

## MEMORANDUM

**TO:** CTIO<sup>1</sup> BOARD OF DIRECTORS  
**FROM:** KELLY BROWN, CHIEF TOLL OPERATIONS OFFICER  
**SUBJECT:** PROPOSED CENTRAL 70 TOLL RATES  
**DATE:** JANUARY 18, 2023

### Purpose and Requested Action

This memorandum presents a request from CTIO staff that the Colorado Transportation Investment Office (CTIO) Board of Directors approve the proposed initial toll rates and schedule for Automatic Vehicle Identification (AVI) and License Plate Toll (LPT) transactions for the Central 70 Express Lanes (C70).

### Overview of Recommended Toll Rates

Staff presented to the Board at the December 2022 Board Meeting the supporting documentation for the proposed initial toll rates for C70, which were determined by our Traffic and Revenue advisor to be set at a base toll rate sufficient to cover toll collection costs, toll equipment maintenance costs and cover debt service, but low enough to attract initial customers to use the toll lane, even when traffic in the general purpose lanes is relatively light, and the corridor is free flowing. The materials from the December 2022 Board meeting are attached as Attachment A.

The following operations policies apply to the Central 70 Express Lanes:

- Hours of operation: 24 hours a day, 7 days a week, 365 days a year.
- High occupancy vehicles with three or more passengers (HOV3+) use the Express Lanes for free.
- Motorcycles use the Express Lanes for free.
- Vehicles with four or more axles pay a surcharge of \$25.
- The tolling regime is Time-of-Day (TOD) pricing (the tolling regime will become dynamic based on traffic demand in the future).

Table 1 below shows the proposed time-of-day AVI and LPT toll rates for the opening year. The technical memo from the tolling advisory consultant team is attached as Attachment B.

Eastbound	AVI Rate	LPT Rate	Westbound	AVI Rate	LPT Rate
6:00AM to 8:59AM	\$4.50	\$10.08	6:00AM to 8:59AM	\$4.50	\$9.01
9:00AM to 1:59PM	\$2.50	\$6.91	9:00AM to 1:59PM	\$2.50	\$5.84
2:00PM to 3:59PM	\$3.25	\$8.10	2:00PM to 3:59PM	\$3.25	\$7.03
4:00PM to 6:59PM	\$2.50	\$6.91	4:00PM to 6:59PM	\$2.50	\$5.84
7:00PM to 5:59AM	\$1.50	\$5.33	7:00PM to 5:59AM	\$1.50	\$4.26

Table 1

<sup>1</sup> The High Performance Transportation Enterprise (HPTE) is now doing business as the Colorado Transportation Investment Office (CTIO). CTIO is how the enterprise refers to itself now and in the future. However, the HPTE name is retained for legislative and legal documents.

### Board Options and Recommendations

1. **Staff Recommendation:** Act on Resolution #405 adopting the proposed initial toll rates and schedule for C70, which would go into effect when the Express Lane opens for tolling, currently anticipated to be February 28, 2023. *Note: The date that the C70 Express Lanes open for tolling is subject to change pending any changes to the tolling back office integration and testing schedule as well as the implementation of the Globeville, Elyria-Swansea (GES) Tolling Equity Program.*
2. Deny the request. The CTIO staff will review the Board's feedback and return to the CTIO Board with new proposed initial toll rates for C70.

### Next Steps

1. If adopted, CTIO staff will implement the approved initial AVI and LPT toll rates for C70 effective 12:00 AM on the C70 Go Live date, currently anticipated to be February 28, 2022. *Note: The date that the C70 Express Lanes open for tolling is subject to change pending any changes to the tolling back office integration and testing schedule as well as the implementation of the Globeville, Elyria-Swansea (GES) Tolling Equity Program.*
2. CTIO staff will continue the Public Outreach process.
3. If the Board does not adopt the proposed initial toll rates for C70, the CTIO staff will review the Board's feedback and return to the CTIO Board in February with new proposed initial toll rates for C70.

### Attachments

Attachment A: Board Memo December 14, 2022, Central 70 Initial Toll Rates

Attachment B: The Central 70 Express Lanes Toll Rates Technical Memo

Attachment C: Resolution #405 Toll Rates and Schedule for C70



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## **ATTACHMENT A**

Board Memo December 14, 2022, Central 70 Initial Toll Rates

## MEMORANDUM

**TO:** CTIO<sup>1</sup> BOARD OF DIRECTORS  
**FROM:** KELLY BROWN, CHIEF TOLL OPERATIONS OFFICER  
**SUBJECT:** PROPOSED CENTRAL 70 TOLL RATES  
**DATE:** DECEMBER 14, 2022

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### Purpose

The purpose of this memorandum is to summarize staff's proposed toll rates for the Central 70 Express Lanes and to commence and facilitate a discussion with the Board and the public regarding the establishment of toll rates.

