



DATE: November 12, 2014  
TO: HPTE Board of Directors  
FROM: Michael Cheroutes, Director of High Performance Transportation Enterprise  
SUBJECT: Recommendation to Transportation Commission regarding delivery method of the C-470 Express Lanes Project

---

#### Purpose

The High Performance Transportation Enterprise ("HPTE"), in conjunction with the Colorado Department of Transportation ("CDOT"), has investigated various delivery models that can be utilized in delivering the C-470 Express Lanes Project ("C-470 Project"). The purpose of Resolution 147 is to recommend to the Colorado Transportation Commission a preferred delivery model.

#### Action

Staff is requesting that the HPTE Board approve Resolution 147 recommending to the Transportation Commission that the C-470 Project be delivered using a design/build public funding approach ("D/B Public-Funding Delivery Model").

#### Details

HPTE and CDOT have evaluated various delivery models, including a design/build/operate/maintain/finance model and a D/B Public-Funding Delivery Model. Based on the analysis and other relevant information (including public input), the State does not appear to receive any additional value in delivering the C-470 Project using a design/build/operate/maintain/finance model. The Preliminary Value for Money Analysis concludes that the D/B Public-Funding Delivery Model is the preferred approach and is likely to produce greater competition among bidders. The recommendation made in Resolution 147 is subject to the HPTE Board of Directors' continued review and consideration of financial and other relevant analysis and on the continued review and consideration of public input.

#### Options and Recommendations

1. Staff Recommendation - Approve Resolution 147 recommending to the Transportation Commission delivery of the C-470 Project using a D/B Public-Funding Delivery Model.
2. Deny approval of recommendation with further instruction to HPTE Staff.

**Resolution – HPTE # 147**

**Approving a recommendation to the Transportation Commission regarding delivery method of the C-470 Express Lanes Project**

**WHEREAS** the General Assembly created the Colorado High Performance Transportation Enterprise (“HPTE”), pursuant to Section 43-4-806, C.R.S., as a government-owned business within the Colorado Department of Transportation (“CDOT”) to pursue innovative means of more efficiently financing important surface transportation projects that will improve the safety, capacity, and accessibility of the surface transportation system; and

**WHEREAS** such innovative means of financing projects include, but are not limited to, public-private partnerships, operating concession agreements, user fee-based project financing, and availability payment and design-build contracting; and

**WHEREAS** HPTE, in conjunction with CDOT, has investigated various project delivery methods that can be utilized in delivering an important surface-transportation project which includes adding tolled express lanes on C-470 in each direction from I-25 to approximately Kipling Boulevard, and constructing direct-connection ramps to the westbound tolled express lanes from I-25 and E-470 (“C-470 Project”); and

**WHEREAS** the project delivery methods reviewed for the C-470 Project have included a design/build/operate/maintain/finance model (“Public-Private Partnership”) and a design/build public funding model (“D/B Public-Funding Delivery Method”); and

**WHEREAS** the HPTE Board of Directors has reviewed and considered public input on the project delivery method and financing alternatives for the C-470 Project; and

**WHEREAS** based on a “Preliminary Value for Money Analysis, Comparison of Project Delivery Methods and Financing Options” report considered by the HPTE Board of Directors, other financial information available to the public, and public input received to date, the State of Colorado does not appear to receive any additional value in delivering the C-470 Project as a Public-Private Partnership and the D/B Public-Funding Delivery Method appears to give the most value to the State of Colorado.

**NOW THEREFORE BE IT RESOLVED:** the HPTE Board of Directors hereby recommends to the Transportation Commission that the D/B Public-Funding Delivery Method be used in procuring the C-470 Project; and

**BE IT FURTHER RESOLVED:** this recommendation is subject to the HPTE Board of Directors' continued review and consideration of financial and other relevant analysis and on the continued review and consideration of public input throughout the process.

Signed as of November 19, 2014

A handwritten signature in black ink, appearing to be 'S. Williams', written over a horizontal line.

Sharon Williams  
Secretary, HPTE Board of Directors



# **Preliminary Value for Money Analysis**

## **Comparison of Project Delivery Methods and Financing Options**

**C-470 ExpressLanes**

**November 2014**

# Outline

---

- ▶ **Executive Summary**
- ▶ **Comparison of Delivery Options**
- ▶ **Base Case Plan of Finance**

