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TRB TRANSPORTATION RESEARCH BOARD

TRB Webinar: Valuation and Compensation Approaches for Utility Accommodations

April 24, 2024

2:00 – 3:30 PM



PDH Certification Information

1.5 Professional Development Hours (PDH) – see follow-up email

You must attend the entire webinar.

Questions? Contact Andie Pitchford at TRBwebinar@nas.edu

The Transportation Research Board has met the standards and requirements of the Registered Continuing Education Program. Credit earned on completion of this program will be reported to RCEP at RCEP.net. A certificate of completion will be issued to each participant. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the RCEP.



Purpose Statement

This webinar will present a range of approaches to consider for setting compensation structures for utility accommodations.

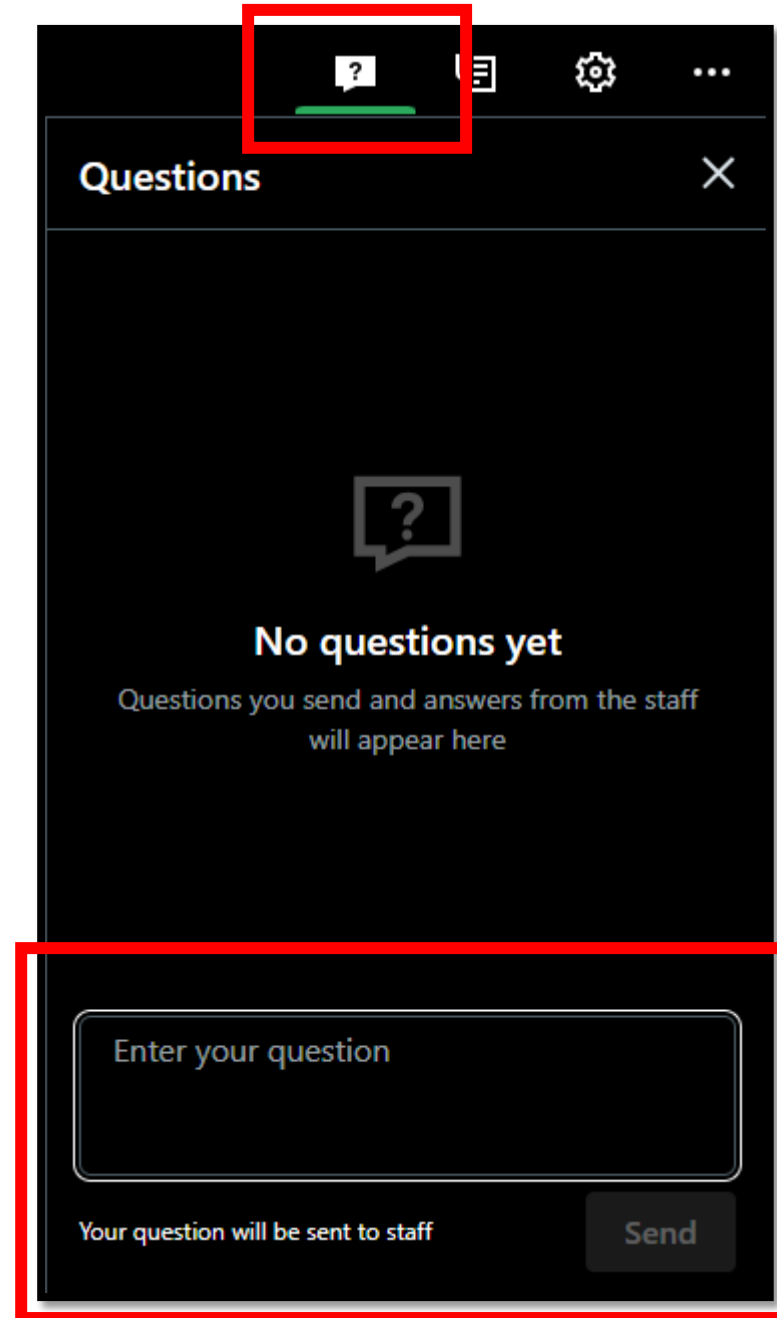
Learning Objectives

At the end of this webinar, you will be able to:

- Determine the value of the right-of-way used in accommodating utilities
- Navigate varying approaches to setting compensation structures for accommodating utilities

Questions and Answers

- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



Today's presenters



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Arizona DOT

NCHRP 15-70
Guidelines for Valuation and
Compensation Approaches in Utility
Accommodation

Research Project Overview

NCHRP 15-70 Team members

- Research Team
 - Iowa State University
 - Roy Sturgill – Principal Investigator
 - Tarig Omer – Graduate Student
 - Parsons Corporation
 - Kenny Franklin
 - T2 Utility Engineers, Inc.
 - Jim Anspach (ISU)
 - John Campbell
 - R.P. Manser, LLC
 - Richard Manser
- Panel Members
 - David Jared - NCHRP
 - Eric Cimo –Chair
 - Vickie Bever
 - Jesse Cooper
 - Zach Derr
 - Joy Johnson
 - Jennifer McCleve
 - Jessica Stokesberry
 - Tom Swafford
 - Maggie Duncan-Augustt

Introduction & Project Objectives

- Project Objectives
 - Identify best practices and prepare guidelines for state DOTs on how to evaluate and charge for the accommodation of utility and communication installations on public ROW.
- Compensation & Valuation
 - Fee structures & approaches ~ background and support