### Action

This item is for information and discussion only. Approval for the stated rates will be sought from the Board at the January 2023 Board meeting.

### Background

The 10-mile-long Central-70 Express Lanes extend from I-25 to Chambers Road. There are three designated entry and three designated exit points along the Express Lanes in each direction. Entering and exiting the Central-70 Express Lanes at non-designated locations is illegal. Drivers pay the same toll price for any distance traveled along the Central-70 Express Lanes in one direction. The Central-70 Express Lanes are expected to open for tolled traffic in the first quarter of 2023.

### Overview of Recommended Toll Rates

CTIO staff recommends setting a base toll rate sufficient to cover toll collection costs, toll equipment maintenance costs, and cover debt service but low enough to attract initial customers to use the toll lane, even when traffic in the general-purpose lanes is relatively light and the corridor is free flowing.

In calculating the Transponder or Automatic Vehicle Identification (AVI) toll rates, the following assumptions were made:

- Tolls will be charged based on a Time-of-Day methodology consistent with the current regime on I-25 Central, I-25 North Segment 2, and US 36, and not on a dynamic tolling basis. This is a temporary tolling regime until dynamic pricing is implemented in the future.
- Due to potential post-COVID changes in travel patterns and peak hours, traffic volume data was obtained in November 2022 to explore current peak hour trends.
- The minimum AVI toll rate is set to recover the AVI toll operation cost.
- The maximum AVI toll rate is capped at \$4.50 for the opening year.

License plate tolling (LPT) costs more than AVI tolling due to additional back-office costs and LPT leakage. Therefore, LPT rates are developed by imposing a surcharge on the AVI toll rates. Additionally, the eastbound direction has 3 toll points, while the westbound direction has 2 toll points. Hence, the LPT rates

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for the eastbound direction will be higher than those for the westbound direction. The following considerations were made when calculating the License Plate Toll (LPT) toll rates:

- LPT surcharge covers the back-office additional cost and LPT leakage.
- LPT leakage is assumed at 40 percent based on historical data.
- LPT leakage includes uncollectable and unbillable LPT transactions.

The following operations policies apply to the Central 70 Express Lanes:

- Hours of operation: 24 hours a day, 7 days a week, 365 days a year.
- High occupancy vehicles with three or more passengers (HOV3+) use the Express Lanes for free.
- Motorcycles use the Express Lanes for free.
- Vehicles with four or more axles pay a surcharge of \$25.
- The tolling regime is Time-of-Day (TOD) pricing (the tolling regime will become dynamic based on traffic demand in the future).

Table 1 below shows the proposed time-of-day AVI and LPT toll rates for the opening year. The technical memo from the tolling advisory consultant team is attached as Attachment A.

Eastbound	AVI Rate	LPT Rate	Westbound	AVI Rate	LPT Rate
6:00AM to 8:59AM	\$4.50	\$10.08	6:00AM to 8:59AM	\$4.50	\$9.01
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7:00PM to 5:59AM	\$1.50	\$5.33	7:00PM to 5:59AM	\$1.50	\$4.26

Table 1

### Next Steps

- The Board is being asked to review the recommended proposed initial AVI and LPT toll rates and provide feedback.
- CTIO staff will integrate any requested changes to the proposed AVI and LPT toll rates for the Central 70 Express Lanes and will return to the Board in January 2023 for the adoption of the initial AVI and LPT toll rates for the Central 70 Express Lanes.

### Attachments

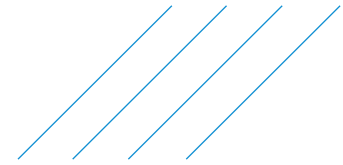
Attachment A: The Central 70 Express Lanes Toll Rates Technical Memo



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## **ATTACHMENT B**

**The Central 70 Express Lanes Toll Rates Technical Memo**



## Memo

To: Kelly Brown, Colorado Transportation Investment Office (CTIO)

<b>From:</b> Rami Harb, Atkins; Rinal Chheda, Atkins	<b>Email:</b> rami.harb@atkinsglobal.com
<b>Date:</b> December 2, 2022	<b>Phone:</b> 720-475-7075
<b>Ref:</b> Central I-70 Express Lanes	<b>cc:</b>

**Subject:** Toll Rate Setting – Central 70

### 1. Introduction

Atkins North America, Inc., (Atkins) has been tasked by the Colorado Transportation Investment Office (CTIO) with setting toll rates for the Central I-70 Express Lanes (C-70 ELs) based on two prior traffic studies conducted in 2015 and 2022.