# Executive Summary

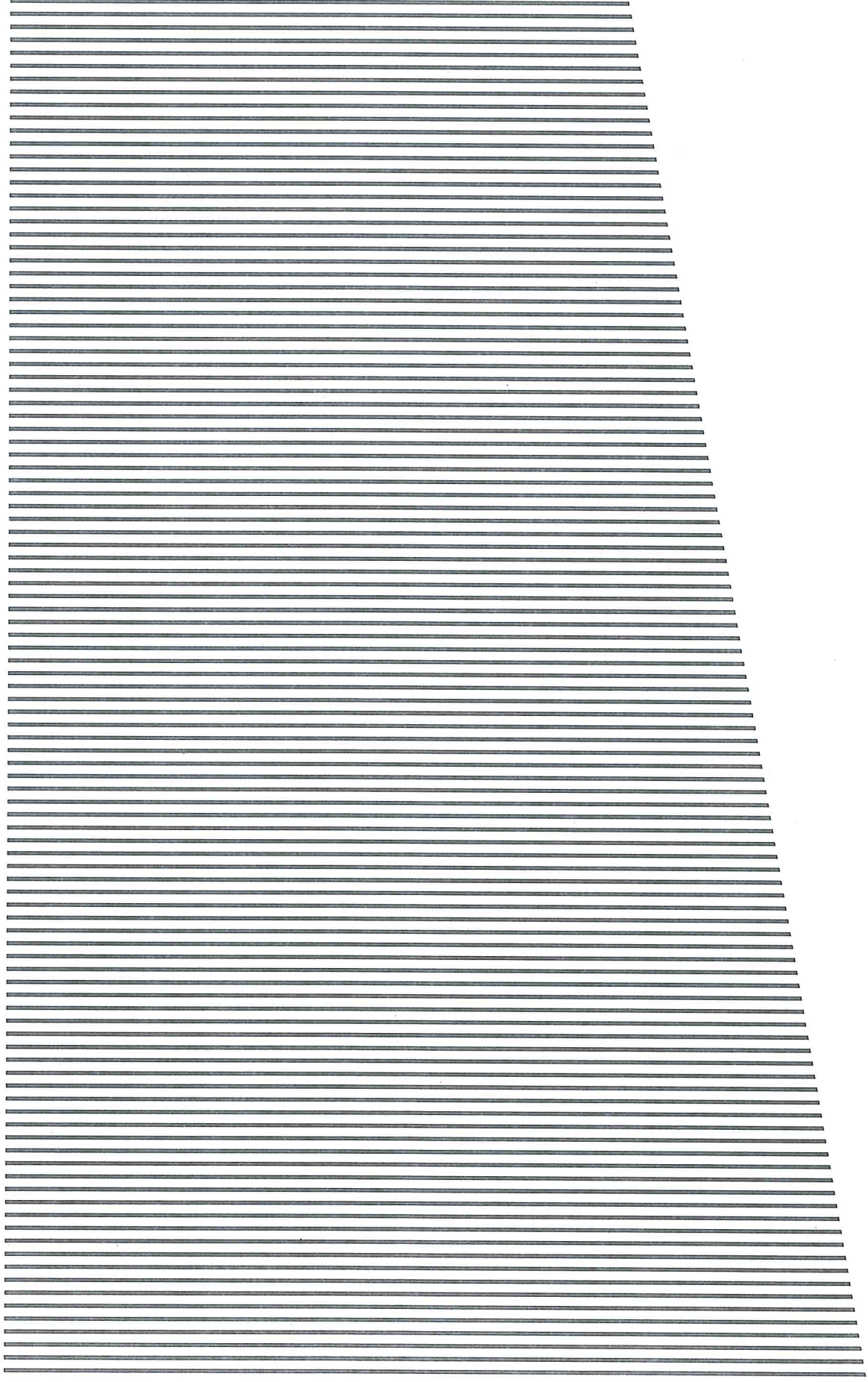
[Redacted content]

# Executive Summary

---

- ▶ A preliminary value for money analysis has been completed to compare two delivery methods for the C-470 ExpressLanes (the “Project”).
  - ▶ Design-Build (DB) with toll revenue-backed public financing (tax-exempt bonds)
  - ▶ Design-Build-Finance-Operate-Maintain (DBFOM) concession backed by toll revenues
  
- ▶ In support of this analysis, an initial financial model has been developed to:
  - ▶ Define the base case plan of finance for each delivery method
  - ▶ Calculate the long-term CDOT/HPTE cash flow profile under each scenario
  - ▶ Perform sensitivity analysis related to revenues, costs, interest rates, etc.
  
- ▶ In addition to the quantitative analysis, qualitative factors were also considered:
  - ▶ Implications for the build out of the ultimate C-470 corridor configuration
  - ▶ Ability to attract robust competition based on project and investment size
  - ▶ Value of potential excess toll revenues to the corridor
  
- ▶ The quantitative and qualitative results were combined into the preliminary value for money results with the DB method preferred to the DBFOM method:
  - ▶ Estimated additional public funds of up to \$40 million would be required under the DBFOM method, compared with \$0-29 million under the DB method, where potential excess toll revenues are retained in the corridor to support future expansion.
  - ▶ Project characteristics, such as revenue projections and size of equity investment, likely make the Project less attractive to DBFOM bidders, thereby limiting potential competition.
  - ▶ Greater competition is expected from a DB procurement, and it has a better chance of fully eliminating the funding gap through public financing.

