

Toll Signage Summary: Best Practices for Signing on Multi-Segment Managed Lane Networks

15TH INTERNATIONAL CONFERENCE ON MANAGED LANES
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Research by the HOV/Managed Use Lane Pool-fund Study

- * PFS is a dozen agencies that pool resources for short term applied research
- * Pricing signing is more complex as Regions now have multiple toll zones on a longer facility or multiple facilities (some intersecting)
- * Business rules: What is displayed on the roadside vs. other methods

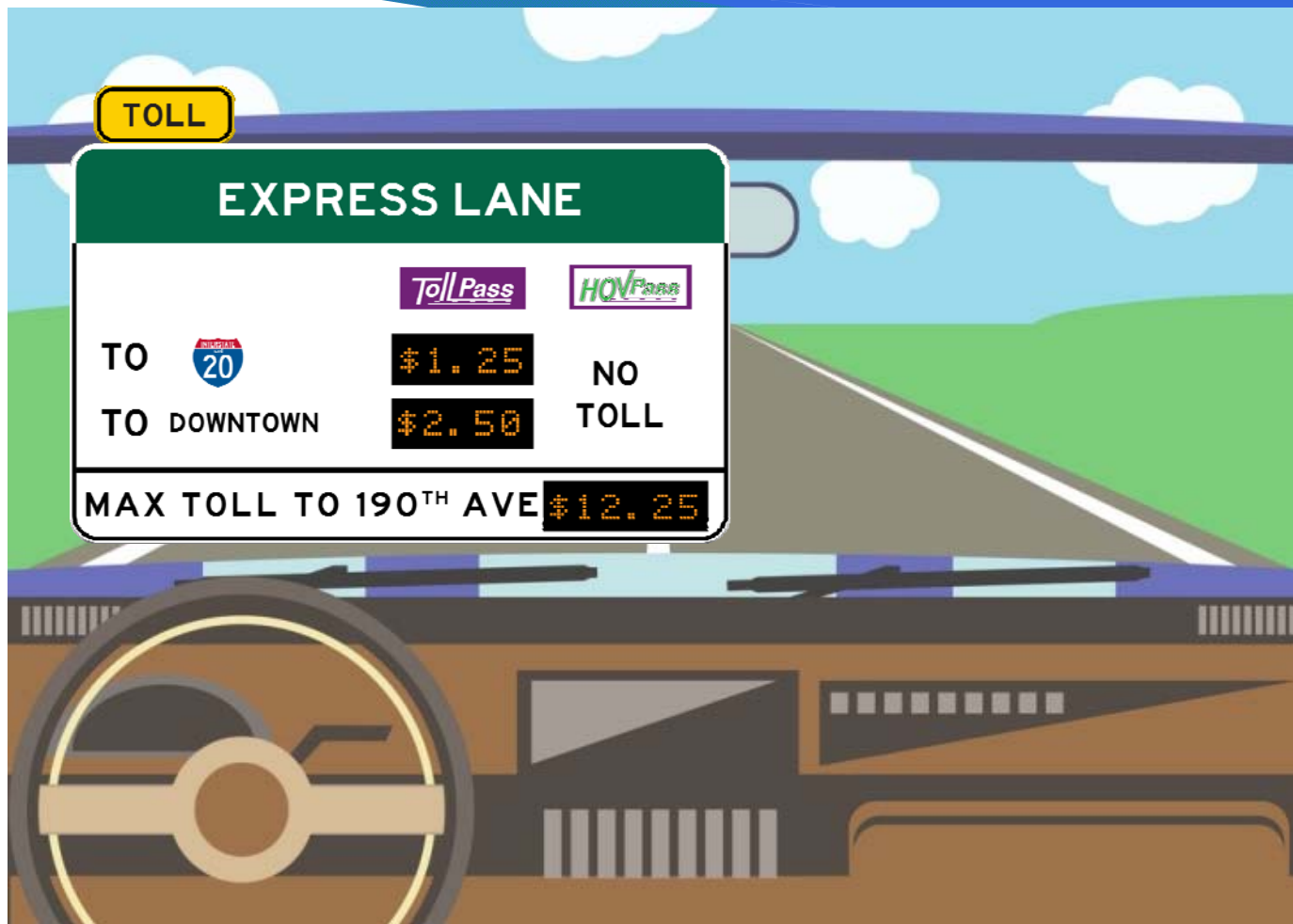


Research approach – Customer understanding of signing

- **Compiled best practice information**
- **Utilized a web-based, animated survey of users**
- **Survey link was distributed with the help of many in this room either as PFS members or TRB contacts**
 - 404 complete responses
 - Responses from 39 States, Provinces, or DC



Managed Lanes Entrance



Online Survey Results – Overview

- **Demographics were obtained.**
- **Transportation professionals were identified**
 - About 35% of respondents are professionally involved with Managed Lanes
- **Analysis phase underway**



Pricing Signing

- * **Zone Tolls**
- * **Maximum Tolls**
- * **Video tolling (surcharges)**



Sign Complexity



#14 - You are driving by yourself in the Express Lane. You are going to I-20. You have a TollPass. The toll you will pay is:

404 Responses		Avg Views: 1.29	
Answer	Count	Percent	
\$2.00	12	3.0 %	
\$1.50	381	94.3 %	
\$0.00 (no toll)	0	0.0 %	
Don't know	11	2.7 %	

