Traffic Engineering and Highway Safety Bulletin 24-01
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TEA Traffic Studies

In This Issue…

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Overview

As the Department of Defense's (DoD) transportation engineering proponent, the mission of the Transportation Engineering Agency (TEA) is to improve the global deployability of U.S. Armed Forces by providing the DoD with transportation and transportability engineering, policy guidance, research, and analytical expertise to support the National Military Strategy. Within TEA, the Traffic Engineering (TE) Branch has the specific mission to improve safety and efficiency on DoD installation road networks and entry control facilities (ECF) / access control points (ACP). To accomplish this mission, the TE Branch team engages in a variety of activities to include the following:

- ☑ Conduct traffic engineering studies
- ☑ Provide technical assistance with engineering matters
- ☑ Publish guidance documents (pamphlets & bulletins)
- ☑ Provide training regarding traffic engineering and safety
- ☑ Develop (and continue to enhance) engineering software to assist with traffic engineering calculations
- ☑ Conduct research supporting traffic safety and efficiency

This bulletin will focus on the mission component of conducting traffic engineering studies. As such, the TE Branch offers these studies at no cost to installations or Services; however, work is dependent upon timing of funding availability.

Traffic studies can vary in size and goal, but most are intended to address a specific traffic need. Studies can be needed as part of long-range installation planning, or they can be in response to existing problems on a base (such as significant delays or crashes at an intersection or on a road segment). For example, an ECF Study might be performed to address multiple needs, such as planning for installation development, addressing current capacity issues, addressing security issues with the absence (or placement) of active vehicle barriers (AVBs), and/or addressing safety related issues for motorists and guards working at the ECF. In the case of a Sign Management Study (SMS), the purpose would be two-fold: to meet the *Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)* requirement that installations have a sign management method in place, as well as to develop a sign database that can be used by installation personnel to track installation signing.

A traffic engineering study is the means to a solution for traffic engineering problems. Though there are many different types of studies, TEA-focused studies will be presented herein and include the following types:

- ☑ ECF / ACP Study
- ☑ Traffic Safety Assessment (TSA)
- ☑ Speed Study
- ☑ Sign Management Study (SMS)
- ☑ Pedestrian Study
- ☑ Traffic Capacity Study
- ☑ Traffic Signal Operational Audit
- ☑ Parking Study
- ☑ Comprehensive Traffic Study
- ☑ Desktop Study/Plan Review

ECF / ACP Study

An access point to an installation is referred to as an entry control facility (ECF), which is UFC terminology, or as an access control point (ACP), which is Army terminology. “Gate” is also a common terminology for either and ECF or ACP. An ECF Study provides recommendations for a gate(s) to an installation. The delivered product contains conceptual design recommendations for proposed ECFs and/or upgrades to existing ECFs that can be met in either the long-term or interim term. *UFC 4-022-01, Security Engineering: Entry Control Facilities/Access Control Points* is the primary UFC for the design of an access point for all services, except for Army. Design of Army access points must follow *The Army Standard (AS) for ACPs*. Considering, long-term gate concepts are intended to be fully UFC- (or Army-) compliant in terms of security, safety, and capacity. Interim-term conceptual designs typically address immediate capacity and safety issues and are likely constrained to the existing ECF footprint. It should be noted that the focus of an ECF Study is not anti-terrorism / force protection but the processing of traffic safely and optimally.

Stakeholder involvement is crucial to understanding the type of deliverable necessary. Installation personnel must provide the following critical information for correct sizing and placement location of the conceptual ECF design(s):

- ☑ Installation population and projected growth
- ☑ Applicable master planning documents
- ☑ Location or placement constraints: such as installation boundary lines, environmental restrictions, or utilities that cannot be relocated.

This information should be provided to the study team prior to, or at, the in-brief meeting conducted the week of the study team's site visit - - which will include site review of the gate and adjacent internal & external intersections, morning peak period observations of gate operations, and traffic data collection. The adjacent internal and external intersections will be counted to assess capacity needs. Additionally, as part of the site visit, Traffic Safety Assessments (TSAs) will be conducted at the gate & the intersections and are intended to identify safety-related concerns. The recommendations provided to mitigate those concerns are generally short-term and quick-to-implement fixes due to the nature of the concern.

