

Comments on the Draft Environmental Impact Report (DEIR) of the LAX Landside Access Modernization Program (LAMP)

Traffic Growth and Capacity Issues

The DEIR for the LAX Landside Access Modernization Program (LAMP) fails to adequately assess the growth impacts of the program on aviation activity levels, including air passengers, flight operations, and ground access traffic, and to provide mitigation measures for such growth. It assumes that the growth in aviation activity is unaffected by the program and that the same levels of activity will materialize regardless of whether the program is implemented or not. The DEIR states that airport access constraints do not affect aviation activity.

1. **Capacity Issues:** The airport is a group of components operating in sequence to accommodate traffic/passenger flow (access system-terminals-gates-airfield-airspace). Each of these components is a link in a chain and has a capacity. The lowest capacity of these links constrains flow and determines the capacity of the whole system. This was recognized by the LAX 2004 Master plan which stated: “The most constraining component defines the capacity of the entire airport”. The 2004 master plan considered an unconstrained demand forecast of 98 MAP in 2015 and evaluated four alternative configurations and estimated the airport capacity for each using the principle that this capacity is constrained by that of the lowest capacity component. The four alternatives considered were:
 - a. No Action No Project:
 - i. Capacity of 78 MAP
 - ii. constrained by the Curb and Roadways.
 - b. Alternative A &B including 5th runway, increased gates, and Landside Improvement (LAMP):
 - i. Capacity 97.9 MAP
 - ii. constrained by 5-runway airfield.
 - c. Alternative C including increased gates and LAMP improvements, but only 4 runways:
 - i. Capacity 89.6 MAP
 - ii. constrained by 4-runway airfield.
 - d. Alternative D including LAMP improvements and limited to 153 gates:
 - i. Capacity 78 MAP
 - ii. constrained by gates as well as curb and roadways.

The DEIR therefore contradicts the 2004 Master Plan which recognizes the fact that the curb and roadway (access system) can constrain airport capacity and consequently hinder growth, and that LAMP improvements will relieve this constraint and permit aviation activity to grow toward the capacity constrained by the next barrier to growth.

As shown in section 4.12.2-5 the ground traffic analysis contained in the DEIR is based on aviation activity levels of 86 MAP in 2024 and 95 MAP in 2035. These levels of activity could not be accommodated with the access system in its existing condition with its capacity of 78 MAP as determined in the Master Plan.¹

2. **Demand Forecasting Issue:** In section 6.3.2 the DEIR maintains that the demands forecast will materialize with or without the proposed project. It quotes the FAA 2014 Terminal Area Forecasts as based on local and national economic conditions “independent of the ability of the airport and air traffic control system to furnish the capacity required to meet the demand”. As such the DEIR fails to recognize the difference between “demand” and actual “aviation activity level”, and makes an assumption that permits activity levels to exceed available capacities. It is clear that forecast demand levels will not materialize if the capacity is not provided to accommodate them. The DEIR further quotes the FAA as saying that “...existing constraints are “embedded in historical data” used by the FAA as a base for the forecast” and makes the wrong conclusion that there is “no correlation between activity level and existing conditions of the CTA”. Existing conditions are reflected in historic data which show activity levels resulting from the interaction of demand and supply, and when the supply is limited the activity level cannot exceed that limit. Historic passenger traffic data at LAX did not, and could not reach beyond the 78 MAP capacity of the curb and roadway system, even if economic conditions created the “demand”.

The LAX Master Plan of 2004, while working in the face of 98 MAP forecast recognized that passenger traffic levels could not exceed 78 MAP unless LAMP improvements were made to release that constraint on capacity. The DEIR does not recognize this and implicitly assumes that activity levels up to the airfield capacity constrain will materialize far exceeding the stated capacity of the curb and roadway system. Such growth cannot occur unless the curb and roadway constraint is removed by the implementation of LAMP.

3. **Airport Market Share Issues:** The Los Angeles metropolitan area is served by a number of airports. In a multi-airport region passengers have a choice among airports. This choice has been the subject of many studies that are well documented in the literature. The ACRP report 98, which is quoted in the DEIR, provides a good summary of the findings on this subject. It identifies the primary drivers of airport choice in a multi-airport market such as: the price, air service

¹ For further information, please refer to “Addressing Future Capacity Needs in the U.S. Aviation System ” report by Eno Center for Transportation (November 2013) (https://www.ustravel.org/sites/default/files/Media%20Root/USTravel_Eno_1.pdf), which states: “Ground access to the airport at LAX is the most significant chokehold in the airport’s system and according to Los Angeles World Airports (LAWA) airport access infrastructure was projected to hit complete gridlock at 78.9 million annual passengers without improvements to the system. While 78.9 million annual passengers is a precise number [sic], it is accurate enough to mean that adding about 15 million annual passengers above the 62.6 million in 2012 will be too much for the access and gate infrastructure to handle.”

quality, airline/alliance loyalty, and airport ground access. It recognizes airport accessibility as the extent to which passengers can get to the airport from their residence or place of business. This is usually measured by the access time. Numerous studies quoted here and elsewhere recognize the importance of time as a variable affecting airport choice.

