

TRAFFIC OPERATIONS POLICY DIRECTIVE

TR-001 (REV 1/2022)

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DAVID MAN, DIVISION CHIEF (Acting) (Signature) <i>David S Man</i>	DATE ISSUED: January 30, 2023	EFFECTIVE DATE: January 30, 2023
SUBJECT: Traffic Count Baseline Guidance Due to the Coronavirus Disease 2019 (COVID-19) Pandemic	DISTRIBUTION <input checked="" type="checkbox"/> All District Directors <input checked="" type="checkbox"/> All Deputy District Directors - Traffic Operations <input type="checkbox"/> Chief Counsel, Legal Division Headquarters Division/Program Chiefs for: <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Design <input type="checkbox"/> Maintenance <input type="checkbox"/> Safety Programs <input checked="" type="checkbox"/> Transportation Planning <input type="checkbox"/> Additional:	
DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, DESCRIBE TOPD 20-04 - Traffic Count Baseline Guidance During the Coronavirus Disease 2019 (COVID-19) Pandemic	
WILL THIS DIRECTIVE BE INCORPORATED IN A DEPARTMENT MANUAL, GUIDELINE OR STANDARD PLAN? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	IF YES, DESCRIBE	

DIRECTIVE

Due to the potential abnormal traffic patterns created by the COVID-19 pandemic, traffic analyses conducted for all projects on the State Highway System (SHS) shall not use traffic data collected between March 13th, 2020 and January 31st, 2022. For areas with lasting pandemic impacts, historical data may continue to be used. Traffic analysis and data usage should be subject to sound traffic engineering judgement and justification with source documentation of historical traffic data.

TRAFFIC OPERATIONS POLICY DIRECTIVE**IMPLEMENTATION**

The COVID-19 pandemic has abnormally impacted statewide traffic patterns such that monitoring data indicated that Annual Average Daily Traffic (AADT) decreased significantly by as much as 50 percent as compared to pre-pandemic conditions. Since the initial pandemic decline in AADT in March of 2020, statewide average AADT has slowly increased and is now just 3% lower than pre-pandemic condition, beginning February 2022. **To ensure the credibility of baseline traffic conditions, on which future year conditions (post-COVID-19) are based, the traffic analyses conducted for all projects on the SHS shall not use traffic data between March 13th, 2020 and January 31st, 2022.** Traffic analysis and data usage should be subject to sound traffic engineering judgement and justification with source documentation of historical traffic data. Historical traffic data gathered from past projects and partner agencies may be used to supplement and/or replace traffic counts collected **between March 13th, 2020 and January 31st, 2022.** Traffic data older than three (3) years may be refreshed by forecasting methods such as a regional travel demand model. **Projects on the SHS shall include Caltrans-sponsored projects and those submitted through the Capital Oversight and Local Development/Intergovernmental Review (LD-IGR) process.**

While AADT has almost returned to pre-pandemic levels, there are specific travel patterns that are still impacted. For example, bottleneck locations, duration, and intensity in the AM peak period for areas with heavy work trip concentrations have changed due to increased telework options. Traffic analysis and investigations in areas where telework, or other longer lasting pandemic impacts, have impacted travel could produce erroneous results and recommendations. Before using any post-pandemic data, an evaluation using sound traffic engineering judgement should be conducted with considerations given to the type of analysis being performed, data being collected, and location of the study. Data used to support the analysis should consider origin destination trends and transit ridership where available. For areas with lasting pandemic impacts, historical data may continue to be used.

DELEGATION

No new delegations of authority are created under this policy.

BACKGROUND

Practitioners may to take the following into consideration when performing traffic analysis:

- The baseline condition is defined as the collection of traffic counts without the impact of internal or external factors (such as COVID-19). During the COVID-19 pandemic, traffic count data has been subject to unstable conditions and changes in travel behavior.
 - Data concerning traffic movements, traffic volume, and performance measures such as speed, average queue length, and delay, are essential in the traffic analysis and decision-making process used by the Caltrans to assess local development project
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BACKGROUND (Cont'd)

impacts upon the SHS. Analysis is based on the data, and the pandemic has considerably impacted its integrity.

