Plan for Transportation Tasks: Symmes Special Permit

Rev. 3 11/18/04

Goals:

- Understand to the best of our ability the transportation performance of the area around the Symmes property and the needed mitigations.
- Make recommendations, in a timely manner, to the ARB for the Special Permit discussions.
- Wherever possible, use the developers consultants for primary work with checks by independent consultant where needed.
- Be sure to include post-development traffic measurements as a part of the Special Permit.

Deliverables:

1. Recommendations to the ARB for use in permitting process.
2. Further recommendations to the BoS if required.

Philosophy:

The area is a system of roadways where changes to one have an impact on others. Address first those with the dominant flow because problems there will have significant impact on roadways with smaller flows. Proceed on a step-by-step basis.

Task 1: List all of the possible mitigation actions listed in both the HSH and FST reports, and ensure that each action is considered in one of the succeeding tasks. See Table 1.

Task 2: Analysis of Summer Street Corridor (from Mill to Brattle)

2.1 Optimize the coordinated Brattle/Summer and Hospital/Summer Intersections for AM and PM peak hours for the following configurations:

- **As in current plan (no right turn lane on Summer, no added crosswalk)**
- **Add right turn lane from Summer St. to Hospital Road**
- **Add "diagonal" crosswalk as suggested by FST**
- **Analyze combination of right turn lane and diagonal crosswalk.**
- **Examine for performance at 2.5% (in report) and for +10%.**
    - **Optimize so that the queues on Summer St. westbound are cleared for each signal cycle.**
    - **Examine delays for each direction, queue lengths on Summer St. (50% and 85%), Hospital, and Hemlock.**
    - **Consider expected pedestrian usage**
    - **Evaluate impact on motorists, pedestrians and cyclists.**
- **Make a provisional recommendation re intersections.**

2.2 **Evaluate whether Grove / Summer and Oak Hill / Summer meet MUTCD warrants for a traffic signal**.

2.3 Analyze the performance of the three coordinated intersections (Brattle, Hospital, Grove/Oak hills) for AM and PM peak hours using +2.5% and 10% growth from measured data in March 04.

- **Make provisional recommendations re Grove/Oak Hill signal.**

2.4 Add an optimized Mill/Summer to the corridor. Analyze the performance of the total corridor to check results.

2.5 Make recommendation for intersections along this corridor. **Coordinate with Mass Highways prior to recommendations.**

* *Recommend that developer perform these tasks.*

Task 3: Revisit Trip Distribution, Trip Generation and Woodside Lane

[Note: Trip distribution will be greatly impacted by the performance of the Summer Street corridor and the queues on Hospital Road. Thus, these should be determined first and used in the trip distribution calculations. Recommendation is that 3.1 and 3.2 be delayed until 2.1 is completed, but that 3.8 proceed.

3.1 *Revise estimates of trip distribution, based upon comments in peer review and modifications to timing estimates based upon the results from Task 1. Consider a variance in the results of the order of 20%.

3.2 ***Compute revised trips, carrying forward the plus and minus 20%.**

3.3 Do the traffic volumes on Hospital and Summer fall within the ranges already considered?

3.4 Solicit information from Fire and Police re emergency access to site.

3.5 Develop specific decision criteria for the egress to Woodside Lane, based on TAC's existing general decision criteria.

3.6 List and consider potential safety improvements for Woodside Lane.

- Sidewalks
- Roadway modifications
- Which are feasible and what is the cost?

3.7 Consider projected traffic volumes with Woodside open at peak hours. Compare to standard safety criteria for line of sight, etc.

- **Attempt to refine estimate via license plate cordon survey at Brattle/Millett, Woodside/Hospital, and Woodside/Oak Hill?**
- **Impact on Brattle and Millett if Woodside access open.**

3.8 Consider how a one-way entrance could be implemented successfully.

3.9 Prepare recommendation for Woodside Lane and why.

Task 4: Roadway Mitigations

4.1 If no signal at Grove/Summer and Oak Hill/Summer:

- What other options are available to improve left turn performance?
  - Intersection redesign? • Other

4.2 Consider Traffic Calming measures for Oak Hill Drive:

- Stop signs on Woodside and Oak Hill
- Redesign of Oak Hill/Summer intersection
- Other

4.3 Other Roadways

- Driving to schools

4.4 Prepare specific recommendations.

Task 5: Pedestrian and Bicycles

5.1 Identify important pedestrian/bike routes for abutters, future site occupants, and visitors

- Coordinate with ABAC, Walking in Arlington, Schools, and abutters. Potential routes include schools, Mass Ave, buses, Vista Park, medical facilities, etc.

4.2 Examine methods to accommodate usage:

- additional sidewalks
- crosswalks and pedestrian signals

4.3 Make recommendations, including on the site itself.

Task 6: Transit

6.1 Examine public transit availability

- Rts 67, 350, 77/79, …

6.2 What part of trip distributions would be a potential for transit or a shuttle to Alewife?

6.3 How to estimate potential riders for medical facility?

6.4 Work with MBTA, CTPS etc to accommodate.

* *Recommend that developer perform these tasks.*

Table 1: Symmes Transportation Mitigation Matrix

rev. 2: 10/14/04

Mitigation Items	Source	Assigned Task #
Additional crosswalk on Hospital Road approach to Summer Street	FST p 5	Task 1
Crosswalk from NW corner of Brattle to SE corner of Brattle	FST p 5	Task 1
Redesign Summer/Brattle intersection to include signal at Hospital Road	HSH p 58	Task 1
Right turn lane from Summer St westbound to Hospital Road	TAC	Task 1
Woodside lane access open only to emergency vehicle, pedestrian, bike	FST p 6	Task 2
Woodside lane one-way entering the site	HSH p 58	Task 2
Monitor traffic at Woodside lane driveway, report to TAC	HSH p 58	Task 2
Sign Hospital Road north of the Medical Building at Resident/Bus only	HSH p 56	Task 2
Sidewalk on Woodside Lane	TAC	Task 2
Sight line improvements at Grove Street	FST p 6	Task 3
Pedestrian only signal at Grove Street	FST p 6	Task 3
Full signal at Grove Street	FST p 6	Task 3
Traffic Calming on Oak Hill Drive	FST p 6	Task 3
Adjust signal timings at Summer/Mill	HSH p 58	Task 3
Adjust signal timings at Mass. Ave/Brattle	HSH p 59	Task 3
4-way stop at Woodside Oak Hill	HSH p 59	Task 3
Signal at Summer/Oak Hill	HSH p 59	Task 3
Redesign geometry of Summer/Oak Hill Drive intersection (may affect the crosswalk)	TAC	Task 3
Sidewalk on northside of Summer Street: Hospital Rd to Oak Hill Drive	FST p 6	Task 4
Hospital Road sidewalk, at least on east side	FST p 6	Task 4
Other sidewalk enhancements as identified from pedestrian flow patterns	FST p 6	Task 4
Pedestrian path from Hospital Road to Summer Street (near Grove)	HSH p 59	Task 4
Pedestrian safety improvements at nearby intersections affected by school district changes	HSH p 59	Task 4
Shuttle service to Alewife	FST p 6	Task 5
Increase MBTA service to site	HSH p 59	Task 5
Encourage Transportation Demand Management among employers on site	HSH p 59	Task 5

Sources: FST letter and HSH final report

* *Recommend that developer perform these tasks.*