Estimating and Confirming Right-of-Way Damages

Prepared by Misty A. Boos, March 2009

KEY SEARCH TERMS:

- Right of Way
- Property Values
- Damages
- Access Management

Research Synthesis Bibliography No. 21

Research Synthesis Bibliographies (RSBs) are distillations of relevant transportation research on current topics of interest to researchers, engineers, and policy/decision makers. Sources cited are available for loan (or available through Interlibrary Loan) to VDOT employees through the VDOT Research Library.
At State and Federal Levels, Little Research Exists to Determine Whether Damages Claimed Were an Accurate Reflection of True Damages Incurred

Most highway projects involve acquiring some form of right-of-way. This acquisition process involves many stages, participants, and a great deal of information. Compensating land owners for loss of land and/or associated damages is an important part of this process. (Zhang, 2006)

Because estimating damages caused by these developments is a complicated process, much research has been dedicated to exploring ways to improve procedures for estimating land value and use effects in right-of-way cases. Citations for reports and articles about cost estimation are listed in this RSB in Section II.

There are many factors to consider when assessing costs and determining actual damages both before and after development. For instance, property values, access or business patronage may change as a result of, or independent from, damages caused by right-of-way development. Also, in some instances, the damages anticipated never actually occur. For example, in 2005 Wyoming DOT completed research that examined perceived and actual impacts on businesses before and after the construction of a right-of-way development. They found that, although adverse economic impacts were predicted by several business owners before construction, these impacts failed to occur after completion of the project. (Young, 2005)

Very little research has sought to determine whether damages claimed by businesses and individuals, and paid for by DOTs in federal and state right-of-way cases, were an accurate reflection of actual damages incurred. Citations that speak to this topic have been placed in Section I of this RSB. Among these, is a study by Minnesota DOT. They systematically and comprehensively examined the long-term impacts of a major development along Interstate 394 to explore how business and land value changed for businesses along the corridor after the development was complete. (Preston, 2007)

To facilitate the sharing of current right-of-way research and information sharing AASHTO developed a Subcommittee Task Force on Research, which hosts a website, located at: [http://rightofway.transportation.org/?siteid=61&pageid=964](http://rightofway.transportation.org/?siteid=61&pageid=964). This site is designed to serve as a central location for providing access to right-of-way and utility issues research from around the US.

– Misty A. Boos, VDOT Research Library
INDIVIDUALS AND ORGANIZATIONS CONTACTED FOR THIS RSB
Bill Meador - VDOT Land Acquisition & Property Manager
Richard Bennett - VDOT State Right-of-way Director
Mike McCall - VDOT Chief Appraiser
Michael Perfater - VTRC Associate Director
Barb Middleton - Realty Officer FHWA Virginia Division
Jennifer Boteler - FHWA Library
Kathy Facer - Realty Specialist, FHWA
David Leighow - FHWA HQ Realty Specialist - Peer Exchange
Joseph Edwards - Office of Real Estate Services Team Leader - FHWA
Minnesota DOT
Wisconsin DOT
Florida DOT
CALTRANS
Lum Library

DATABASES SEARCHED FOR THIS RSB
OneSearch - UVA
OneSearch - VDOT Research Library
Google Scholar
WorldCat
TRIS Online
TLCat
NTIS Catalog
TRANSPORT
Research in Progress
Other DOT Websites
JSTOR

OVERVIEW
Research Synthesis Bibliographies (RSBs) are selected lists of resources on current topics of interest to VDOT employees or divisions. When available, links to online documents are provided.

RSBs are "selective listings," organized and distilled from the larger universe of research materials to save the researcher’s time. Selection criteria used by library staff include authority, relevance, and timeliness.

ACCESS TO RESOURCES LISTED HERE
Full text copies of most resources listed in this document are available in the VDOT Research Library's collections, or through Interlibrary loan, through the Library. In many cases, the Library owns both virtual and hard copies of documents, as well as formats such as CD-ROM.

QUESTIONS
Library staff are available Monday-Friday 8:00-4:00 excluding state holidays. Please contact us if you have a reference question, need information about our lending policies, or need any other kind of help.

The library’s collections and services are available to all VDOT employees and contractors working on VDOT projects. Local collections are accessible to all Virginia residents for in-house use only. All services are reserved for VDOT employees and employees of other Virginia state agencies on a case-by-case basis.

VDOT Research Library
530 Edgmont Road
Charlottesville, VA 22903
Ph: (434) 293-1959
Fax: (434) 293-1990
E-mail: Library.Circulation@VDOT.Virginia.gov
Intranet Web Site: http://
I. AFTER-DEVELOPMENT COST STUDIES AND EXAMINATIONS

Texas Frontage Road Economic Study
DATE: 2005
CITATION: Texas DOT
ABSTRACT: The safety and operational benefits of one-way frontage roads are well documented and accepted by transportation professionals. However, research on the economic impacts of converting two-way frontage roads to one-way operation is limited. The rapid urbanization of suburban and rural frontage roads in Texas is bringing this subject to the forefront. Business owners are often concerned that changes of access to their property will have adverse temporary or permanent impacts on their sales. These perceived impacts of the frontage road conversion by adjacent commercial businesses and landowners are often major impediments to projects moving forward. This study seeks to clearly illustrate both the perceptions and the reality of business vitality before, during, and after converting two-way frontage roads to one-way operation.

The Effects of Transportation Infrastructure on Nearby Property Values: a Review of the Literature
DATE: 1994
CITATION: Huang, William S, Berkeley University of California and Institute of Urban & Regional Development.
DATABASE: WORLDCAT
ACCESS: Available to VDOT employees through Interlibrary Loan.

DATE: 2001
CITATION: Moore, Terry and Thomas W. Sanchez.
ABSTRACT: In 1998, the Oregon Department of Transportation undertook a study of the impacts of highway capacity improvements on land uses and growth, particularly at the urban fringe. The objective was to better understand the cause and effect relationships among highway capacity, travel demand and development patterns. Case studies of six communities provided an in-depth understanding of the pressures which drive
development decisions and land use change. This guidebook provides guidance to ODOT staff for completing environmental analysis and documentation on indirect land use impacts of highway improvements, based on findings of the study. One finding was that most highway capacity increases do not cause development to be dramatically different from local land use plan guidance, or from what would have occurred in absence of the highway improvement. Appendices A-F of this report provide background on the study findings, including the literature review, growth trends analysis and six in-depth case studies. Also included in the appendices are a discussion of population and employment forecasting issues and a summary of ODOT processes for project evaluation. 67 P. This document contains only the report itself.

