

Best Practices in Transportation Master Planning

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Abstract

In the last four years, MMM's Thornhill office has worked on a host of transportation master plans (TMPs) for jurisdictions across Ontario, large and small, urban and suburban. Through these projects, MMM has gained valuable insight into best practices to develop a TMP that will lay the transportation framework in support of a healthy, vibrant community.

This paper relates MMM's experience on a number of TMP projects and provide helpful tips for how to get the most out of the transportation planning process. Topics addressed include:

- **Public consultation** – increasing participation through innovative online tools, study branding, public notices and the choice of venues for face-to-face meetings;
- **Horizon year conditions analysis** – considering not only travel demand model results but also other factors such as benefits for active transportation, transit, goods movement and other measures;
- **Multi-modal integration** – using a complete streets approach to plan for all modes of transportation and encourage healthy, vibrant communities;
- **Policy development** – linking the TMP to the Official Plan; and
- **The final report** – creating a useful, easy-to-read document that provides all of the key information in a format the can be understood by elected officials, stakeholders and the general public.

Written from the consultant's perspective, the paper addresses ways to manage teams and incorporate work from different disciplines into the final document. It also includes a segment on managing expectations and relationships with the client Project Manager and Steering Committee.

While the lessons learned and identified best practices will be based on eight examples from Ontario, this information has broad applicability to other TMPs that could be prepared for jurisdictions nationwide. The reader will come away with a frank assessment of what has worked and what has been challenging, and will be better prepared to undertake a successful transportation master plan.

Introduction

In the last four years, MMM's Thornhill office has worked on a host of transportation master plans (TMPs) for jurisdictions across Ontario, from northern Ontario to the Greater Toronto Area. MMM has completed TMPs for towns and cities as well as counties and for cities as small as 30,000 people to cities with population over 500,000. While no two TMPs are the same, through these projects, MMM has gained valuable insight into best practices to help a jurisdiction develop a TMP that will establish an action plan for a transportation network that supports healthy, vibrant communities.

This paper addresses the following aspects of TMPs:

- Public consultation;
- Horizon year conditions analysis;
- Multi-modal integration;
- Policy development;
- The final report; and
- Project management.

Written from the consultant's perspective, the paper presents lessons learned and best practices that the author has learned having worked on eight different TMPs in the last four years. This paper represents experience gained from working in the following jurisdictions:

- Ajax;
- Bolton community of Caledon;
- Brampton;
- Burlington;
- Greater Sudbury;
- Leamington;
- Oshawa; and
- Simcoe County.

While based on examples from Ontario, the information in this paper has broad applicability to other TMPs that could be prepared for jurisdictions nationwide. The paper provides a frank assessment of what has worked and what has been challenging, and can help guide consultants and governments to be better prepared to undertake a successful transportation master plan.

Public Consultation

One lesson learned about public consultation that is consistent throughout all of these TMPs is that consultation must be taken to the people – to where they are and to where they want to be. Participating in a TMP must be convenient for people. Requiring people to make a special trip will often weed out all but the most resolute participants.

As a way of taking the consultation to the people, MMM held Public Information Centres (PICs) in conjunction with already scheduled events, many of which attracted large crowds of pass by traffic. One event that had great success was the Beeton Honey and Garden Festival in Simcoe County. The festival had over 175 different booths lined along multiple blocks of the community of Beeton. The TMP display was part of a multi-faceted County display of projects and services. Literally thousands of people attended the event, and many of these walked by the display for the Simcoe County TMP. The pass by traffic generated scores of visitors to the TMP booth and provided the opportunity to spread the word about the study and solicit feedback from a wide swath of the population.

Recreation centres and community centres are another popular venue for public meetings. In Leamington, MMM set up the PIC in the main entryway of the main recreation facility in the city. Everyone entering or exiting the facility had to walk right by the meeting display. This location was convenient for the people who came expressly to view the materials and also attracted dozens of others whose original trip purpose was to visit the recreation facility.

Simply being at a recreation facility does not guarantee success. In two other examples, the PIC was located in back rooms or side rooms of a recreation facility. In these instances, the pass by traffic did not see the meeting or was not compelled to stop. The majority of these meeting attendees were people who came solely to see the presentation materials.

