



Engineers and Highway Development: The Rise and Fall of Expertise during the 20th Century

Bruce E. Seely

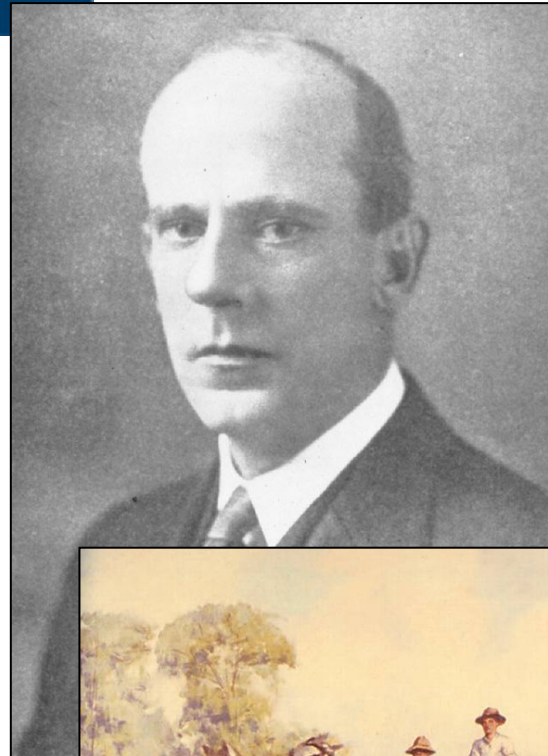
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Chair
- bseely@mtu.edu

American Engineers & Roads

The Reforming Impulse: Engineers were:
*Problem-solvers; Public Servants;
Efficient; Apolitical; Immune to
Graft*

