

Signs of the (non-stop) times on E-470

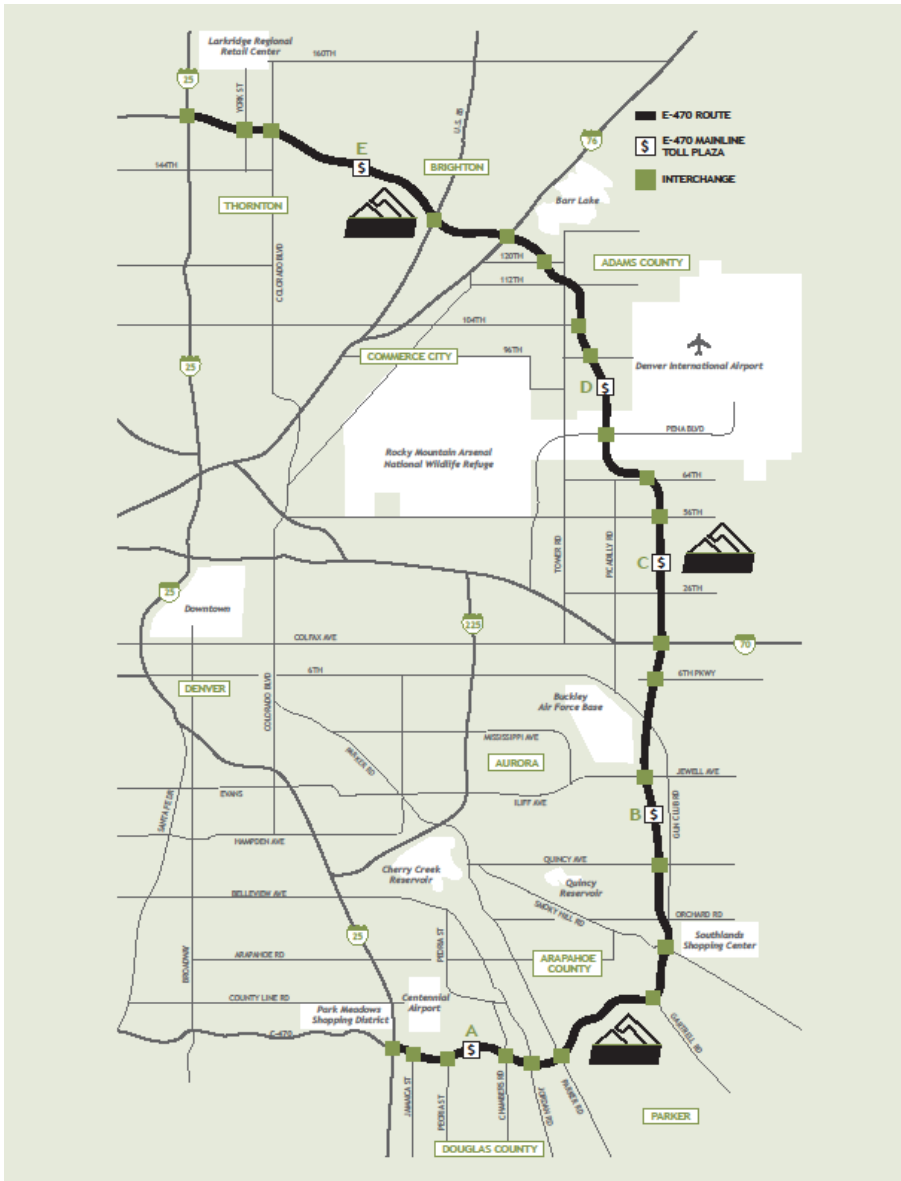


IBTTA
INTEROPERABILITY & ALL-ELECTRONIC TOLL
COLLECTION
MAY 17, 2011 - PLANO, TX

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E-470 PUBLIC HIGHWAY AUTHORITY

E-470: Who are we?

- 46 miles around the eastern perimeter of metro Denver
- Full build out in 2003
- No public funding involved in construction
- Approx. 50m transactions/year
- Approx \$100m revenue/year
- Approx. 70/30 split between transponder/video toll
- All-ETC on July 4, 2009



- Schedule for All-ETC: Phased Implementation Approach
- Before/During/After Photos
- Design Process & MUTCD Guidance
- Account Management Challenges
- Lessons Learned – “If we did this again.....”

E-470 ALL-ETC IMPLEMENTED IN 2 PHASES:

PHASE 1: JANUARY 1, 2009

- Start video tolling
- **Continue to collect cash tolls**
- Add “license plate tolling” signs
- Construction project cost = \$375,000
- 6 month PR campaign – TV, Youtube, email, fliers handed out at booths, heavy use of variable message signs
- **Added differential pricing to encourage cash customers to become transponder users**



PHASE 2: JULY 4, 2009 (“FREEDOM FROM STOP/GO TOLLING”)

- **Closed cash lanes**
- 100% video and transponder tolling = All-ETC
- Construction project cost = \$670,000
- MAY 2011:
 - Adding signs showing differential pricing