# Comparison of Delivery Options





# Baseline Delivery Options Summary

	DBFOM Toll Concession	DB with Public Finance Net Pledge*	DB with Public Finance Gross Pledge*
<b>Project Scope</b>	One westbound managed lane from I-25 (with direct connect) to Wadsworth Additional westbound managed lane from I-25 (with direct connect) to University One eastbound managed lane from Wadsworth to Yosemite		
<b>Development Schedule</b>	Development, design and construction over 2 years		
<b>Contract Term</b>	2 + 40 years	2 years	2 years
<b>Design &amp; Construction</b>	Concessionaire	Design-Builder	Design-Builder
<b>O&amp;M / Lifecycle</b>	Concessionaire	Project (Cost) CDOT (Performance)	Project (Cost) CDOT (Performance) CDOT (Contingent Cost Support)
<b>Financing</b>	Concessionaire	HPTE (Net Pledge)	HPTE (Gross Pledge)
<b>Long-Term Excess Cash Flows</b>	Concessionaire	HPTE	HPTE

\*Under the net pledge approach, revenues are pledged to bondholders after the payment of O&M. Under the gross pledge approach, debt service would be paid before O&M with a contingent loan made available by CDOT in the event toll revenues after debt service are insufficient to cover O&M. The latter approach allows for more debt to be raised, but would require contingent O&M support.

# Financial Model Assumptions

Project Item	Value (DBFOM/DB)
<b>Schedule</b>	
Financial Close	2016
Revenue Operations	2018
Term/Analysis Period	Construction + 40 years
<b>Construction</b>	
Construction Cost	\$230 million
Base Year Costs	FY 2014
Spend Curve	50%, 50%
Construction Period	2 years
Development Costs	\$20 million / \$3 million
Cost Inflation	3.0%
<b>Operations</b>	
T&R Scenario	Fixed III (Cambridge Systematics)
Leakage	10 % of Gross Revenues
Ramp-Up (Yrs 1-4)	50%, 50%, 75%, 75%
Inflation	2.0-3.0%
<b>Other</b>	
Road O&M Costs	\$1.5 million / year
Toll Processing	\$0.18/Transponder, \$0.60/LPT
Lifecycle Costs	\$10 million (10-yr cycle)

Financing Item	Value (DBFOM/DB)
<b>Senior Debt</b>	
Rating	BBB-
Term	35 years
Interest Rate	5.68% / 5.93%
CAB Margin	1.00%
DSCR	1.40x vs. IG Curve
DSRF	Next 12 months
<b>TIFIA</b>	
Rating	BBB-
Term	35 years
Interest Rate	3.56%
DSCR	1.40x vs. IG Curve
DSRF	Next 6 months
<b>Equity</b>	
Min IRR (Pre-Tax)	18%
Minimum Equity (% of total fin.)	25%
<b>Reserves</b>	
O&M	Next 6 months
Lifecycle	100% / 66% / 33%
Ramp-Up	\$1.5 million

Note: Preliminary engineering and monitoring costs are excluded from this analysis and assumed to be paid by HPTE/CDOT. The \$230 million cost is quoted in \$2014, and includes \$5 million for procurement and traffic and revenue advisory costs. Financing assumptions take into account greenfield nature of the revenue projections and project size.

# Estimated Sources & Uses of Funds During Construction

SOURCES OF FUNDS (\$000s)	DB	DBFOM	DB w/TIFIA	DBFOM w/TIFIA
Tax-Exempt CIBs	74,000	71,000	38,000	--
Tax-Exempt CABs <sup>1</sup>	25,000	--	--	--
TIFIA Loan	--	--	88,000	91,000
Private Equity	--	25,000	--	33,000
FASTER + Local Funding	12,000	12,000	12,000	12,000
RAMP Funding	100,000	100,000	100,000	100,000
<b>Additional Public Funding</b>	<b>61,000</b>	<b>79,000</b>	<b>29,000</b>	<b>40,000</b>
<b>Total Sources</b>	<b>\$272,000</b>	<b>\$287,000</b>	<b>\$267,000</b>	<b>\$276,000</b>