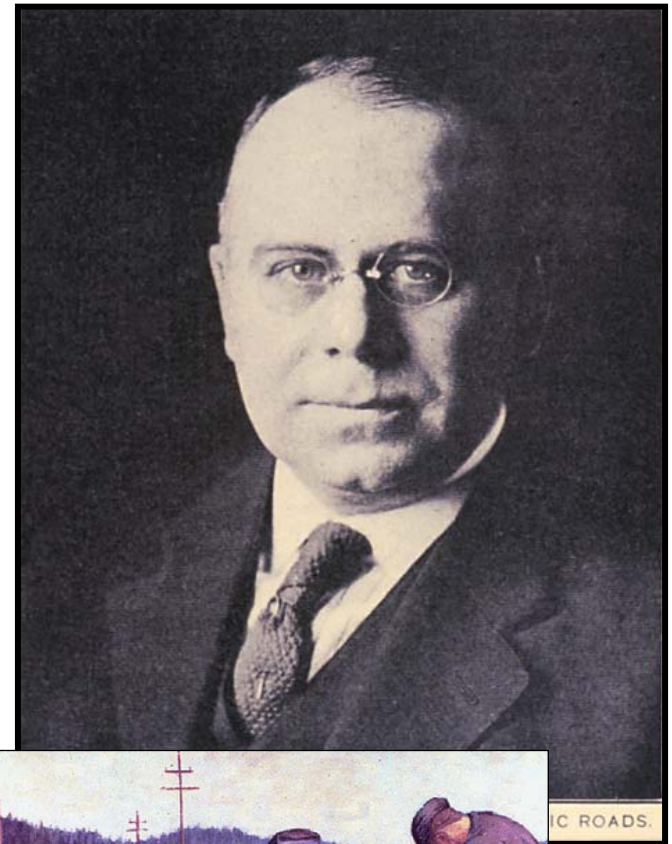


Reformers & Apolitical Expertise

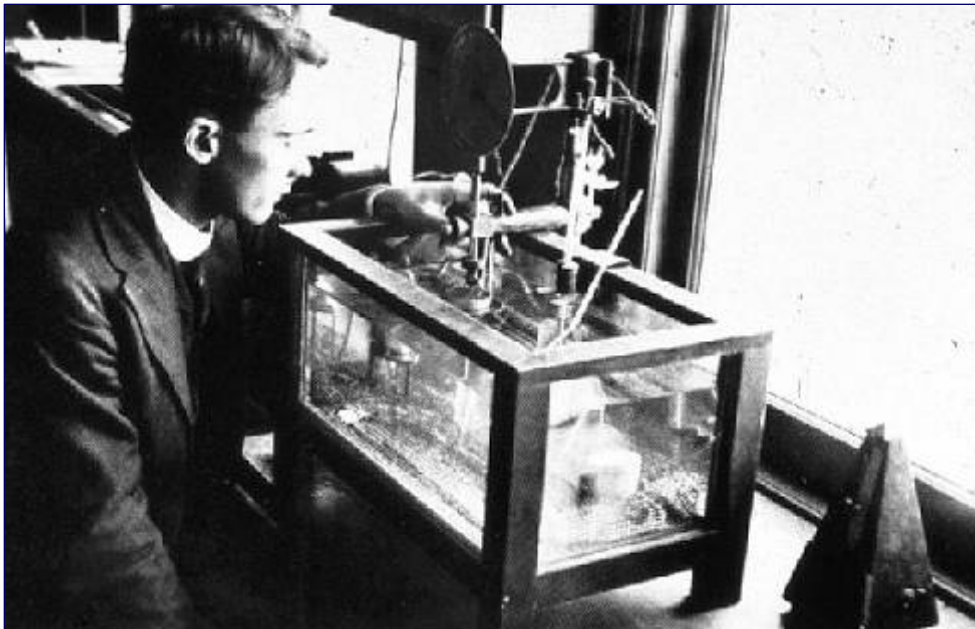
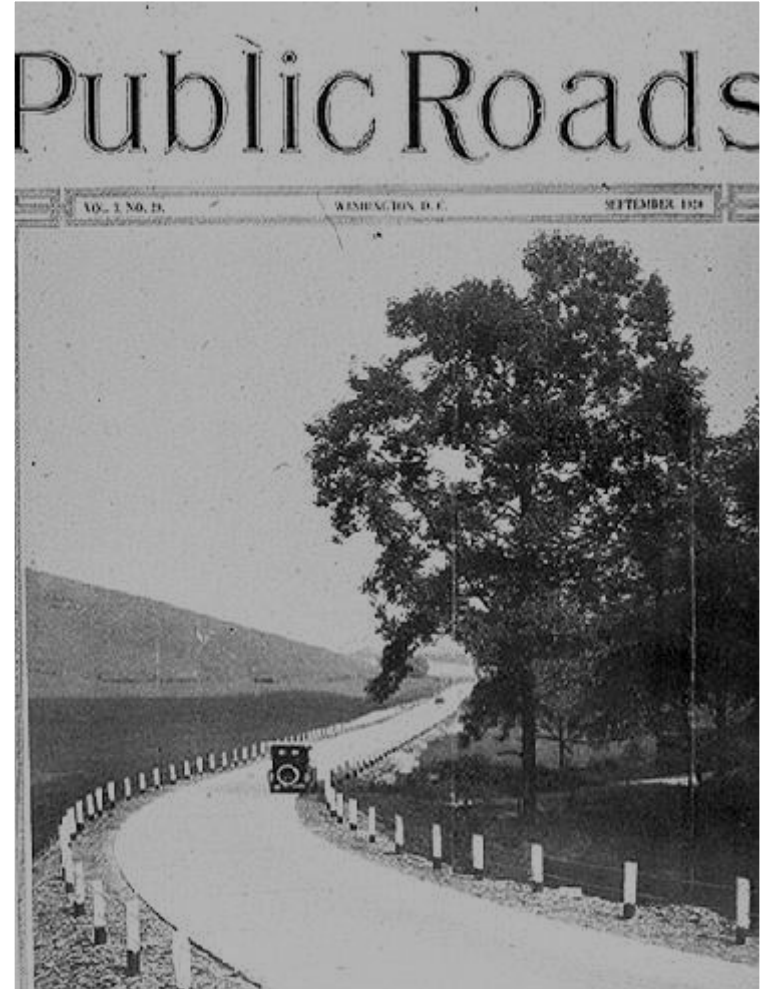


Logan Page
(1900-1918)