“BEFORE” – safety, stop/go/weaving traffic, air quality, sign clutter





“DURING” – video tolling added



“AFTER”: temporary traffic control



“AFTER”: safer, cleaner, simpler



09/30/2009



BEFORE



AFTER



BEFORE – TYPICAL RAMP



AFTER - TYPICAL RAMP



BEFORE



AFTER



BEFORE



AFTER

May 2011 – Differential Pricing Signs Installed



MAINLINE - BEFORE



MAINLINE - AFTER



RAMP - BEFORE



RAMP - AFTER

SIGN DESIGN

- All departments had design input - compromises & challenges
- PR needs versus traffic control
- Discussion of “negative” phrasing: “do not enter”, “do not stop”
- Research other agencies signing
- MUTCD guidance for All-ETC
- Signing directed mainly toward infrequent users, ex-cash customers
- Construction – fairly routine and completed without incidents – drivers accepted changes easily – the sign changes worked!

FINAL DESIGN





01/05/2009

2009 MUTCD

- Addresses combination of ETC, cash payments & ticket system
- Limited guidance on All-ETC, video tolling.
- “ALL TRAFFIC” signs used
- 2 tiered pricing
- Purple background for ETC logos (pictographs)
- Use of VMS for marketing/education purposes



THIS RAMP	
 ExpressToll	 License Plate Toll
\$.95	\$ 1.20
DO NOT STOP	

TOLLS	 ExpressToll	 License Plate Toll
2 AXLES	\$ 2.40	\$ 3.00
HIGHER TOLL FOR ADD'L AXLES		



2009 MUTCD: SIGN OPTIONS

1

CASH LANES ARE NOW CLOSED. ALL TRAFFIC MUST USE ETC LANES. ALL TOLL USERS THAT ARE NOT CURRENTLY TRANSPONDER ACCOUNT HOLDERS PLEASE JUST CONTINUE THROUGH THE LANES WITHOUT STOPPING. DON'T WORRY, WE'LL SEND YOU A BILL IN THE MAIL AND YOU'LL HAVE 28 DAYS TO PAY WITHOUT PENALTY. IF YOU DON'T PAY IN 28 DAYS THEN WE'LL IMPOSE A \$5 LATE FEE WHICH WILL INCREASE EVERY MONTH THAT YOUR ACCOUNT IS DELINQUENT. THEN WE'LL SEND YOUR ACCOUNT TO COLLECTIONS AND AFTER THAT THE UNPAID TOLLS WILL BECOME VIOLATIONS WHICH WILL BE SUBJECT TO ADDITIONAL PENALTIES AND POSSIBLE LEGAL ACTION THROUGH THE ADMINISTRATIVE COURT SYSTEM. CALL (303) 537-3470 OR LOG ON TO E470.COM IF YOU HAVE QUESTIONS. TRANSPONDER ACCOUNT HOLDERS SHOULD IGNORE THIS SIGN AND CONTINUE TO TRAVEL THROUGH THE TOLL LANES AND WE'LL DEDUCT THE COST FROM YOUR ACCOUNTS. DON'T WORRY – BE HAPPY!

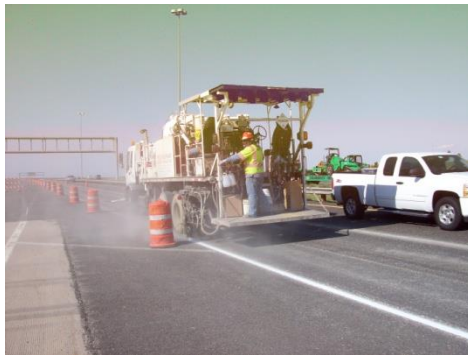
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ALL TRAFFIC



SUMMARY OF CHANGES RELATED TO ALL-ETC:

- 32 toll baskets (ACM's) removed
- 350 “cash” related signs removed
- 32,000 SF striping removed
- 130 new signs
- 272 new delineators
- 40 new “type 3” barricades
- 200 gallons new striping
- Approx. \$1m civil costs**
- 150 new “PIPS” infrared cameras (\$3m)
- 160 new “6c” antenna/readers (\$1.2m)



ACCOUNT MANAGEMENT OF VIDEO TOLL CUSTOMERS

- DMV coordination/wrong addresses
- Out of state vehicles
- Rental cars
- Temporary plates
- Mailing costs
- Video toll customers have to open an account to pay toll
- Image reviewers vs. toll collectors
- Violation/fee structure adjusted
- Improved, user friendly account management system - web (online) payments
- Improved toll collection system – PIPS cameras, 6C antennas



FROM
CASH



TO
THE
WEB



LESSONS LEARNED

- Introduce All-ETC in phases – allows time for PR efforts; infrequent customers can get used to changes and sign up for transponders
- Benefits – safety, environmental, efficiency
- Communication with customers. Know your customers - how many trips/year do cash customers make? Will they get a transponder if they only pay \$10 per year?
- Design input from all departments
- 2009 MUTCD has limited guidance for “All-ETC” – some improvisation may be needed
- What to do with unused infrastructure – develop?
- **Civil work is easy, account management is hard!**



QUESTIONS?

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