USES OF FUNDS (\$000s)	DB	DBFOM	DB w/TIFIA	DBFOM w/TIFIA
Design & Construction	249,000	249,000	249,000	249,000
Financing Fees <sup>2</sup>	3,000	20,000	3,000	20,000
Interest During Construction	8,000	8,000	4,000	--
Debt Service Reserve(s)	8,000	6,000	7,000	3,000
Operating Reserves <sup>3</sup>	4,000	4,000	4,000	4,000
<b>Total Uses</b>	<b>\$272,000</b>	<b>\$287,000</b>	<b>\$267,000</b>	<b>\$276,000</b>

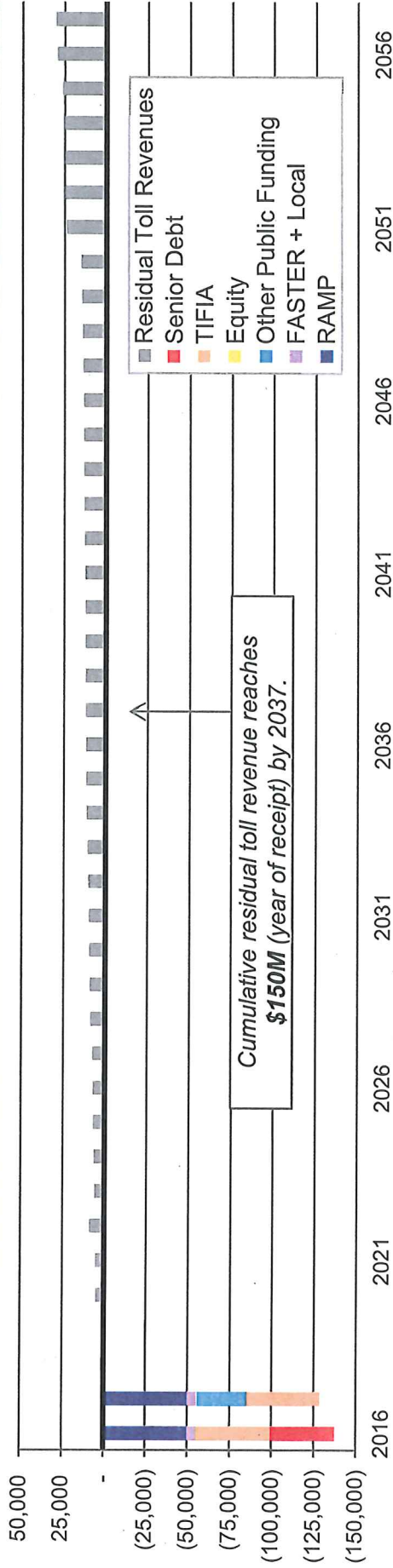
<sup>1</sup> Capital appreciation bonds (CABs) issuance limited to 25% of total debt.

<sup>2</sup> Includes legal and other advisory fees, debt issuance costs, and equity letter of credit fees, if applicable.

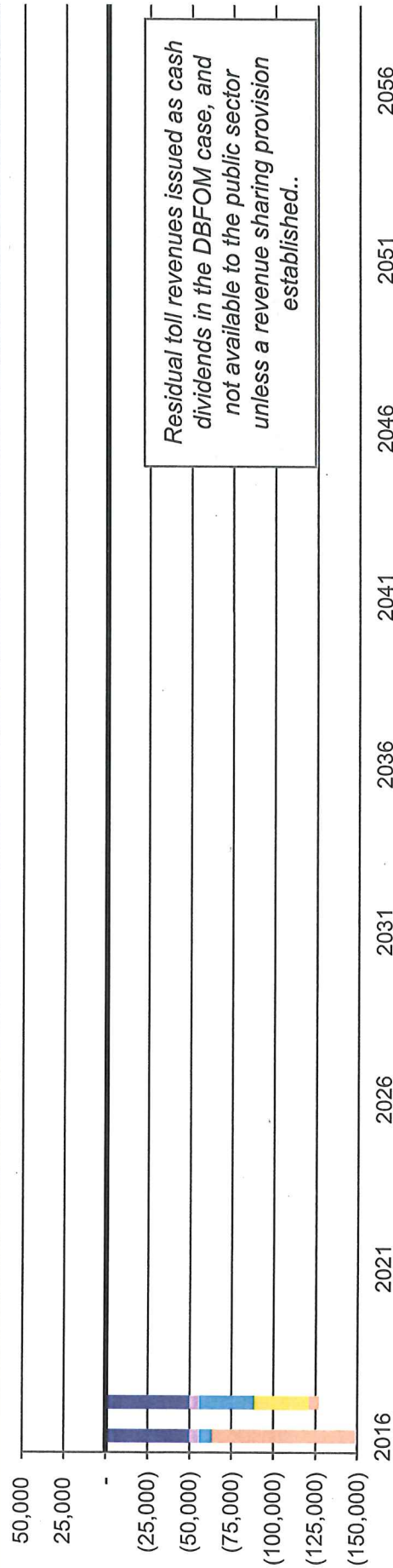
<sup>3</sup> Reflects amounts for initial O&M, lifecycle, and ramp-up reserve account deposits.

