Christopher G. Parker, AICP
Assistant City Manager
Planning and Strategic Initiatives
c.parker@dover.nh.gov

288 Central Avenue
Dover, New Hampshire 03820-4169

(603) 516-6008
Fax: (603) 516-6097
www.dover.nh.gov

City of Dover, New Hampshire

Department of Planning & Community Development

TRAFFIC IMPACT ASSESSMENT AND ANALYSIS STANDARDS

Certain development projects proposed in the City of Dover will require a study to ascertain the potential impacts to the existing traffic conditions and safety in the vicinity of the project. The purpose of this document is to describe the standards for these studies.

Source of Requirement: The requirement for the preparation of a Traffic Impact Assessment and Analysis is contained in Chapter 149-13-A(20) of the Site Review Regulations and in Chapter 155-9-I of the Land Subdivision Regulations.

Procedures: Applicants are strongly encouraged to consult with the staff of the Planning Department early in the project design regarding the scoping of the Traffic Impact Assessment and Analysis, including consideration of the study area boundary and any special considerations for the area that the development is proposed. A draft of the Traffic Impact Assessment and Analysis shall be submitted as part of a complete package prior to the Technical Review Committee meeting so that it can be included in the discussion. A complete version of the analysis shall be finished prior to the first meeting at which the application will be presented to the Planning Board so that abutters and the Planning Board will have an opportunity for review.

Type of Analysis Required: The applicant shall provide a Traffic Impact Assessment and Analysis to document existing traffic conditions in the vicinity of a proposed development project, to describe the volume and effect of projected traffic generated by the proposed project, and to identify measures proposed to mitigate any adverse impacts on traffic. All analyses must meet the minimum requirements of a "Standard" analysis. If any of the following thresholds apply, then an "Advanced" analysis must be completed:

1. Trip generation exceeding 1,000 average daily trips or 100 peak hour trips. Peak hour is defined as any of the following:
    a. AM peak hour (7-9 AM);
    b. PM peak hour (4-6 PM);
    c. Saturday midday peak hour (11AM-1PM); and
    d. peak hour generator for certain land uses (e.g., school, movie theater) if it falls outside the three previously listed periods. Analysis of Saturday midday peak only applies to retail uses.
2. The Planning Department may require an "Advanced" analysis because of special circumstances.

Standard Analysis Requirements

The primary objective of the "Standard" analysis is to justify that an "Advanced" analysis is not required. At a minimum, the "Standard" analysis must include the following:

1. Description of Site: A brief narrative of the character of the site and adjacent properties, including land uses and other pertinent facts.

2. Description of Roadways: A brief narrative of the study area roadway facilities, including the number of lanes, speed limit, major intersections, and locations of existing driveways. A description of pedestrian amenities such as sidewalks, crosswalks, and handicap ramps should also be completed.

3. Sight Distance: Measurements shall be provided for each proposed driveway. A comparison of the available sight distance at each driveway and/or intersection with standards in Chapter 92 and Chapter 149-14-H, if applicable, shall be included.

4. Trip Generation: In all cases, the analysis shall include trip generation based upon the ITE Trip Generation Handbook - latest edition. Where the applicant feels the ITE trip generation is not representative of the proposed development, justification must be provided for alternative trip generation methodology. If counts are performed to determine trip generation rates, the applicant must conduct two separate counts and provide full details of the count locations, including the size of the facility, percent occupancy, location, adjacent road Average Daily Traffic (ADT), time, and date of count.

5. Trip Distribution: At the "Standard" analysis level, trip distribution shall be described in a report that demonstrates knowledge of area-wide land uses, roadway facilities, and predominant traffic flows by time of day. The analysis shall contain a percentage distribution of trips (by direction) to the adjacent roadway facilities and any relevant assumptions. All assumptions made shall be outlined, with justification, in the report.

6. Public Transit: In all cases, the analysis shall include the accessibility of existing public transit to the project (within ¼ mile). This shall document the proximity of the project to all transit routes, and stops along the routes. If a project is located along a route (i.e. on the same street), potential improvements or upgrades to encourage use of the public transit system shall be included (i.e., bus stop accessibility improvements, bench, shelter, pullout, etc.).

