

Comprehensive Transportation Review (CTR) Process Summary Guide

This summary can be used to help navigate the CTR process by describing the steps used to determine trips, required assessments, mitigation tiers, and mitigations. The steps below are intended to guide the user, but **the user must also consult the CTR** for important information about each step. A worksheet is provided, as well, which is to be included on the construction plans for the development.

Version 08.22.2022

The Process Summary Guide will be updated as needed.

CTR Steps

- 1) **Determine net vehicle trips.** Use summary table below (and see CTR Section 3.2 and Table 3.5) to determine vehicle trips for existing and proposed land uses. For mixed-use developments, add the total daily vehicle trips for all land uses. See CTR Table 3.5 for guidance about when existing vehicle trips may be deducted from the proposed land use's trips. Net trips equal total proposed trips minus total existing trips.

Vehicle Trip Generation Summary Table (ITE Trip Gen 11 th Edition)					
Land Use	Vehicle Trips				
Residential	≥ 350 daily trips	≥ 750 daily trips	≥ 1,100 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips (after 30% trip reduction)
Single-Family Detached	≥ 32 homes	≥ 73 homes	≥ 110 homes	≥ 154 homes	≥ 311 homes
Single-Family Attached/Townhomes	≥ 53 townhomes	≥ 105 townhomes	≥ 153 townhomes	≥ 204 townhomes	≥ 382 townhomes
Multifamily (1-2 floors)	≥ 43 units	≥ 106 units	≥ 160 units	≥ 223 units	≥ 435 units
Multifamily (3-10 floors)	≥ 84 units	≥ 167 units	≥ 241 units	≥ 325 MF units	≥ 609 MF units
Commercial	≥ 1,000 daily trips	≥ 1,250 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips (after 30% trip reduction)	
Retail (GFA)	≥ 18,300 SF	≥ 24,200 SF	≥ 30,100 SF	≥ 42,500 SF	
Fast Food w/ Drive thru (GFA)	≥ 2,140 SF	≥ 2,700 SF	≥ 3,300 SF	≥ 6,100 SF	
Gas Station / Conv Store (VFP or GFA)	≥ 4 fueling positions or 1,100 SF	≥ 5 fueling positions or 1,800 SF	≥ 6 fueling positions or 2,200 SF	≥ 11 fueling positions or 4,000 SF	
Bank w/ Drive-In (GFA)	≥ 10,000 SF	≥ 12,500 SF	≥ 15,000 SF	≥ 28,500 SF	
Office (peak-hour)	≥ 100 peak-hour	≥ 125 peak-hour	≥ 150 peak-hour	≥ 200 peak-hour (after 30% trip reduction)	
General Office (GFA)	≥ 55,000 SF	≥ 71,000 SF	≥ 88,000 SF	≥ 187,000 SF	
Medical / Dental Office (GFA)	≥ 21,100 SF	≥ 25,200 SF	≥ 30,000 SF	≥ 55,300 SF	
Office (Daily)	≥ 1,000 daily trips	≥ 1,250 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips (after 30% trip reduction)	
General Office (GFA)	≥ 84,300 SF	≥ 109,000 SF	≥ 134,300 SF	≥ 282,000 SF	
Medical / Dental Office (GFA)	≥ 26,000 SF	≥ 31,600 SF	≥ 37,500 SF	≥ 69,100 SF	
Industrial	≥ 1,000 daily trips	≥ 1,250 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips (after 30% trip reduction)	
Light Industrial (GFA)	≥ 252,000 SF	≥ 319,000 SF	≥ 385,400 SF	≥ 747,000 SF	
Manufacturing (GFA)	≥ 212,000 SF	≥ 277,900 SF	≥ 344,200 SF	≥ 704,400 SF	
Warehouse (GFA)	≥ 608,400 SF	≥ 766,600 SF	≥ 924,900 SF	≥ 1,785,000 SF	
Others	≥ 1,000 daily trips	≥ 1,250 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips (after 30% trip reduction)	
Hotel (rooms)	≥ 132 room	≥ 155 rooms	≥ 178 rooms	≥ 303 rooms	
Public parks (acres)	≥ 1,424 acres				