DATABASE: TRIS ONLINE

**Long-Term Impacts of Access Management on Business and Land Development along Minnesota Interstate 394**

DATE: 2005

Plazak, David. Iowa State University Center for Transportation Research and Education

ABSTRACT: Understanding the relationship between changes in transportation infrastructure and the surrounding commercial economy is important for completing improvement projects successfully. Owners of businesses located along major highway corridors considered for improvements often suggest that changes to the existing street network will reduce property values, reduce retail sales, or cause the business to fail. This is particularly true when direct access between the roadway and commercial land parcels is modified and controlled. Little information exists about the economic impacts of roadway improvements, though studies in Iowa, Texas, and Kansas have indicated that there are few or no adverse economic impacts to most businesses. Recently, the Minnesota Department of Transportation (Mn/DOT) comprehensively and systematically analyzed the economic impacts associated with converting arterial US Highway 12 to freeway-standard I-394, between Minneapolis and Wayzata in the Twin Cities metro area. The I-394 study first developed an overview covering both the transportation and business conditions in the entire corridor before and after conversion. The second step focused on the details (travel times/distances, land use/values, business turnover) of a representative sample of parcels in the corridor. The selected parcels represent a cross section of corridor business types, including offices, auto dealerships, retail, hospitality, restaurants, and gas stations. Secondary data were gathered and in-depth interviews of business owners were conducted. The I-394 study found that all transportation performance measures improved when US 12 converted to a limited-access interstate freeway, though traffic volumes almost doubled due to regional and corridor growth. The business performance measures also improved: the amount of vacant land in the corridor has significantly declined, new businesses have been added, business turnover was below statewide and national averages, and employment and adjacent commercial land values are up. Interviews with 14 of the selected business owners/managers indicated that most are doing well and most agreed that the I-394 corridor is a good place to do business, even after much greater access control was put in place. These results are consistent with the findings of the previous research and indicate that the dire predictions of a few of the business owners prior to construction about long-term adverse economic impacts associated with the conversion of US Highway 12 to I-394 did not prove to be true.

Interstate 394 Business Impact Study Research Summary and Key Findings
DATE: 2007
CITATION: Preston, Howard P. E. Minnesota Department of Transportation
ABSTRACT: The traffic safety and operational benefits of highway improvement projects are well documented in transportation research. However, the economic impacts of these projects, especially if changes in access are involved, are not as well documented. The few studies that have been done in this area reveal that access modifications did not cause inordinate damage to businesses or commercial land values (see Section 2). The lack of research, and a lack of Minnesota specific examples, has left Mn/DOT staff unable to provide a clear and credible response to business owners and commercial property owners concerned about potential economic effects of highway projects. Mn/DOT is attempting to address this information gap by conducting a comprehensive and systematic analysis of economic effects of a highway improvement project—the conversion of US 12 to Interstate 394 (I-394). This I-394 Business Impact Study is a first step in documenting credible, local information about the potential business related impacts associated with highway improvements. This research is intended to provide a comprehensive long-term evaluation of the transportation, business, and land development impacts of a major transportation project in the Minneapolis-St. Paul metropolitan area.
ACCESS: Available in the VDOT Research Library, Call Number TE 24 .M6 I394 2004

Highway Construction Impacts on Wyoming Businesses
DATE: 2005
CITATION: Young, Rhonda Kae; Wolffing, Chris; Tomasini, Michael. Transportation Research Record: Journal of the Transportation Research Board 1924, pp. 94-102
ABSTRACT: Highway construction projects can affect motorists and businesses in many ways. Even though construction projects are temporary situations, many businesses worry about the level of impact during construction and the length and magnitude of the recovery period. Highway construction may cause a temporary loss of customers, revenue, and property value as well as create noise and air pollution and other problems. Currently, there is little information that quantifies the estimated business impacts, particularly for rural areas such as Wyoming. This study investigated the business-related effects of highway construction projects in Wyoming and provided managers at the Wyoming Department of Transportation with case studies and impact estimates to better address business owners’ concerns. The study also compared the businesses’ perceptions of what happened to their sales during and after construction with the actual impact on the businesses’ sales for the same time period. Perceived impact data were collected through surveys sent to businesses in the 12 case study projects across Wyoming, and Wyoming Department of Revenue tax data were used to examine the actual estimated sales data before, during, and after construction. In addition to sales revenue data, traffic volumes and right-of-way purchase information were compared with the business owners’ perceptions. The result of the study was the quantification of actual impacts as well as an analysis of the difference between the actual and perceived impacts
DATABASE: TRIS ONLINE
ACCESS: http://dx.doi.org/10.3141/1924-12

Corridor Reservation: Implications For Recouping a Portion of the "Unearned Increment" Arising from Construction of Transportation Facilities: Final Report
DATE: 1994
CITATION: VTRC 94-R15; Borhart, Robert J. and Virginia Transportation Research Council
ABSTRACT: This report examines the phenomenon of the unearned increment, which is the often substantial increase in private land values resulting from transportation facility construction, and possible attempts to recoup it to finance transportation projects. The report has four parts. Part I examines when, where, and why the unearned increment is likely to be created. It also gives a review of the history of the increment. Parts II and III break down the types of statutes that can be used to recoup the increment. Part II examines corridor reservation laws that restrict any development within a proposed transportation corridor for a period of time without compensation by the government until acquisition of the land occurs. In return, the affected property owners receive transferable development rights. The report concludes that such a regime might survive legal challenges based on the Takings Clause of the Fifth Amendment. Part III focuses on direct recoupment of the unearned increment from land near a transportation facility that appreciates in value as a result of the construction of the facility. The uses of special assessments, impact fees, proffers, transferable development right receiving areas, and excess condemnation are examined, and analyses of legal ramifications and defects are included. Part IV is intended to present a plethora of policy choices to recoup the unearned increment, not to give specific recommendations for legislative or administrative action. Instead, the legal and policy issues involved for the various reservation and revenue enhancement techniques are included as a list of alternatives for action.