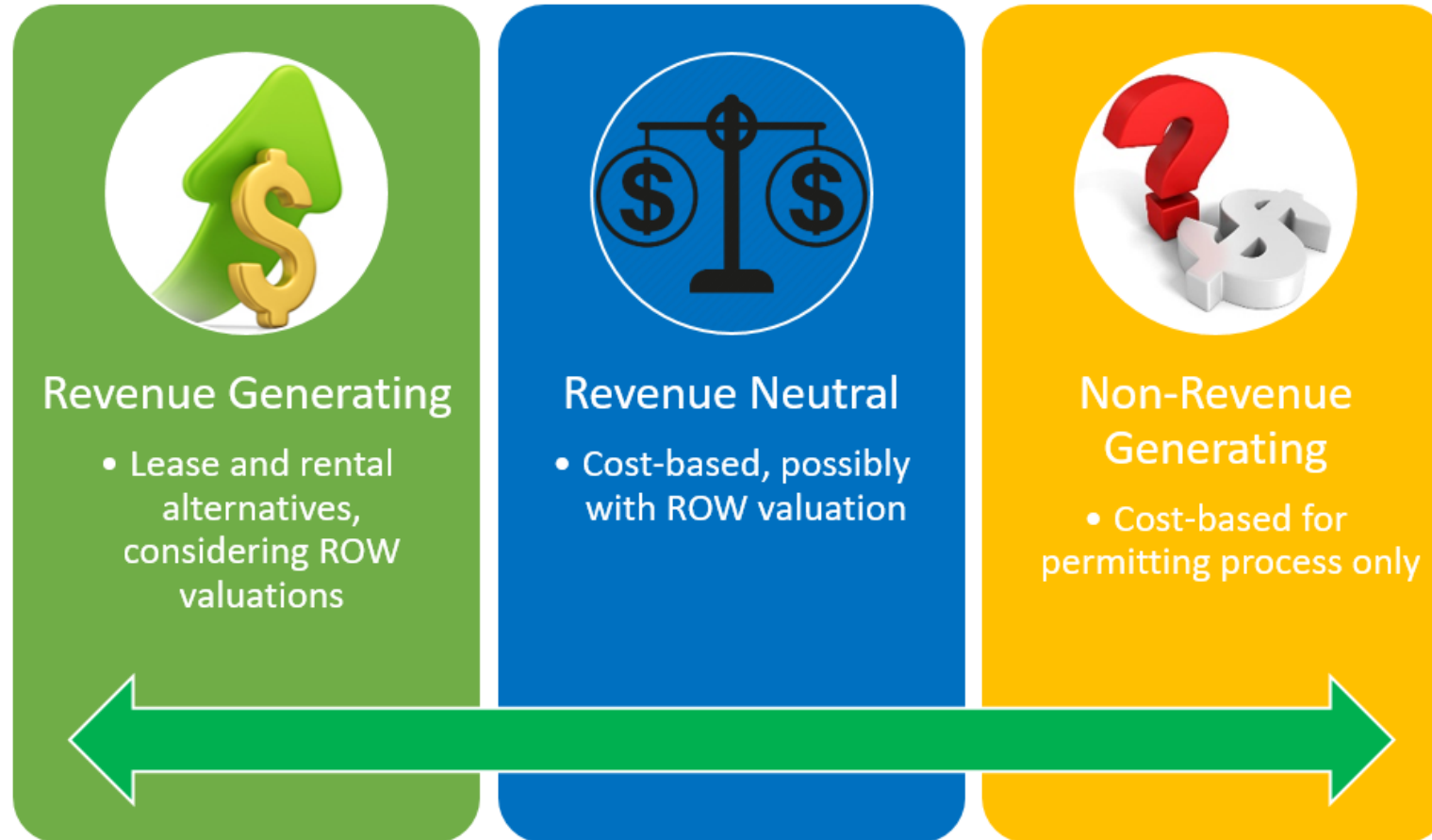
Introduction & Project Objectives

- Guidelines considerations:
 - A comparison of fees, leasing, and in-kind trading
 - Reasons for the variance in fees, valuation methods, and other factors
 - Provide the means and approaches necessary to execute a fee or leasing schedule for occupancy both for general utilities and telecommunications