7. The report shall be signed and stamped by a professional engineer licensed in New Hampshire, preferably with traffic engineering certifications.

Advanced Analysis Requirements

The applicant and, if possible, the person hired to perform the analysis, shall meet with the Planning Department to confirm the study area and study area requirements. All information described in the "Standard" analysis must also be contained in the "Advanced" analysis.

The additional information required for an Advanced Analysis includes the following:

1. Existing Traffic Counts: In no case shall existing traffic counts used in the analysis be more than two years old (from date of count to date of analysis submittal). If a significant change (e.g., new

roadway or development) has occurred within the last two years, the Planning Department can, at their discretion, require that new counts be conducted. Traffic counts shall include information on date, time, day of week, and name of the firm or individual who performed the counts. Traffic counts shall be seasonally adjusted to average and peak conditions.

2. Design Year Traffic Projection:

    i. Design Year: The design year for traffic projections shall be ten years from the current year.
    ii. The applicant shall obtain a list from the Planning Department containing all proposed developments permitted to date within the study area. The traffic generated by these projects shall be added to the no-build and build analyses. Additionally, the background growth rate should be determined based upon information obtained from the NH Department of Transportation or other available traffic counts. The calculated background growth rate should be completely documented and included in the study for review.
    iii. Trip Generation: Traffic projection for trip generation growth is described in the "Standard" analysis section.
    iv. Trip Distribution: The applicant shall provide justification for the assumed trip distribution. The trip distribution methodology should be representative of the type of development. Data may be obtained from employee zip code analysis, studies of similar sites, analysis of ADT on adjacent roadways, US Census journey to work and home-based work/non-work trips, or other sources. Graphic presentation shall be provided showing 1) peak hour trips added by the development, and 2) study area peak hour traffic volumes under each of the following scenarios:
        a. Existing conditions;
        b. Existing conditions with proposed development;
        c. No build for design year, and;
        d. Build for design year.

3. Peak Hour Capacity Analysis: Capacity analysis is to be performed at all study intersections (including driveways) using the most current Highway Capacity Manual Level of Service methodology for signalized and unsignalized intersections. Each of the four scenarios listed above must be analyzed at a minimum. A gap acceptance analysis should be provided in the case of adjustment to the default critical gap in the capacity analysis.

    Level of service (LOS) "C" shall be the design objective, however, LOS "D" will be considered as a design objective subject to the approval of the Planning Department. Under no circumstances will less than LOS "D" be accepted for site and non-site traffic. If LOS "E" is the result of the analysis, then mitigation funded by the developer for providing LOS "D" shall be analyzed and included as part of the analysis (see Section 9 below).

4. Safety Analysis: Accident data for the roadways and intersections included in the study area shall be obtained from the Dover Police Department. Accident history for the three most recent years available shall be summarized and compared to the

5. Statewide or national rates established for the corresponding facility type (e.g., rural two-lane highway, urban arterial, etc.).

6. Trucks: The location of loading docks and/or delivery drop-off areas shall be given in the analysis. The estimated frequency of trucks by time of day shall be provided when the number of daily truck trips exceeds 30 percent of the ADT on any roadway in the study area.

7. Parking: There should be a defined correlation between estimated trip generation and parking space requirements. The proposal shall contain a comparison of daily and peak hour trip generation estimates to the number of proposed parking spaces on site.

8. Narrative: Discussion of the following shall be provided:
    i. Travel safety characteristics of any streets substantially impacted by allowing the "build" alternative, considering such things as sight distance limitations, width limitations, horizontal or vertical alignment deficiencies, and surface conditions;
    ii. Streetside safety of any streets substantially impacted, considering such things as the amount and type of development along such streets, presence of sidewalks, vehicle speeds, and any outstanding limitations in sight distance or road configuration;
    iii. Impact on pedestrian safety and convenience;
    iv. Noise impacts on residential premises.

9. Mitigation: Any mitigating measures proposed shall be described in detail and included in the analysis. It is imperative that the applicants identify improvements to intersections even if they don't fund them fully. Transportation Demand Management (TDM), non-vehicular transportation and mass transit should be strongly considered as mitigating strategies.