II. COST ESTIMATION IN RIGHT OF WAY PROJECTS

Advanced Acquisition of Right-of-Way: Best Practices and Corridor Case Studies
DATE: 2009-07
CITATION: Aultman, Sara and Adeel Lari. Hubert H. Humphrey Institute of Public Affairs
ABSTRACT: The most expensive part of many transportation projects, especially roadway expansions, is acquiring the Right-of-Way (ROW). One approach that the Minnesota Department of Transportation (Mn/DOT) has used to decrease these costs is through a practice known as advanced acquisition. This study documents Mn/DOT’s current advanced acquisition practices and investigates the appreciation rates of parcels adjacent to transportation corridors. Current practices were documented by surveying the eight Mn/DOT district offices and city officials. These surveys identified current problems with advanced acquisition practices, such as excess land acquisition, lack of guidelines on preservation tools, and the increased need for communication between cities, counties, and Mn/DOT. The corridor case studies showed that the effect of being adjacent to a transportation corridor is heterogeneous across the three corridors studied. A binomial logit model was developed and the only significant variable was the subdivided. This indicates that a parcel that has subdivided is strongly correlated with an appreciation rate above 25% per year. From these findings we developed two recommendations. First, we recommend Mn/DOT develop a set of guidelines for Mn/DOT district managers regarding how and when to use certain ROW preservation tools. Second, we recommend Mn/DOT develop a monitoring program for transportation corridors in the Twin Cities that can identify properties on the verge of subdivision or a land use change.

ACCESS: www.cts.umn.edu/Publications/ResearchReports/pdfdownload.pl?id=1072
Estimation of Right-of-Way Acquisition Costs in Texas
DATE: 2004
CITATION: Kara M. Kockelman, Jared D. Heiner, Shadi Hakimi, and James Jarrett, September 2004, p.4
ABSTRACT: Not available.
DATABASE: NTIS
ACCESS: http://www.utexas.edu/research/ctr/pdf_reports/0_4079_S.pdf

RUMS: Right-of-Way Tracking
DATE: 2005
ABSTRACT: This article describes the Virginia Department of Transportation's (VDOT) Right of Way and Utilities Management System (RUMS). This software program provides right-of-way managers with a single, comprehensive view of project and land parcel status and lets them track deadlines more efficiently. RUMS also helps track other activities of the VDOT division responsible for right-of-way, including appraising and acquiring rights of way and easements for road construction and expansion projects; removing building structures and other improvements; relocating utilities, businesses, and residences; and tracking residue parcels and surplus rights of way for public sale or lease. The author briefly reviews the old software that the VDOT used and explains how RUMS was developed and how it improves upon that earlier system. A final section discusses how the software may prove to be of interest to other states.
ACCESS: http://www.tfhrc.gov/pubrds/05jan/04.htm

The Problem of Faulty Analyses: Can We Rely on Current Methods in Determining Right of Way Impact on Neighboring Properties?
DATE: January/February 2006
CITATION: ALBERT R. WILSON, CRE. International Right of Way Association
ABSTRACT: Not available
ACCESS: https://www.irwaonline.org/EWEB/upload/ROW%20Archives%207-05%20thru%207-06/106/Faulty%20Analyses.pdf

Joint FHWA and State DOT Process/Peer Review of Mn/DOT Appraisal and Acquisition Practices
DATE: 2003
CITATION: Reginald Bessmer, Minnesota, Dept. of Transportation, United States and Federal Highway Administration. , Minnesota Dept. of Transportation, St. Paul, Minn.
ABSTRACT: The purpose of this review was to evaluate the appraisal, appraisal review, and acquisition processes utilized by the Minnesota Department of Transportation (Mn/DOT) on the Trunk Highway 52 Design-Build Project in Rochester, Minnesota. Mn/DOT is required to adhere to the policies and procedures contained in their Right-of-Way Manual. This manual is approved by the Federal Highway Administration (FHWA) and incorporates the federal requirements of 49 CFR Part 24 that govern the appraisal and acquisition of right-of-way (r/w). An additional purpose of the review was to examine from a peer perspective any innovative or expedited processes that Mn/DOT used to accelerate the acquisition of r/w. Specific review objectives included: 1. Evaluate Mn/DOT compliance with their r/w manual; 2. Identify strengths and weaknesses in the processes...
used by Mn/DOT; 3. Identify best practices and lessons learned from the peer evaluation of the expedited processes used by Mn/DOT; 4. Determine what effect, if any, the compressed time schedule of acquisition had on the appraisal and acquisition processes.

DATABASE: WORLDCAT
ACCESS: http://www.dot.state.mn.us/hottopics/rowpeerreview.pdf

Physical and Access/Locational Characteristics of Remainders of Partial Takings Significantly Affecting Right-of-Way Costs: Interim Report
DATE: 1994
CITATION: Buffington, J. L, M. K. Chui, J. L. Memmott and F. Saad. Texas Transportation Institute; Texas Department of Transportation; Federal Highway Administration, 84-p.

ABSTRACT: Highway right-of-way costs have accelerated in recent years, especially in suburban and urban areas of Texas. Thus, further efforts are being made by Texas Department of Transportation (TxDOT) officials to find ways to reduce or hold down such costs. One of the efforts helped to enact a new law determining the compensation paid property owners for partial takings of right-of-way for highways. This law, subsequently declared unconstitutional by the Texas Supreme Court, allowed consideration of special or direct benefits arising from the highway improvement in awarding compensation for the taking or assessing damages to the remainder, and it did help to reduce right-of-way costs. The purchase of partial takings can cause some remainders to suffer considerable severance and/or proximity damages. The state only gains title to the partial taking, and the property owner keeps title to the remainder. Although enhancements can offset some of these damages, purchasing agencies are still paying many property owners more than the taking value. Often, small and irregularly shaped remainders are created and damaged to 100% of value (the whole property's value). This study seeks to determine which remainder characteristics significantly affect right-of-way costs. The more specific objectives of the study are to determine (1) the significant remainder property, access, and location characteristics that affect right-of-way costs and (2) the effects of the 1984-87 right-of-way evaluation law on right-of-way costs. A thorough study of the literature; a mail survey of selected right-of-way fee appraisers, TxDOT appraisers, and attorneys on the state attorney general's staff; the preparation and analysis of a sample of old remainder case histories developed by the Texas Transportation Institute and TxDOT during the 1960s; and the collection and analysis of a new sample of remainders created before, during, and after the new law was in effect are all being accomplished under the research plan. The new sample data cover three time periods: 1) January 1, 1974 to October 1, 1984; 2) October 1, 1984 to August 17, 1987; and 3) August 17, 1987 to December 31, 1991. All the work plan has been completed, except for the collection and analysis of the new data base of remainders. The literature survey has helped identify several important remainder characteristics to be tested. A total of 70 out of 91 persons surveyed responded and gave importance scores to a list of remainder characteristics. At least the top 10 or 12 characteristics are being used in the regression models of the two data samples. Lastly, the regression analysis of the sample of old remainder case histories has identified several important characteristics related to the remainder, i.e, size, value, and use of whole property; remainder shape, value total damages paid; and proportion of taking. Researchers expect the analysis of the new database to confirm these findings and yield other characteristics that significantly affect right-of-way cost.