The ECF/ACP Study report includes documentation of the TSA deficiencies & recommendations, the conceptual gate design(s), as well as conceptual intersection designs if capacity or geometric improvements are necessary. In addition to background data used in the develop of the concepts, the report will also include planning cost estimates for all recommendations provided.

Traffic Safety Assessment (TSA)

A TSA is an assessment to identify safety-related concerns at an intersection or along a roadway segment. Though most TSAs are conducted on existing roadways (and are therefore essentially a field review), a TSA can also be conducted on a proposed roadway as part of a design review of the plans.

A TSA is often conducted at locations being studied for other reasons (such as capacity) but can also be conducted as a stand-alone project. A TSA might not include obtaining traffic data, especially if the location is not being studied for capacity concerns. An assessment typically addresses the following:

- ☑ Traffic control
- ☑ Lane configuration
- ☑ Signing
- ☑ Pavement markings
- ☑ Design vehicle accommodation/geometric adequacy
- ☑ Operational concerns
- ☑ Intersection sight distance
- ☑ Roadside hazards
- ☑ Improper traffic control devices
- ☑ Bicycle and pedestrian access

An analysis of the most recent 5 years of crash data should also be included as part of the assessment with the goal of identifying remedial recommendations. The installation-provided crash data should at a minimum include location, crash type, severity, and weather conditions. Information about the crashes and a probable cause, ideally from an investigating officer, is also helpful. The crash data should exclude personal information about the crash victims since the study team is interested in the details about the crash itself and information leading up to the crash. It is important to ensure that the personally identifiable information can easily be removed from the crash reports so that it can be provided to the study team. Historically, the inability to remove this information disallowed providing usable crash data. “Near misses” and “almost hits” are subjective and difficult to address but can be an indicator of an issue as well as help point study members toward further data needs, such as speed or signal timing.

Onsite, the study team will collect traffic data at the location and perform a thorough safety assessment. Though the assessment will focus on short-term improvements that can be implemented in a relatively brief timeframe, long-term recommendations may also be provided. Short-term recommendations such as changes to signing and pavement markings, or removing roadside hazards, could potentially be addressed by installation maintenance personnel. Long-term recommendations may feature improvements such as turn lane additions, required locations of excavation to remove sight distance limitations, or horizontal curve flattening.

The deliverable for a TSA will be a photo-based report that identifies and illustrates all safety concerns noted. Conceptual drawings may be provided for long-term recommendations illustrating construction within and/or around the study location. The report will also contain estimates of cost for all recommendations.

Below are example writeups ,stating the deficiency and corrective action, from a TSA conducted at an intersection.

TSA Examples

Deficiency:
The light pole located along the south is a fixed object within the clear zone.

Corrective Action:
In the long-term, it is recommended to relocate the light pole outside the clear zone. In the short-term, an OM-3R object marker on the base of the light pole can be installed to help delineate the hazard.

OM3-R

Deficiency:
The overhead street name signs are too small which makes them difficult to see.

Corrective Actions:
Replace the overhead street name signs with ones that utilize upper-case lettering that is at least 12 inches in height and lower-case lettering that is at least 9 inches in height.

If an installation has a crash location of concern, TE can conduct a specific crash analysis for that location which would include an assessment to determine roadway-related contributing factors for the crashes and provide recommendations for mitigation. Examples of contributing factors include improper traffic control, faded or non-retroreflective signing or pavement markings, sight distance limitations, capacity issues, crosswalk location, pavement condition, or geometric constraints. A high crash location is a location where crash rates are higher than similar locations with similar geometric features. Note: A location does **not** have to meet the criteria for a "high crash location" to be studied by TEA.

Speed Study

A Speed Study includes the documentation of travel speed data at a point along a roadway and relevant roadway characteristics such as geometry and surrounding land use. This data is then used to either validate existing posted speed limits or make recommendations on changes to existing posted speed limits. Speed limits should not be arbitrarily set. Improperly assigned speed limits can contribute to crashes (increase the crash potential) by increasing speed differentials between vehicles, as many drivers will travel at the speed at which they are comfortable while at the same time others will travel at the speed limit. A properly assigned speed limit will encourage speed uniformity and minimize speed differences. A speed study will determine this ideal speed.

