

REDEFINE THE DRIVE



NORTH DuSABLE LAKE SHORE DRIVE

NORTH DUSABLE LAKE SHORE DRIVE STUDY SPOTLIGHT

LEVEL 3 SCREENING PERFORMANCE CRITERIA

Level 3 Screening Criteria: Results

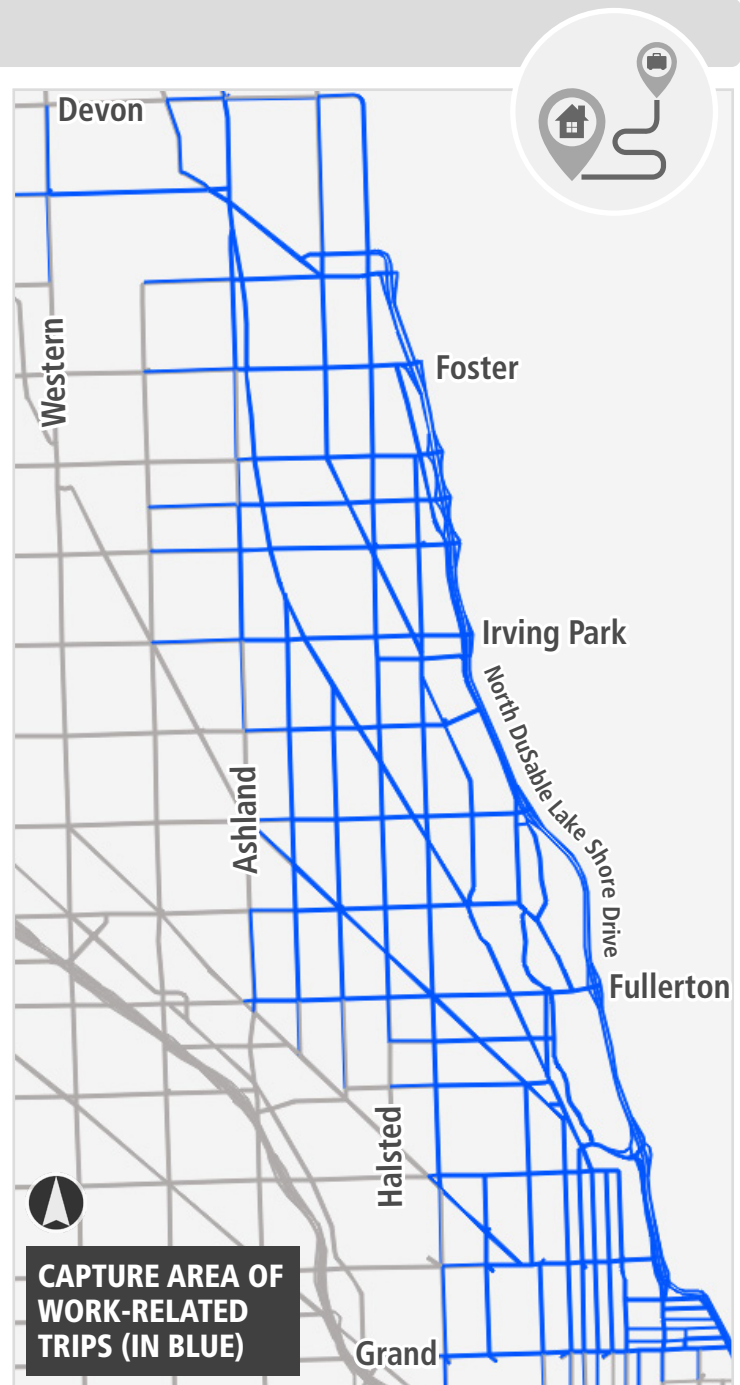
November 2023

The North DuSable Lake Shore Drive (NDLSD) Phase I Study is currently evaluating the [five remaining NDLSD Build Alternatives](#) (“Level 3 Screening”). As part of this evaluation, nearly 30 different criteria are being considered, including Performance, Social, Economic and Environmental factors. The project team has separated criteria into two categories: 1) Distinguishing criteria contain results that vary amongst alternatives, and 2) Non-distinguishing criteria contain results that are the same or similar amongst alternatives. This Study Spotlight addresses several non-distinguishing Performance criteria associated with each of the remaining alternatives under consideration, including access to employment, impacts to arterials, moving people in the corridor, and transit demand. For additional details regarding the overall Phase I Study, please visit the project website at northdusablelakeshoredrive.org.