DATABASE: TRIS ONLINE
ACCESS: Available in the VDOT Research Library, Call Number TE 206 .P49 1994
TxDOT Guidebook for Right-of-Way Valuations and Negotiations
DATE: 2006
CITATION: Caldas, Carlos H, Texas, Dept. of Transportation, et al. Center for Transportation Research, University of Texas at Austin, 30 p.
ABSTRACT: In fiscal year 1999, the Federal Highway Administration (FHWA, 2003b) reported that the federal government spent nearly one billion dollars on right-of-way (R/W) acquisition. Because valuations and negotiations can have such a large impact on a project’s overall success, they are becoming particularly vital parts of the right-of-way acquisition process. Successful R/W valuations and negotiations depend on three criteria: time management, cost containment, and a good relationship with the public. However, it is difficult to achieve all three objectives at once because of the complex nature of the process. While project plans, surveys, and construction have relatively finite timelines, condemnation proceedings often make property acquisition last longer than expected or desired (NCHRP, 2000). Furthermore, a series of complex statutes, rules, and regulations creates additional challenges. Given the significance of R/W acquisition and its numerous challenges, it is crucial to evaluate and undertake effective strategies for successful valuations and negotiations. In order to facilitate effective R/W valuation and negotiation by the Texas Department of Transportation (TxDOT) and its agents, this guidebook presents guidelines and documents recommended practices. Also, these guidelines are based on various reviews of the literature, research on the R/W process, analysis of databases, and interviews. They are intended for use by TxDOT’s R/W agents and outside consultants.
DATABASE: WORLDCAT
ACCESS: http://www.utexas.edu/research/ctr/pdf_reports/0_5379_P2.pdf

Best Practices in Right-of-Way Valuations and Negotiation Report
DATE: 2007
CITATION: Caldas, Carlos H, Texas, Dept. of Transportation, et al. Center for Transportation Research, University of Texas at Austin, 122 p.
ABSTRACT: Right-of-way acquisition is an integral component of the overall planning and implementation of highway and transportation projects. This process has become more complex, expensive, time consuming, and socially sensitive over the last few decades. For this reason, the valuations of the parcels and the negotiations with the property owners have been focused on improving the acquisition process. In order to recommend some best practices for successful valuation and negotiation, the research team considered property owners’ experiences, different practices among Texas Department of Transportation district offices, factors that may affect possession type, as well as a thorough literature review. Guidelines, supported by recommended practices and practices to avoid, were identified for each valuation and negotiation. The guidelines and practices focused on promoting good relations between the Texas Department of Transportation and property owners.
DATABASE: WORLDCAT
ACCESS: http://worldcat.org/DATABASE: WORLDCAT/85855961/viewonline

Costs of Right-of-Way Acquisition: Methods and Models For Estimation
DATE: 2005
ABSTRACT: Transportation infrastructure and other major projects often require the taking
of real property, or right-of-way (ROW). Accurate estimation procedures are needed to facilitate budgeting and timely completion of projects. The costs of partial takings, commercial properties, remainder damages, court costs, utility relocations, and other ROW-related items are difficult to anticipate. Hedonic price models and large sample data analysis may be useful tools to help agencies track and predict ROW costs and the likelihood of damages. Hedonic price models for estimation of costs associated with taking property are proposed using recent acquisition data from several Texas corridors and full-parcel commercial sales transactions in Texas’ largest regions. Results indicate that damages depend heavily on parking, access, and location, the size of the taking is not as important as the value of improvements, and utility costs are highly variable. For the commercial property value models, improvement square footage and the condition of the property were very significant predictors, with a property in excellent condition being worth $22-$28 (2003 U.S. dollars) more per square foot of improved area than a similar property in only fair condition.

DATABASE: TRIS ONLINE
ACCESS: Available to VDOT employees through Interlibrary Loan.

**Right-of-Way Costs and Property Values: Estimating the Costs of Texas Takings and Commercial Property Sales Data**

DATE: 2004

CITATION: Kockelman, Kara M, Texas, Dept. of Transportation, Office of Research and Technology Implementation, University of Texas at Austin and Center for Transportation Research, 144 p.

ABSTRACT: Right-of-Way (ROW) acquisition for highways and other transportation improvements can be very expensive, time-consuming, and socially sensitive. Accurate ROW cost estimation, efficient acquisition practices, and appropriate federal and/or state laws can be keys to successful completion of ROW acquisition. This report reviews the literature related to ROW acquisition, and highlights the findings of expert interviews. Hedonic price models were proposed using recent acquisition data from several Texas corridors and separate databases of full-parcel commercial sales transactions for Texas’ largest regions. For the latter, the method of feasible generalized least squares (FGLS) was employed to correct the standard error terms for heteroskedasticity. The models presented here add considerably to the literature and research in this area and should prove valuable to ROW professionals, transportation planners, developers, appraisers, and others involved in ROW cost estimation and commercial property valuation. A cost estimation tool developed in Excel, accompanied by a supporting document providing instructions on its application, was presented to Texas ROW administrators as a potential budget estimation tool for future tasks. Furthermore, state condemnation statutes were aggregated and then compared and contrasted for ROW acquisition, noting their associated weaknesses and strengths. This report recommends modifications to current laws in order to expedite the acquisition process, minimize cost, and build property owners’ trust in government actions. Additionally, it describes how state characteristics impact real property condemnation rates. Results indicate that states with the lowest condemnation rates allow early taking of land, land consolidation and land exchange techniques; mandate early public involvement; and require that appraisal details be reported to property owners. They also emphasize negotiation and mediation before filing for condemnation proceedings, while providing comprehensive and detailed laws regarding compensable items. This research also found that variables like rural highway mileage, fraction of land owned by the Federal Government, urban area population, and educational...
attainment are statistically significant in predicting condemnation rates.