The ideal location for a PIC is in a location where people want to be for reasons in addition to the TMP. For this reason, City Hall often is not a good location for a public meeting. Unless there are other functions going on at City Hall at the same time, there is little chance that the public will naturally be inclined to visit City Hall in the evening to view TMP presentation materials. Only those with the express intent of viewing materials will attend. In MMM's experience, this equates to a low turnout (less than 20 attendees, and often less than 10 attendees, regardless the population of the city or county).

The best "turnout" for a public meeting out of these eight example TMP was in the Brampton TMP Update, when the project team went into people's homes and offices by providing an online tool that was open 24 hours a day for a period of two or three months to solicit feedback. The first round of public engagement using the online tool netted over 1,000 visits on the tool's webpage, with over 400 of these visits supplying a total of over 1,000 data points. This amount of visits and this number of data points of feedback was seen as a huge success when compared to the in-person PIC held for the City's previous TMP, which was reported to have been attended by fewer than 30 people.

Online tools can vary from a simple online survey to more advanced websites that can be developed and customized to allow the participant to rank transportation priorities, comment on how available transportation funding should be used and identify locations

on a map and indicate challenges or opportunities for transportation improvements. Online tools can be utilized in conjunction with face-to-face public meetings and offer a good way to collect and collate data through automated processes. Online tools also provide the ability for respondents to reply when it is convenient for them, even if they are not available to attend a one-time meeting.

Getting people to attend and participate in a PIC is one part of consultation. Soliciting the type of feedback that will be useful to the TMP is another important element of consultation. While all comments are welcome and valid, those that are made toward the goals and objectives of the TMP may have more impact to the development of the TMP.

With that in mind, designing questionnaires and online tools to gather public feedback is a bit like “Jeopardy” – one needs to know the answer in order to form the question. The project team needs to understand what type of information would be useful to help shape the TMP and then structure the consultation materials in a way to solicit feedback that will be beneficial to the development of the TMP. Questionnaires, hand written or online, need to be designed with questions whose answers will further the study.

Public consultation is an essential component of TMPs. Proper planning of meeting venues and consultation materials, including public input forms, will help make public engagement more meaningful and public input more useful.

Horizon Year Conditions Analysis

TMPs include an analysis of future alternative transportation scenarios in an effort to determine the preferred transportation network. A major component of the analysis of future travel conditions usually entails the use of a travel demand model.

Travel demand models typically are designed to predict automobile travel demand. Volume to capacity plots generated from these models indicate where roads are expected to approach, or even exceed, capacity. To solve the capacity problem, more roadway lanes are added to the model, which results in the widening or extension of existing roads or construction of new roads.

As the only way to quantify improvements in most transportation models, road construction often is recommended. Invariably, this additional roadway capacity often generates additional trips that quickly absorb the capacity. Adding capacity in urban areas is a self-fulfilling prophecy of attracting additional vehicle trips to utilize this capacity. While some road projects often are needed, additional criteria should be considered to help optimize road projects and to think beyond solely vehicular capacity.

MMM has developed and continually is refining and tailoring to each TMP a multiple account evaluation (MAE) framework to consider a host of factors when analyzing transportation alternatives. Criteria that MMM has used include:

- Goods movement: would improving a road facilitate better goods movement?;
- Active transportation: would improving a road enable appropriate active transportation facilities to be constructed, if not in place, or improved, if already present?;
- Transit: would the road improvement facilitate better transit service so that buses would not be delayed in congestion and would be able to better adhere to reliable schedules?;
- Environment: what impact would a road improvement or new road construction have on the environment; and
- Cost: would the improvement be cost efficient, compared to other alternatives?

The application of these criteria to the analysis of transportation alternatives is described in greater detail in the paper *Efficient Transportation Networks: A Multi-modal Perspective*, also presented at the CITE Regina 2015 conference.

Multi-modal Integration

A common message heard at public meetings for transportation master plans throughout Ontario is that the public desires travel options to reach their destinations. Seldom are road widenings or road improvements recommended at public meetings. Most often, those who participate in TMP meetings seek increased transit service and more active transportation facilities.