**Thomas
MacDonald**
(1919-1953)



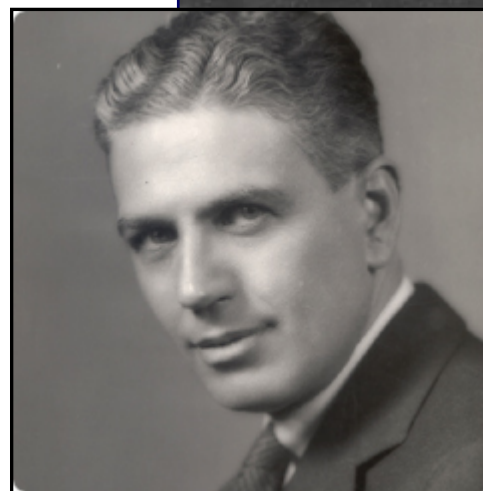
Scientific Expertise = Political Influence + Cooperation: The Federal-Aid Partnership



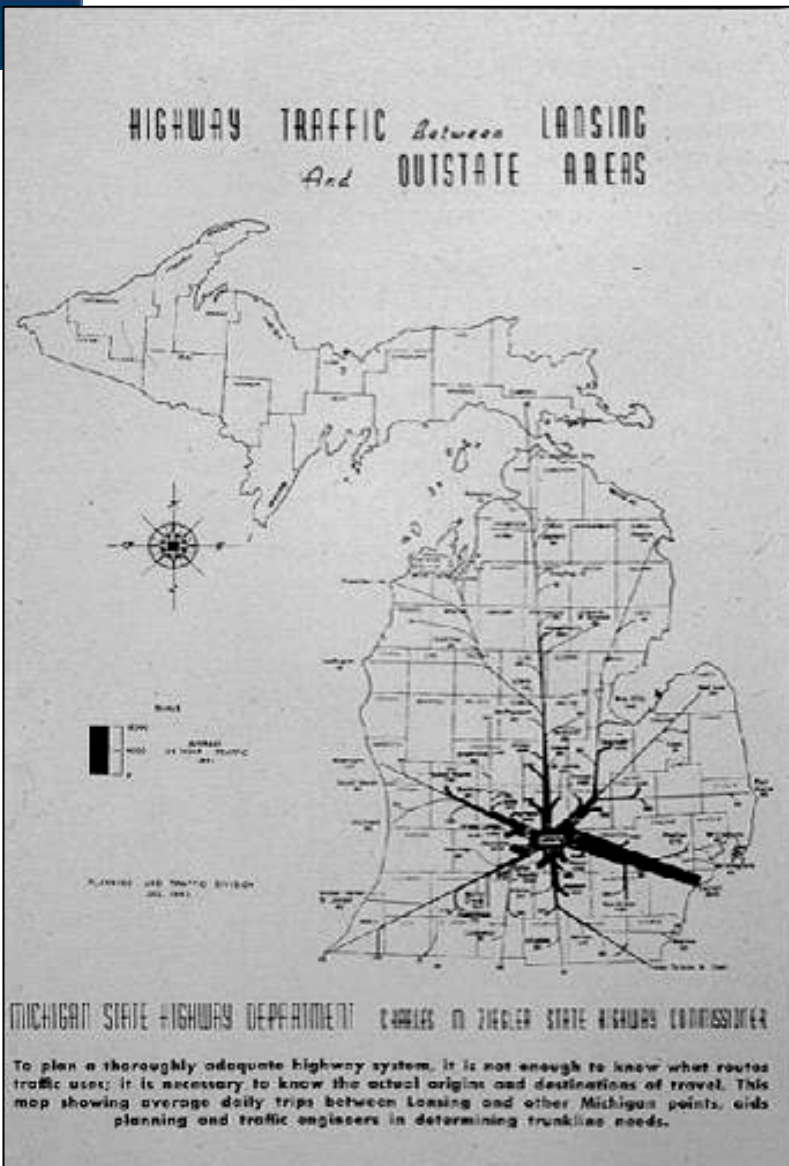
Engineers and National Policy



THOS. H. MACDONALD, CHIEF, BUREAU OF PUBLIC ROADS.