**DATABASE: WORLDCAT**
**ACCESS:** [http://www.utexas.edu/research/ctr/pdf%5Freports/0%5F4079%5F1.pdf](http://www.utexas.edu/research/ctr/pdf%5Freports/0%5F4079%5F1.pdf)

---

**DATE: 2006**
**CITATION:** Kockelman, Kara, Texas, Dept. of Transportation, et al. Center for Transportation Research, University of Texas at Austin.
**DATABASE: WORLDCAT**
**ACCESS:** Available to VDOT employees through Interlibrary Loan.

---

**Land Value and Land Use Effects of Elevated, Depressed, and At-Grade Level Freeways in Texas**
**DATE: 1997**
**CITATION:** Lewis, Carol A, Texas, Dept. of Transportation, et al. Texas Transportation Institute, Texas A&M University System, 150 p.
**ABSTRACT:** To answer questions being raised by abutting residents and businesses about proposed elevated and/or depressed freeway improvements in the urban and suburban areas of Texas, a four-year study has been conducted to estimate the social, economic, and environmental effects of such freeway designs. Eight existing, two under-construction, and one approved-for-construction freeway sections have been studied on a before-, during-, and after-construction basis. The sections selected for study range from being predominantly residential suburban areas to predominantly commercial-industrial downtown areas. The specific effects of the study estimated for each study section include: (1) social impacts: population changes, neighborhood, accessibility, and neighborhood cohesion; (2) economic impacts: relocation and mitigation costs, business sales, property uses and values, tax revenues, employment and income, and user costs; and (3) environmental impacts: aesthetics, drainage and erosion, noise and air pollution, vibration, and hazardous spills. The literature review and a survey of highway agencies in other states were used to determine the appropriate procedures or models and mitigation measures to implement in estimating the social, economic, and environmental impacts of elevated and depressed freeways. The results of the study, presented in six separate reports according to types of effect, can be used by highway planning and designing engineers to prepare environmental statements and documents of the expected social, economic, and environmental impacts of proposed elevated and depressed freeway projects. Also, the results can be disseminated at the public hearings for a proposed project. This report presents the findings of the land value and use effects of elevated, depressed, and at-grade level freeways. The findings from prior studies indicate that freeway grade level differences in abutting land values are significant for certain land uses. However, these differences are negative or positive, depending upon the type of abutting land use. The results of this study confirm those findings.
**DATABASE: WORLDCAT**
**ACCESS:** Available in the VDOT Research Library, Call Number HE 336 .E94 L36 1997

---

**The Effect of Right of Way Acquisition on Farm and Ranch Operating Units; Summary Analysis of Three Study Areas**
**DATE: 1971**
**CITATION:** Meuth, Hugo G. Texas Transportation Institute, Texas A&M University, 37 p.
**ABSTRACT:** The effects of controlled access highways on selected farm and ranch
operators in three types of agricultural areas in Texas are summarized. It was found that the taking of right of way for controlled access highways had short term effects on farm and ranch operations, but after a few years to allow for adjustments, the operations as a whole made noticeable gains in agricultural production and average net income. No major changes in land use or tenure could be attributed to the highway. Also, travel patterns of the local operators were changed very little by the limited access type highways

Right of Way Effects of Controlled Access Type Highway on a Farming Area in Colorado and Fayette Counties, Texas

DATE: 1970
CITATION: Meuth, Hugo G, Texas Transportation Institute, Texas and Highway Dept.
ABSTRACT: The objectives of this study were to determine: (1) the effects of right of way acquisition for interstate 10 on the changes of land use, number of farm units, tenure and operation scope, (2) the cost of adjustments to new farming operating conditions and changes in farm income caused by decreasing farm acreage and division of units into separate tracts. Information was gathered by interviews from operators from areas along the highway and areas outside of highway influence. The latter group served as a control group. The information covered before (1964), during (1965), and after (1969) the completion of the new facility. Information was gathered from each operator concerning his overall farming and livestock operations. It was found that the taking of right of way for interstate 10 had a short term effect on farm operations, but after a few years to allow for adjustments, the operators as a whole made noticeable gains in income from agriculture. No major changes in land use or tenure could be attributed to the highway. Travel patterns of local operators were changed little by the limited access type highway.

Adjusting Market Value Over Time

DATE: 2008
ABSTRACT: Not available.
ACCESS: https://www.irwaonline.org/EWEB/upload/1108a.pdf

Spatial Analysis of the Relationship Between Transportation Infrastructure and Metropolitan Housing Values: Integrating Traditional, Spatial, and Geostatistical Approaches

DATE: 2000
ABSTRACT: Not available.
DATABASE: WORLDCAT
ACCESS: Available to VDOT employees through Interlibrary Loan.


DATE: 1960
CITATION: New Jersey. State Highway Dept. Division of Right of Way Acquisition and
An Analysis of Highway Condemnation Cases Under the Provisions of Senate Bill 724: Comparisons of Jury and Commission Awards

DATE: 1994
ABSTRACT: Not available.
DATABASE: WORLD CAT

Property Values and Highway Expansion: Timing, Size, Location, and Use Effects

DATE: 2002
ABSTRACT: The effect on commercial property of a major capacity expansion of a roadway facility in Austin, Texas, is examined by analyzing parcel-level real estate assessment data over an 18-year period (1982-1999). A land value model, an improvement or structure value model, and a total property value model were each estimated separately. Since total land values are fundamentally related to parcel acreages and improvement values are related to improvement size, parcel and improvement areas were related to appropriate access variables and structural variables. Empirical results suggest that improvement type, freeway proximity, parcel location at key network points (e.g., corner parcels), and timing of construction and completion play key roles in property valuation. The estimates of impacts should prove very helpful in comprehensive cost-benefit assessments of projects of this nature by public agencies and corridor property owners.
DATABASE: TRIS ONLINE
ACCESS: http://dx.doi.org/10.3141/1812-24

Socioeconomic and Land Value Impact of Urban Freeways in Arizona

DATE: 1987
ABSTRACT: This study analyzes the impact of freeway construction on residential property values and the attitude of residents about the development of freeways in close proximity to their property. Changes in land use along two corridors in the Phoenix Metropolitan area where freeways were developed are also analyzed. This was done using time series aerial photographs and county records of zoning changes.
DATABASE: WORLD CAT
ACCESS: Available to VDOT employees through Interlibrary Loan.

