

4.7 TRAFFIC AND CIRCULATION

This section incorporates by reference information from the Other Physical Attributes Baseline Study of Fort Ord, California, which is available for review at the public information repository established at the Seaside Branch Library (U.S. Army Corps of Engineers, Sacramento District 1992e).

This section describes existing conditions in the traffic study area. The study area, which includes Fort Ord and the surrounding communities, is shown in Figure 4.7-1. This section begins by providing definitions for the traffic terms used both in this section and in Section II.7, "Traffic and Circulation". This is followed by a brief discussion of the approach used to describe traffic conditions, a discussion of service standards for roadway operations, and finally an analysis of current traffic conditions and problems in the traffic study area.

4.7.1 Definition of Terms

Several technical terms are used in this traffic analysis that may be unfamiliar to most readers or that may have specific meanings in the context of this analysis. A definition of each of these terms is provided below to assist the reader in understanding the analyses in this section, in Section 5.7, and in Section II.7 in Volume II.

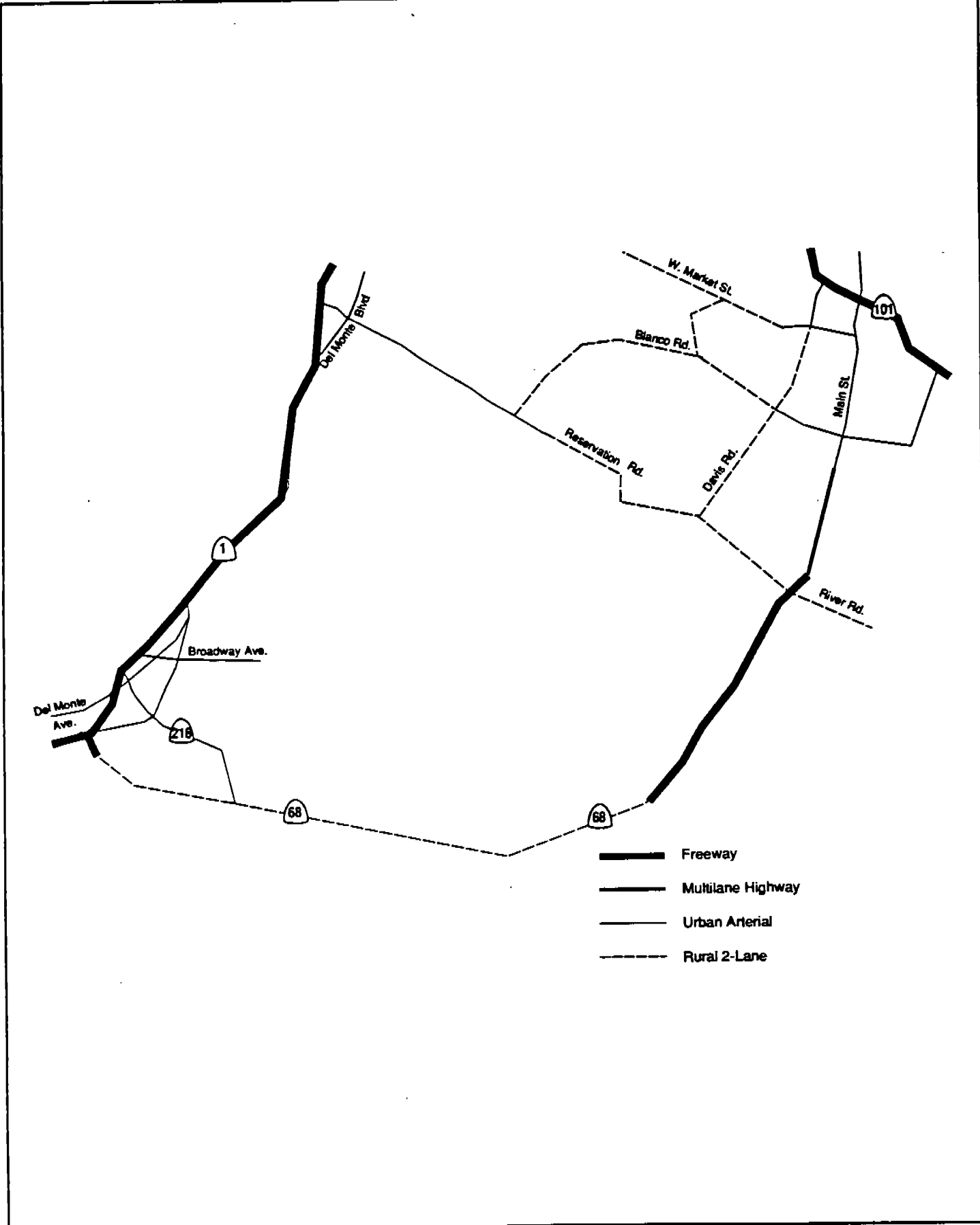
- **Level of Service** - the operation of a roadway or intersection in terms of the level of congestion or delay that would be experienced by a person using the facility. Level of service (LOS) is stated as a letter between A and F, with A representing the least congestion and F the worst. Table 4.7-1 describes the driving conditions that would be experienced while driving on a roadway operating at each LOS.