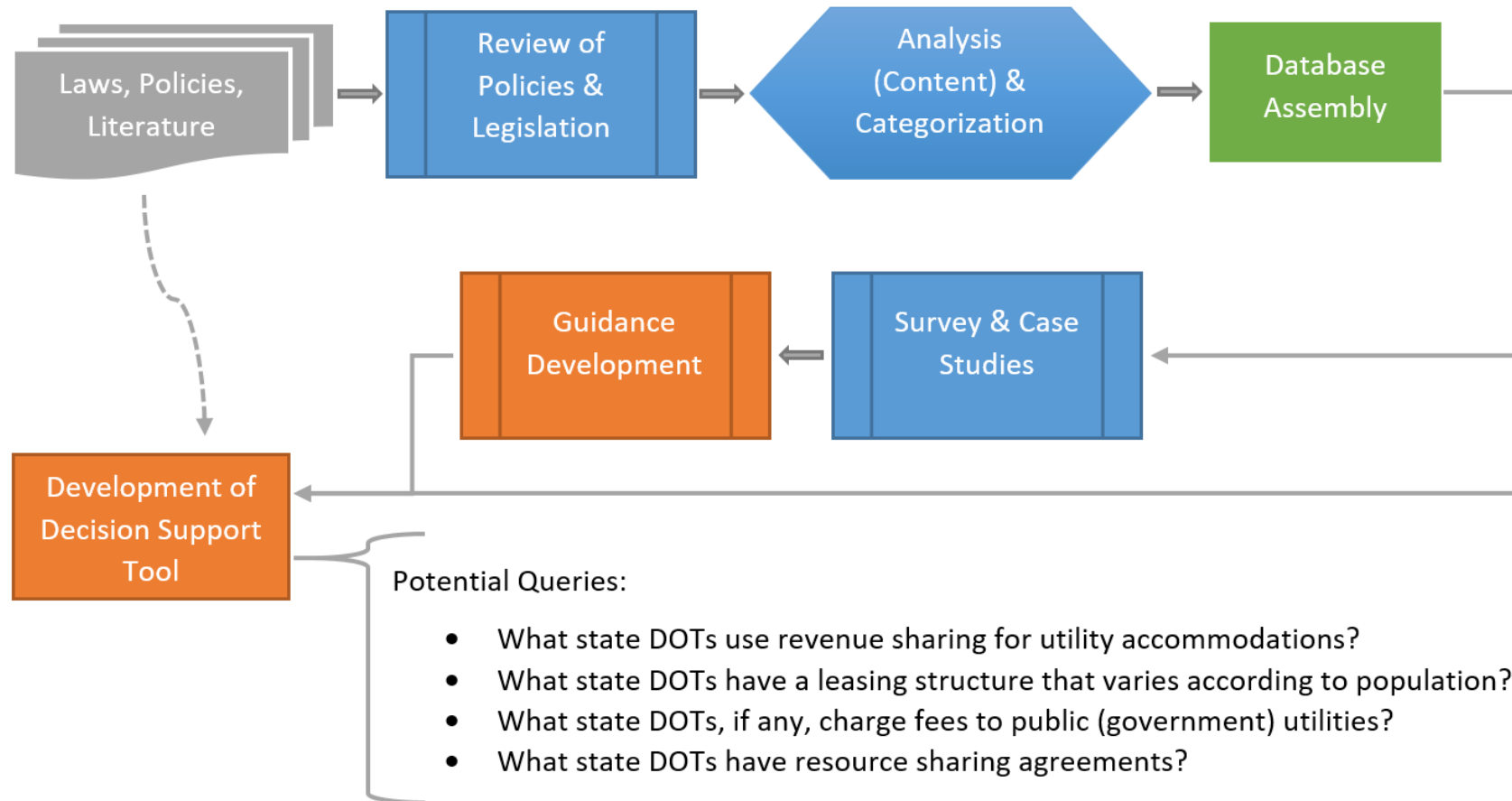
Why the research?

- Demands on ROW
- Interests in monetizing ROW
- Recouping costs for accommodations
 - Considering the value utilities are receiving
- Valuation for compensation/fee structure development

Where we started: Revenue Generation Categorization



Research Framework



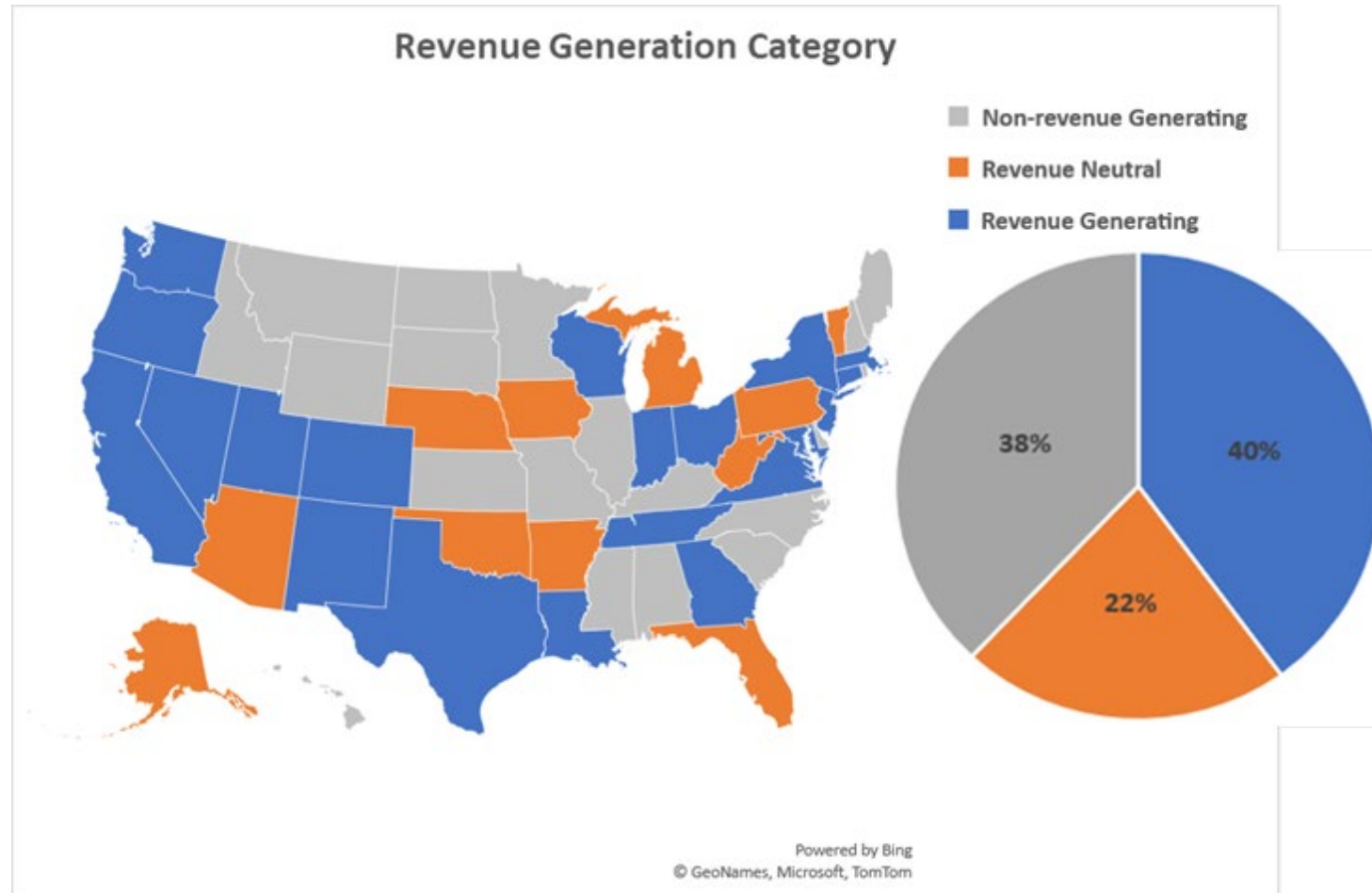
How can approaches vary: Compensation and Valuation Schema