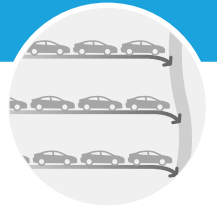
ACCESS TO EMPLOYMENT

Access to employment for the NDLSD corridor is estimated through the use of travel times for work-related trips as measured in the Chicago Metropolitan Agency for Planning (CMAP) regional travel demand model. Shorter work-related travel times are assumed to provide more access to employment, as improvements for mobility on NDLSD then makes up a lower percentage of the overall commuting time. The travel times measured in the CMAP model reflect the average total trip duration over the entire day. These travel times include time spent on the local street network as well as on NDLSD. For the access to employment analysis, the focus was on work-related trips originating in the area within and immediately adjacent to the NDLSD corridor as shown on the map to the right.

This analysis shows a negligible difference in average daily travel times for transit users regardless of alternative, with no more than 30 seconds of travel time separating all of the alternatives. For auto users, the travel times vary by approximately 90 seconds of travel time compared to No Action. Therefore, travel times for work trips are non-distinguishing across the alternatives.



IMPACTS TO ARTERIAL ROADWAYS



Another consideration for the NDLS D study area is the potential impact that changes to operations on NDLS D would have on parallel arterial streets used for local travel as well as arterial streets that provide access to NDLS D from adjacent neighborhoods. This criterion highlights the traffic impacts of each of the remaining alternatives on both north–south arterial roadways parallel to the Drive as well as east-west arterial roadways that provide access to NDLS D.

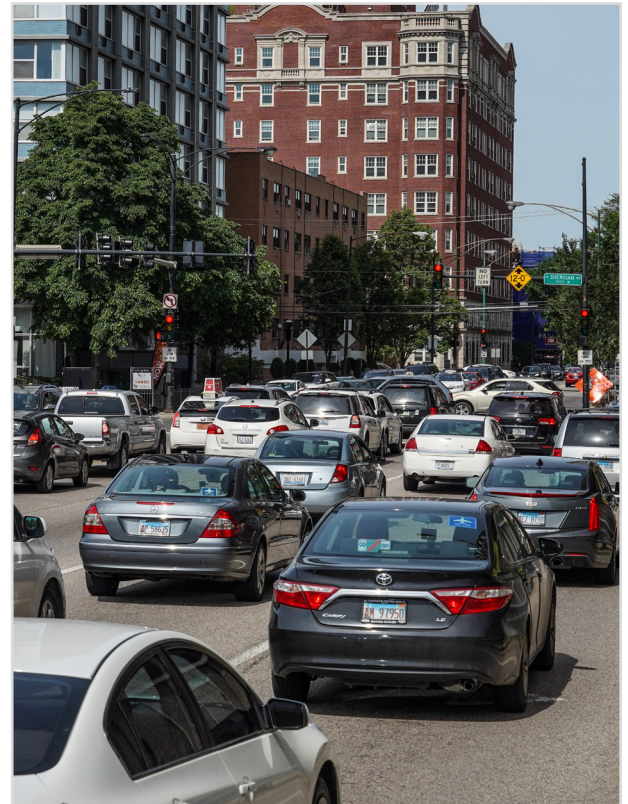
How much will traffic change on nearby arterial streets?

Changes in forecasted arterial traffic volumes is one lens through which the impact of the proposed alternatives can be evaluated. Daily traffic volumes for arterials within the study area are included in the year 2050 travel demand model forecasts for NDLS D and can provide a general idea of anticipated changes in traffic patterns resulting from implementation of each alternative.

To evaluate the changes in arterial volumes, projected traffic volumes were calculated by the CMAP travel demand model for arterials within an area bounded by Ashland Avenue on the west, Inner Lake Shore Drive/Marine Drive on the east, Hollywood Avenue on the north, and North Avenue/LaSalle Drive on the south. Generally, increases in traffic on north-south arterials may indicate diversion away from NDLS D, while decreases may indicate trips being diverted to NDLS D. For east-west arterials, increases in traffic may indicate more traffic moving towards NDLS D, while decreases may indicate traffic avoiding NDLS D. Though the data indicate that there will be diversions to the arterial network for some alternatives, the amount of volume change is less than 3 percent for each of the remaining alternatives. Therefore, it is concluded that there is not a distinguishable difference between alternatives with respect to changes in arterial volumes.