# Projected Public Sector Cash Flows (w/ TIFIA)

DB w/TIFIA (\$000s)

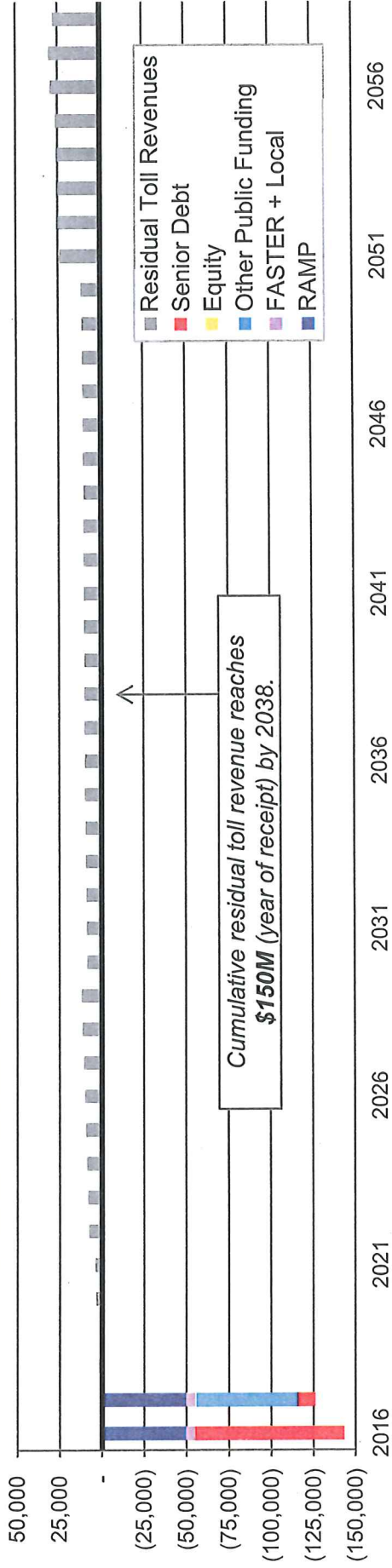


DBFOM w/TIFIA (\$000s)

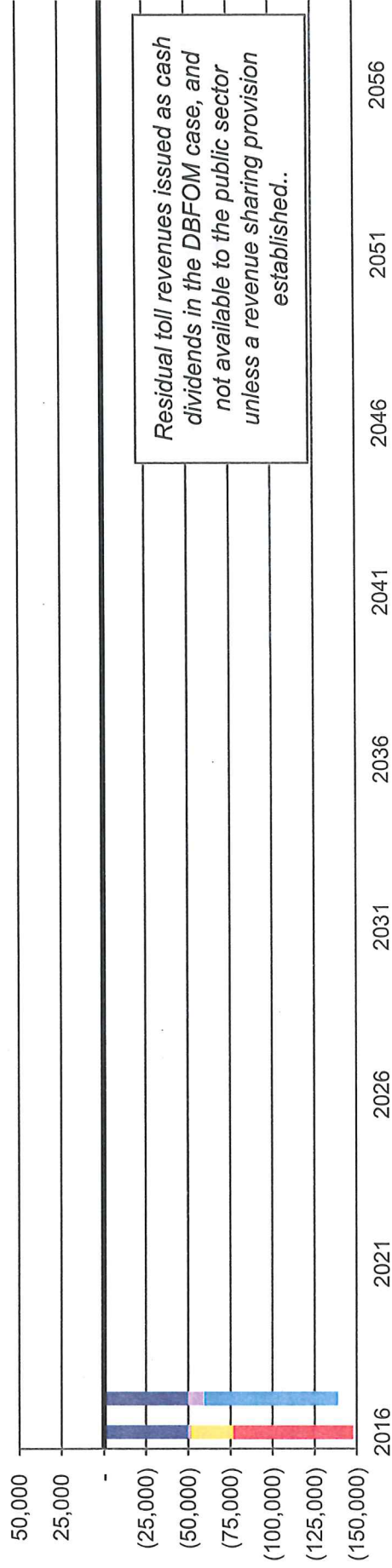


# Projected Public Sector Cash Flows (w/o TIFIA)

DB w/o TIFIA (\$000s)



DBFOM w/o TIFIA (\$000s)