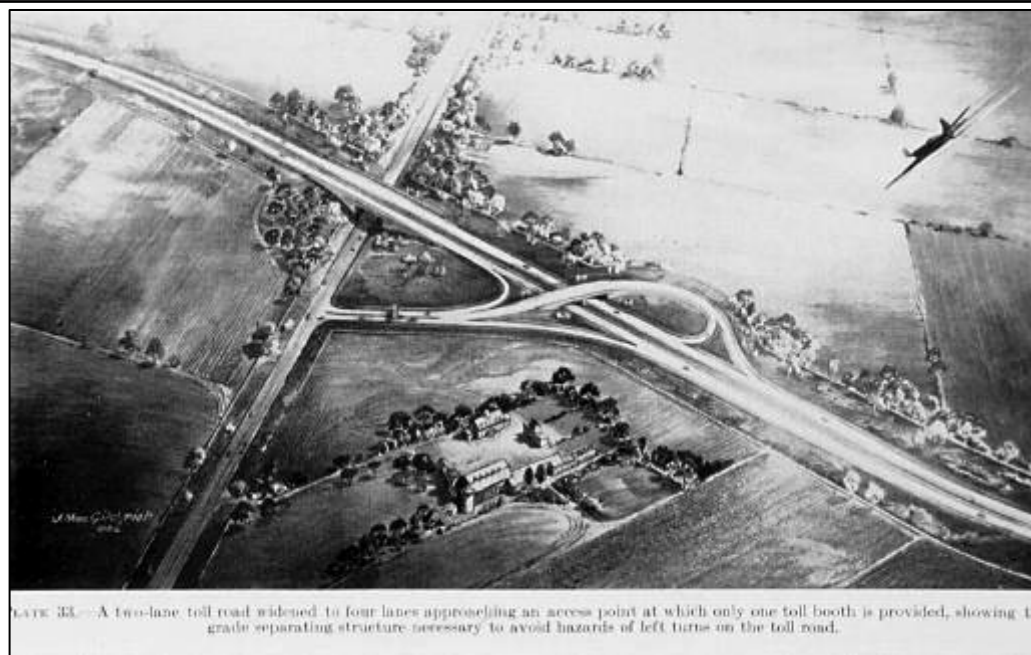
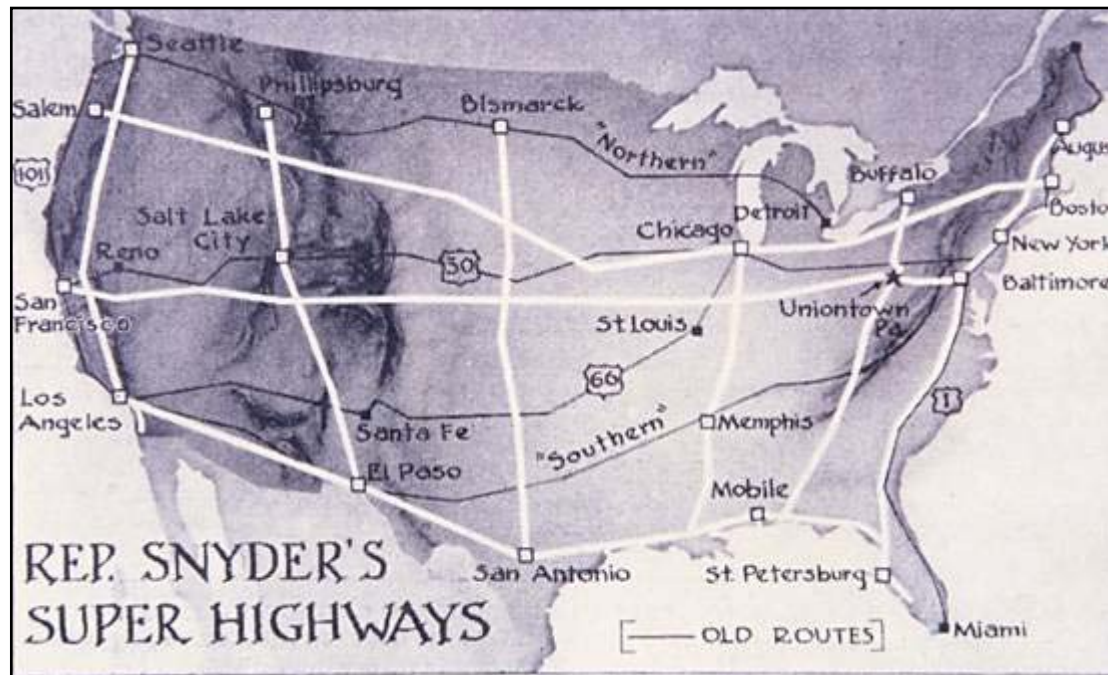
Statewide Highway Planning Surveys



