Traffic Control, Traffic Management, and Disruption Management during Road Construction

For
Municipalities, Agencies
Utilities and Private Developers

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Question ??

In the race between
the tortoise and the hare,
who was first across the finish line?

When we re-assign a portion of the RoW
everyone is *affected*

- Local Community & Businesses
- Emergency Services
- Pedestrians and Cyclists
- Transit & Taxis
- Goods Movements & Deliveries
- Car Travellers

Disruption

Disturbance
Inconvenience
Shambles
Ruckus
Upheaval
Pain
Turmoil
Interruption
Obstruction
Nuisance

Public Opinion

Construction is a Pain in the Ass Parsagus

Project Evaluation Culture

- Was the project finished on time?
- Was the project finished on budget?

- Who is going to ask: Did you cause too much disruption

Content

A. Ten “must do” things **prior** to contract award
B. Five simple steps during construction
C. Managing the Contractor
D. Conclusions (Recommendations)

1. Establish Realistic Expectations for All Users

- Local Access/Services
- Area Traffic and Transit Movements
- Construction (schedule, noise, vibration, air quality, hours)
- Project & Traveler Information

#1 of 10 “Must Do’s”

2. Select Disruption Management Tool

Project specific:

- **Traffic Control Plan**
  (mandatory)
- **Traffic Management Plan**
  (+area transportation)
- **Disruption Management Plan**
  (+businesses/residents)

#2 of 10 “Must Do’s”

2. TCP or TMP or DMP

- Depends on:
  - Capacity reduction
  - Extent of disruption
  - Duration
  - Location
- Example
  - 0-50% capacity reduction……. TCP
  - 40-70% capacity reduction……. TMP +TCP
  - 60-100% capacity reduction……DMP +TCP

#2 of 10 “Must Do’s”

3. Establish Requirements for Preparing TCPs/TMPs/DMPs

- Work Zone Boundaries and Durations
- Vehicle Access (work and emergency)
- Intersection Operations +Mid-block
- Signals, Signs & PM mods
- Transit Operations
- Parking

#3 of 10 “Must Do’s”

4. Adopt Key Principles for Work Zone Staging

1) Get In, Get Out, Stay Out

2) Short Duration Extreme Pain preferred to Long Duration Lingering “Mild” Pain

3) Avoid “abandoned” work zones (show activity)

#4 of 10 “Must Do’s”

4. Plan First Cut of Work Zone Staging

- To be prescriptive or not to be prescriptive
- Every construction stage has implications for local businesses, local residents and area transportation
- To be proactive we need to assess options during design (***too late if left till after contract award***)

#4 of 10 “Must Do’s”

5. Plan Transit Service

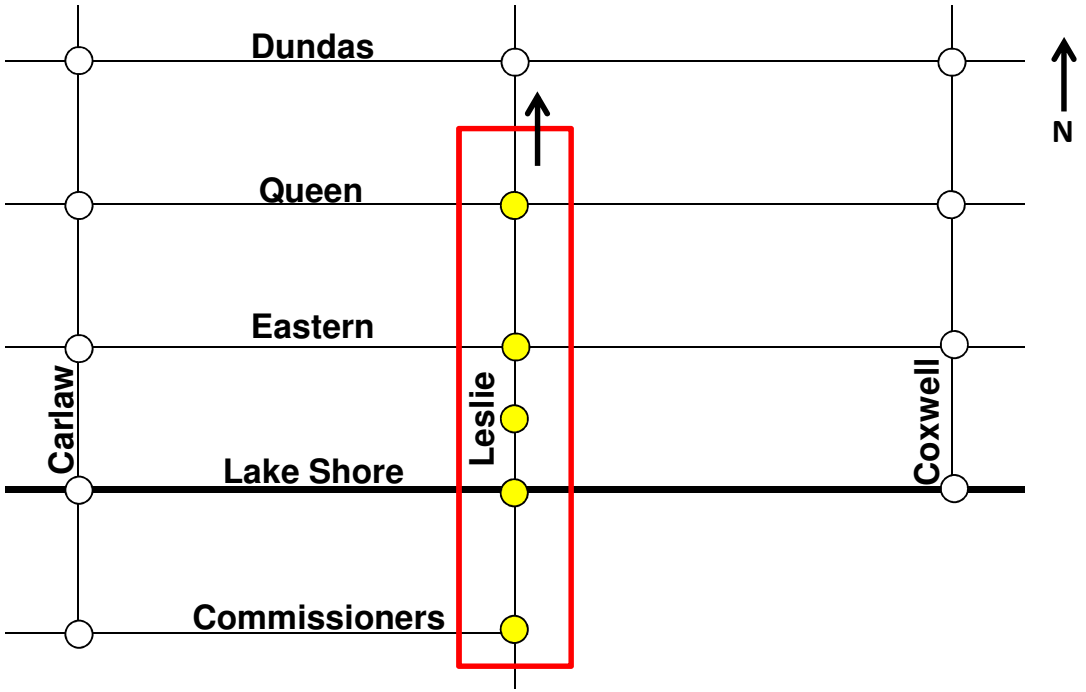
- Route/Stops/Schedule (advance notice)
- Traveler information
- Traffic control requirements (signal timing changes)
- Preferred treatments (queue jump lanes)