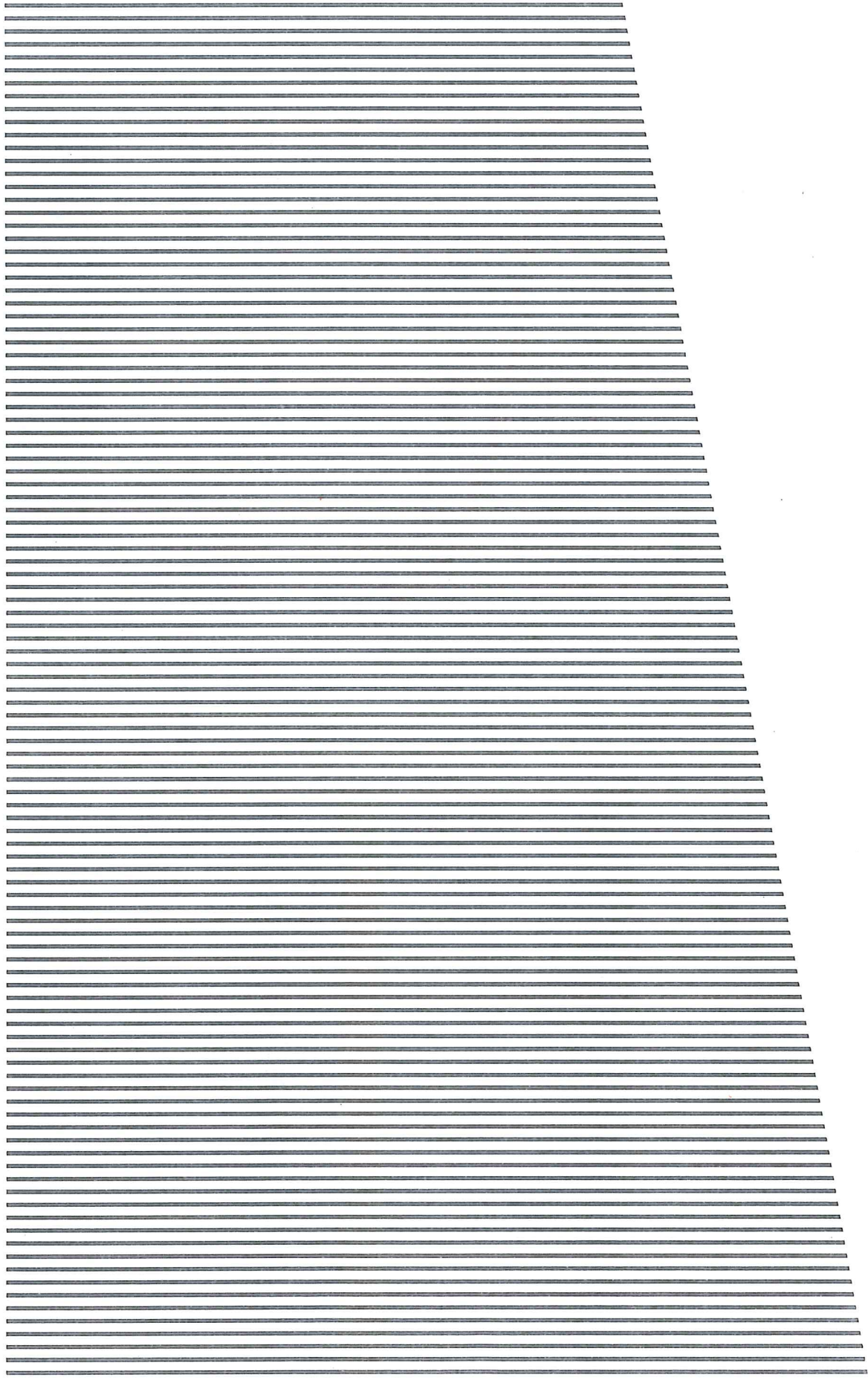


# Other Considerations

The quantitative comparison of the delivery approaches should be supplemented with a comparison of qualitative issues related to the Project.