#15 - If you did not have a TollPass would you pay the same amount?

404 Responses		Avg Views: 1.29	
Answer	Count	Percent	
Yes	7	1.7 %	
No	359	88.9 %	
Don't know	38	9.4 %	



Video Toll Rate Understanding



#7 - Driving by yourself with no transponder, the toll to go Downtown is:

419 Responses		Avg Views: 1.62	
Answer	Count	Percent	
\$1.25	12	2.9 %	
\$2.50	27	6.4 %	
\$3.00	320	76.4 %	
\$0.00	4	1.0 %	
Don't know	56	13.4 %	



Video Toll Understanding



#8 - You are driving with two other people in the Express Lane. You are going to I-20. You do not have an HOVPass or a TollPass.

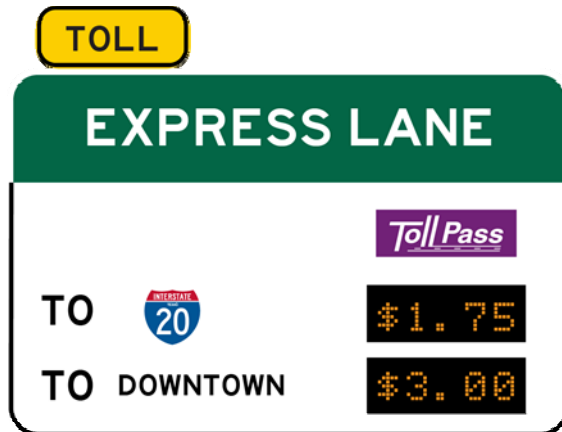
415 Responses		Avg Views: 1.64	
Answer	Count	Percent	
\$1.25	23	5.5 %	
\$1.75	287	69.2 %	
\$0.00 (no toll)	43	10.4 %	
Don't know	62	14.9 %	

#9 - Why did you chose \$0.00 (no toll)?

43 Responses		Avg Views: 1.44	
Answer	Count	Percent	
Don't know	1	2.3 %	
Vehicles with 2 or more people do not pay a toll because they are HOVs	35	81.4 %	
The vehicle has 3 people and it has an HOVPass	7	16.3 %	



Surcharge Understanding



#17 - You are driving by yourself in the Express Lane. You are going to I-20. You do not have a TollPass. The toll you will pay is:

404 Responses	Avg Views: 1.11	
Answer	Count	Percent
<i>\$1.75 plus 25%</i>	368	91.1 %
\$1.75 minus 25%	4	1.0 %
I will be treated like a violator and pay a fi	14	3.5 %
Don't know	18	4.5 %



Business Rule Signing

- * **HOV Requirements**
- * **Transponder usage**
- * **HOV Registration**
- * **Hours of Operation**



Transponder Requirement



#1 - Is a transponder required to enter the Express Lane?