- Accommodation Mechanism
 - Easement
 - Lease
 - Franchise, etc.
- Compensation Methods
 - Cash
 - Bartering, etc.
- Compensation Structure
 - One-time fee
 - Annual fee
 - Lease,
 - Resource Sharing, etc.
- Valuation Approach
 - Direct DOT costs
 - Value of adjacent land, etc.
- Variation and mixtures of the above...

Categorization Mechanism & Coding

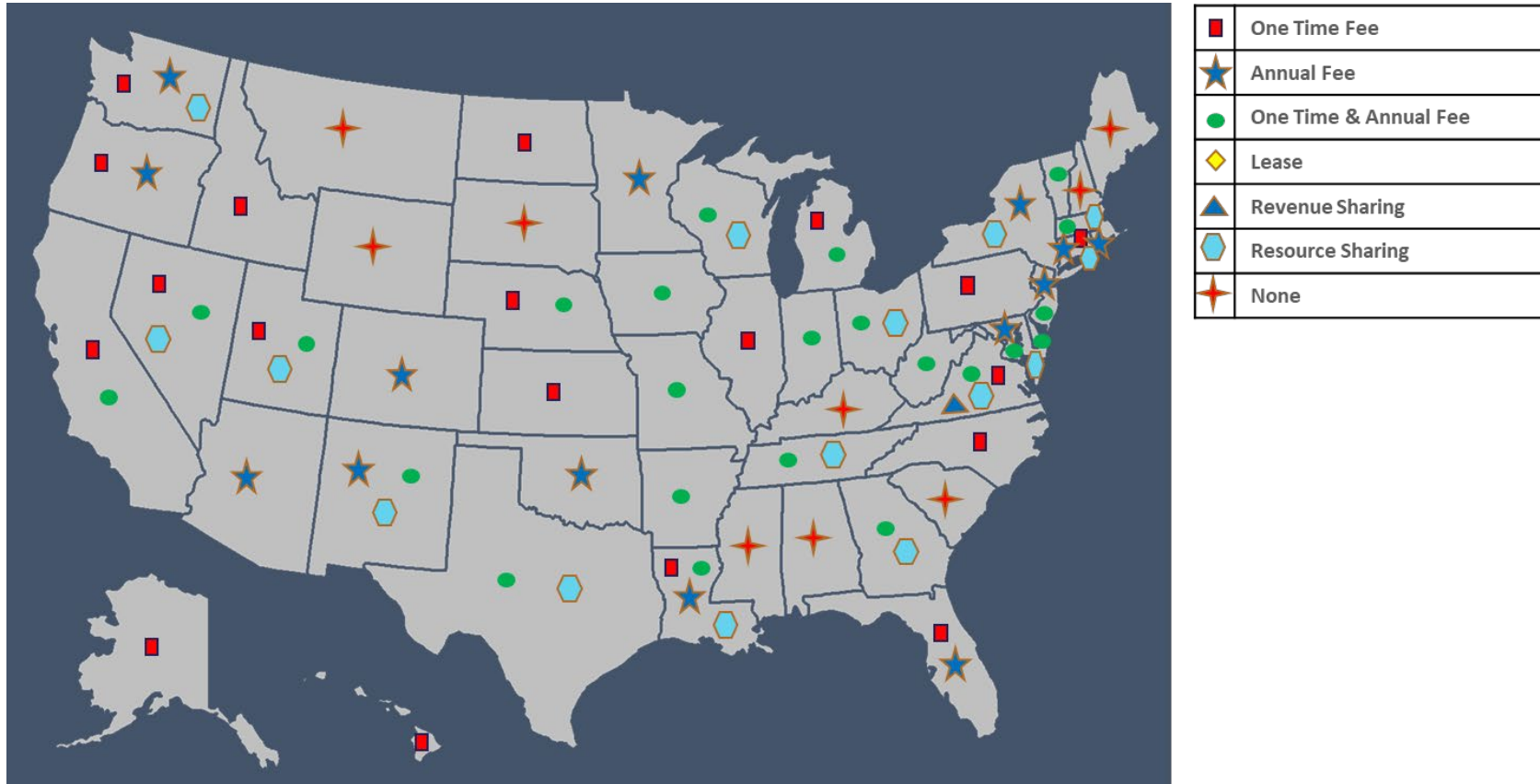
Revenue Generation Category	Accommodation Mechanism	Compensation Method	Compensation Structure	Valuation Approach	Scheme Variation
A. Revenue Generating	1. Easement	i. Cash	a. One Time Fee	1. DOT costs	A. Singular approach
B. Revenue Neutral	2. Lease	ii. Bartering	b. Annual Fee	2. Bidding/competitive auction	B. Variation by roadway functional class/access control
C. Non-revenue Generating	3. Franchise	iii. Cash and Bartering	c. Lease	3. Valuation of adjacent land	C. Variation by utility type
	4. License/Permit	iv. None	d. Revenue Sharing	4. Cost of next best alternative	D. Variation ownership
	5. Statutory Authority		e. Resource Sharing	5. Needs-based compensation	E. Variation by attachment
			f. None	6. Historical experience	F. Variation by geographic location
				7. Market research	G. Variation by ROW/surplus property type (including aerial or underground rights)
				8. None	H. Variation by population served by the utility