To collect existing speed data, the study team will install Automatic Traffic Recorder (ATR) devices, which also serve as speed measuring devices. These devices are installed at locations where traffic speeds are not constrained by roadway curves, major access points, intersections, or crosswalks. One location is appropriate for smaller roadway segments, while larger roadway segments may require two or more locations. Larger roadway segments may not necessarily require the same posted speed limit for its entire length since the nature of the roadway may change from segment to segment.

In addition to measuring travel speeds, the speed data must be analyzed and includes identifying key speeds such as the 85th-percentile speed, 50th-percentile speed, and the 10-mph pace speed. As required by the 2023 MUTCD, the engineering speed study shall consider the roadway context. The principal factors considered in a study include the following:

- ☑ Roadway environment
- ☑ Roadway characteristics
- ☑ Geographic context
- ☑ Speed distribution of free-flowing vehicles
- ☑ Crash history
- ☑ A review of past speed studies to identify any trends in operating speeds

The engineering study will determine which factors will prevail in setting the speed limit. If an increase to the speed limit is proposed, the team will ensure that speed dependent factors, such as curve travel speeds, clear zone, superelevation rate, and sight distance limitations, are appropriate for an increase to the speed limit, or if other mitigation is required. Horizontal roadway curves may require an advisory speed lower than the speed limit, so it is recommended to not place a regulatory speed limit sign at a horizontal curve.

The deliverable for a Speed Study will be a report summarizing the existing speed limit, average measured speed, 85th percentile speed, and recommended speed posting for each studied roadway segment (if more than one). It will also include any other recommendations needed to accommodate the proposed speed limit, including advisory speeds for warning conditions, fixed object removal in the clear zone, or traffic signal clearance interval recalculation.

Sign Management Study (SMS)

The MUTCD regulates the application, size, message, placement/installation, and required minimum retroreflectivity of traffic signage. An SMS will identify recommendations to ensure that the MUTCD requirements are met. An SMS conducted by TEA has two primary purposes: (1) to determine if existing signage complies with the MUTCD regulations, and (2) to determine if there are missing signs or if an existing sign is inappropriate for a condition. The SMS will document the sign conditions, including retroreflectivity values of the sign colors. A sign management system is a good tool to ensure continued compliance with MUTCD requirements. An SMS performed by TEA will provide the installation with this management system.

Installation personnel must provide aerial mapping of the installation for use in the study team's collection program. The collection program uses global positioning systems to collect the location of the sign. Information is entered for multiple attributes relating to existing conditions, plus any recommendations for changes to the sign. Most attributes are collected by visual observation including sign type, sheeting type, post type and breakaway condition; or by basic distance measurements for attributes such as mounting height, offset from road edge, and sign size. A retroreflectometer is used to collect / measure sign retroreflectivity values. The study team will also assess the site for required signing not currently in place. Common examples can include pedestrian crosswalk signing or curve warning signing.

The deliverable for an SMS consists of a report summarizing common deficiencies, recommendations, statistics from the SMS database, plan sheets that illustrate the location and relevant characteristics of existing and proposed signs, and a geographic information system (GIS) database containing all SMS data. All signs are categorized by different priorities for replacement, including signs that are fully compliant and only need to be replaced at the end of their useful service life. Plan sheets show all the information to remove/replace signs throughout the installation, including type, size, and location. The GIS database details all relevant information relating to each proposed and existing sign and is intended to be updated as signing is added or replaced such that it remains an accurate tool for maintaining signs.

The graphic below is an example of an SMS plan sheet showing signs to be replaced at an intersection.

