State of California
AIR RESOURCES BOARD

RESEARCH PROPOSAL

Resolution 12-19

March 22, 2012

Agenda Item No.: 12-2-1

WHEREAS, the Air Resources Board (ARB) 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 2742-273, entitled "Analyzing the Economic Benefits and Costs of Smart Growth Strategies," has been submitted by the University of California, Berkeley;

WHEREAS, the Research Division staff has reviewed and recommended this proposal for approval; and

WHEREAS, the Research Screening Committee has reviewed and recommends for funding:

> Proposal Number 2742-273 entitled "Analyzing the Economic Benefits and Costs of Smart Growth Strategies," submitted by the University of California, Berkeley, for a total amount not to exceed $330,000.

NOW, THEREFORE, BE IT RESOLVED that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39703, hereby accepts the recommendation of the Research Screening Committee and approves the following:

> Proposal Number 2742-273 entitled "Analyzing the Economic Benefits and Costs of Smart Growth Strategies," submitted by the University of California, Berkeley, for a total amount not to exceed $330,000.

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 effort proposed herein, and as described in Attachment A, in an amount not to exceed $330,000.

I hereby certify that the above is a true and correct copy of Resolution 12-19, as adopted by the Air Resources Board.

Mary Alice Morency, Clerk of the Board

ATTACHMENT A

"Analyzing the Economic Benefits and Costs of Smart Growth Strategies"

Background

The concept of "smart growth" focuses on effective planning to produce positive outcomes for the environment, economy, and other societal goals. In California, the smart growth concept is reflected in state law (Senate Bill 375), which requires regional planning agencies to develop a "sustainable communities strategy" (SCS) as part of the regional transportation plan.

In order to prioritize smart growth strategies, state, local, and regional authorities need better information on the cost and benefits of these strategies. Although extensive research has been conducted on various aspects of smart growth, there has been little research done on the economic implications, specifically the distribution and variation of benefits and costs of specific strategies for government agencies, businesses and individuals. For example, the cost of infrastructure to serve new growth varies regionally, due to differences under- or over-capacity of existing infrastructure. Information on how the benefits and costs of smart growth strategies vary with market, spatial, and demographic conditions is critical as SB 375 is implemented across the state. There is a particular need for economic assessment of those strategies best suited to California.

Objective

This study will provide information to help local governments better evaluate the potential economic impacts of smart growth policies, plans and projects. Existing examples of such analysis are limited. The goal of the proposed research is to develop and systematically apply a complete, objective, and reliable framework of benefit-cost analysis, including both financial and non-financial metrics, to a series of smart growth case studies specific to California. Results will assist local agencies' decisions in the land use and transportation planning process and development of sustainable communities strategies needed to meet the goals of SB 375.

Methods

The research team will complete four to six case studies of completed smart growth projects in California, providing qualitative and quantitative economic analysis of benefits and costs, including both market goods and non-market goods. Researchers will also include an examination of the effects on minority and low-income populations in their analysis. Investigators will analyze cases with the widest possible applicability to California's local government decision-makers.

To prepare for the case analyses, the research team will review the literature that identifies and quantifies relationships between smart growth strategies and economic impacts. Smart growth implementation issues and data sources for benefit-cost analysis will be identified through interviews of relevant stakeholder groups, including local governments, developers, public health agencies, non-profit groups, and affected

residents. The final report will draw on case study results to identify the circumstances under which smart growth strategies are likely to have net benefits.

Expected Results
The proposed research would provide information to assist local and regional governments to implement sustainable communities strategies developed under SB 375. The project would identify and quantify economic benefits and costs associated with specific smart growth strategies, including impacts on local governments, businesses, and individuals.

Significance to the Board
ARB sets regional greenhouse gas emission reduction targets for each regional sustainable community strategy. Better information on the cost and benefits of smart growth strategies could help regions meet or exceed the GHG reduction goals established under SB 375.

Contractor:
University of California, Berkeley

Contract Period:
30 months

Principal Investigator (PI):
Daniel Chatman, Ph.D.

Contract Amount:
$330,000

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:
Professor Daniel Chatman has published on smart growth strategies relating to travel patterns, the economy, immigration, and mortgage policy and has been principal investigator on a relevant series of largely state- and federally-funded research projects totaling $2.4 million. He leads a concurrent nationwide research project quantifying the wider economic impacts of employment densification and population growth from transit investments, and is also principal investigator on a nationwide study of how density and smart growth affects the success of rail investments. This would be Professor Chatman's first project with ARB.

Prior Research Division Funding to University of California, Berkeley:

Year	2011	2010	2009
Funding	$754,264	$801,587	$1,507,702

BUDGET SUMMARY

Contractor: University of California, Berkeley

"Analyzing the Economic Benefits and Costs of Smart Growth Strategies"

DIRECT COSTS AND BENEFITS			
1.	Labor and Employee Fringe Benefits	$ 108,683	
2.	Subcontractors	$ 129,569	
3.	Equipment	$ 1,500	
4.	Travel and Subsistence	$ 9,898	
5.	Electronic Data Processing	$ 800	
6.	Reproduction/Publication	$ 0	
7.	Mail and Phone	$ 200	
8.	Supplies	$ 540	
9.	Analyses	$ 0	
10.	Miscellaneous	$ 66,799[1]	
	Total Direct Costs		$317,989
INDIRECT COSTS			
1.	Overhead	$ 12,011	
2.	General and Administrative Expenses	$ 0	
3.	Other Indirect Costs	$ 0	
4.	Fee or Profit	$ 0	
	Total Indirect Costs		$12,011
TOTAL PROJECT COSTS			**$330,000**

[1] Tuition (and student fee) remission. It is the University of California's policy to provide partial fee remission for all graduate student researchers working at or above 25 percent time. This proposal includes four semesters (2 years) of registration fees and tuition for the two Graduate Student Researchers included in this project. Tuition and fees are based on 2012-13 and 2013-14 academic year rates of $7,888/semester and $8677/semester, respectively.

Attachment 1

SUBCONTRACTORS' BUDGET SUMMARY

Subcontractor: University of California, Los Angeles

Description of subcontractor's responsibility: Participate in literature review, interviews and case studies.

DIRECT COSTS AND BENEFITS				
1.	Labor and Employee Fringe Benefits	$	85,368	
2.	Subcontractors	$	0	
3.	Equipment	$	0	
4.	Travel and Subsistence	$	0	
5.	Electronic Data Processing	$	0	
6.	Reproduction/Publication	$	0	
7.	Mail and Phone	$	500	
8.	Supplies	$	1,460	
9.	Analyses	$	0	
10.	Miscellaneous	$	30,461[1]	
	Total Direct Costs			$117,789
INDIRECT COSTS				
1.	Overhead	$	11,780	
2.	General and Administrative Expenses	$	0	
3.	Other Indirect Costs	$	0	
4.	Fee or Profit	$	0	
	Total Indirect Costs			$ 11,780
TOTAL PROJECT COSTS				**$129,569**

[1] Tuition (and student fee) remission. It is the University of California's policy to provide partial fee remission for all graduate student researchers working at or above 25 percent time. This proposal includes four semesters (2 years) of registration fees and tuition for the two Graduate Student Researchers included in this project. Tuition and fees are based on 2012-13 and 2013-14 academic year rates of $7,888/semester and $8677/semester, respectively.