

MEMO

To: Kelly Brown, Chief Toll Operations Officer, Colorado Transportation Investment Office (CTIO)

FROM	EMAIL	REF
Rami Harb, AtkinsRéalis	rami.harb@atkinsrealis.com	C70 Express Lanes
DATE	PHONE	CC
September 12, 2024	720-475-7075	
SUBJECT	Dynamic Pricing Parameters Adjustment C70 Express Lanes	

1. Introduction

AtkinsRéalis has been tasked by the Colorado Transportation Investment Office (CTIO) with reviewing the parameters setting on the Central I-70 Express Lanes (C-70 ELs). The C-70 ELs went live on July 11, 2023, with a Time-of-Day (TOD) pricing and on April,08, I 2024 with dynamic pricing. The operations policies are summarized in **Appendix 1**. A thorough review of dynamic pricing parameters was conducted.

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 per zone.
- The current tolling regime is Time-of-Day (TOD) pricing. The tolling regime will become dynamic on November 01 of 2024.

4. Current Dynamic Pricing Parameters

Pursuant to the CTIO amended toll rate setting and adjustment policy (November 2023), three primary criteria of the dynamic pricing algorithm will be evaluated for each Express Lane. The three criteria include:

1. Minimum and maximum toll rates
2. Rate change interval
3. Maximum AVI increment and decrement

The current dynamic pricing parameters are set as the following:

- Minimum toll rate: \$1.50
- Maximum toll rate: \$5.50
- Rate change interval: 5-15 minutes
- Maximum increment for AVI: 50 cents (surcharges for LPT apply)
- Maximum decrement AVI: 20 cents (surcharges for LPT apply)

4.1 Review of Current Traffic Operations

Based on data from April 08 to July 30th, 2024, it was determined that the current dynamic pricing parameters are effectively managing traffic demand and maintaining desired speeds and traffic level of service on the C-70 ELs. To date, the maximum dynamic toll rate on C-70 ELs of \$5.50 was reached once on May 13, 2024. Given the performance of the dynamic pricing algorithm, no changes are recommended to the minimum toll rate, maximum toll rate, and rate change interval.

In anticipation of the traffic ramp-up on the C-70 ELs in its second year of operations, and in anticipation of possible abrupt increases and decreases in traffic volumes during peak hours, adjusting the maximum increment and decrement are recommended. Increasing the maximum increment from 50 cents to \$4.00 and maximum decrement from 20 cents to \$4.00 are recommended.

5. Summary Recommendations

- Minimum toll rate: \$1.50 (No change)
- Maximum toll rate: \$5.50 (No change)
- Rate change interval: 5-15 minutes (No change)
- Maximum AVI increment: \$4.00 (change)
- Maximum AVI decrement: \$4.00 (change)

MEMO

APPENDIX 1: Express Lanes Operations Policies

	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	I-25 S GAP Express Lanes
Open 24/7	Yes	Yes	Yes	Yes	No ²	No ¹	Yes
Tolling Regime	Dynamic	Time-of-day (TOD)	Time-of-day (TOD)	Time-of-day (TOD)	Time-of-day (TOD)	Eastbound: Time-of-day (TOD) Westbound: Dynamic	Dynamic
HOV Discount	HOV3+ free ³	No discount	HOV3+ free ³	HOV3+ free ³	HOV3+ free ³	No discount	HOV3+ free ³
Motorcycle Policy	Free	Free	Free	Free	Free	No discount	Free
Trucks / Trailers	\$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	\$25 surcharge for 4+ axles (2 zones per direction, per zone)
Transit Buses	Allowed	Allowed, but no transit routes exist currently	Allowed	Allowed	Allowed	Not allowed	Allowed

¹Open on weekends, holidays, and on special occasions.

²On 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.

³HOV3+ vehicles must have an ExpressToll account and Switchable HOV transponder to avail discount.