

EXHIBIT A: SCOPE OF SERVICES

Chapel Hill Cooperative Preschool (CHCP) Traffic Impact Study

This Scope of Services document identifies the general scope of work to be completed by the Engineer ([HNTB North Carolina, PC](#)) for the Owner (**Town of Chapel Hill**) for the following Project:

Chapel Hill Cooperative Preschool

Mount Carmel Church Road and US 15-501
Chapel Hill, North Carolina

Section A. - Scope of Services

A.1. Engineer shall perform the following Services:

1. Engineer will review previous documentation regarding the Chapel Hill Cooperative Preschool (CHCP) project provided by Town staff, and utilize relevant information in the preparation of an independent review of traffic impacts caused by the preschool. This information will include trip generation and queuing projections from an NCDOT MST A study, as well as additional information provided by the Applicant, Town and NCDOT.
2. The Study Area will consist of the following existing/future intersections for the CHCP TIS:
 - 1) US 15-501 and Mt. Carmel Church Road / Culbreth Drive
 - 2) Mt. Carmel Church Road and Proposed Site Access Driveway (Right-turn in/right-turn out only)
 - 3) Mt. Carmel Church Road and Bennett Drive / Copper Beach Court
 - 4) US 15-501 and Bennett Drive / Arlen Park Drive

The study time frame will consist of the following scenarios:

- 2022 Build-out Year (to account for assumed full build-out effect of Obey Creek and other study area developments)
3. Weekday peak hour traffic count (AM, Noon, and PM peak periods) data will be collected following the implementation of proposed improvements to the US 15-501 / Mt. Carmel Church intersection for the following intersections:
 - 1) US 15-501 and Mt. Carmel Church Road / Culbreth Drive
 - 2) Mt Carmel Church Road and Bennett Drive / Copper Beach Court
 - 3) US 15-501 and Bennett Drive / Arlen Park Drive
 4. Short-term capacity analyses will be performed for the following conditions using SYNCHRO Professional 10.0, SIDRA Version 7.0, and the *Highway Capacity Manual Version 6*:
 - 2022 Build-out Year with site
 - 2022 Build-out Year with site and improvements for all intersections operating worse than Level-of-Service D (LOS D) and all unsignalized intersections having a critical movement worse than LOS E

The analysis of the Mt. Carmel Church Road and Bennett Drive / Copper Beech Court intersection will be completed for the following scenarios:

- Existing intersection geometrics and traffic control (two-way stop controlled)
- Proposed roundabout configuration (NCDOT STIP Project U-5854)

Trip generation rates for all future site traffic from the CHCP development will be calculated from the following source and adjusted for any updated information from the Applicant:

- NCDOT MST A Report for CHCP

Site traffic from Town-approved studies in the project study area to be completed by the 2022 Build-out analysis year will be added to ambient growth for all with site analyses (information to be provided by the

Town to the Engineer). Ambient growth rates for future scenarios will use historic daily traffic growth patterns in the study area, based on information from NCDOT Traffic Survey Unit and the Town, and will be consistent with previous traffic impact studies in the project vicinity.

No other approved development traffic will be analyzed for this study, unless specified by the Town. Roadway improvements, to be provided by the Town and NCDOT, will be included in all build-out year analyses. Existing peak hour and daily travel patterns in the project study area, along with information from the Town and Applicant will be used to estimate the site trip distribution at all analyzed intersections. These trip distribution sources will be used to develop a traffic pattern within the area and the site vehicular traffic will be assigned accordingly.

Approved roadway improvements shown on the site plan (to be obtained from the Applicant) within the study area will be taken into consideration during this analysis. When a peak hour **intersection** level of service, falls below LOS D with the addition of site traffic for the build-out year, improvements to bring the intersection level of service (or critical movement level of service) to LOS D will be analyzed. If a **critical movement** level of service (if intersection is not signalized) falls below LOS E with the addition of site traffic for the build-out year, improvements to bring the intersection level of service (or critical movement level of service) to LOS E will be analyzed. Should the existing level of service for an intersection (or critical movement) fail to meet the above requirements, improvements to maintain, but not increase, the *no build* delay time for that intersection (or critical movement) will be analyzed.

Additional turn-lane storage requirements, acceleration and deceleration lane analyses, and sight distance analyses shall be conducted, if necessary, and will conform to the *Town of Chapel Hill Guidelines for Traffic Impact Analyses*.

5. Engineer will provide free standing draft and final technical memorandums summarizing the findings and conclusions. This report will contain grammatical, graphical, and tabular information. The technical memorandums will include any specific information as required in the *Town of Chapel Hill Guidelines for Traffic Impact Analysis* that directly pertains to analysis conducted for this study and will provide an independent review of information previously produced related to traffic impacts of the proposed site.
6. Engineer will attend one (1) meeting for the presentation of the study findings to the Town Council and/or additional meeting with the Applicant.

A.2. The following Services are not included in this Scope of Services, but shall be provided as Additional Services if authorized or confirmed in writing by the Owner:

- Any additional analyses
- Any additional meetings

A.3. In conjunction with the performance of the foregoing Services, Engineer shall provide the following submittals/deliverables (Documents) to Owner:

- 1 electronic copy of draft technical memorandum
- 8 copies of final technical memorandum
- 1 digital copy of final technical memorandum and supporting files

Section B. - Schedule

Engineer shall perform the Services and deliver the related Documents (if any) according to the following schedule:

- Draft technical memorandum – submitted three weeks after traffic count data collection activities (to be determined in coordination with the Town)
- Final technical memorandum within one (1) week of receiving comments from the Owner

Section C. - Compensation

C.1. In return for the performance of the foregoing obligations, Owner shall pay to Engineer the amount of **\$7,812** (see **Exhibit "B"** for detailed fee estimate) payable according to the following terms:

- Monthly Invoice, to be accompanied by a monthly progress report summarizing the hours spent and work completed.
- Owner to be billed only for hours spent on a task and for meetings attended.

C.2. Compensation for Additional Services (if any) shall be paid by Owner to Engineer according to the following terms following Owner acceptance of study:

- Lump Sum upon completion

Section D. - Owner's Responsibilities

Owner shall perform and/or provide the following in a timely manner so as not to delay the Services of Engineer. Unless otherwise provided in this Scope of Services, Owner shall bear all costs incident to compliance with the following:

- Information on any proposed roadway improvements in the study area
- Information on any approved proposed developments in the study area
- Information on traffic projections for future roadways in the study area
- If available, site building uses, sizes, and schedules (hours of operation)