Table 4.7-1 Level of Service Descriptions for Roadway Segments at Fort Ord

Level of Service	Definition
A	Represents unrestricted operation
B	Generally may be described as smooth and stable
C	Although still stable, approaches range where instability can occur because of small changes in flow
D	Vehicles must frequently adjust their speed to avoid conflicts
E	Represents capacity operation; considerable delay is experienced and speeds are greatly reduced
F	Represents overcapacity flows with heavy congestion and considerable reductions in speed

- **Capacity** - the maximum number of vehicles that can use a facility under normal operating conditions. Capacity can be expressed either as a daily capacity or a peak-hour capacity. The analyses in this report are based on daily capacities.

Figure 4.7-1
Fort Ord Traffic Study Area



- **Volume-to-Capacity Ratio** - a number representing the proportion of a facility's total capacity occupied by existing or projected traffic volumes. A volume-to-capacity (V/C) ratio of 1.00 indicates that a facility is or would operate at its capacity. Ratios less than 1.00 indicate facilities operating below their capacity (LOS A, B, C, D, or E). Ratios greater than 1.00 indicate facilities operating above their capacity (LOS F). These facilities could be subject to severe congestion and delays.
- **Critical Roadway Segments** - those facilities included in the traffic analysis. Inclusion of segments in the analysis was based on proximity to the installation, existence of current congestion problems on the facility, or likelihood that the facility would be affected by the proposed action and alternatives.
- **Freeway** - a high-speed multilane facility providing travel between communities with access restricted to grade-separated interchanges. The capacity of a freeway is approximately 20,000 vehicles per lane per day.
- **Multilane Highway** - a moderately high-speed facility with a limited number of cross streets. Traffic on the cross streets is typically controlled by stop signs to allow high volumes of traffic to travel along the highway with infrequent stops. The capacity of a multilane, access-controlled highway is approximately 16,000 vehicles per day per lane.
- **Urban Arterial** - a moderate-speed facility typically with more than one lane of travel in each direction. Travel along the facility requires stops at traffic lights at intervals of approximately 1 mile or less. The capacity of an urban arterial is approximately 7,500 vehicles per lane per day.
- **Rural Two-Lane Highway** - a moderately high-speed facility with few cross streets. Speeds and capacities are often determined by the extent to which trucks and other heavy vehicles restrict the speeds of other vehicles unable to pass them. Typically, the capacity of a two-lane rural highway is 14,000 vehicles per lane per day.
- **Screenline** - a method for measuring large-scale changes in travel demand. Using this method, a line that crosses all facilities serving travel in a particular direction is drawn on a map. By counting the volume of travel or projected travel on all of these facilities, the total demand for travel in a particular direction can be measured. For instance, a circular screenline surrounding Fort Ord would measure the total travel between Fort Ord and the surrounding communities, as well as travel through Fort Ord between communities.

4.7.2 Analysis Approach

Four principal methods are used to determine the LOS on roadway facilities. In order of decreasing precision they are operational-level analyses of critical intersections, planning-level analyses of critical intersections, V/C ratio analyses of critical roadway segments, and screenline analysis of major movements.

Operational level analyses are most appropriately used in refining intersection operations and in measuring the impacts of small changes in travel demand under existing conditions. Planning level analyses are most appropriately used where moderate changes in traffic are expected and where future scenarios are being analyzed. Roadway segment analyses are most appropriately used where traffic changes are expected to be quite large and where impacts are likely to occur many years in the future but where the proposed project and future improvements to the roadway network are well defined. Screenline analyses are typically conducted where details concerning individual roadways are not important or where the relative differences between alternative projects are more important than absolute impacts.

Given the factors discussed above, the use of the screenline analysis was determined to be the most appropriate tool for this analysis. Because the reuse alternatives and future roadway improvements are speculative and conceptual in nature, impacts are most appropriately measured by gross changes in travel demand as reflected in the screenline analysis. A further consideration in this decision was the focus of this analysis, which is to identify the impacts of each alternative relative to the others rather than to identify the precise impacts of each alternative.

4.7.3 Level of Service Standards

The traffic study area includes facilities under the jurisdiction of five different governmental bodies: the Cities of Seaside and Marina, Monterey County, DOD, and California Department of Transportation. In addition, standards for some roadways have been established by the Transportation Agency for Monterey County, which is responsible for congestion management planning in Monterey County under state Assembly Bills 1791 and 471.