6. Identify Roles and Responsibilities

- For signals/signs/PMs etc
  - during design and during construction
  - within and outside “construction area envelope”
- Who designs/approves design?
- Who implements/approves/maintains?

#6 of 10 “Must Do’s”

6. Roles and Responsibilities cont.
Construction Area Envelope



6 Roles and Responsibilities cont

- Need to fine tune for each project
- Need to have ALL staff buy-in (City, TTC, Agencies, Utilities)
- Need to incorporate into specifications
- Need to repeat and remind at pre-construction meeting(s)

This is the way we are going to manage the project as a team

#6 of 10 “Must Do’s”

Working as a Team

Contractor

Owner

7. Define Traffic Monitoring Program

- Cameras/Monitors?
- Volume Counts?
- Speed Measurements?
- Collision Tracking?
- Complaints

#7 of 10 “Must Do’s”

8. Assess Quality of Subsurface Investigations

- Underground infrastructure….the major cause of delays and budget deviations
- Major Impact on disruption expectations
- CSA S250 Underground Utility Mapping Standard
- Risk analysis

#8 of 10 “Must Do’s”

9. Identify Competing Adjacent Projects

- Coordinate Traffic Management Plans
- Enforce advance notice requirements
- Include both projects and activities
- The challenge of “emergency work”

#9 of 10 “Must Do’s”

10. Design Communication/Outreach Program

- Construction Liaison Meetings
- Construction Liaison Officers/Local Office
- Catchment Area
- Frequency

#10 of 10 “Must Do’s”

B. Five Simple Steps During Construction

1. Contractor Plans Ahead; Submits Work Zone Stages
2. Develop TMP or DMP
3. Assess: can we make It work

- **Iterative Process**

4. Communicate What to Expect
5. Implement

B. Benefits of 5 Simple Steps

Adequate Time to:

- address options
- prepare mitigating measures
- Conduct community notification
- Implement

Eliminate Thursday to Monday last minute scramble

C. Managing the Contractor

- Contractor performance
  - Payment schedule
  - Penalties & Bonuses

Contract Specifications

C. Contract Specifications for Traffic/Disruption Management

- The Weakest Link
- $$ often included in general overhead
- Zero incentive for the contractor to perform
- Need to change specs
- Employ independent traffic contractor

C. Contract Specifications cont

- If the contractor is late submitting work zone staging, do we issue a “Stop Work Order”?
- If the contractor deviates from approved disruption management plan, do we issue a “Stop Work Order”?

Alternative Procurement Strategies

- Lane Rental
- A+B Bidding

E. Recommendations

1. Plan, plan, plan, prior to contract award (10)
    1) Realistic Expectations
    2) Work Zone staging first cut (how prescriptive?)
    3) Roles & Responsibilities
    4) Subsurface investigations
    5) Communications/outreach
    6) Contract specifications

Lack of Planning

Notes

1. Of the 32 slides in this presentation 17 address issues that need to be resolved **prior to contract award**
2. In the race between the tortoise and the hare, who was first across the finish line?

Additional Available Detail

- Requirements for TMPs and DMPs
- Roles and Responsibilities Tables
- Guidelines for Pay Duty Police
- Transit Planning
- Subsurface Investigations

Thank-You

Questions?