State DOT Categorization Summary



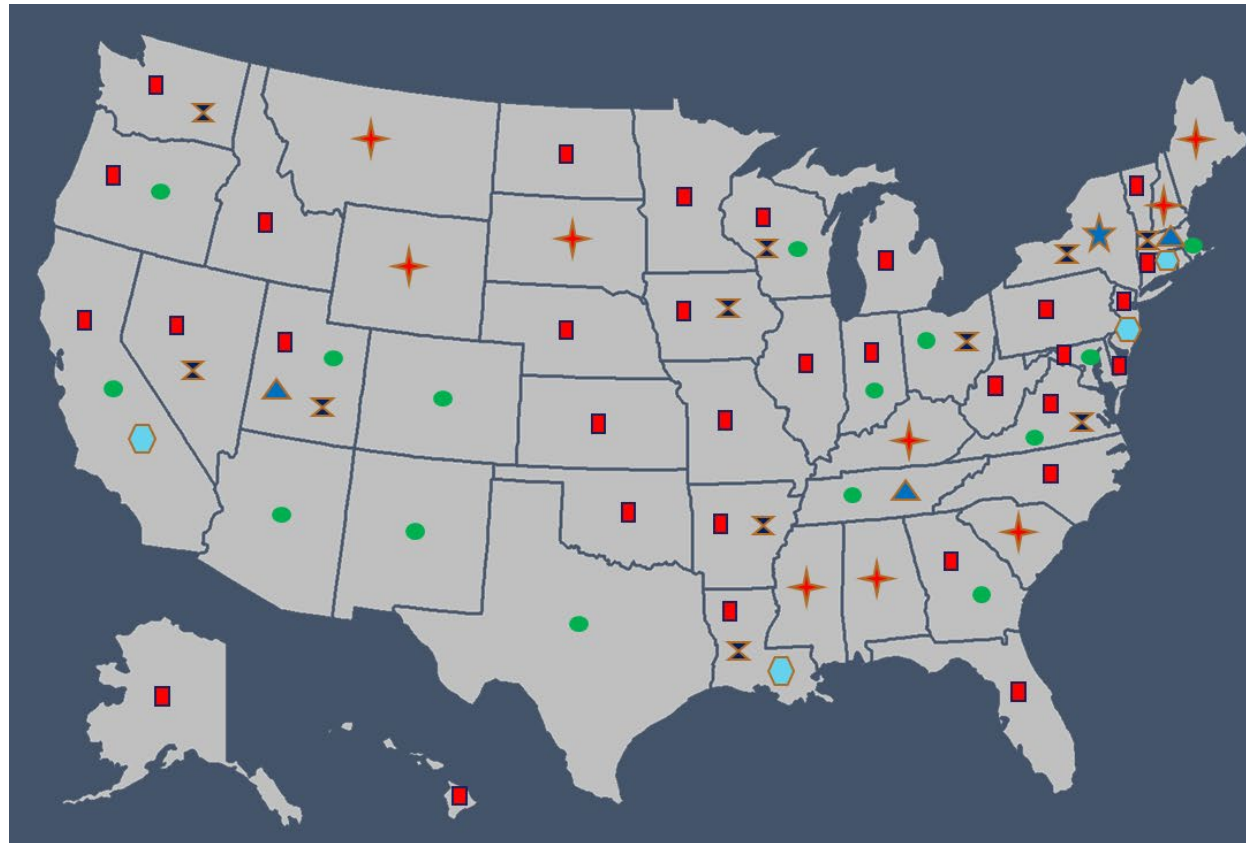
State DOT Categorization Summary

Compensation Structure



State DOT Categorization Summary

Valuation Approach

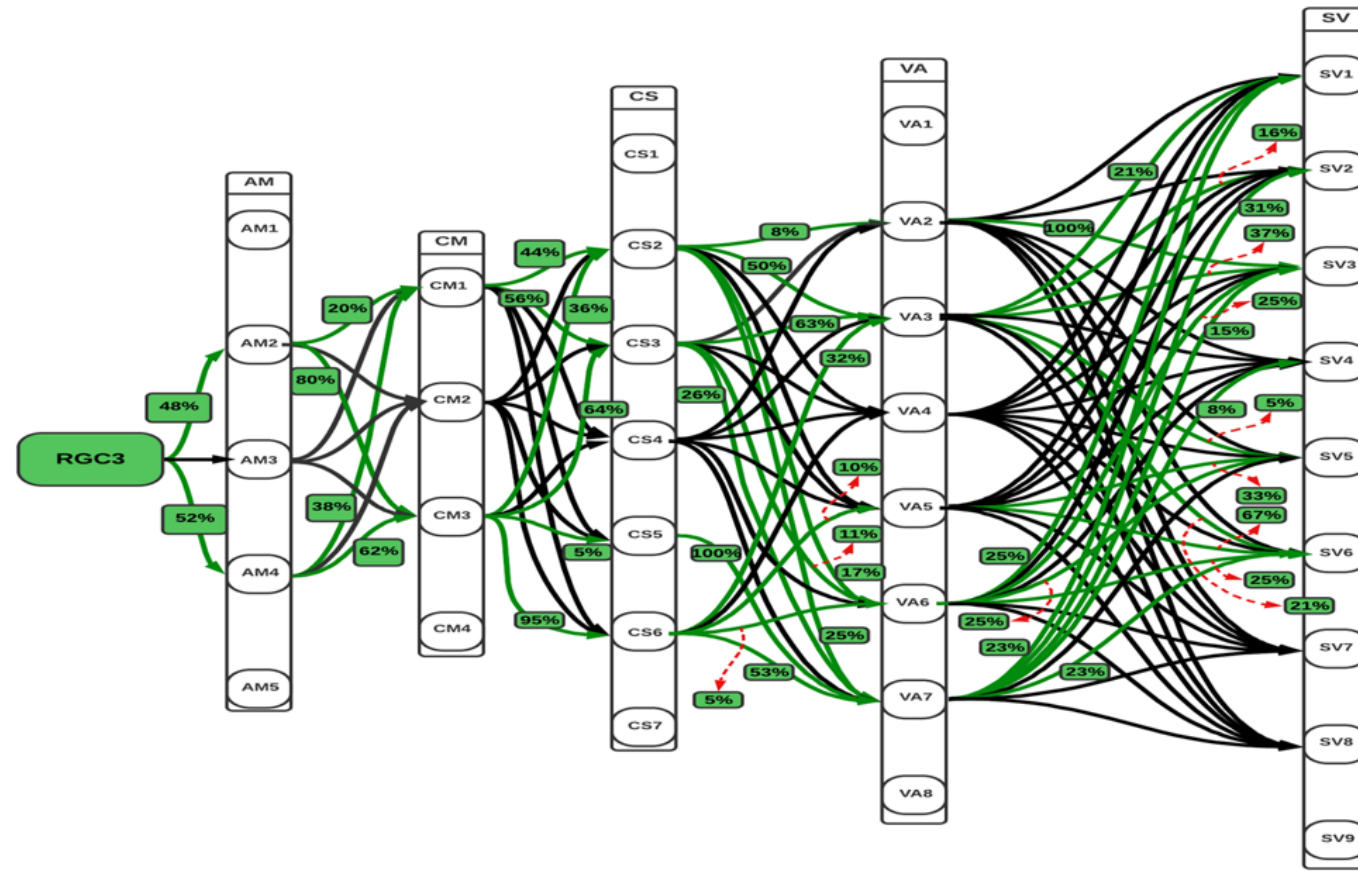


■	DOT costs
★	Bidding/competitive auction
●	Valuation of adjacent land
◇	Cost of next best alternative
▲	Needs-based compensation
⬡	Historical experience
⌘	Market research
✦	None

State DOT Categorization Summary ~ Example

State	Revenue Generation Category	Accommodation Mechanism	Compensation Method	Compensation Structure	Valuation Approach	Scheme Variation	Type of Utility
Alabama	C. Non-revenue Generating	4. License / Permit	iv. None	f) None	8. None		Permit for general utilities
Alaska	B. Revenue Neutral	1. Easement 4. License / Permit	i. Cash	a) One Time Fee b) Annual Fee	1. DOT costs 7. Market research	A. Singular approach	Permit for general utilities and Wireless telecommunications
Arizona	B. Revenue Neutral	1. Easement 2. Lease 3. Franchise 4. License / Permit	iii. Cash and Bartering	b) Annual Fee c) Lease	1. DOT costs 2. Bidding / competitive auction	A. Singular approach	Wireless telecommunication
Arkansas	B. Revenue Neutral	3. Franchise 4. License / Permit	iii. Cash and Bartering	a) One Time Fee b) Annual Fee e) Resource Sharing	1. DOT costs	A. Singular approach	Wireless telecommunication