H.S. Fairbank

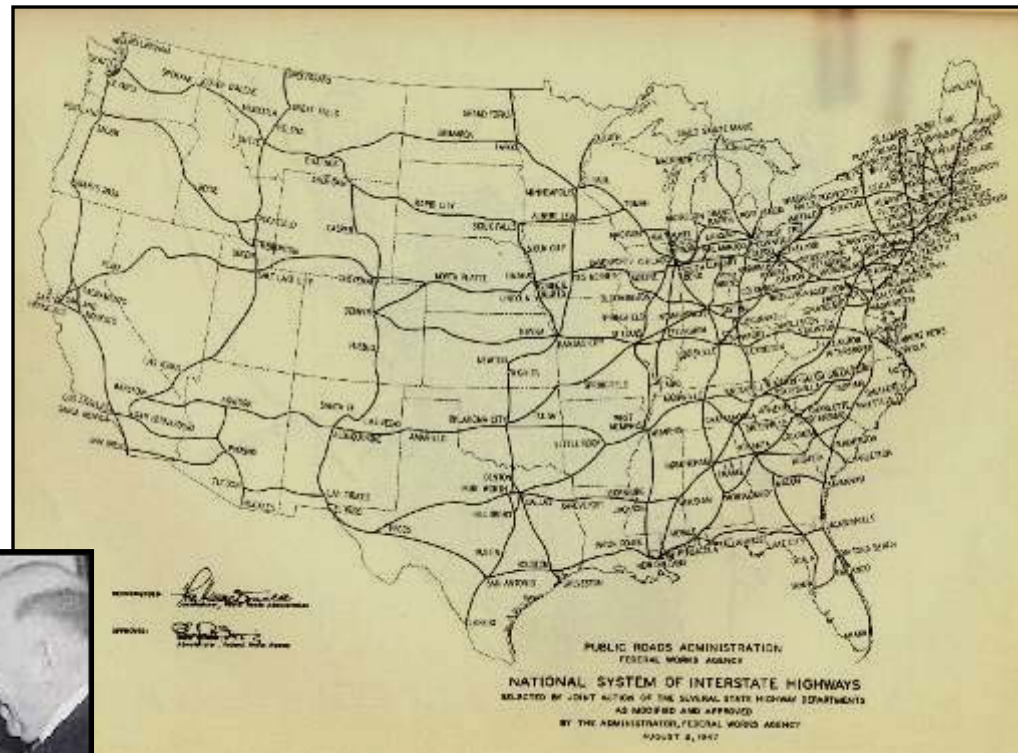


Roads, Relief & Toll Roads and Free Roads



The Interstate System

*The
Interstate
System , 1947*



*The Clay Committee &
Eisenhower*

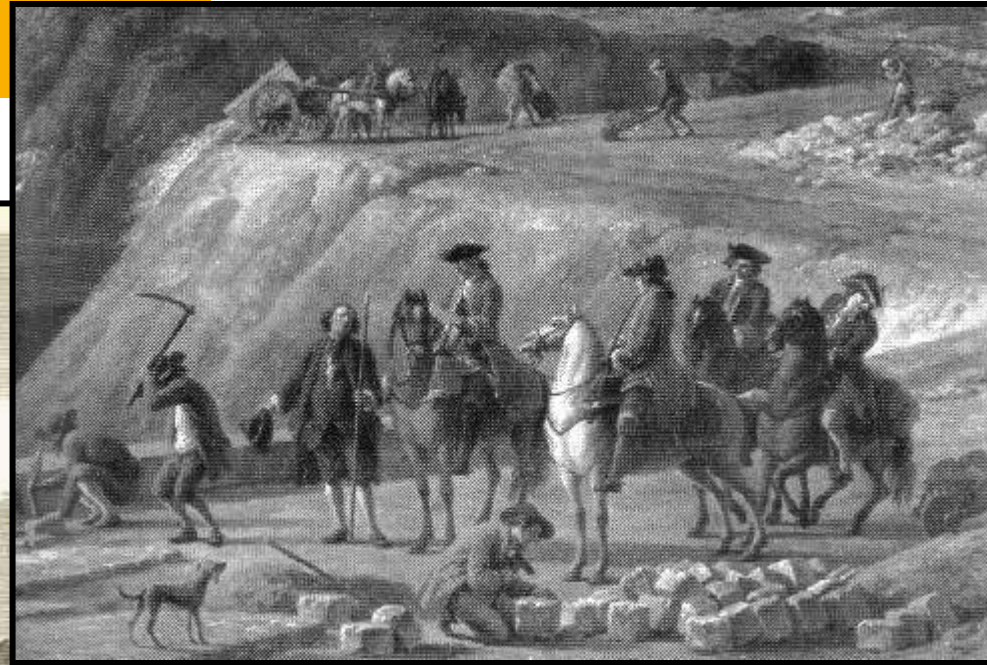


*Frank
Turner*

Engineering Patterns: Britain & France



GRANGE ROAD BRIDGE AND TURNPIKE, ABOUT 1820.



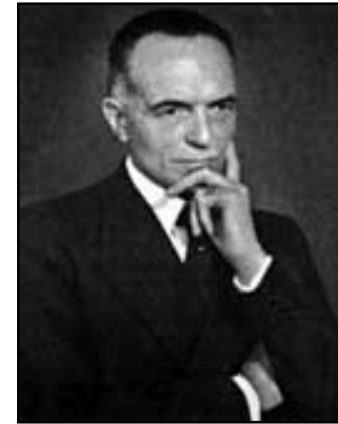
*Ecoles des Ponts et
Chausses*