### 2. Project Limits and Tolling

The 10-mile-long C-70 ELs extend from I-25 to Chambers Road. There are three designated entry and three designated exit points along the Express Lanes in each direction. Entering and exiting the C-70 ELs at non-designated locations is illegal. Drivers pay the same toll price for any distance travelled along the C-70 ELs in one direction.

### 3. Operations Policy

The operations policy for the C-70 ELs is summarized below:

- Hours of operation: 24 hours a day, 7 days a week, 365 days a year.
- High occupancy vehicles with three or more passengers (HOV3+) use the Express Lanes for free.
- Motorcycles use the Express Lanes for free.
- Vehicles with four or more axles pay a surcharge of \$25.
- The tolling regime is Time-of-Day (TOD) pricing (the tolling regime will become dynamic based on traffic demand in the future).

A comparative table of operations policy for all Colorado express lanes, including the C-70 ELs, is provided in **Appendix 1**.



## 4. Calculation of Transponder Rates

In calculating the Transponder or Automatic Vehicle Identification (AVI) toll rates, the following assumptions were made:

- Tolls will be charged based on a Time-of-Day methodology consistent with the current regime on I-25 Central, I-25 North Segment 2, and US 36, and not on a dynamic tolling basis. This is a temporary tolling regime until dynamic pricing is implemented in the future.
- Due to potential post-COVID changes in travel patterns and peak hours, traffic volume data was obtained in November 2022 to explore current peak hour trends.
- The minimum AVI toll rate is set to recover the AVI toll operation cost.
- The maximum AVI toll rate is capped at \$4.50 for the opening year.

## 5. License Plate Tolling (LPT) Surcharge

License plate tolling (LPT) costs more than AVI tolling due to additional back-office costs and LPT leakage. Therefore, LPT rates are developed by imposing a surcharge on the AVI toll rates. Additionally, the eastbound direction has 3 toll points while the westbound direction has 2 toll points. Hence, the LPT rates for the eastbound direction will be higher than those for the westbound direction.

- LPT surcharge covers back-office additional cost and LPT leakage.
- LPT leakage is assumed at 40 percent based on historical data.
- LPT leakage includes uncollectable and unbillable LPT transactions.

## 6. Recommended Toll Rates

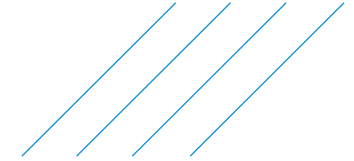
Table 1 below shows the TOD AVI toll rates, as well as the LPT rates for the opening year.

**Table 1: Time-of-Day Transponder/AVI and LPT Rates for 2- and 3-Axle Vehicles (weekday & weekend)**

Eastbound	AVI Rate	LPT Rate	Westbound	AVI Rate	LPT Rate
6:00AM to 8:59AM	\$4.50	\$10.08	6:00AM to 8:59AM	\$4.50	\$9.01
9:00AM to 1:59PM	\$2.50	\$6.91	9:00AM to 1:59PM	\$2.50	\$5.84
2:00PM to 3:59PM	\$3.25	\$8.10	2:00PM to 3:59PM	\$3.25	\$7.03
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7:00PM to 5:59AM	\$1.50	\$5.33	7:00PM to 5:59AM	\$1.50	\$4.26

Appendix 2 shows a comparison of maximum toll rates per mile for all tolled roadways operating in the United States.





## APPENDIX 1: Express Lanes Operations Policy

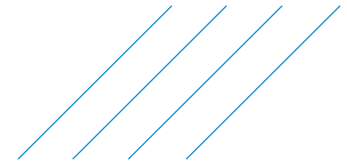
	C-70 Express Lanes	C-470 Express Lanes	US 36 Express Lanes	I-25 North Express Lanes	I-25 Central Express Lanes (reversible)	I-70 Mountain Express Lane
<b>Open 24/7</b>	Yes	Yes	Yes	Yes	No <sup>2</sup>	No <sup>1</sup>
<b>Tolling Regime</b>	Time-of-day	Time-of-day	Time-of-day	Time-of-day	Time-of-day	Dynamic rate
<b>HOV Discount</b>	HOV3+ free <sup>3</sup>	No discount	HOV3+ free <sup>3</sup>	HOV3+ free <sup>3</sup>	HOV3+ free <sup>3</sup>	No discount
<b>Motorcycle Policy</b>	Free	Free	Free	Free	Free	No discount
<b>Trucks / Trailers</b>	\$25 surcharge for 4+ axles	\$25 surcharge per zone for 4+ axles	\$25 surcharge per toll point for 4+ axles	\$25 surcharge for 4+ axles (for each Segment 2 and 3)	\$25 surcharge for 4+ axles	Not allowed
<b>Transit Buses</b>	Allowed	Allowed, but no transit routes exist currently	Allowed	Allowed	Allowed	Not allowed