Categorization Pathways



General Findings

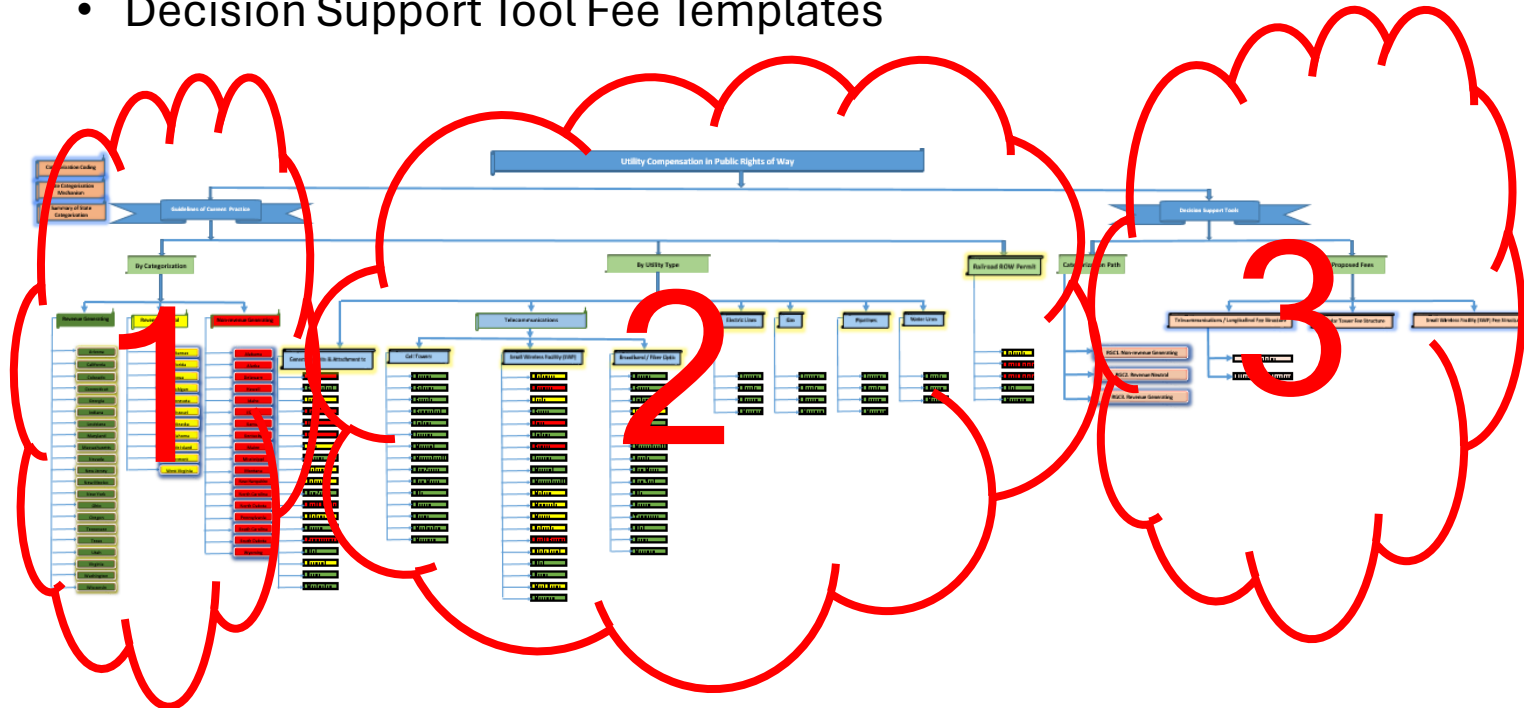
- Generalized Approaches
 - Derived from data (when known)
 - Many lost to time
- Some trends
 - Urban versus Rural
 - Access Control
 - Utility Type

General Findings

- Rapidly changing landscape
- A need for future considerations
- Improved consistency/standardization is needed (cross-state work)
- Consider the collective program