- 2) **Determine whether development type is “low intensity” or “medium to high intensity”.** Use CTR Table 3.1 (Page 2) and the zoning district for the proposed development to determine the development intensity type and which section of Table 3.1 applies.
- 3) **Determine applicable assessments.** Use Table 3.1 (Page 2) and net vehicle trips (from Step 1) to determine which assessments are required and which tier applies for the proposed development. On the relevant land use row, find the appropriate vehicle trip category for the development. The column heading gives the Tier and required mitigation points.
- Potential *Low Intensity Assessments*: 1) Multimodal Assessment, 2) TIS
 - Potential *Medium to High Intensity Assessments*: 1) Multimodal Assessment, 2) TDM, 3) TIS
- 4) **If MA and/or TDM assessments are required:**
- Determine number of required mitigation points.** Use Table 3.1 and the appropriate tier (from Step 3) to identify the number of mitigation points required.
 - Determine which mitigations to use.** Refer to CTR Sections 3.3 and 3.4, and Tables 3.3 and 3.4 to find mitigations that equal the required total points for each type of assessment required.
- 5) **If a TIS is required:** submit a CTR TIS Scope for CDOT review and approval (see CTR section 3.2), which also includes MA and/or TDM assessments, as appropriate.
- 6) **Submit the CTR Worksheet.** The Worksheet (Page 3) should be included on the construction plans for the development.

Table 3.1 Comprehensive Transportation Review Thresholds

		Multimodal Assessment			Transportation Demand Management Assessment (TDM)			Traffic Impact Study (TIS)	
		Intent Identify pedestrian mitigations			Intent Identify vehicle trip reduction strategies			Intent Identify vehicle trip mitigations	
		Multimodal Mitigation			TDM Mitigation			Traffic Impact Study	
Zoning Districts	Land Use	Tier 1 (Mitigation Points:3)	Tier 2 (Mitigation Points:6)	Tier 3 (Mitigation Points:9)	Tier 1 (Mitigation Points: NA)	Tier 2 (Mitigation Points: NA)	Tier 3 (Mitigation Points: NA)	Threshold	Additional Conditions
Net New Trip Thresholds: Low Intensity Development (based on zoning districts)									
N1 Districts N2-A N2-B MHP ML-1 ML-2 IC-1 OFC N2-C IC-2 CG CR	Residential	≥ 750 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips	Not Required			≥ 1,500 daily trips or ≥ 150 peak hour trips	Regardless of threshold, a TIS may be required if any of the following conditions exist. 1. Impacts a location with a high vehicle or multimodal crash history. 2. Occurs at a high congestion location. 3. Creates the fourth leg of or otherwise modifies an existing signalized intersection. 4. Impacts a unique access situation, such as a railroad crossing, fire station access location, etc. <i>Thresholds are based on ITE Suburban classification. CDOT may allow other classifications.</i>
	Commercial	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips					
	Office	≥100 peak-hour	≥125 peak-hour	≥150 peak-hour					
	Industrial	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips					
	Mixed Used ¹	≥1,000 daily trips	≥ 1,500 daily trips	≥ 2,000 daily trips					
Net New Trip Thresholds: Medium to High Intensity Development (based on zoning districts)									
Zoning Districts	Land Use	Tier 1 (Mitigation Points:5)	Tier 2 (Mitigation Points:9)	Tier 3 (Mitigation Points:14)	Tier 1 (Mitigation Points:2)	Tier 2 (Mitigation Points:4)	Tier 3 (Mitigation Points:6)	Threshold	
IMU NC CAC-1 CAC-2 TOD-UC TOD-NC TOD-CC TOD-TR RAC UC UE	Residential	≥ 350 daily trips	≥750 daily trips	≥1,100 daily trips	≥350 daily trips	≥ 750 daily trips	≥ 1,100 daily trips	≥ 2,000 daily trips or ≥ 200 peak hour trips <i>(after 30% trip reduction for TDM)</i>	
	Commercial	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips		
	Office	≥100 peak-hour	≥125 peak-hour	≥150 peak-hour	≥100 peak hour	≥125 peak hour	≥150 peak hour		
	Industrial	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips		
	Mixed Used ¹	≥1,000 daily trips	≥ 1,250 daily trips	≥ 1,500 daily trips	≥1,000 daily trips	≥1,250 daily trips	≥1,500 daily trips		

¹Includes Public Parks and Recreational Centers

City of Charlotte CTR Summary Worksheet

Use the table below to determine and report required mitigations and include the table on the construction plans.

CTR Assessment Report						
Vehicle Trips						
Proposed			Existing			Net Trips
Land Uses	Square Footage	Daily/Peak Hour Trips	Land Use	Square Footage	Daily Trips /Peak-Hr.	
1)			1)			
2)			2)			
3)			3)			
Totals			Totals			
Mitigations						
Assessments	Tier	Required Points	Mitigation (Total Points)			
MA			1)	2)	3)	4)
TDM			1)	2)	3)	4)
TIS Required? (Yes/No)		<i>If yes, a full CTR TIS Scope and Report are required separate from this table and any TIS mitigations should be included below:</i>				
		1)				
		2)				
		3)				
		4)				
		<i>Add additional lines, as needed</i>				