		DB	DBFOM
<b>Future Project Phases</b>	<ul style="list-style-type: none"> <li>- Provides more flexibility with respect to development of future Project phases, allowing for DB or DBFOM delivery at a later stage</li> </ul>	<ul style="list-style-type: none"> <li>- Concession agreement would need to include provisions for future corridor expansion</li> <li>- Could be difficult to develop any extension separately from original concession agreement</li> </ul>	
<b>Project Revenues</b>	<ul style="list-style-type: none"> <li>- Excess project revenues would accrue in full to HPTE for future phases</li> <li>- If revenue is lower than expected, HPTE will receive less excess cash flow, and may need to fund O&amp;M</li> </ul>	<ul style="list-style-type: none"> <li>- Excess project revenues would accrue to concessionaire, but revenue sharing can allow for cash flow to HPTE if project performs well</li> <li>- Downside revenue risks transferred to concessionaire</li> </ul>	
<b>Procurement</b>	<ul style="list-style-type: none"> <li>- Procurement may be shorter than DBFOM</li> <li>- Number of bidders and competition may be greater than DBFOM</li> <li>- Limits selection to construction price</li> </ul>	<ul style="list-style-type: none"> <li>- Procurement may be longer than DB</li> <li>- Number of bidders and competition may be limited due to limited revenue potential and greenfield nature of project</li> </ul>	
<b>Other Items</b>	<ul style="list-style-type: none"> <li>- HPTE will be responsible for setting tolls</li> <li>- Preservation of options to derive synergies with other regional projects</li> <li>- Provides flexibility for DB+OM delivery</li> </ul>	<ul style="list-style-type: none"> <li>- Concessionaire tolling setting ability governed by concession agreement</li> <li>- Limited ability to drive costs down relative to DB</li> <li>- Provisions for unforeseen competing facilities</li> <li>- Project would be on smaller side for a DBFOM</li> </ul>	

# Base Case Plan of Finance



# Base Case Plan of Finance (DB – Net Pledge w/TIFIA)

This base case plan of finance assumes design-build construction with a net pledge financing and a TIFIA loan of approximately \$90 million. Design and construction costs have been escalated to YOE dollars.

**Sources & Uses**  
Values in \$000

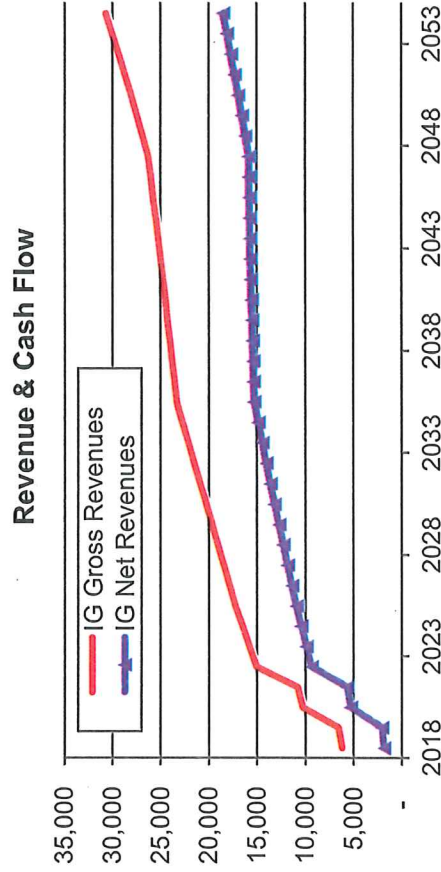
Sources	Value
Tax-Exempt CIBs	38,000
Tax-Exempt CABs	--
TIFIA	88,000
CDOT - RAMP	100,000
FASTER + Local	12,000
<b>Other Public Funding</b>	<b>29,000</b>
<b>TOTAL</b>	<b>\$267,000</b>

Uses	Value
Design & Construction	249,000
Financing Fees <sup>1</sup>	3,000
Interest During Construction	4,000
Debt Service Reserves	7,000
Operating Reserves <sup>2</sup>	4,000
<b>TOTAL</b>	<b>\$267,000</b>

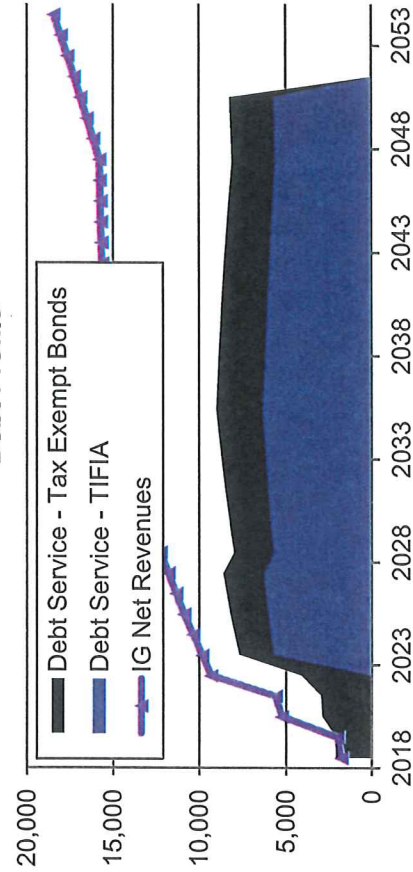
<sup>1</sup> Includes debt issuance and related costs.

<sup>2</sup> Includes O&M, lifecycle, and ramp-up reserves.