Macadam & Telford

23e Congrès mondial de la Route - Paris 2007

Engineering Patterns: Italian Autostrada



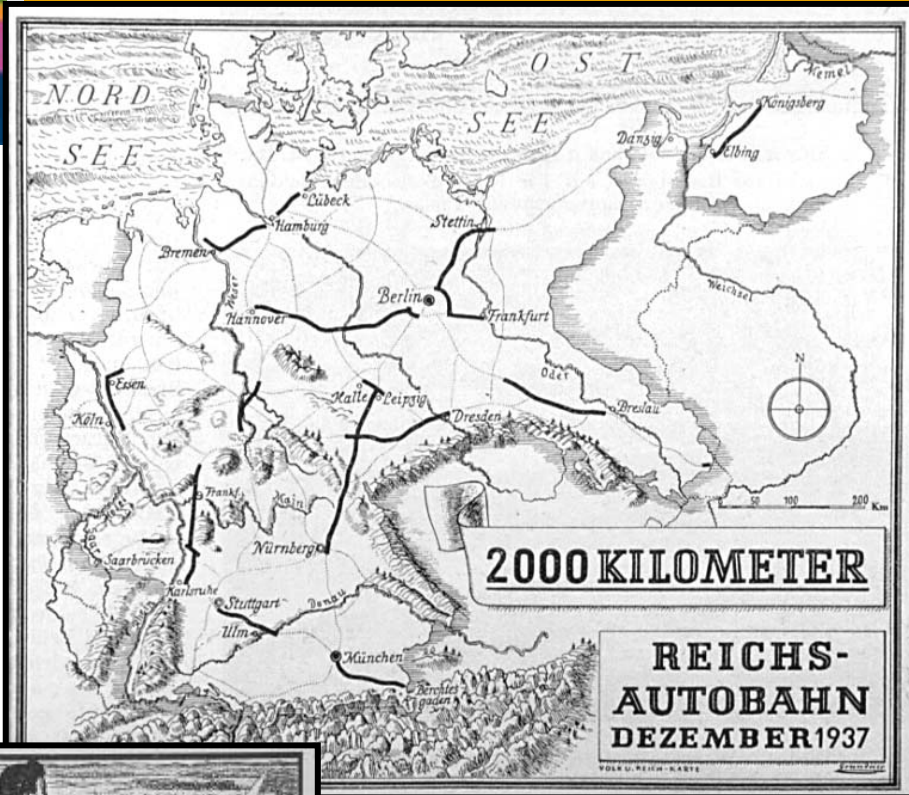
Piero Puricelli



Autostrada, 1923-1925



Engineering Patterns: Germany & Autobahnen



Todt

Austria: Mountain Roads and Tourism



Engineering Patterns: Dutch Roads



Ministerie van Verkeer en Waterstaat

Water



Scandinavia: Engineers as Policymakers



Issues:

Roads vs. Rails

Traffic Engineering

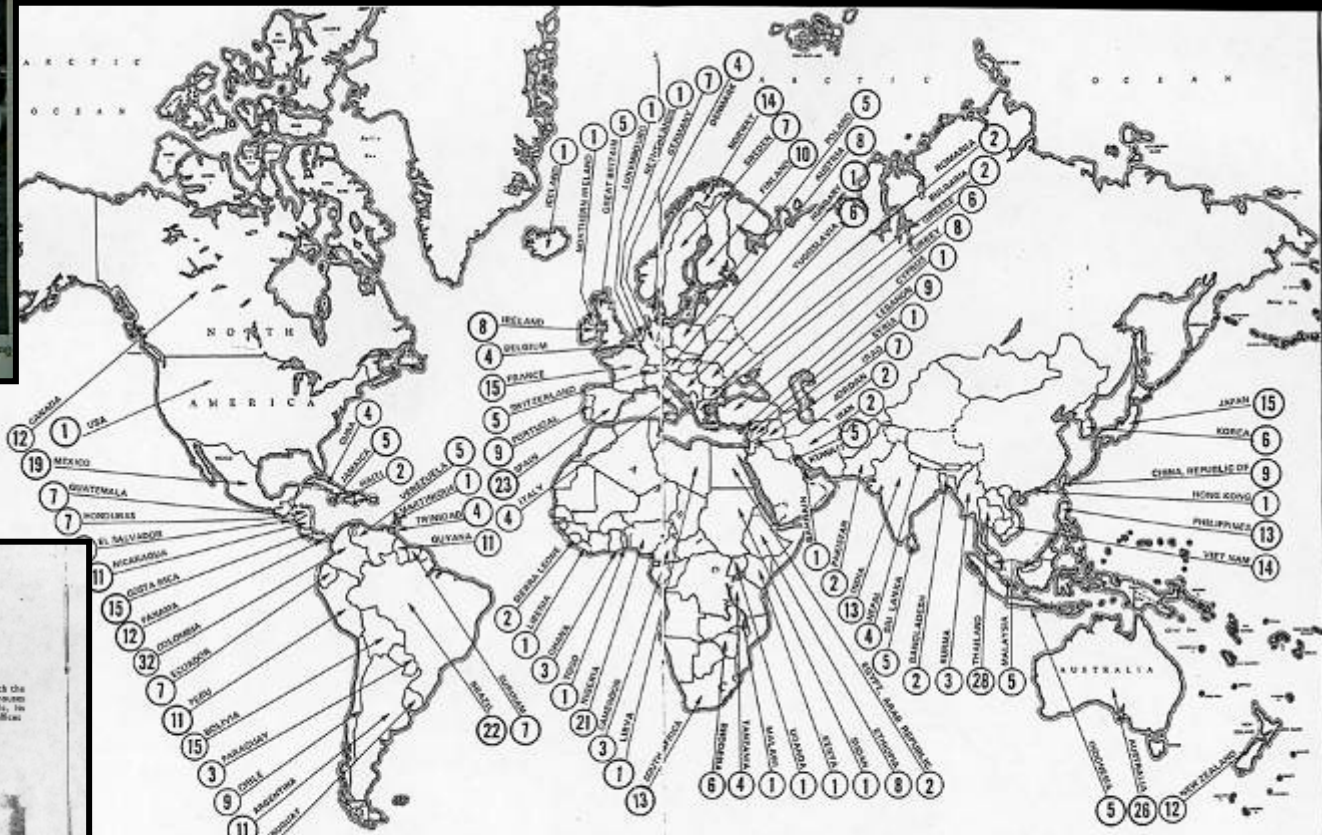


“Technify the Question...”

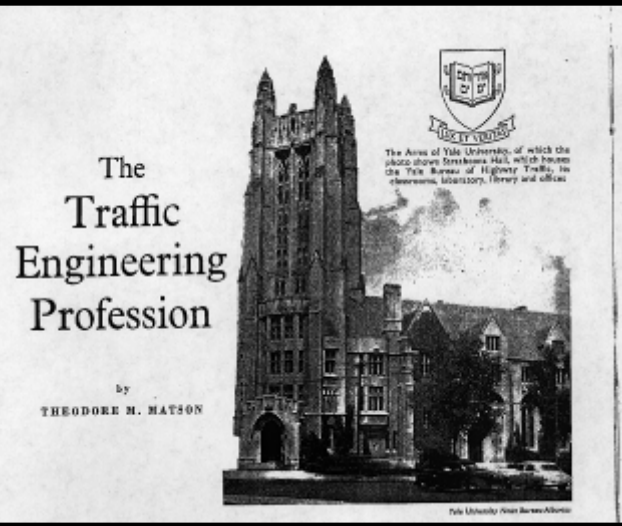
Postwar Tech Transfer: BPR, Yale & IRF



JOHN M. PAGE (left), of the U. S. Bureau of Public Roads, and George Sharp, of England, watch line compaction on Reinheid-Kamen Expressway.