Recognizing public input and the difficulty in building our way out of congestion, it is imperative that a transportation master plan consider multi-modal integration. One success that MMM has had has been in coupling an active transportation master plan concurrent with the transportation master plan. In doing so, the appropriate active transportation facility can be planned and phased for implementation at the same time as the road improvement, which makes more efficient use of construction monies and helps get active transportation projects built in a timelier manner.

Transit planning sometimes encompasses a master plan of its own, but naturally needs to be considered in a TMP. Linking transit improvements to road construction also helps to maximize the investments in transportation infrastructure.

Goods movement is intricately linked to the transportation network. Planning and policy for this element can assist in providing appropriate infrastructure for this important part of many local economies.

A transportation demand management plan, policy or guidance often is included in a TMP and can be used to knit together various multi-modal plans and strategies under one umbrella policy.

Policy Development

Policy development and review has become a more important part of TMPs recently as many jurisdictions align their TMP with their Official Plan review. Many jurisdictions are looking for a review and update of the transportation policies in their Official Plan in order to reflect the direction of the TMP.

One policy that is being requested more and more is a “complete streets” policy. “Complete streets” are streets that are planned, designed, constructed, operated and maintained for all modes of transportation and all transportation system users. Adopting a policy of “complete streets” often leads to reviewing and revising related policies or practices on road classification, road hierarchy, road design guidelines and sidewalks.

The Final Report

The TMP study should start with the final report in mind. From the beginning, there should be an active dialogue regarding the contents, layout and branding of the TMP report. MMM regularly starts the Table of Contents of the TMP after the project initiation meeting so that all sides know what to expect in the final document.

There should be a clear understanding of the length of the final report and the level of detail required in the final report. Some jurisdictions are choosing to go with a more nimble document, closer to an Executive Summary, and leave the details to a technical appendix. It is important that enough of the detail is provided in the final report so that the reader can understand the process used to develop the TMP recommendations.

Whatever the length of the final report, it is paramount to summarize all TMP recommendations within the TMP report. The TMP report is an action plan and staff and Council need clear direction on the recommended next steps in order to begin to implement the TMP.

Project Management

TMPs are complex assignments that involve multiple disciplines working together to meet a common vision and objectives. They involve multiple staff on the consulting side of the team, and often include a steering committee of multiple staff from different backgrounds for the government entity commissioning the TMP. This section presents lessons learned on how to manage these projects. Many of the lessons are not specific to TMPs alone, but also could be applied to other complex projects.

It is important to have one person recognized as the client project manager. That project manager should be the one conveying direction to the consulting team. The project manager should collect comments from client staff and vet the comments before delivering them to the consulting team. Vetting the comments is a critical step for the project manager, as it is a way to make sure that the comments provide clear

direction that is within the overall scope of the assignment. Vetting the comments provides the opportunity to eliminate conflicting comments before they make their way to the consulting team.

TMPs often take 12 months or more to produce. Due to the elongated schedule, it is important to define, refine and maintain a project schedule to keep the consulting team and client project management team aware of expected meeting dates and delivery dates for reports. Maintaining the schedule will allow both sides to see the ramifications of changes to the schedule in terms of review time and scheduled date for deliverables. Updating the schedule will help to show if corrective action needs to be taken to meet certain deadlines.

Steering committees can be unwieldy in size. It is recommended that the core client team be no more than four people in size, with one person still recognized as the project manager who will convey the client's wishes. Steering Committees of more than four people may be full of well-intentioned people, but these people may have different priorities that do not completely line up with the scope of the TMP. A smaller team is useful to focus on the tasks at hand.

Conclusion

Transportation master plans are action plans that can positively impact large numbers of people by setting into motion the steps needed to meet short term and long term mobility needs. To get the greatest return on the investment in the TMP, this paper has shown through lessons learned the following axioms:

- Public consultation should be carefully planned to meet the public where they are;
- Future conditions analysis should consider multiple evaluation factors;
- Multi-modal planning for modes other than cars should be considered to the greatest extent possible;
- The TMP should be linked to the Official Plan, with TMP policies incorporated into the Official Plan;
- The final TMP report should summarize recommended actions; and
- An empowered leader from the client side and the consulting side should work together to steer the project to meet its goals and objectives.

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