**Financial Summary**  
Values in \$000



**Debt Profile**





# Plan of Finance Variation (DB – Gross Pledge w/TIFIA)

A gross revenue pledge could be used to eliminate the additional upfront funding requirement (support would be provided in the form of a CDOT contingent O&M loan).

## Sources & Uses

Values in \$000

Sources	
Tax-Exempt CIBs	81,000
TIFIA	88,000
CDOT - RAMP	100,000
FASTER + Local	12,000
Other Public Funding	--
<b>TOTAL</b>	<b>\$281,000</b>

Uses	
Design & Construction	249,000
Financing Fees <sup>1</sup>	3,000
Interest During Construction	8,000
Debt Service Reserves	9,000
Operating Reserves <sup>2</sup>	11,000
<b>TOTAL</b>	<b>\$281,000</b>

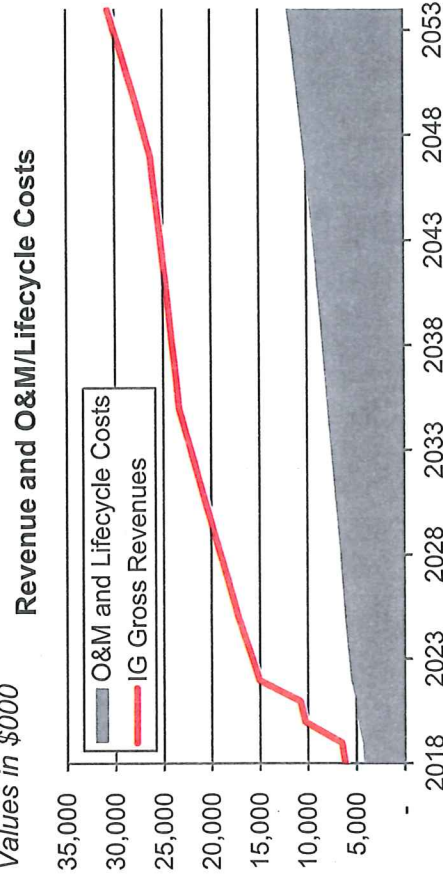
<sup>1</sup> Includes debt issuance and related costs.

<sup>2</sup> Includes O&M, lifecycle, and ramp-up reserves.

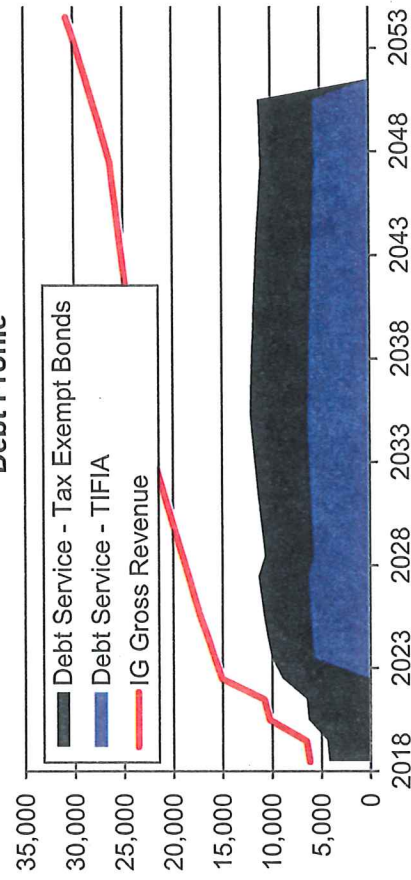
<sup>3</sup> Min DSCR of 1.91x relative to gross revenue forecast.

## Financial Summary

Values in \$000



## Debt Profile<sup>3</sup>



# Gap Closure Strategies

---

The net and gross pledge design-build financing cases will be change as final costs, interest rates and revenue forecasts are refined over time. The Project may be able to utilize one or more of the below tools to help close any funding gaps.

- ▶ **Amend Project scope**
  - ▶ Remove discrete sections that may be able to be completed as part of a future phase or sections that contribute minimal revenue and/or operate at a loss
  - ▶ Extension of the express lanes to Kipling has been discussed as a potential gap closure measure; however, preliminary indications suggest that an extension beyond the current scope would not net additional project funding for the Project
  - ▶ Additional analysis of project scope changes should be evaluated as part of the in process Level III traffic and revenue study
- ▶ **Alter timing of public contributions**
  - ▶ CDOT and HPTE could consider frontloading RAMP and any other upfront contributions
  - ▶ Depending on the final Project structure, the above may allow HPTE to defer any private financing until year two of construction, reducing total construction period interest costs
- ▶ **Utilize additional CABs and/or longer maturity debt**
  - ▶ The Project may be able to utilize a higher amount of CABs and/or sell longer maturity bonds to increase the amount of debt that can be raised for construction