

Rationale:
Data on Users' Perceptions are Needed because –

- It is important to understand the driver perceptions that are said to underlie the LOS concept.
- Little has been done to compare the expert opinions that defined LOS with the lay-user perceptions of LOS.
- The present measures of effectiveness for LOS do not take intangible measures into account (Kittelson).
- The relationship between LOS category thresholds and user perception is not known (also Kittelson).

Related research:

- This paper is a continuation of work on commuters' QOS perceptions by Hall, Wakefield, Al-Kaisey, TRR 2000 (density/maneuverability, safety, and traveler information).
- Future publication by Hostovsky, Wakefield, Hall on rural commuters (ease of rural driving - e.g. low density), predictable travel time and steady travel speed, ample manoeuvrability).

Research Questions:

- Is the use of density as the primary criterion for defining level of service appropriate?
- If not, what other criteria should be considered in determining LOS?

Truck Drivers Are an Important Category of Driver:

- Trade between Canada and the United States is expected to double in the next 5 years - 80% by truck.
- Truck volumes are increasing at 7% per annum, trucks are now longer & wider.
- There has been a 50% increase in truck mileage between 1980 to 1989.
- Truck traffic is 30% of the volume on Hwy 401 at London, Ontario.
- It is reasonable to expect that different factors will affect truck drivers' perceptions of freeway QOS.
 - trucks' different performance characteristics,
 - truckers' reasons for being on the road,
 - and the amount of time spent on the road.

Methodology: Focus Group –
 (Focus groups are superior to questionnaires for detailed exploration of complex issues)

- Qualitative, exploratory
- Facilitated focus group – Ontario Trucking Association Road Knights Team (n=7)
- Inductive thematic interpretation
- Thick description (quotes)
- QSR N5 software
- Triangulation – peer review of results by American, Canadian and Ontario trucking associations

Theme Identification Criteria

- Intensity (number of text blocks)
- Relevance (to the research questions)
- Frequency (word counts)
- Universality (agreement with themes by other key informants)
- Emphasis (emotional strength of the discussion)

TABLE 1.1
Good Trip Factors Mentioned as Affecting Perceived Quality of Service – Ontario Road Knights Focus Group

FACTOR	Focus Group Mentions by Text Unit Blocks
“GOOD” TRIP FACTORS	44
• Traffic conditions	11
• Weather related	8
• Road/surface conditions	7
• Maneuverability	6
• Time sensitivity of cargo arrival	5
• Safety	3
• Scenery	3
• Straight freeways	1

TABLE 1.2
Bad Trip Factors Mentioned as Affecting Perceived Quality of Service – Ontario Road Knights Focus Group

FACTOR	Focus Group Mentions by Text Unit Blocks
“BAD” TRIP FACTORS	94
Attitudes toward other vehicles (road etiquette)	27
• Automobile drivers	11
• Tractor trailer drivers better drivers	6
• Sport utility vehicles (SUVs)	4
• Couriers	2
• Dump trucks	2
• Rail trucks	1
• Straight trucks	1
Freeway conditions:	27
• Lane restrictions/size	12
• Signage problems	8
• Lane markings	4
• Freeway exit problems	2
• Freeways designed for cars, not trucks	1
Road rage	15
Traffic Conditions	11
Weather	8
Rubber-necking at accidents	6

TABLE 1.3
Miscellaneous Factors Mentioned as Affecting Perceived Quality of Service – Ontario Road Knights Focus Group

Regional quality of service perceptions	23
• Named State/Province/city variations	19
• Toronto specific comments	3
• Differing perceptions of congestions	1
Urban-rural freeway differences	6
• Rural accidents	4
• Slower pace in rural	1
• Construction delays	1

ABSTRACT:

Trucks make up a significant and growing portion of the traffic on freeways. This paper deals with the perceptions of tractor-trailer drivers regarding the Quality of Service on freeways, with a focus on the factors that are important to this group of road users. Perceptions were determined using the standard qualitative inductive analysis approach through a focus group with professional tractor-trailer drivers. The results were compared with QOS focus groups held for urban and rural freeway commuters. Freeway conditions in general were the most frequently mentioned factors, and encompassed a variety of considerations. The three variables that together describe traffic conditions were all mentioned with regard to QOS: travel time (or speed); traffic density (or maneuverability); and traffic 'flow'. Likely the most significant finding is that it is not traffic density that matters to them, rather it is traffic flow. It appears that there is a comfortable operating range of highway speeds that does not require much braking and acceleration related gear-changing. Other important themes included, weather, attitudes toward other drivers, and “road rage” (i.e. aggressive driving). Participants also responded to questions about regional differences in QOS. Safety was an issue that transcended or overlapped with many other issues.