SMS Plan Sheet Example

Sign ID	Primary Sign	Proposed Sign	Proposed Post	MUTCD Sign Type	MUTCD Series	Proposed/ Existing Size	Required Size	Post Breakaway	Standard Regulatory/ Warning/Sign Comments	Sign Comments	Reflectivity Condition	Priority No.
104	Yes	No	No	Regulatory	R10 Traffic Signal	48x36	48x36	Yes			Marginal	17
105	Yes	No	No	Regulatory	R10 Traffic Signal	48x36	48x36	Yes			Marginal	17
106	Yes	No	No	Regulatory	R1-1 Stop	30x30		Yes			Good	N/A
107	Yes	No	No	Warning	W3-3a-TEA Active Barrier Ahead	36x36	30x30	Yes		Use standard message ACTIVE BARRIER AHEAD	Good	N/A
108	Yes	No	No	Regulatory	R2-1 Speed Limit	24x30	24x30	Yes			Poor	12
109	Yes	No	No	Warning	W3-3a-TEA Active Barrier Ahead	36x36	30x30	Yes		Use standard message ACTIVE BARRIER AHEAD	Good	N/A
110	Yes	No	No	Warning	W11-27-TEA Taxiway	24x24	30x30	Yes		This should be a diamond, warning, sign and not square.	Good	25
111	Yes	No	No	Warning	W11-27-TEA Taxiway	24x24	30x30	Yes		This should be a diamond, warning, sign and not square.	Good	25
112	Yes	No	No	Regulatory	R10-6a Stop Here On Red (curved arrow)	24x30		Yes			Good	N/A
1092	No	No	No	Warning	W16-2aP Distance (feet) (1 line)	24x12		No			Good	N/A

Pedestrian Study

The overuse and misuse of pedestrian crossings is commonly observed on military installations. In many situations crosswalks are applied indiscriminately, resulting in uncontrolled crosswalk locations that do not meet the warrant criteria provided in the *TEA Crosswalk Warrant and Guidelines*. A pedestrian study assesses existing crosswalks to determine if a marked crossing is warranted, or if a crossing is needed. The study will also assess the sidewalk placement and continuity, and Architectural Barriers Act (ABA)/Public Right-of-Way Accessibility Guidelines (PROWAG) compliance to ensure pedestrian safety. It may also include an assessment of light readings to determine if current lighting levels at crosswalks are adequate at night.

Installation personnel must provide the locations in need of study. Pedestrian crossing data can be collected by the study team for multiple crosswalks from a single observation location, provided they are located fairly close together and the observer is situated in a location where each location is visible. Multiple observation locations can be included in a week-long site visit for data collection. The study team will also install ATR devices throughout the study area since roadway traffic volumes are included in the criteria of the crosswalk warrants.

The deliverable for a Pedestrian Study is a report summarizing all of the findings and recommendations, including traffic volumes, pedestrian volumes, and whether crosswalks at uncontrolled locations meet warrants for installation. It will also summarize safety observations and noted deficiencies relative to ABA/PROWAG compliance, identify new sidewalk locations, and (if required by the study scope) document crosswalk light readings.

Traffic Capacity Study

A traffic capacity study is the basis for identifying necessary roadway and intersection capacity improvements. This can include the addition of intersection turning lanes, changes to lane assignments, changes to traffic control, or the addition of corridor travel lanes. It can also include reductions to capacity if the roadway was originally designed for traffic volumes that exceed the current demand. The roadway capacity can be reduced by modifying the cross-section to reduce the travel lanes and accommodate bicycle facilities or parking; or the overall cross-section can be reduced and converted to greenspace. Traffic capacity studies can vary significantly in size, from a single intersection to as many as 50 or more comprising all the major intersections on an installation.

A traffic capacity study is typically conducted for one of two reasons: to remedy existing deficiencies or to determine what deficiencies will result from future growth or traffic volume redistribution. On a military installation, future growth occurs with the addition of new installation personnel. Traffic volume redistribution can occur from relocating a large facility or opening/closing ECFs. It may also occur with new development such as when a new roadway is constructed, thereby changing traffic patterns on surrounding streets.

Installation personnel must provide the following:

- ☑ Intersections or roadways of concern: The list of problem locations, or those that could be affected by a new facility opening.
- ☑ Existing population and growth information: Master planning information relative to the positive or negative growth of the installation, as well as the addition or relocation of facilities.
- ☑ Localized growth information: If a new facility is planned, such as a shoppette, day care, or school, traffic volumes should be projected for that facility to determine traffic impacts in the immediate area.
- ☑ Traffic signal timings: timing information for all signalized intersections under study should be provided to determine whether existing timings can be optimized to remedy existing operational issues. The study team can also assess whether the signal is operating per designed timings.

Traffic volumes are collected by two primary means – manual turning movements counts (TMCs) at intersections and automatic traffic recorders (ATRs) on road segments. Turning movement counts are conducted to determine intersection approach volumes and turning proportions throughout intersections. Automatic traffic recorders are used to capture

traffic volumes along a roadway corridor and can also be used to obtain vehicle classification and speed data. Traffic data is commonly collected in 15-minute intervals for the count period. Turning movement counts are typically conducted for the peak morning, mid-day, and evening periods to coincide with traffic arriving to work, traveling to lunch, and departing from work. Data collected using ATRs is typically for at least one 24-hour period.

