State of California
AIR RESOURCES BOARD

Assessing the Travel Demand and Co-Benefit Impacts of Affordable TODs

RESEARCH PROPOSAL

Resolution 15-28

July 23, 2015

Agenda Item No.: 15-6-2

WHEREAS, the Air Resources Board (ARB or Board) has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code sections 39700 through 39705;

WHEREAS, a research proposal, number 2792-283, titled "Assessing the Travel Demand and Co-Benefit Impacts of Affordable TODs," has been submitted by the University of California, Berkeley, in an amount not to exceed $300,000;

WHEREAS, the Research Division staff has reviewed Proposal Number 2792-283 and finds that in accordance with Health and Safety Code section 39701, research is needed to evaluate the impact that preserving and building affordable housing in transit-oriented areas has on travel demand, vehicle miles traveled, and greenhouse gas emissions; and

WHEREAS, in accordance with Health and Safety Code section 39705, the Research Screening Committee has reviewed and recommends funding the Research Proposal.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39700 through 39705, hereby accepts the recommendations of the Research Screening Committee and staff and approves the Research Proposal.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and contracts for the Research Proposal as further described in Attachment A, in an amount not to exceed $300,000.

I hereby certify that the above is a true and correct copy of Resolution 15-28 as adopted by the Air Resources Board.

Tracy Jensen

Tracy Jensen, Clerk of the Board

ATTACHMENT A

"Assessing the Travel Demand and Co-Benefit Impacts of Affordable TODs"

Background

The preservation and development of affordable housing opportunities near public transit is a land use planning strategy that is thought to increase viability of the public transit system, and provide mobility options to populations with the greatest need, and reduce vehicle miles traveled (VMT). The California State Budget allocated $130 million of the 2014/2015 proceeds from Cap and Trade to support an Affordable Housing and Sustainable Communities Program, part of which will fund affordable housing projects near transit stations in order to reduce greenhouse gas (GHG) emissions.

However, there has been limited research to confirm whether increasing affordable housing in transit-oriented areas actually reduces VMT. A few attempts to understand the impacts of affordable housing on VMT have relied on cross-sectional analysis of household travel survey data and smog check odometer readings from the Department of Motor Vehicles. Additionally, a Caltrans-funded project that aims to develop a trip generation methodology for multifamily housing proposes to survey travel behavior of subsidized housing dwellers; however, this project is not designed to assess the effectiveness of affordable housing as a VMT reduction strategy (i.e., does not use a control/counterfactual) nor will it assess the potential for co-benefits of affordable housing.

Objective

The objectives of this research project are to provide an empirical, quantitative analysis of the impact of preserving and building transit-oriented affordable housing on VMT in California, and to qualitatively assess the health, economic, and well-being impacts of affordable housing.

Methods

The project will begin with a literature review on land use, urban form, and VMTs to identify the key variables associated with VMT reductions in affordable transit oriented developments (TODs), and on the impact of residence in a TOD on public health, economics, and wellbeing. The research team will work with ARB and other appropriate agencies to select appropriate study sites for case-control surveys. The sites selected will address the need for diversity of geography, affordable housing type (e.g., multi-family, special needs, senior residence), neighborhood accessibility (e.g., proximity to destinations and transit characteristics), and other factors, plus the selection of appropriate counterfactual sites. Once the sites are selected, approximately 200 households will be recruited for travel diary data collection, and a subset of those will also have their travel tracked through smart phone-based global positioning system (GPS) data collection to ground-truth the travel diaries. Researchers will provide smart phones to participants that do not own them, and will provide materials in either English

or Spanish as appropriate. In order to assess the health, economic, and well-being impacts of affordable housing, the researchers will conduct focus groups.

Expected Results
This research project will provide an empirical, quantitative analysis of the impact of preserving and building transit-oriented affordable housing on VMT in California, and will qualitatively assess the health, economic, and well-being impacts of affordable housing.

Significance to the Board
Results will evaluate the impact that preserving and building affordable housing in transit-oriented areas has on travel demand, vehicle miles traveled, and GHGs, and will provide insights into the economic, health, and well-being impacts on the associated residents.

Contractor:
University of California, Berkeley

Contract Period:
30 months

Principal Investigator (PI):
Karen Chapple, Ph.D.

Contract Amount:
$300,000

Basis for Indirect Cost Rate:
The State and the UC system have agreed to a ten percent indirect cost rate.

Past Experience with this Principal Investigator:
Dr. Karen Chapple, the principal investigator, is also the principal investigator of another ARB-funded research project focusing on displacement associated with transit-oriented development, has conducted pioneering research on gentrification and affordable housing transit-oriented development for the San Francisco Foundation, the Association of Bay Area Governments, the University of California Transportation Center, and Center for Housing Policy. She has advised MTC/ABAG on the affordable housing allocation for their Sustainable Communities Strategy and as part of the Great Communities Collaborative, has provided technical assistance on linking affordable housing and transit to over twenty cities in the Bay Area.

Prior Research Division Funding to the University of California, Berkeley:

Year	2014	2013	2012
Funding	$ 0	$ 1,595,792	$ 1,320,000

BUDGET SUMMARY

Contractor: University of California, Berkeley

Assessing the Travel Demand and Co-Benefit Impacts of Affordable TODs

DIRECT COSTS AND BENEFITS			
1.	Labor and Employee Fringe Benefits	$ 191,378	
2.	Subcontractors	$ 0	
3.	Equipment	$ 0	
4.	Travel and Subsistence	$ 11,726	
5.	Electronic Data Processing	$ 0	
6.	Reproduction/Publication	$ 0	
7.	Mail and Phone	$ 0	
8.	Materials & Supplies	$ 20,000	
9.	Analyses	$ 0	
10.	Miscellaneous	$ 54,433[1]	
	Total Direct Costs		$ 277,537
INDIRECT COSTS			
1.	Overhead	$ 22,463	
2.	General and Administrative Expenses	$ 0	
3.	Other Indirect Costs	$ 0	
4.	Fee or Profit	$ 0	
	Total Indirect Costs		$ 22,463
TOTAL PROJECT COSTS			**$ 300,000**

Notes

[1]Miscellaneous expenses include $52,904 for partial fee remission of tuition, fees, and graduate student health insurance which the University of California provides to all graduate students who are employed on-campus 25 percent time or greater during the academic year. The rate for in-state remission is $8,533 per semester, which is escalated annually in the budget at a rate of 10 percent per year. Additional miscellaneous expenses are for general, automobile, and employment liability insurance.