A Traffic Impact Analysis (TIA) may be required for developments based on the site trip generation estimates, site context, or at the discretion of the NCDOT District Engineer. The Applicant or the TIA Consultant shall submit this form along with the site plan to the District Engineer to determine the TIA need and, if a TIA is required, initiate the TIA scoping process. Without an approved scope, the TIA is incomplete and will be rejected until the study is revised to conform to NCDOT’s TIA requirements.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name:** | |  | | **Previous Name:** If Applicable | |  | |
| **Location:** |  | | | **County:** |  | **Municipality:** |  |
| **Project Description:** | | |  | | | | |
|  | | | | | | | |
|  | | | | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Contact:** | Applicant |  | TIA Consultant |
| Company Name |  |  |  |
| Contact Person |  |  |  |
| Phone Number |  |  |  |
| Email |  |  |  |
| Mailing Address |  |  |  |
|  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Site Plan Prepared By:** | |  |  | **Site Plan Date:** |  | |
| See site plan/vicinity map requirements on page 2. | | | | | | |
| **Parcel Size:** |  | Acre(s) | | **Anticipated Build-Out Year:** | |  |

**Weekday Site Trip Generation -** Do NOT adjust for mode split, pass-by, internal capture, or diverted trips.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ITE LUC | Proposed Land Use | Size | Unit | | Daily Trips | Peak Hour Type | AM Peak Hour Trips | | | | PM Peak Hour Trips | | | Data Source |
| Enter | Exit | | Total | Enter | Exit | Total |
|  |  |  |  | |  | **Please Select** |  |  | |  |  |  |  | **Please Select** |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
|  |  |  |  | |  |  |  |  | |  |  |  |  |  |
| Total | |  |  | |  |  |  |  | |  |  |  |  |  |
| Refer to the current [*NCDOT Congestion Management Capacity Analysis Guidelines*](https://connect.ncdot.gov/resources/safety/Congestion%20Mngmt%20and%20Signing/Congestion%20Management/Standards%20-%20Capacity%20Analysis%20Guidelines.pdf) for acceptable trip calculation methods and data sources. | | | | | | | | | | | | | | |
| \*\*Explain local or other data sources, if used: | | | |  | | | | | | | | | | |
| The estimated site trips meet NCDOT’s TIA trip threshold of 3,000 daily trips. | | | | | | | | | | | | | | |
| The estimated site trips meet the municipal TIA trip threshold of | | | | | | | | |  | | | | | |
| This project is located in a known [STIP](https://connect.ncdot.gov/projects/planning/pages/state-transportation-improvement-program.aspx) and/ or local CIP project # | | | | | | | | |  | | | | | |

This project includes a rezoning request.

The proposed site access is located within 1,000 feet of an interchange.

The Applicant requests for a new or modified control-of-access break.

The Applicant requests for a new or modified median break.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

Applicant’s Signature Print Name Date

**Site Plan/Vicinity Map Requirement for TIA Need Screening:** While the site plan may not be finalized during the TIA scoping stage, the graphic representation of the proposed development shall provide adequate details on the development scope and context. More specifically, the site plan/map shall clearly show the location and type of each access point, spacing to adjacent and opposing driveways or intersections, internal street network, proposed buildings/parcels with their anticipated uses and sizes at full build-out and, if applicable, any nearby interstate, US, NC or Secondary Roads (SR).

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Name:** |  | **Project Reference Number:** |  |

**A TIA is Required by the Local Government.** In addition, the study area is expected to include

NCDOT maintained transportation facilities.

**A TIA is Required by NCDOT,** per the[*Policy on Street and Driveway Access to North Carolina Highways*](https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Policy%20on%20Street%20and%20Driveway%20Access.pdf)*.*

If either or both of the boxes above are checked, the Applicant/TIA Consultant is hereby requested to

fill out as much as possible of the following TIA scoping checklist, and return it along with the

supporting documents to NCDOT prior to the scoping meeting.

**A TIA is NOT required**. This decision is based on the development information presented above.

Changes in the development plan will require re-evaluation of the TIA need, and may necessitate a TIA. The Applicant should inform the District Engineer of any significant changes in a timely fashion to avoid delays or rejections of the driveway permit / encroachment agreement applications.

**Additional Comments:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| The TIA need decision is made by the NCDOT Division |  | District |  | on |  | . |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

NCDOT District Representative’s Signature Print Name

Email concurrence may be used in lieu of the signature.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name:** | |  | | **TIA Scoping Date:** | | |  |
| **TIA Need Screening Forms are Attached.** | | Project Reference #: | |  | Decision Date: |  |

**Site Plan and Access**

Provide a site plan illustrating site access, internal and external roadways, buildings and land uses.

Refer to NCDOT’s [*Policy on Street and Driveway Access to North Carolina Highways*](https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Policy%20on%20Street%20and%20Driveway%20Access.pdf) pages 14 and 15 for site plan requirements.