Will congestion change on nearby arterial streets?

Traffic volumes alone may not quantify the full impact of changes in traffic patterns on the arterial street network. If an arterial has excess capacity, small increases in traffic may have little to no impact on mobility. Therefore, another measure of arterial impacts evaluated in this study was change in arterial travel times. Travel times can reflect both congestion and accessibility to the Chicago lakefront (in the case of east-west oriented arterials). Morning and evening peak hour travel times were calculated by the CMAP regional travel demand model using the same evaluation limits as in the traffic volume analysis. The travel time changes along arterials are close to or less than a minute for each of the alternatives. Given the small differences in arterial travel times between the alternatives, this criterion is found to be non-distinguishing.



PERSON THROUGHPUT

Transportation system performance can be measured in many different forms, such as travel times, reliability, mode share, and others. One aspect of mobility that is often evaluated for transportation improvements is the number of persons that can be accommodated by the facility during a given time period, or person throughput. Person throughput measures the maximum capacity of a transportation facility or network based on likely vehicle mix and occupancy characteristics. The measure is reported in terms of number of users (persons) passing through the facility or network at a specific location over a period of time. The section of NDLSL between Fullerton Parkway and LaSalle Drive was selected for this analysis as it has historically had the highest transit and auto volumes of all sections in the corridor.



Transit Throughput

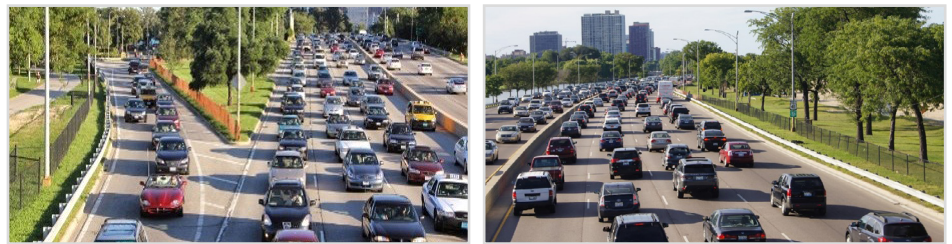
The person throughput calculation for transit for all alternatives in this analysis assumes future service levels on NDLSL as outlined in a 2016 CTA report, and that transit users do not exceed the desirable maximum occupancies of standard buses (53 persons/bus) and articulated buses (80 persons/bus).



Auto Throughput

The anticipated mix of single- and multiple-occupant vehicles was forecast as part of CMAP's 2050 Travel Demand Modeling for each proposed alternative as well as the No Action alternative. The classes of vehicles reported by CMAP are single-occupancy (SOV), dual occupancy (HOV-2), and vehicles with three or more occupants (HOV-3+).

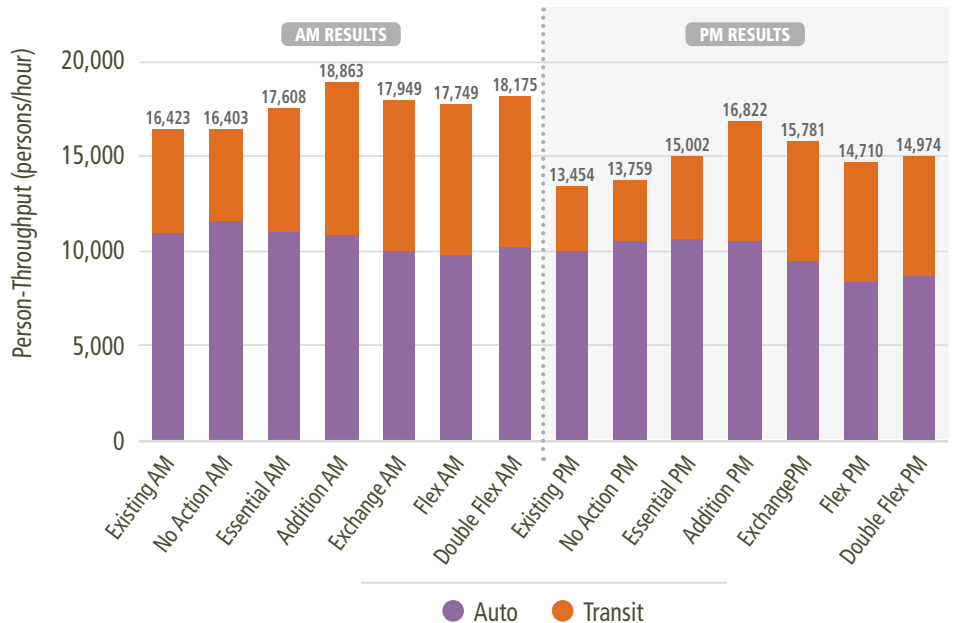
For the proposed alternatives, auto throughput would be affected by several geometric and/or operational changes within the NDLSL corridor, such as changes to the number of general purpose lanes in each direction north of Irving Park Road, provision of weaving lanes between certain junctions, and adding or converting lanes for dedicated use by transit vehicles and/or managed traffic. These proposed features are designed to prioritize transit use and mobility in the corridor, while aiming to maintain or improve auto mobility conditions. These changes also affect travel behavior related to vehicle occupancy, as the managed lane alternatives would slightly increase single-occupant vehicles (and reduce overall person throughput) as compared with the other alternatives.