447 Responses		Avg Views: 1.17	
Answer	Count	Percent	
Yes	64	14.3 %	
No	357	79.9 %	
Don't know	26	5.8 %	



Is a Transponder Required for HOVs



#2 - If your vehicle has three people but no transponder (no TollPass), are you allowed to get into the Express Lane?

440 Responses		Avg Views: 1.11	
Answer	Count	Percent	
Yes	192	43.6 %	
No	195	44.3 %	
Don't know	53	12.0 %	



Is a Transponder Required for HOVs



#3 - If your vehicle has three people but no transponder (no TollPass), are you allowed to get into the Express Lane?

438 Responses		Avg Views: 1.14	
Answer	Count	Percent	
Yes	211	48.2 %	
No	171	39.0 %	
Don't know	56	12.8 %	



Is a Transponder Required for HOVs



#4 - If your vehicle has three people but no transponder (no TollPass), are you allowed to get into the Express Lane?

436 Responses		Avg Views: 1.09
Answer	Count	Percent
Yes	380	87.2 %
No	31	7.1 %
Don't know	25	5.7 %



Logo Location



#5 - If your vehicle has three people but no transponder (no TollPass), will you have to pay a toll on the Express Lane?

429 Responses		Avg Views: 1.15	
Answer	Count	Percent	
Yes	265	61.8 %	
No	96	22.4 %	
Don't know	68	15.9 %	



Logo Location



#6 - If your vehicle has three people but no transponder (no TollPass), will you have to pay a toll on the Express Lane?

427 Responses		Avg Views: 1.13	
Answer	Count	Percent	
Yes	232	54.3 %	
No	137	32.1 %	
Don't know	58	13.6 %	



Likely Recommendations

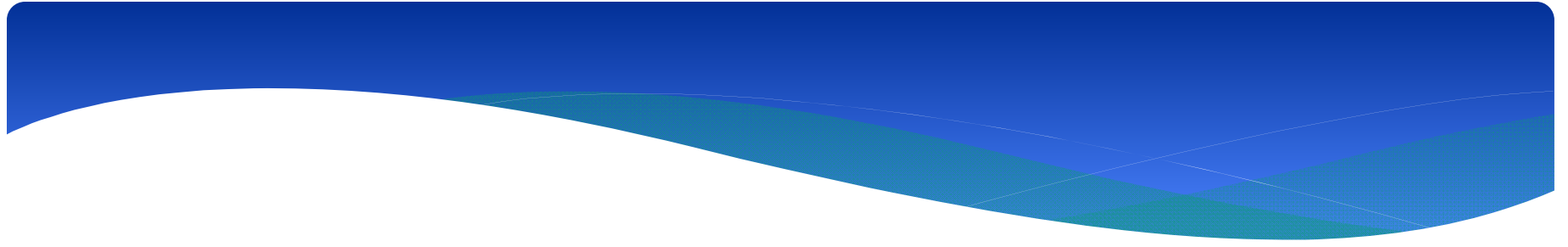
- * Pricing information is well understood.
- * The existing MUTCD standards seem to work well for displaying pricing information
- * The amount of messaging (complexity) on toll price signage does not appear to be a major limiting factor.
- * The concept of “Maximum Price” seems well understood.



Likely Recommendations

- * **Business Rule information seems less understood. (i.e. transponder requirements, registration, & HOV free)**
- * **Going forward: What is conveyed on the roadside versus other means**
- * **Continuity of Business Rules within a Region(s)**
- * **Potential for Guidance on Network Signing**





Thank you!