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Truckers are concerned about the physical conditions of the freeway:

- Lane restrictions, lane width, lane markings
- Signage (e.g. to exit the freeway)
- Weather conditions, especially snow removal: “clear and clean”,
- Road surfaces - prefer even, non-bumpy roads so that “you’re rolling along nice and smooth, you’re not bouncing up and down all the time”.

Trucker are concerned about traffic conditions:

- “What makes a good trip for me? No gridlock.”
- Truckers are also concerned that to improve traffic conditions during the day (i.e. for commuters), freeways are being closed at night for maintenance and construction, which is considered “premium truck traffic time”.

Steady traffic flow is very important to truckers:

“The speeding up and slowing down isn't a huge issue, as I say. If you're in that range from 80 to 100, or 90 to 110 or whatever the range might be, that's a nice little range and you can live in that. You've got to slow down a little bit, but that's not braking. That's just getting off the accelerator as flow changes. But you're not jumping from 20 km to 100 km, but you're also not jumping from 100 to 20 or 30 km...So if it's flowing, if it's just moving and you're not on the brake and off the brake and up 3 or 4 or 5 gears and down 3 or 4 or 5 gears, then you're comfortable in what you're doing. It's just...there's no stress and the people weaving in and out aren't a huge problem...”

Maneuverability is an issue for truckers:

- Truckers mentioned “can't maneuver around like cars can, we can't accelerate like a car can...” therefore it is important to them to have the centre lane open.
- “...It's nice to have that centre lane open where it should be...Keeping people out of that left lane, the middle lane. Trying to keep them over the right so we can get around. And we need that for fuel economy, safety, you've got the cushion.”

Truckers' Attitudes Toward Other Drivers:

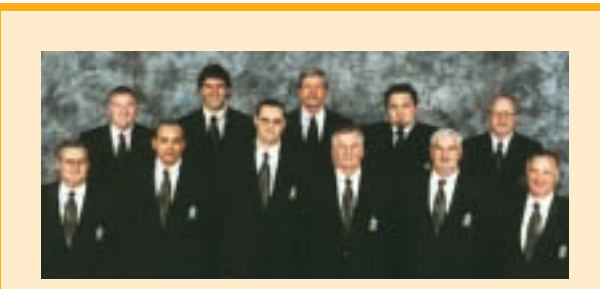
- Courteous interplay - “If you're looking for things that make a good trip, one thing I find is people's attitude towards a truck. I find I have a really good trip, case in point, I'm going to signal and a car flashes me to let me over and it's that acknowledgement that people are actually helping you out.”
- Some hostility displayed toward drivers of automobiles, SUVs and other types of trucks (e.g. dump trucks).

Aggressive driving is a major safety concern to truckers:

- Truckers complained about being cut-off, the application of brakes in front of them (i.e., to slow them down), “flipping you the bird” (i.e., the middle finger), being stared at, have seen violent road rage stemming from aggressive driving behavior.
- “One of the things that makes a good trip is not encountering as much road rage as possible throughout the trip.”
- “85% of the time”, in answer to the question, “how often do you encounter road rage on your daily trips?”
- “...when they can resolve the issue of flow, they will probably resolve 90% of the rage...”

CONCLUSIONS:

- Comparisons With Other Driving Groups**
 - Commuters – main concerns are travel time, density, maneuverability, safety, information.
 - Truckers – it is not traffic density that matters to them, rather it is traffic “flow”.
- Level of Service Implications**
 - Continue use of density, but also pay attention to the steadiness of flow on facilities when trucks constitute a larger proportion of the total traffic.
 - Introduce safety concerns explicitly in the identification of LOS.
 - Physical condition of the road - it is difficult to design LOS measures that deal with maintenance.
- Results need to be followed up by a detailed quantitative analysis with a larger, statistically representative sample**



ROAD KNIGHT TEAM

“The OTA Road Knights Team is a group of 10 professional transport drivers with first class driving records who make presentations on how car and truck drivers can safely share the road. The team's mission is to help make our roadways safer by encouraging all road users to be partners in safety”

<http://www.ontruck.org/knights>