Identify site access.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **New Access** | On Road | Access Type | | Driveway Spacing | | |
| Road Name | Permitted Movements | Traffic Control | Distance (ft) | Direction | Nearest Intersection / Access |
| Access A |  | **Please Select** | **Please Select** |  | **Please Select** |  |
| Access B |  |  |  |  |  |  |
| Access C |  |  |  |  |  |  |
| Access D |  |  |  |  |  |  |
| Access E |  |  |  |  |  |  |
| Access F |  |  |  |  |  |  |
| Access G |  |  |  |  |  |  |
| Access H |  |  |  |  |  |  |
|  | | | | | | |
| **Existing Access** | Existing Intersection of | | Access | **Proposed Interconnectivity** (If Applicable) | | |
| Road A | Road B | Modification | Connector # | Road Connected | Adjacent Development |
| Access 1 |  |  | **Please Select** | Connector 1 |  |  |
| Access 2 |  |  |  | Connector 2 |  |  |
| Access 3 |  |  |  | Connector 3 |  |  |
| Access 4 |  |  |  | Connector 4 |  |  |

Additional access clarifications and provisions (e.g., proposed control-of-access or median breaks, modifications of existing access, loading/unloading area access, bike/pedestrian accommodation).

**Proposed K-12 School Site**

|  |  |  |
| --- | --- | --- |
| NCDOT [MSTA School Traffic Calculator](http://www.ncdot.gov/download/mstaschoolcalculator/SchoolCalculator.xlsx) for | **Select School Type** | shall be used. |

Peak Hour Factors (PHFs) shall be adjusted/weighted for new school trips (0.5 PHF by default).

Internal school circulation analysis is required, and should be submitted in advance or concurrent

with the TIA submittal.

Clarify traffic operation plans (e.g. traffic circulation pattern, pedestrian access, drop-off/pick-up

zone location and configuration, queue storage area and, if applicable, staggered start times).

**Trip Generation**

The TIA Consultant shall prepare trip generation estimates following the current [*NCDOT Congestion Management Capacity Analysis Guidelines*](https://connect.ncdot.gov/resources/safety/Congestion%20Mngmt%20and%20Signing/Congestion%20Management/Standards%20-%20Capacity%20Analysis%20Guidelines.pdf), and submit the calculation sheets and supporting information to the District Engineer for approval prior to capacity analysis.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ITE LUC | Proposed Land Use | Size | Unit | Daily Trips | Peak Hour Type | AM Peak Hour Trips | | | | PM Peak Hour Trips | | | | Data Source |
| Enter | Exit | Total | | Enter | Exit | Total | |
|  |  |  |  |  | **Please Select** |  |  |  | |  |  |  | | **Please Select** |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |
| Unadjusted Site Trips | | | |  |  |  |  |  | |  |  |  | |  |
|  | | | | | | | | | | | | | | |
| Internal Capture Trips (Attach Calculation Sheets) | | | |  | |  |  |  | |  |  |  | | **Please Select** |
| Internal Capture % of Unadjusted Site Trips | | | | % | | % | | | | % | | | |  |
| LUC | Proposed Land Use | Any Internal Trips? | | Pass-By % of External Trips | | | | | | | | | |  |
|  |  | **Please Select** | | % | | % | | | | % | | | | **Please Select** |
|  |  |  | | % | | % | | | | % | | | |  |
|  |  |  | | % | | % | | | | % | | | |  |
|  |  |  | | % | | % | | | | % | | | |  |
|  |  |  | | % | | % | | | | % | | | |  |
| Pass-By Trips (Attach Calculation Sheets) | | | |  | |  |  | |  |  |  | |  |  |
| Adjacent Street Volumes | | | |  | |  | | | |  | | | | **Please Select** |
| Non-Pass-By Primary Trips | | | |  | |  |  |  | |  |  |  | |  |
| Diverted Trips, if Applicable and Justifiable | | | |  | |  |  |  | |  |  |  | | **Please Select** |

\*\*Explain local or other data sources, if used:

Existing Site Trip Information for Redevelopment Projects (Attach separate sheets as needed)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ITE LUC | Existing Land Use | Size | Unit | Daily Trips | Peak Hour Type | AM Peak Hour Trips | | | PM Peak Hour Trips | | | Data Source |
| Enter | Exit | Total | Enter | Exit | Total |
|  |  |  |  |  | **Please Select** |  |  |  |  |  |  | **Please Select** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Existing Site Trips | | | |  |  |  |  |  |  |  |  |  |

**Trip Distribution**

Trip distribution diagrams are submitted concurrently with this document (attach separate sheets).

Trip distribution diagrams will be submitted separately, along with supporting information, to the

District Engineer for review and approval prior to capacity analysis. The trip distribution shall be based on the current and anticipated traffic patterns, as well as instructions noted below.