Each of the agencies has established its own standards for LOS. In some cases, standards have been established for individual roadway segments. Applying all of these standards would be confusing because it would be difficult to determine which portions of new roads in the proposed reuse areas were under the jurisdiction of which agency, especially because it has not been determined which entities would receive lands since the screening process, as described in Section 2.0, "Proposed Action", has not been completed. Therefore, a single standard was established against which all roadways would be measured. That standard is LOS C. The analysis in the Other Physical Attributes Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District 1992e) was based on the individual standards of local agencies, so the analysis in this report is not directly comparable to the one in the baseline study.

4.7.4 Existing Volumes and Level of Service

Table 4.7-2 shows the existing number of lanes and LOS on each critical roadway segment in the traffic study area. The sources of these data are provided in the table. The data in this table indicate that 10 of the critical roadway segments currently operate below LOS C (i.e., D, E, or F).

Another useful measure of travel demand is the screenline count. In January 1992, traffic counts were taken at all five active gates to Fort Ord. The total of those counts represents a screenline that measures the daily travel on and off the installation. This measure is compared to estimates of travel across this screenline for each of the reuse alternatives analyzed in Section 5.7 and in Volume II, Section II.7. The 1992 counts indicate that approximately 58,000 trips are made to and from Fort Ord each day.

The LOS for roadways on Fort Ord could not be determined. This information was not believed to be important, however, because each reuse alternative would require the construction of a new roadway system to serve its land uses. A general description of the deficiencies of the Fort Ord traffic system is provided in a 1986 traffic engineering study conducted by the Military Traffic Management Command - Transportation Engineering Agency. This study examined the transportation system at Fort Ord, identified deficiencies, and recommended improvements to the system.

The report indicated that two factors, insufficient capacity on several major roads and an overall street pattern that is too circuitous, have led to excessive safety and delay problems on the installation. None of the recommendations made in that report have been implemented to date. A description of these deficiencies is provided in the Other Physical Attributes Baseline Study of Fort Ord, California (U.S. Army Corps of Engineers, Sacramento District 1992e). A more detailed discussion of these problems is provided in the 1986 study.

Table 4.7-2 Summary of Existing Roadway Segment Levels of Service

Segment	Number of Lanes	Facility	Level of Service
State Routes			
SR 1 - SR 68 interchange to Del Monte Avenue interchange	4	Freeway	C
SR 1 - Del Monte Avenue interchange to SR 218 interchange	4	Freeway	C
SR 1 - SR 218 interchange to Fremont Boulevard interchange	4	Freeway	D
SR 1 - Fremont Boulevard interchange to .5 mile north	4	Freeway	E
SR 1 - .5 mile north of Fremont Boulevard to Main Gate	6	Freeway	C
SR 1 - Main Gate to south Marina interchange	6	Freeway	C
SR 1 - south Marina interchange to Reservation Road	4	Freeway	B
SR 218 - SR 1 to Fremont Boulevard	4	UA	F
SR 218 - Fremont Boulevard to SR 68	2	UA	E
SR 68 - SR 1 interchange to SR 218 interchange	2	Rural	E
SR 68 - SR 218 to Toro Park	2	Rural	E
SR 68 - Toro Park to Spreckels Boulevard	4	Freeway	B
SR 68 - Spreckels Boulevard to Blanco Road	4	MLH	B
County Roads			
Reservation Road - Salinas Street to Blanco Road	4	UA	C
Reservation Road - Blanco Road to East Garrison Gate	4	UA	A
Reservation Road - East Garrison Gate to SR 68	2	Rural	C
Davis Road - Reservation Road to Blanco Road	2	Rural	F
Davis Road - Blanco Road to Market Street	2	UA	F
Blanco Road - Reservation Road to Davis Road	2	Rural	E
City of Marina Roads			
Del Monte Avenue - SR 1 to Reservation Road	4	UA	C
Reservation Road - Del Monte Avenue to Salinas Street	4	UA	C
City of Seaside Roads			
Fremont Boulevard - SR 218 to Broadway Avenue	4	UA	D
Fremont Boulevard - Broadway Avenue to SR 1	4	UA	B
Broadway Avenue - Del Monte Boulevard to Fremont Boulevard	4	UA	A
Broadway Avenue - Fremont Boulevard to North-South Road	4	UA	A
Del Monte Boulevard - SR 218 to Broadway Avenue	4	UA	B
Del Monte Boulevard - Broadway Avenue to Fremont Boulevard	4	UA	A

Notes:

- Freeway = controlled-access, grade-separated interchange.
- MLH = divided multilane highway, controlled access at grade.
- UA = urban arterial roadway with signalized intersections.
- Rural = rural two-lane highway.