After traffic data is obtained, the peak hour is determined for each peak period studied. The average daily traffic (ADT) is developed by adding all intervals of traffic for the 24-hour period. The peak hour volumes are used to analyze existing roadway capacity which determines whether there are any current capacity issues requiring mitigation.

If applicable, traffic data is adjusted to account for growth to analyze the future scenario. This is done by either the use of a growth factor or by adding specific traffic from localized growth, or both. A growth factor is determined by considering the amount of additional personnel planned for the installation as compared to the existing population. Localized growth is developed by using Institute of Transportation Engineers (ITE) Trip Generation data for the planned facility. After the traffic growth is generated, it is then assigned and added to the appropriate existing traffic volumes to determine the (future) design traffic volumes. Same as the existing scenario, these volumes are analyzed to identify capacity deficiencies and recommendations are developed to address those deficiencies, thereby improving the future operations.

The deliverable is a report summarizing the methodology and recommendations. Existing and design peak hour traffic volumes are identified and conceptual drawings illustrating the recommendations are drafted over aerial imagery. Planning level cost estimates are also included.

This type of study is also many times referred to as a **Traffic Impact Study** where the number of additional trips to be generated by a proposed development (or an increase in population) is estimated, capacity analyses conducted to assess existing and future operations, impacts identified, and roadway or intersection improvement needs determined.

Traffic Signal Operational Audit (TSOA)

Traffic signal timing can be a source of major delays and the issue has been noted on many military installations in the form of both inefficient traffic signal operations and equipment in need of repair. Short-term enhancements offer some level of benefit, but sometimes signals require complete replacement. Timing should typically be reviewed every 3 to 5 years but more often when there are significant changes in traffic volumes, traffic patterns or roadway conditions within the installation.

Traffic volumes and turning proportions can change over time, leading to inefficient operations when updates to traffic control do not occur. For example, if traffic signal timing and detection is inappropriate for the traffic volumes currently served by a signal, operations will likely be negatively impacted. Thus, operations could be improved with relatively low-cost improvements such as signal retiming, changes to signal phasing, lane use re-assignment, or signal coordination.

Poorly timed traffic signals cause increased emissions, waste fuel, and create unnecessary delay to roadway users and can lead to unsafe driver decisions so optimizing signal operations is a very beneficial option though it is not always considered. With additional focus on traffic signal sustainability, installations will reduce delays and emissions in addition to increasing the safety of motorists and pedestrians.

A TSOA focuses on efficiency and safe operations. The goal is to reduce delays, reduce emissions, and increase traffic flows (thereby decreasing congestion). An operational audit has the following objectives:

- ☑ Inventory existing traffic signal equipment
- ☑ Recommend immediate short-term optimization with existing equipment or minor upgrades that accommodates the existing traffic volumes
- ☑ Recommend long-term optimization, potentially with new equipment, that accommodates future traffic volumes

Installation personnel must provide the following to the study team:

- ☑ Projected growth (positive or negative)
- ☑ Aerial imagery

- ☑ Traffic signal locations to be audited
- ☑ Traffic signal timing/phasing plans (if available)

A count of the traffic and inventory of the number of lanes, lane assignments, and signal timing & phasing is necessary for conducting a TSOA. Using collected turning movement traffic counts at the study intersection(s), the peak hour traffic volumes are determined (and adjusted for future growth if applicable). These volumes are then entered into Synchro (a traffic software for modeling and optimizing traffic systems) to determine if additional travel (or turning) lanes are necessary to add capacity or if only adjustments to the signal system are needed to alleviate the traffic problems, resulting in more efficient and safer movement at the intersection.

Parking Study

A parking study can identify areas where additional parking capacity is needed. Lack of adequate parking presents a significant problem at many installations and is often localized to a portion of the installation, such as commissaries, exchanges, barracks areas, and major employment concentrations. The objective of a Parking Study is to identify existing parking shortages, project the future parking demand, and develop conceptual parking improvement schemes (to place the proper number of stalls with a properly designed layout and traffic circulation patterns).