If required by the District Engineer, the following additional diagrams shall also be submitted:

Mixed-Use Developments (separate diagrams for residential, commercial, and office trips)

Inter-Development Trips (if ‘internal” trips cross public streets)

Pass-By Trips

Diverted Trips

Each Analysis Period

**Mode Split**

|  |  |  |  |
| --- | --- | --- | --- |
| Mode | Auto |  |  |
| Period |
| AM Peak | % | % | % |
| PM Peak | % | % | % |
| Daily | % | % | % |
|  | % | % | % |

Provide Data Source and Justification

Identify proper infrastructure and accommodation for other modes of travel.

**Analysis Peak Periods:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Weekday AM Peak | | | |  |
| Weekday PM Peak | | | |  |
| Weekday Midday Peak | | | |  |
| Weekday PM School Peak | | | |  |
| Weekend | |  | Peak |  |
| Other |  | | | |

**Study Area Intersections and Data Collection**

The study area shall include the site access intersections (both new and existing) identified under “Site Plan and Access” on page 1, as well as the following external and, if applicable, internal intersections.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| External Intersection | Intersection of | | Traffic Control | Intersection Turning Movement Counts | | | Notes |
| Road A | Road B | New / Existing | Date of Counts | Growth Adjustment |
| #1 |  |  | **Please Select** | **Please Select** |  |  |  |
| #2 |  |  |  |  |  |  |  |
| #3 |  |  |  |  |  |  |  |
| #4 |  |  |  |  |  |  |  |
| #5 |  |  |  |  |  |  |  |
| #6 |  |  |  |  |  |  |  |
| #7 |  |  |  |  |  |  |  |
| #8 |  |  |  |  |  |  |  |
| #9 |  |  |  |  |  |  |  |
| #10 |  |  |  |  |  |  |  |
| #11 |  |  |  |  |  |  |  |
| #12 |  |  |  |  |  |  |  |
|  | | | | | | | |
| Internal Intersection | Intersection of | | Access Type | | Intersection Spacing | | |
| Road A | Road B | Traffic Control | Permitted Movements | Distance (ft) | Direction | Nearest Intersection |
| #101 |  |  | **Please Select** | **Please Select** |  | **Please Select** |  |
| #102 |  |  |  |  |  |  |  |
| #103 |  |  |  |  |  |  |  |
| #104 |  |  |  |  |  |  |  |
| #105 |  |  |  |  |  |  |  |

The following data will be collected:

New traffic turning movement counts in  15-min intervals  5-min intervals (near schools)

Unless otherwise noted above, new traffic counts shall be collected at the existing study intersections during the analysis periods. Weekday counts shall avoid Mondays, Fridays, holidays, school breaks, road closures, and major weather events.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To account for the impact of existing and/or proposed school traffic, PHFs will be adjusted for: | | | | |
| intersections numbered: | |  | | |
| and access points numbered: | |  | | |
| Traffic Forecast Data for TIP: | |  | | |
| Roadway/Intersection Configuration & Traffic Control | | | | |
| Traffic Signal Phasing & Timing Data | | | | |
| Crash Data: |  | | Period: |  |

Other:

**Future Year Conditions**

|  |  |
| --- | --- |
| Project Build-Out Year: |  |
| Future Analysis Year(s): |  |

Identify below any funded/committed future transportation improvements, as well as any approved

but incomplete developments near the site.

|  |  |  |  |
| --- | --- | --- | --- |
| **Funded STIP / Local CIP Project** | Project Description | | Year Complete |
|  |  | |  |
|  |  | |  |
|  |  | |  |
|  |  | |  |
|  | | | |
| **Nearby Approved Development** | Location | Future Land Use  (exclude any completed phases) | Committed Improvements |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Annual Growth Factor: |  | % |
| Justification/Data Source: |  | |

**Local Comprehensive Transportation Plan Compliance**

Identify Applicable Local Transportation Planning Documents

Identify Applicable Roadways inside the Study Area

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Road Name | Classification | Speed Limit | Proposed Cross-Section | Proposed  Right-of-Way | Compliance Requirements | Affect Study Intersection # |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Study Method**

The traffic analysis shall follow the current [*NCDOT Congestion Management* *Capacity Analysis Guidelines*](https://connect.ncdot.gov/resources/safety/Congestion%20Mngmt%20and%20Signing/Congestion%20Management/Standards%20-%20Capacity%20Analysis%20Guidelines.pdf), [*Policy on Street and Driveway Access to North Carolina Highways*](https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Policy%20on%20Street%20and%20Driveway%20Access.pdf), and use the current approved version of analysis software (e.g. Synchro/SimTraffic, HCS, Sidra Intersection, TransModeler).

The study shall include the following analysis scenarios for each analysis period.