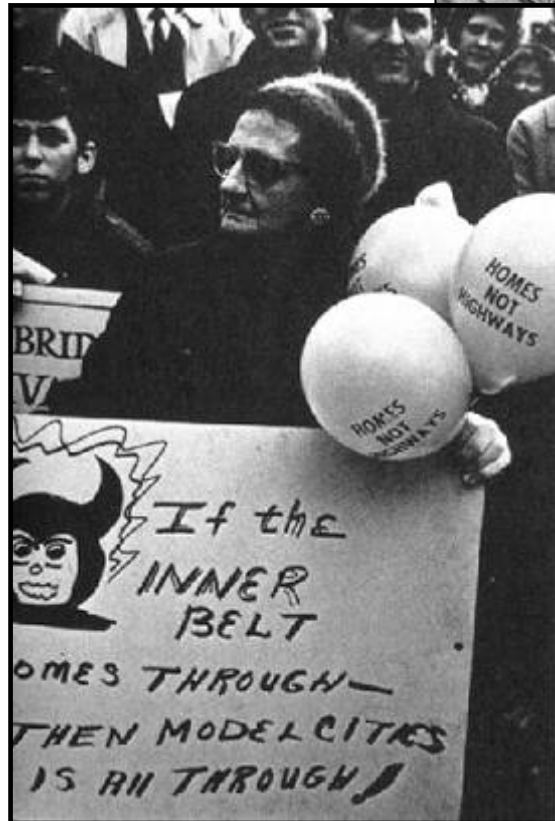
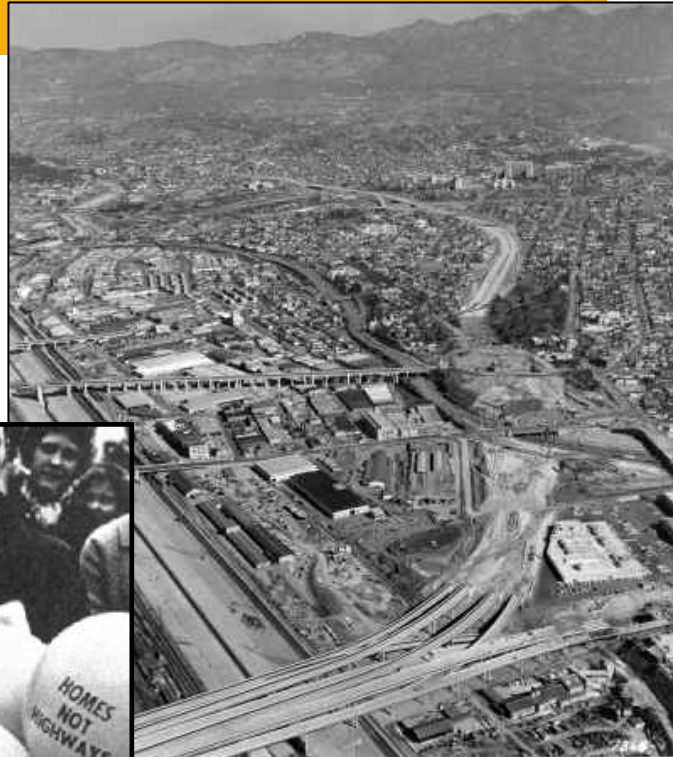
Geographical Distribution of the IRF Fellowships 1949-1975



Bureau of Street Traffic Research

IRF Fellowships

Demise of Engineering Control: The US Freeway Revolt



European Resistance to American Engineering Control



Stockholm



Vienna

*Avenue de
Gravelle, Bois
de Vincennes,
Paris/F*



The Limits of Expertise: 1960s onward



**“Technify the Question”
vs. Political Control**