Installation personnel must provide the locations desired for study which may be limited to areas that are most congested, larger areas with moderate congestion, or the entire installation.

The study team will observe parking utilization during high parking utilization periods. These periods are when people are typically at work, including mid-morning between 0900 and 1100 and mid-afternoon between 1300 and 1500. If a location is under study that caters to lunch traffic, such as a fast-food restaurant or a food court, it would be observed over the lunch period between 1130 and 1300.

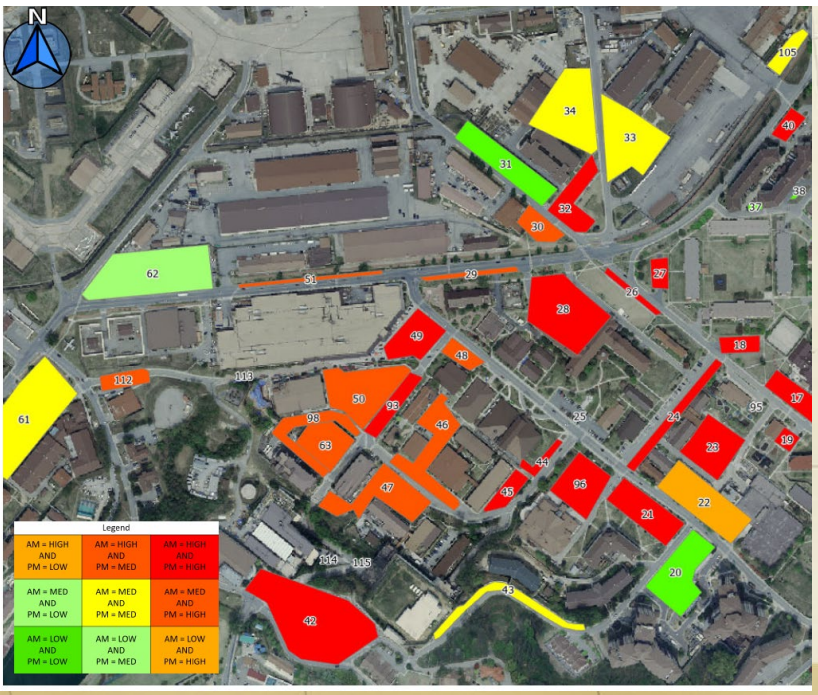
The deliverable for a Parking Study is a report that addresses all parking lots studied - - providing an inventory of utilization observations and percentage occupancy for each lot, as well as recommendations to address parking capacity needs. Recommendations may include simple additions to existing parking lots, such as optimizing existing parking usage, or identifying locations for additional surface lots. That said, if the area is congested, it is not likely that space would be available for a new surface lot, and parking structures may need to be considered. Also, demand management systems can be considered, with examples including providing work-from-home options, increasing accessibility for alternative transportation modes such as transit, walking, and cycling, implementing carpooling programs, and developing shuttle systems that provide access to and from parking lots farther away from employment concentration centers.

The following page illustrates an example parking inventory - - inclusive of a table depicting the size & utilization of each lot at certain times of day and aerial imagery illustrating the lot locations.

Parking Inventory Summary

Image Source: Osan AB aerial imagery

Parking Lot Number	General Parking Total	Mid-Morning General Parking Count	Mid-Morning General Parking Percent Occupied	Mid-Afternoon General Parking Count	Mid-Afternoon General Parking Percent Occupied
17	34	39	115%	37	109%
18	26	27	104%	26	100%
19	11	11	100%	11	100%
20	371	179	48%	178	48%
21	88	88	100%	88	100%
22	22	20	91%	0	0%
23	6	7	117%	8	133%
24	36	36	100%	35	97%
25	Under Construction				
26	30	30	100%	30	100%
27	24	23	96%	23	96%
28	41	39	95%	40	98%
29	16	14	88%	16	100%
30	21	18	86%	21	100%
31	39	9	23%	12	31%
32	42	42	100%	42	100%
33	51	34	67%	26	51%
34	93	66	71%	66	71%
35	10	0	0%	2	20%
36	5	1	20%	1	20%
37	6	0	0%	2	33%
38	5	0	0%	2	40%
39	11	18	164%	18	164%
40	10	12	120%	10	100%
41	21	19	90%	20	95%
42	186	186	100%	169	91%
43	74	48	65%	52	70%
44	20	20	100%	21	105%
45	43	44	102%	40	93%
46	140	108	77%	127	91%
47	50	48	96%	44	88%
48	19	20	105%	16	84%
49	40	40	100%	40	100%
50	125	112	90%	131	105%
51	40	28	70%	40	100%
52	24	10	42%	10	42%
53	3	3	100%	3	100%