1. Existing Conditions
2. Future No-Build Conditions (existing + background growth + approved developments + committed or funded improvements)
3. Future Build Conditions (future no-build + site trips)
4. Future Build with Improvements Conditions (future build traffic with improvements to mitigate the proposed development’s impacts) and, if applicable:

|  |  |
| --- | --- |
| 5. TIP Design Year Analysis | % |

6. Alternative Access Scenario (without proposed control-of-access or median break / modification)

The following additional analysis/outputs should be provided as warranted:

|  |  |
| --- | --- |
| Signal Warrant Analysis for accesses/intersections # | % |

Multi-Modal Level of Service Analysis

School Loading Zone Traffic Simulation

Phasing Analysis (scope separately as needed)

Safety/Crash Analysis

Control-of-Access Modification Justification

Median Break / Modification Justification

|  |  |
| --- | --- |
| Other | % |

**Submittals**

In addition to the hardcopies required below, the TIA Consultant shall provide the District Engineer and, if required, the local government an electronic copy of the study documents, including the latest site plan, figures and appendices, in searchable PDF files and the original traffic analysis files (e.g., Synchro, HCS). To expedite review, the NCDOT electronic submittals shall also be delivered concurrently to:

|  |  |
| --- | --- |
| Div. Traffic Engr  Regional Traffic Engr  Congestion Management  Other | % |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Submittals | NCDOT | | Local Government | |
| Electronic | Hardcopy | Electronic | Hardcopy |
| Trip Generation & Distribution | Required |  | **Please Select** |  |
| Draft TIA Report | Required |  |  |  |
| Final Sealed TIA Report | Required |  |  |  |

**Additional Comments (**municipal TIA requirements, approved variations from NCDOT guidelines)

**Agreement by All Parties**

The undersigned agree to the contents and methodology described above for completing the required traffic impact analysis for the proposed development identified herein. Any changes to the above methodology contemplated by the Applicant or the TIA Consultant must be submitted to the District Engineer in writing. If approved by NCDOT, then such changes may be accepted for the TIA report. Subsequent revisions to the development plan (e.g. land use, density, site access, or schedule) may require additional scoping and analysis, and may modify the TIA requirements.

|  |  |  |
| --- | --- | --- |
| This agreement shall become effective on the date approved by NCDOT, and shall expire |  | months after |

the effective date or upon significant changes to the roadway network and/or development assumptions, whichever occurs first. Once expired, renewal or re-scoping will be required for subsequent TIA submittals.

**APPLICANT**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

Signature Print Name Date

**TIA CONSULTANT**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

Signature Print Name Date

**LOCAL GOVERNMENT REPRESENTATIVE (If Applicable)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

Signature Print Name Date

Email concurrence may be used in lieu of the signature.

**NCDOT DISTRICT REPRESENTATIVE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Reviewed and approved by the NCDOT Division |  | District |  | on |  | . |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

Signature Print Name

Email concurrence may be used in lieu of the signature.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Submittal:** | **Please Select** | | | | | **Document Date:** | | | | |  |
| **Project Name:** |  | | | | | **Previous Name:** If Applicable | | | |  | |
| **NCDOT Division:** | |  | **District:** | |  | **County:** |  | | | **Municipality:** |  |
| **TIA Consultant:** | |  | | | | Submitted By: | | |  | | |
| Phone Number: |  | | | | | Email: | |  | | | |
| **TIA Scoping Checklist Approval Date:** | | | |  | | **Unadjusted Daily Site Trips:** | | | |  | |

The approved TIA Scoping Checklist is included in this submittal.

LOS D or better is expected at all study intersections after proposed mitigations.

The study report is sealed by a NC Professional Engineer with expertise in traffic engineering.

This study has identified all known deficiencies with and without the proposed development.

This study has identified mitigation measures to adequately accommodate the site trips.

Explain here if any of the boxes above are unchecked:

The undersigned affirms that, except for the deviations noted below, the TIA submittal conforms to the current [*NCDOT Congestion Management* *Capacity Analysis Guidelines*](https://connect.ncdot.gov/resources/safety/Congestion%20Mngmt%20and%20Signing/Congestion%20Management/Standards%20-%20Capacity%20Analysis%20Guidelines.pdf), [*Policy on Street and Driveway Access to North Carolina Highways*](https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Policy%20on%20Street%20and%20Driveway%20Access.pdf), and the TIA Scoping Checklist approved by the NCDOT District Office. The undersigned also acknowledges that the TIA will be rejected if the deviations and justifications are not properly documented and approved by NCDOT.

**Deviations and Justifications** (e.g., changes in site plan, development schedule, site trip and off-site trip estimates, study area, data collection, analysis period and method. Attached separate sheets if needed.)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

TIA Consultant’s Signature Print Name Date

(Professional Engineer of TIA Record)