Severance Damage Study: Phase I

DATE: 2003
CITATION: Valuation Advisory Services, Cushman & Wakefield, University Transportation Research Center, 43 p.
ABSTRACT: Severance damages are the theoretical result of the diminution in value of a
partially appropriated "remainder" property, over and above the value of land and improvements actually taken. Severance damages can be attributed to a variety of factors including: Loss of building or parking setback resulting in reduced utility and/or noncompliance with zoning or other land use regulations; Reduction in available on-site parking, particularly front-yard parking; Alteration of ingress and/or egress causing on-site traffic flow disruption and concomitant loss of utility; Changes in highest and best use, particularly of vacant, commercially zoned sites. To estimate the extent that commercial properties suffer severance damages as a result of partial takings in eminent domain, real estate appraisers often use the same data sets (i.e., comparable sales and comparable rentals) in their analyses of the before and after situations. Inevitably, this practice introduces a high degree of subjectivity into the valuation process. Due to the imperfect nature of available market data and that each property possesses attributes unique to itself, the level of subjectivity is not lessened when different data sets are used in the before and after situations. In recognition of this problem, the New York State Department of Transportation (NYSDOT) is seeking to ascertain if severance damages to commercial properties can be measured on a more empirical basis. In concert with NYSDOT, select road widening projects on Long Island have been identified as study areas. The purpose of selecting completed road widening projects is to examine the market's actual reaction to post appropriation conditions.

**Factors Affecting Appraised Values in Highway Land Acquisition Cases**

**DATE:** 1988


**ABSTRACT:** In 1984, Section 21.042 of the Texas Property Code was amended to allow for the benefit to a remainder of property condemned for highway purposes to be subtracted from the compensation paid for the part taken. Prior to this time, special benefits were allowed to be offset against damages to the remainder, but not against the value of the land taken. The overall goal of this research was to examine the impacts of this amendment on highway land acquisition cases. The amendment was declared unconstitutional in 1987. As a result, the immediate usefulness of the research has been reduced. However, the information presented should be useful to other State Departments of Highways and, possibly, the Texas State Department of Highways and Public Transportation (SDHPT) in the future. This report presents an overview of the highway right-of-way appraisal process, the role of the principal actors involved, and key factors which affect appraised values in highway condemnation cases. Additionally, it describes the operational experiences of the appraisal section of the SDHPT under the amendment to Section 21.042 of the Property Code brought about during the 68th Texas Legislature. The analyses provide insights that are applicable to the assessment of the financial impacts of House Bill 101 on partial takings during the 1984-87 period. Finally, the preliminary investigations concerning the development of an indexing system to measure quantitatively the special benefit, by locational characteristic and improvement type, that result to real property in partial takings are summarized.

**DATABASE:** WORLDCAT

**ACCESS:** Available in the VDOT Research Library, Call Number HD 266 .T4 W38 1988
A Model for Estimating the Value of Property Access Rights

DATE: 1995
CITATION: Westerfield, Heidi, Texas, Dept. of Transportation, Office of Research and Technology Transfer, University of Texas at Austin and Center for Transportation Research, 202 p.
ABSTRACT: Public highway agency action limiting or denying individual property owners rights of accessing public highways is a common occurrence. Statutory laws, in most states, grant property owners rights of accessing their property from public highways. If these rights are modified, property owners are sometimes compensated. The concept that property owner access rights may have economic value is based, in part, upon public agency compensation practices. However, very little information has ever been published regarding estimation of the value of access rights. This study is an effort to examine access rights from a legal and econometric point of view, and to develop value estimation procedures. Access rights and their economic value are examined through an extensive review of related case law. Significant numbers of cases evolve from property owner disagreements with compensation offered by public agencies. One important fact derived from this examination is that court-mandated access right values are highly variable. The question of temporary modification or denial of access to public highways during construction or rehabilitation is also examined. Results of a survey of property owners adjacent to a recent major construction effort are included. A procedure for more thoroughly examining this issue is presented. A two-phase effort to develop models for estimating access right values was implemented. Compensation paid by the Texas Department of Transportation (TxDOT) to property owners for access rights, as well as a number of predictor variables, was acquired from TxDOT. While large numbers of access rights acquisitions were identified, in most cases, the records did not contain documentation of specific amounts paid for access rights; that is, access rights are part of many physical property takings, but the portion of total compensation for access rights is seldom specified. Despite a lack of desirable numbers of observations, a number of econometric models were developed. These models provide, at least, a reliable starting place for estimating access rights values.
DATABASE: WORLDCAT
ACCESS: Available to VDOT employees through Interlibrary Loan.

Real Property Damages and Rubber Rulers

DATE: Summer 2006
ABSTRACT: During the past two decades many articles and court cases have involved alleged diminution and damages to the value of real property resulting from a disamenity that influences a geographic area of values. "Alleged" is the key word because highly suspect analytical techniques frequently are the basis of the argument that a given disamenity results in a diminution or damage. Notably, at least two of these techniques--hedonic analysis and contingent valuation--are "rubber rulers," techniques that may be deliberately or inadvertently manipulated to achieve a preconceived result. This article discusses the fundamental concepts of damage and diminution to value, and appropriate and methods for identifying and measuring diminution and damage if they exist. It also describes a set of three analytical steps required to demonstrate a damage to value.
ACCESS:  http://www.entrepreneur.com/tradejournals/article/151846888.html

Partial takings of mitigation real estate: a case study of severance damages
Simulating Land Use Impacts of Highway Development in the Texas Triangle a Case Study of the Austin Metropolitan Region

DATE: 2008

CITATION: Zhang, Ming, 1963 Apr.22-, Tian Huang, Southwest Region University Transportation Center (U.S.), University of Texas at Austin and Center for Transportation Research, 63 p.