- During the COVID-19 pandemic, the number of vehicle miles traveled along California's highways and local arterials significantly decreased. This was due to "new quasi-normal" day-to-day activities and businesses operating under various restrictions, including shelter-in-place and complete business shutdowns. Thus, society saw a significant increase in the number of individuals teleworking from home, persons unemployed, restrictions on school attendance, restaurant dining and retail, and many simply avoiding unnecessary trips to avoid exposure to COVID-19. The future of work-from-home activity/mode is unknown as some private entities continue to offer permanent and expanded telework opportunities. A vast majority of COVID-19 traffic counts are at historic lows and may be lower than previous baseline conditions, or short-term future conditions, while in some rural/resort areas traffic counts are now higher than historic levels. Daily traffic patterns continue to be altered.
 - The AADT data has been monitored and reported through the Caltrans Performance Measurement System (PeMS) before and during the COVID-19 pandemic. The data are compared to the same relative date in the year 2019, and the percent change is calculated. The statewide AADT percent decrease has been significant for six (6) Counties in the Bay Area (San Francisco, Santa Clara, San Mateo, Marin, Contra Costa, and Alameda), which started 4-days prior to Governor Newsom's first shelter-in-place order, that took effect on Tuesday, March 17, 2020. The shelter in-place order for the entire State of California took effect on Thursday, March 19, 2020. Monitoring data indicated that AADT decreased by over 50 percent on April 4, 2020, from the comparative date in 2019. As a result of the lower AADT, travel speeds on the SHS have increased by over 13 percent during weekdays for May 2020 compared to May 2019.
 - As observed traffic conditions indicated a near return to pre-pandemic conditions, a comparison of statewide average daily traffic volume monthly trends was conducted using PeMS. Data was collected for only Tuesdays-Thursdays in order to capture typical conditions. Results showed that average daily traffic volumes in 2022 (February-April) increased by a 4% average when compared to 2021 and were 3% lower than 2019 pre-pandemic conditions on average. It should be noted that while volumes have changed over time, so has data availability in terms of detector station health and number of overall detector stations, as detector health can vary between good and poor conditions and the number of detector stations in operation can change due to construction and maintenance activities. The change in reported data can impact data comparisons over time. Additionally, the data used in the comparison analysis only represents state highway facilities that report data to PeMS. Facilities in rural areas or areas with no PeMS coverage are not represented in comparison calculation.
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TRAFFIC OPERATIONS POLICY DIRECTIVE**BACKGROUND (Cont'd)**

PeMS bottleneck data was used to compare bottleneck locations, duration, and intensity between pre-pandemic and post-pandemic conditions. Results showed that AM bottlenecks in urban areas are still impacted, depending on analysis area. Additional review of data should be conducted for traffic analysis or investigations involving bottlenecks in the AM peak period or in areas with other longer lasting pandemic impacts.

- All projects that conducted traffic analysis, not using traffic count data prior to March 13, 2020, including projects submitted by others through the LD-IGR program are affected. To provide valid traffic analysis during this time, traffic count data should be less than three years old. Pre-COVID-19 traffic data collected prior to March 2020 should be used as the baseline during the short-term interim (e.g., next two years). Historical traffic data gathered from past projects and partner agencies may be used to supplement and/or replace “existing” COVID-19 pandemic period traffic counts, subject to sound engineering justification and source documentation of historical traffic data.
 - For the use of any traffic data that is older than three (3) years, it is recommended to use Regional Travel Demand Model to forecast the traffic data to the current year with some adjustment factors based on observed traffic patterns using PeMS and current land use. If counts at the needed location are not available, current counts should be gathered from the needed location and from a representative location where prior counts are available. The current counts from the needed location can then be adjusted to more accurately reflect assumed post-COVID conditions. Traffic consultants and local agencies should also follow these recommendations for Capital Oversight and LD-IGR program projects
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TRAFFIC OPERATIONS POLICY DIRECTIVE**DEFINITIONS**

When used in this Traffic Operations Policy Directive, the text shall be defined as follows:

- 1) **Standard** – a statement of required, mandatory or specifically prohibited practice. All standards text appears in **bold** type. The verb **shall** is typically used. Standards are sometimes modified by Options.
 - 2) Guidance – a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in underline type. The verb should is typically used. Guidance statements are sometimes modified by Options.
 - 3) Option – a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements text appears in normal type. The verb may is typically used.
 - 4) Support – an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs shall, should and may are not used in Support statements.
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