Comprehensive Traffic Study

A Comprehensive Traffic Study is a combination of two or more types of studies previously described in this bulletin. Commonly, a Comprehensive Traffic Study might assess 10-20 key internal intersections, the ECFs & adjacent intersections, pedestrian accommodations, access management issues, speeding, and master planning issues. As specific items of concern can be added to the scope of work per the installation's request, the study is truly catered to meet the needs of the installation.

Desktop Study/Plan Review

The TE Branch conducts smaller scale in-house desktop studies, which tend to be limited in scope and do not involve travel to the installation. This can include plan or concept reviews proposed by installation personnel or others. A desktop study is an assessment using photos and aerial imagery; and may include some analysis, possibly using data collected previously by TEA, installation personnel, or a consultant. Examples of a desktop study include study of one gate, a capacity or safety study of one intersection, and/or a pedestrian study of a limited area. A plan review conducted by the TE Branch would focus on traffic safety-related concerns and other basic geometric conflicts.

For a desktop study, installation personnel must provide as much information as is available to study the problem and may include collection of traffic volumes. The TE Branch will provide clear guidance on how to collect and report data. Depending on the complexity of the study, the deliverable may be a summary memo or a drawing of recommendations to address the problem under study.

As stated, the TE branch is available to review roadway or gate construction plans or concepts prepared by an AE consultant or service branch, noting that the review would be limited to site layout and traffic-related items, versus roadway design items such as drainage and pavement design. As for an ECF/ACP Traffic Study (i.e., report that identifies design requirements for elements such as the number of ID check lanes, truck holding size, Visitor Center parking, etc.) developed by anyone other than TEA, review and validation by TEA is required by the UFC (applicable to all non-Army gates) and the Army Standard (applicable to all Army gates).

Summary

In summary, there are several different types of studies that TEA provides. Installation personnel don’t necessarily have to know exactly what type of study they need to submit a request but know that the TE Branch is here to assist.

The first step in the process is to complete a Traffic Engineering Service Request Form that is available on the TE Branch website. After downloading the form, fill it out with as much detail as possible. The more information that is included the better. If possible, also include any aerial imagery, photos, or maps. Once the form is complete, send it to the email address on the top of the form. The request will be reviewed and placed in a queue for action. The TE Branch maintains a project listing for requests which is referenced when allocating funding. It should be noted that completion of a study could take up to 12 months to complete once awarded on a task order based on availability of funding. All studies conducted by the TE Branch are NO COST to the installation.

If you believe your installation previously had a study conducted by TEA within the last 10 years, know that copies of all studies are available on the Traffic Engineering Studies webpage. A common access card and a DISA DoD365-J Guest Account are required to access these studies. Instructions for obtaining access are provided on the Traffic Engineering Studies page. Feel free to contact the TE Branch to check for additional past resources that may not have been uploaded to the website.

Lastly, as part of this service, the TE Branch is also available to answer email questions regarding most any traffic engineering matter.

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Reference List

- ☑ Transportation Engineering Agency (TEA) Homepage
- ☑ *Traffic Engineering Studies Reference*, SDDCTEA Pamphlet 55-8. 2016.
- ☑ *Traffic and Safety Engineering for Better Entry Control Facilities*, SDDCTEA Pamphlet 55-15. 2019.
- ☑ *Better Military Traffic Engineering*, SDDCTEA Pamphlet 55-17. 2016.
- ☑ Addendum to SDDCTEA Pamphlet 55-17, *Crosswalk Warrant and Guidelines*, 6 February 2024.
- ☑ DOD Supplement to the MUTCD, TEA, 2015
- ☑ *Security Engineering: Entry Control Facilities/Access Control Points,* Unified Facilities Criteria (UFC) 4-022-01, 27 July 2017
- ☑ *Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 11th Edition,* December 2023