ABSTRACT: This report is part of an ongoing research on Texas Triangle megaregion, which refers to the region delineated by the metropolitan areas of Dallas/Fort Worth, San Antonio/Austin, and Huston. As the region expects a population growth by approximately 10 million in the next 40 years, it is important to understand the land use/land cover (LULC) implications of the vast growth. Even more important is to understand how public policies and investments (in infrastructure, for example) will influence LULC. The study reported here focuses on the effect of highway construction on LULC through a case study of the Austin, TX area. The methodologies developed from the Austin case may be applied to the entire Triangle to understand the effects of state-wide transportation strategies, for example, the Trans-Texas Corridor (TTC), on urban development outcome in the region. The Austin case study included three parts. First, historical data on highway constructions in the Austin area are collected and visualized in GIS. Next, land use/land cover maps are derived from classifying LandSat images. A binary logit model is then formulated, quantifying the impacts of transportation accessibility and neighborhoods on the likelihood of LULC change.

DATABASE: WORLDCAT

Electronic Appraisal Development Study

DATE: 2006

CITATION: Zhang, Zhanmin, Texas Dept. of Transportation, Research and Technology Implementation Office, University of Texas at Austin and Center for Transportation Research., 86 p.

ABSTRACT: The acquisition of Right-of-Way is one of the major tasks involved in most of the highway projects. It is a highly complicated process requiring multiple stages, various participants, and large amounts of data and information. It is the duty of the state Departments of Transportation to ensure that the property owner is fully compensated for the loss of land and resulting damages incurred due to the acquisition of his/her land. This involves valuation of the property being acquired. Normally, an independent fee appraiser is hired by a state Department of Transportation to determine the compensation that must be paid to the property owner. There is a substantial divergence in values of the appraised properties that are similar in nature by two different fee appraisers. A variety of factors are responsible for these inconsistencies. In spite of the recent technological advances made by the states, the problems still persist. The objective of this research is to develop an Electronic Appraisal System (EAS) that is capable of capturing, transmitting, storing,
managing, and analyzing the appraisal data, thereby improving the appraisal process and reducing the likelihood of inconsistent appraisal values. A prototype of the proposed EAS has been developed to demonstrate the applicability and features of the new system.  

DATABASE: WORLDCAT  
ACCESS:  http://www.utexas.edu/research/ctr/pdf_reports/9_1523_1.pdf

III. INTERNATIONAL RESEARCH

**European Right-of-Way and Utilities Best Practices**  
DATE: 2002  
ABSTRACT: As right-of-way acquisition and utilities coordination grow more complex, transportation agencies in the United States are under pressure to streamline the process of providing cleared right-of-way for highway projects. The Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the National Cooperative Highway Research Program sponsored a scanning study of England, Germany, Norway and the Netherlands to review best practices in right-of-way and utilities services. In the countries visited, the U.S. delegation observed a philosophy of sensitivity to the needs of property owners affected by highway projects, as well as innovative techniques for compensating owners. Highway agencies emphasize coordination with utilities to minimize delays. Right-of-way professionals undergo formal education and ongoing training to develop expertise in their field. The scanning team’s recommendations for U.S. application include encouraging property owner input by involving owners in the design phase and using an in-depth interview process, creating a voluntary land consolidation pilot program, developing education programs for right-of-way professionals, and promoting greater coordination and communication between State transportation departments and utilities.  

**SUMMARY OF INTERNATIONAL SCANNING PROGRAM FOR RIGHT OF WAY AND UTILITIES, MARCH 13-15, 2000**  
DATE: 2000  
CITATION: Federal Highway Administration, 8 p.  
ABSTRACT: Highway right of way acquisition and utilities accommodation in the United States have become significantly more complex during the last 20 years. At the same time, right of way and utilities personnel are under increasing pressure to provide cleared right of way more quickly. The objective of this scanning tour was to review and document procedures and best practices in several European countries for the major functional work areas involved in highway right of way and utilities processes. Norway, Germany, the Netherlands and the United Kingdom were identified as countries where right of way issues and solutions in both urban and rural areas would relate to issues in the United States. The U.S. delegation’s goal was to identify practices in the selected countries that, when implemented in the United States, will help ensure timely procurement and clearance of highway right of way and adjustment of utilities.  
DATABASE: TRIS ONLINE  
ACCESS:  http://international fhwa dot gov/Pdfs/scan_summaries/rowscans.pdf
IV. RESEARCH IN PROGRESS

Right of Way Methods and Tools to Control Project Cost Escalation
Sponsor: National Cooperative Highway Research Program
http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2656

Construction project cost escalation from planning to construction is a fundamental problem facing the transportation industry. NCHRP Report 574, Guidance for Cost Estimation and Management for Highway Projects During Planning, Programming and Preconstruction, focuses on the general issue of project cost escalation and identified the production of accurate and precise right-of-way cost estimates as one of the primary strategies to help control project cost escalation. It provides a guidebook that contains methods and tools for state departments of transportation to use to develop, track and manage highway project cost estimates in order to achieve estimates with greater consistency and accuracy throughout the long-range transportation planning, priority programming, and preconstruction phases of project development. It does not, however, provide an in-depth treatment of methods and tools necessary to implement a specific strategy related to estimating and managing right-of-way costs. While increases in project cost estimates over the course of project development may be caused by any number of factors, NCHRP Report 574 indicates that 1) increases in the cost of right-of-way is a significant factor in overall project cost escalation; 2) the manner in which state departments of transportation currently develop, track, and manage cost estimates for right-of-way can be improved; 3) that management practices can be modified to address cost estimate consistency and accuracy throughout the entire project development process; and 4) specific guidance on how to implement more effective methods of developing, tracking and management right-of-way estimates is needed. The objectives of this research are twofold: 1) to further refine right-of-way cost estimate and management methods and tools, with a focus on methods and tools that would be useful in the planning process, and 2) provide specific guidance to state departments of transportation on how to implement such methods and tools in practice.

Sponsor Organization
National Cooperative Highway Research Program
Transportation Research Board
500 Fifth Street, NW
Washington, DC 20001
USA

Federal Highway Administration
http://www.fhwa.dot.gov/
1200 New Jersey Avenue, SE
Washington, DC 20590
USA
Phone: (202) 366-4000

Performing Organization
Texas A&M University

Project Manager
Sundstrom, Lori L.

Principal Investigator
Anderson, Stuart D.
Phone: (979) 845-2407
Real Impact of Transportation Facilities Expansion on Adjoining Property Valuation

CITATION: Sponsor: Minnesota Department of Transportation.