LAX remains the primary airport serving the region because of its other service advantages: nonstop flights to more destinations, international connections, wider choice of airlines, etc. But the fact remains that access constraints will affect the airport's share of the market. The ACRP 98 report, concludes based on a the Los Angeles regional case study that²:

“Surface access issues across most of the regional – Passenger commute times remains a primary passenger choice driver in the Los Angeles Basin. Given the presence of several regional facilities across the area, the traffic situation in the Basin drives the airport choice for a large proportion of travelers”.

To the extent that LAMP improvements will relieve congestion in the CTA and improve travel time for passengers accessing or leaving the LAX terminal area, it will improve LAX's attractiveness relative to other airports in the region and will expand its market shed area. This has been shown to be true repeatedly in airport choice models that have consistently found significant effects of travel time as a factor in airport choice.

Another factor that has been shown to affect passenger airport and mode choice is the travel time reliability. Improving reliability is tantamount to reducing travel time because passengers will need to allow for shorter margins to avoid missing flights. The LAMP improvements will improve reliability by providing regular APM access to the CTA thereby reducing the fluctuations in travel time that arise when congestion is severe.

The DEIR simply dismisses all this by stating that the other factors such as air service quality, flight schedules, price, and loyalty program are the primary factors affecting passenger choice, and that therefore the LAMP improvements will not increase the market share of LAX.

Summary

The DEIR of the LAMP program incorrectly ignores the aviation activity growth effects of the project. It incorrectly ignores the fact that capacity constraints at the curb/roadway access system will limit airport activity, which cannot grow

² Parella, B.C. et. al. “Understanding Airline and Passenger Choice in Multi-Airport Regions”, Aviation Cooperative Research Program ACRP 98. Transportation Research Board. Washington, D.C., 2013. <https://www.nap.edu/download/22443>

towards the forecast demand level without the improvements in the access system. LAMP improvements are designed to accommodate activity levels of 86 MAP in 2024 and 95 MAP in 2035, levels that clearly could not be accommodated with the current access system with its 78 MAP capacity.

Furthermore, the DEIR ignores the potential effect of the LAMP improvements on LAX's accessibility attractiveness relative to the other airports in the region and the resulting increase in its share of the regional market.

Recommendation

The DEIR should include a thorough and comprehensive aviation activity modeling analysis to quantify the effect of the LAMP improvements on activity considering regional demand and airport market share. The analysis should evaluate how the reduction in access time and the improvement of access time reliability will improve LAX's accessibility relative to the other airports in the Los Angeles Basin and how that will affect its market share of the total travel demand in the Basin. The aviation activity modeling analysis should also show what effect LAMP will have on passengers' mode choice to LAX and the extent if any to which LAMP will increase public transportation access to the airport. Only with such a thorough and comprehensive analysis would it be possible to assess the aviation activity and environmental impacts of LAMP.

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Professor of the Graduate School, University of California at Berkeley. Kanafani holds a Ph.D. in Civil Engineering from the University of California at Berkeley. Since joining the faculty at Berkeley in 1971 he has taught and conducted research on transportation systems, transportation engineering, airport planning and design, and air transportation economics. He has served on a number of national and international advisory panels to Government and industry. He was Director of Berkeley's Institute of Transportation Studies from 1982 to 1997, and Chairman of the Department of Civil and Environmental Engineering from 1997 to 2002, and Co-Director of the National Center of Excellence in Aviation Operations Research from 2001 to 2005. Kanafani's important contributions to air transportation include air transportation demand analysis, airport capacity analysis methods, and airline network analysis. His research on airline hubbing and on the relation between aircraft technology and airline network structure laid the ground for much of the work aimed at understanding the implications of airline deregulation in the late 1970's. He was a member of the research team that developed airport capacity analysis methods that are in widespread application in airport planning and design. Professor Kanafani has authored over 170 publications on transportation, including three books on Transportation Demand Analysis, on National Transportation Planning, and on the Economics of Networked Industries. He is a recipient of numerous including election to the U.S. National Academy of Engineering in 2002. He served as Chair of the Air Transport Division of the American Society of Civil Engineers, and as chair of the Transportation Research Board of the National Academies in 2009 and was named a Lifetime Associate of the National Academies in 2012.

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