<sup>1</sup>Open on weekends, holidays, and on special occasions

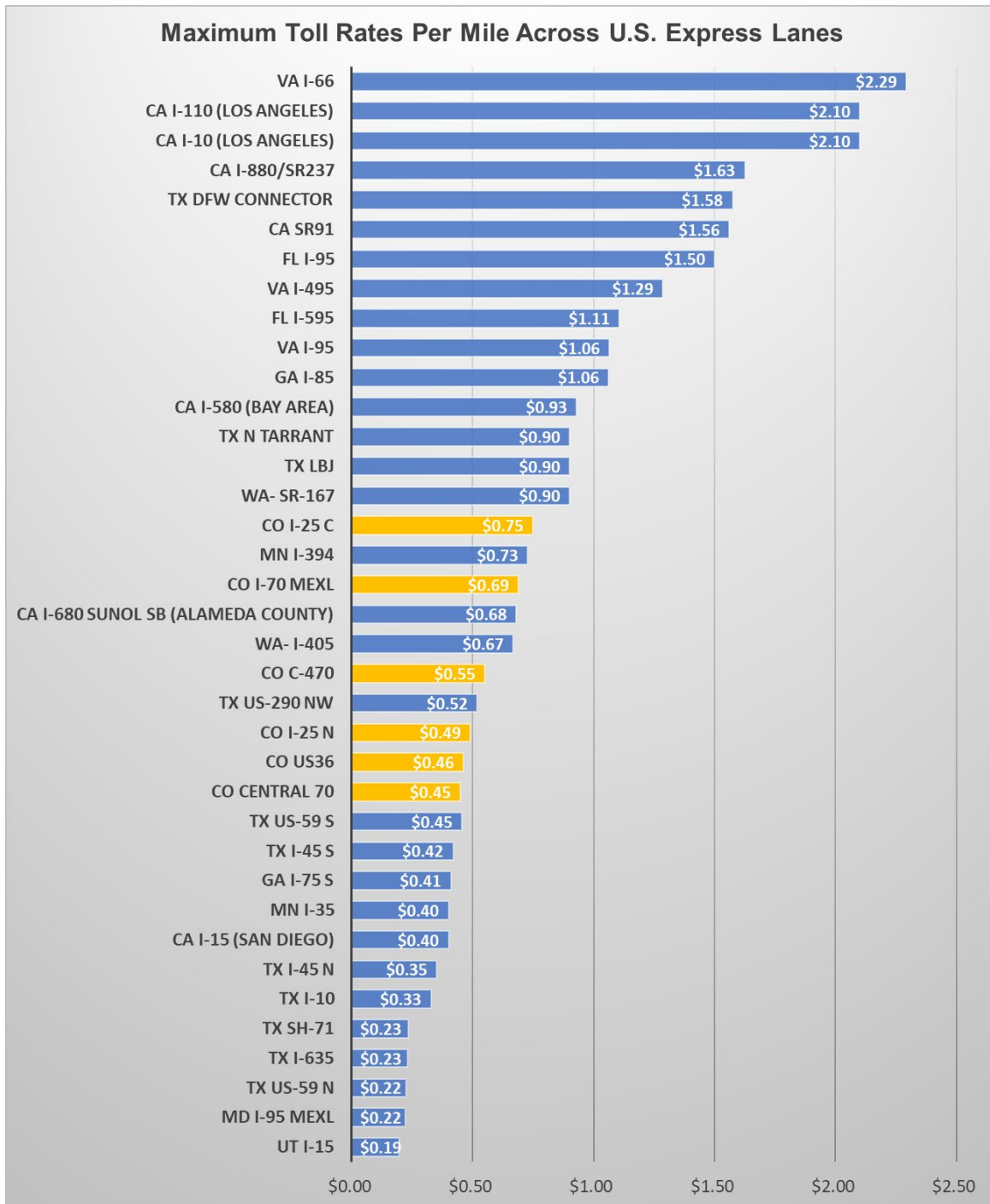
<sup>2</sup>On weekdays, southbound travel is open from 5 a.m. to 11 a.m., northbound travel is open from noon to 3 a.m. On weekends, northbound lanes are open from Friday noon until Monday 3 a.m.

<sup>3</sup>HOV 3+ vehicles must have an ExpressToll account and Switchable HOV transponder to avail discount

<sup>4</sup>Hybrid/Electric vehicles could use US 36 and I-25 Central Express Lanes for free until May 31, 2020



## APPENDIX 2: Toll Rates Per Mile





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## ATTACHMENT C

Resolution #405 Toll Rates and Schedule for C70