Overall Person Throughput

Total person throughput was estimated for the morning peak hour in the southbound direction and the evening peak hour in the northbound direction for the critical segment between Fullerton Parkway and LaSalle Drive. It would increase for all of the proposed alternatives, generally as a result of substantial transit person throughput increases and moderate auto person throughput decreases.

2050 Peak Hour, Peak Direction Person Throughput
Fullerton Parkway to LaSalle Drive



TRANSIT TRAVEL DEMAND



Mode Share

Mode share refers to the percentage of total trips that use each available mode of transportation within a given geographic area or on a specific transportation facility. Changes to this metric can reflect the degree to which a proposed transportation improvement project affects the performance of various modes of transportation. For this study, mode share refers to the relative proportion of auto users to transit users. The CMAP travel demand model currently does not forecast walking and biking trips at a project level.

The area surrounding NDLSL currently has one of the highest concentrations of transit routes in the Chicago region, with three rail transit lines (CTA Red, Purple, Brown), one commuter rail transit line (Metra Union Pacific-North), and over two dozen CTA bus routes (including the seven express bus routes that operate on the Outer Drive) within the project study area. These transit options had a pre-pandemic mode share of 43% along the NDLSL corridor. The CMAP travel demand model forecasts that the transit mode share along the NDLSL corridor will not change substantially under 2050 No Action conditions.

How do the proposed alternatives impact mode share?

Analysis using the CMAP travel demand model indicates that all proposed alternatives would increase overall transit mode share by 0-2% compared to No Action. This level of change is within the margin of error for the model, meaning that the mode share impacts of each proposed alternative are not distinguishable from the others.

Mode Shift

Mode shift refers to an increase in the number of trips of one transportation mode resulting from a corresponding decrease in another transportation mode. This measure reflects whether and how much a proposed transportation network, policy, or service change affects travel behavior.

How do the proposed alternatives impact mode shift?

Analysis using the CMAP travel demand model indicates that all proposed alternatives result in an overall mode shift to transit of 0-2% compared to No Action. This level of change is within the margin of error for the model, meaning that the mode shift impacts of each proposed alternative are not distinguishable from the others.

It should be noted that the trips evaluated in the mode share and mode shift discussion only represent those that originate within the study area boundary shown in the map on the first page and have direct access to NDLSL express bus service. This does not include trips on NDLSL to or from parts of the city or suburbs outside of the study area that do not have direct access to NDLSL express bus service. For a summary of the entire regional travel market analysis for all trips on NDLSL, please refer to the Travel Market Analysis study spotlight.

In conclusion, the analysis of trip making behavior within the study area indicated that while changes in transit performance may be expected to increase the number of riders on NDLSL express buses across all alternatives, the relatively low overall mode share and mode shift percentages suggest most of these new riders would be shifting from other transit routes available along the NDLSL corridor rather than shifting from autos to transit. In addition, the total levels of forecast changes to mode share and mode shift are within the margin of error for the model, meaning that the impacts of each proposed alternative are not distinguishable from the others.



A Note about Transit Demand and the COVID-19 Pandemic: The transit demand projections provided in this spotlight assume that transit service and demand on NDLSL will have fully recovered from the COVID-19 pandemic by 2050. In March 2023, the NDLSL express bus route ridership was at 61% of the March 2019 ridership. There are signs that demand is continuing to recover in the NDLSL corridor, as NDLSL express bus ridership increased by 7% between March 2022 and 2023.