

Case 2

A transportation planning consultant for a growing Midwest county recently estimated that demand for a proposed light-rail transit system will be 8,221 daily passengers at the time of its planned opening. After reviewing the executive summary of her report, the chair of the county board of supervisors scheduled a meeting with the consultant to explain federal funding guidelines that require an estimated demand of 12,000 daily passengers to qualify grant applications for further consideration. Federal monies traditionally cover 80% of capital costs for such projects. Before wrapping up the meeting, the chair urged the consultant to review her analysis for possible errors and omissions. The consultant, who favors construction of the transit line regardless of demand because it promises to significantly improve accessibility for traditionally underserved groups in the county, provided a revised estimate some weeks later that exceeded the 12,000 rider threshold. Although she did not fabricate data, she subsequently gave the proposed transit system the “benefit of the doubt” by setting all assumptions at either the lower or the upper end of a range of values that seem reasonable, at least to most laypersons.

The consulting firm hired by the county provided a lengthy report to the county planning staff detailing the methodology, data sources and assumptions on which their ridership estimate was based. The county board of supervisors and other stakeholders in the process received only an executive summary that essentially only provided the official forecast as 12,103. Although the complete report was available to everyone, it was highly technical and never requested by anyone from the planning staff.

Traditional travel demand models comprise a series of mathematical equations that attempt to predict future travel behavior for a particular region based on forecasted socioeconomic variables, such as population and employment, and planned changes to the transportation system. Practitioners and scholars have formalized the travel demand modeling techniques used today over the last half-century since their introduction. In application, however, travel demand models are highly imprecise, their inputs are extremely difficult to predict, and the formulations of future travel demand are almost sure to be inaccurate to some extent. For these reasons, a planner must assess carefully the reasonableness of all underlying assumptions when using a travel demand model.

Even though the county planning staff is generally considered very competent, it did not produce the forecasts for this project for lack of in-house resources. Internally, it complained that the consultant’s forecast was deceptive because the estimate, 12,103 passengers, suggested a precision unwarranted by methodology. In fact, confidence intervals for forecasts of this sort commonly span 10-20%. Furthermore, staff planners who waded through the documentation provided by the consultant raised fundamental concerns about the reasonableness of the assumptions used to prepare the travel demand forecast. The Director of Planning refused to raise the objections of his staff with the

board because he reasoned that the documentation was available and in this case, the county board of supervisors had already made up its mind about the light rail project—probably well before the county even hired the consultant.

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