ABSTRACT: The cost to acquire right-of-way for transportation projects continues to escalate faster than any other cost to develop transportation facilities. While in the majority of cases a price is quickly agreed on, there is a substantial minority of cases where assessments by the state and the landowner differ by substantial amounts. In some cases these disputes are relatively easily settled (but at a higher price) and in other cases expensive legal action may result. This has led to two concerns. On the one hand, Mn/DOT may be unintentionally underestimating the value of certain types of land acquisitions, leading to costly and time-consuming dispute resolution. On the other hand, they may be paying too much for some parcels because they have little research to back up their belief that their appraisals are generally accurate. In either case, there could be substantial value to a better understanding of the possible strengths and weaknesses of the appraisal process.

Sponsor Organization
Minnesota Department of Transportation
http://www.dot.state.mn.us/
Mail Stop 330, 395 John Ireland Boulevard
St. Paul, MN 55155-1899
USA
Phone: (800) 657-3774

Project Manager
Klessig, Jim
Phone: (651) 366-3760
Email: jim.klessig@dot.state.mn.us

Performing Organization
University of Minnesota, Minneapolis
301 19th Avenue South, Humphrey
Institute of Public Affairs
Minneapolis, MN 55455-
USA

Principal Investigator
Barnes, Gary R.
Phone: (612) 626-9865
Fax: (612) 626-9833
Email: gbarnes@hhh.umn.edu

V. RIGHT-OF-WAY – BACKGROUND

2008 FHWA Incentive Payments Peer Exchange Report Summary - Portland, Oregon
DATE: 2008
ABSTRACT: On August 13 and 14, 2008, the Federal Highway Administration (FHWA) Office of Real Estate Services facilitated a peer exchange to share information on use of relocation and acquisition incentive payments. Several State Departments of Transportation (DOTs) have made use of incentive payments and shared their insights and lessons learned. Each DOT set up a process and received approval by the FHWA Division office. It is important to note, as you read through the following summary of presentations and discussions, that each agency developed a unique procedure to reflect its needs. The FHWA does not recommend one procedure over another, and use of incentive payments by an agency is voluntary. The participant list at the end of the report contains contact information.
ACCESS: http://www.fhwa.dot.gov/realestate/incpeerexch.htm
AASHTO Subcommittee Task Force on Research
ABSTRACT: The Subcommittee has established a base of information about what research is being conducted in the various states relating to right-of-way and utility issues so that other states may review and potentially avoid duplicating research on issues that are already being researched in other states. A summary of such research projects as well as a contact person is posted on the Subcommittee's website for the use of all the Subcommittee members. State Title Idaho Roadway Features Affecting Property Values; Indiana Utilities Imaging and Locating Buried Cables; Michigan Utilities Trenchless Construction Methods; Minnesota Analysis of Business Impacts of Transportation Investments (Case Study:I-394 Corridor); Minnesota Greater Minnesota Access Study; Minnesota Real Impact of Transportation Facilities Expansion on Adjoining Property Valuation; Missouri Access Missouri Spatial Based Management Systems for Right-of-Way; New Hampshire Right-of-Way Management System; Wyoming Contributory Value of Landscaping
ACCESS:  http://rightofway.transportation.org/?siteid=61&pageid=964

Proceedings Booklet of the 2008 AASHTO/FHWA Utilities Right of Way Conference
DATE:  2008
Citation:  Grand Rapids, Michigan, May 4-8, 2008, AASHTO Highway Subcommittee on Right of Way.
ACCESS:  http://cms.transportation.org/sites/rightofway/docs/2008_TOC.pdf

Annual Right-of-Way Statistics
DATE:  2008
ABSTRACT: The Annual Right-of-Way Statistics website is a source for residential and non-residential acquisition and relocation information. It features summary reports and a searchable database of historic acquisition and relocation statistics. An access to automated reporting form is also included for state and other Federal agencies engaged in real property acquisition and relocation to report annual right-of-way statistics as required under the Uniform Act.

Interagency Land Acquisition Conference Uniform Appraisal Standards for Federal Land Acquisitions
DATE:  2000
CITATION:  Published by the Appraisal Institute.
ACCESS:  Available to VDOT employees through Interlibrary Loan.

Project Development Guide (PDG)
ABSTRACT: The Office of Real Estate Services Project Development Guide (PDG) contains a practical approach to developing a right-of-way project. It leaves the requirements needed for Federal-aid projects to the regulatory material found elsewhere. In it you will find plain talk and common sense ways to deal with developing a right-of-way project in addition to mini-case studies to demonstrate how others have handled a variety of right-of-way problems.
ACCESS:  http://www.fhwa.dot.gov/realestate/pdg.htm
Asset Management Literature Review and Potential Applications of Simulation, Optimization, and Decision Analysis Techniques for Right-of-Way and Transportation Planning and Programming

DATE: 2007
CITATION: Krugler, Paul E. Texas Transportation Institute, Texas Dept. of Transportation and Research and Technology Implementation Office.
DATABASE: WORLDCAT

Corridor Preservation

DATE: 1994
CITATION: Maiorana, John J., National Research Council (U.S.) and Transportation Research Board.
DATABASE: WORLDCAT
ACCESS: Available to VDOT employees through Interlibrary Loan.

Managing Corridor Development. A Municipal Handbook

DATE: 1996
CITATION: Marshall, Margaret A. and Kristine M. Williams. Center for Urban Transportation Research - University of South Florida
ABSTRACT: The challenge of managing corridor development lies in the dynamic interaction between transportation and land use. The land use plan used to predict transportation needs inevitably changes as new highways stimulate real estate speculation, rezoning, and growth. At the same time, competing demands on the corridor may damage long term transportation and development objectives. New development may foreclose opportunities to expand or interconnect roads where needed. Buildings may be constructed too close to the roadway. Thoroughfare frontage may be subdivided into small lots or strip zoned for commercial development, with little attention to access control. Poorly coordinated access systems force more trips onto the arterial, traffic conflicts multiply, and congestion increases. Road improvements are needed sooner than expected, and the cycle begins again. Transportation and land use problems are interdependent and require coordinated solutions. One solution is better collaboration between the agencies involved in transportation and development planning. Another solution is to integrate corridor management into local development planning and regulation. This handbook addresses a variety of techniques of corridor development management.
DATABASE: TRIS ONLINE