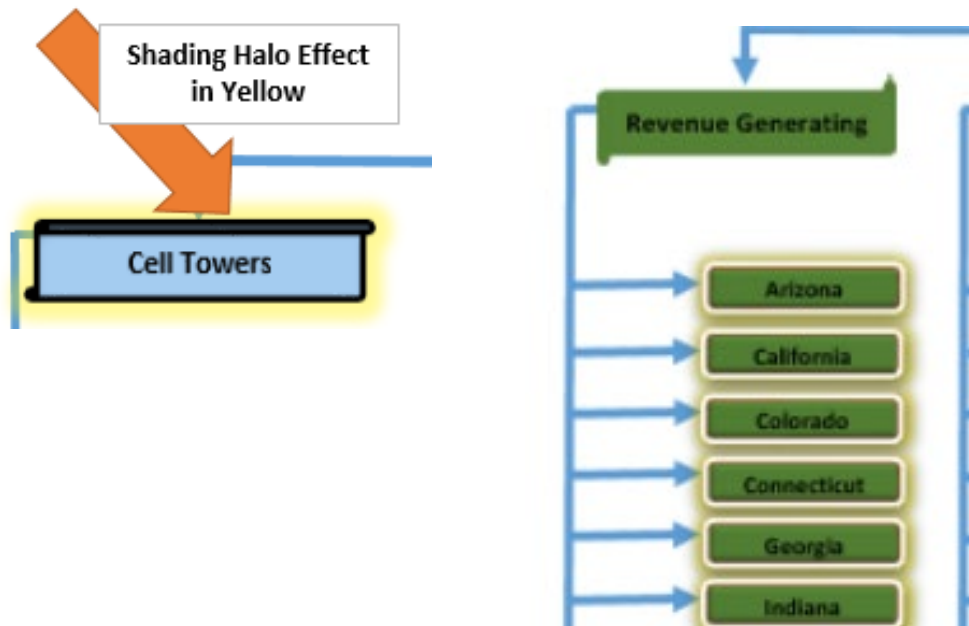
Research Product: Decision Support Tool

- Concisely compiled tool
- Three Interest Areas
 - States by Revenue Category
 - Categorization by Utility Type
 - Decision Support Tool Fee Templates



Research Product: Decision Support Tool

- Easy Navigation
 - By spreadsheet tab
 - Or hyperlinks indicated by the shading halo effect



Research Product: Decision Support Tool

- An Assortment of Summaries
- Access directly to web-based resources

No	State	Revenue Generation Category			Accommodation Mechanism				
		Non-revenue Generating	Revenue Neutral	Revenue Generating	Easement	Lease	Franchise	License/Permit	Statutory Authority
1	Alabama	Y						Y	
2	Alaska	Y						Y	
3	Arizona			Y		Y		Y	
4	Arkansas		Y					Y	
5	California			Y				Y	
6	Colorado			Y		Y			
7	Connecticut			Y		Y		Y	
8	Delaware	Y						Y	

f State Policies & Manuals		
Name of Policies & Manuals	Date	Policies & Manuals Website
Right-of-Way Manual	Jul-21	https://dot.ca.gov/programs/right-of-way/right-of-way-manual
Encroachment Permits Manual	Jul-21	https://dot.ca.gov/programs/traffic-operations/ep/ep-manual
Local Assistance Procedures Manual	Jan-21	https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm

Research Product: Decision Support Tool

- Fee Templates

Home					
Telecommunications / Longitudinal Fee Structure					
Longitudinal					
Small Wireless Facility		Fee Structure	Fees	Quantity	Total
Application fee for a Communication Utility that is a mile or more in length		One Time Fee	\$840	1	\$840
For installing fiber optic in the right-of-way / mile			\$1,510	1	\$1,510
Rent Escalation Rate (beginning January 2023)		3.00%			
Base RSA Term		10 Years			
Renewal Option		(2-3) 10-year options			
The fees and rate is for a single cable installed aerially on a pole line or underground.					

Research Access

- NCHRP 15-70 *Valuation and Compensation for Accommodating Utility and Communications Installations in Public Rights of Way*
- Resources and Support provided through
 - Research Final Report
 - Guidebook
 - Decision Support Tool
- Available at: <https://www.trb.org/Publications/Blurbs/183050.aspx>



TRB Webinar

Valuation and Compensation Approaches for Utility Accommodations

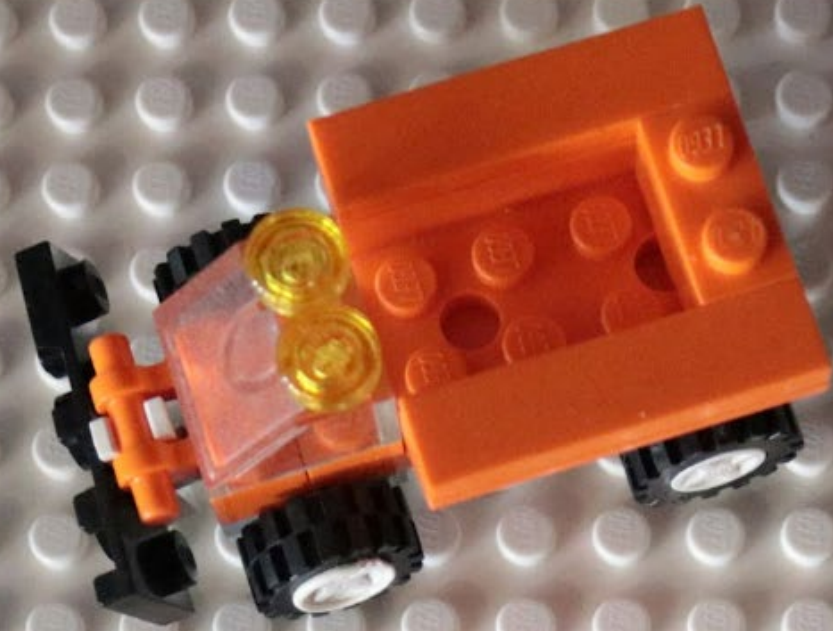
The logo for the Utah Department of Transportation (UDOT) is displayed in a large, white, stylized font. The letters are bold and italicized, with a modern, sans-serif feel. The 'U' and 'D' are connected, and the 'O' is a simple circle. The 'T' has a sharp, pointed end.

 *Keeping Utah Moving*

The slogan "Keeping Utah Moving" is written in a white, italicized, sans-serif font. To the left of the text is a graphic consisting of three parallel, slanted orange bars of varying lengths, creating a sense of motion.

Lynne Yocom UDOT Fiber Optics Director

04/24/2024



LEDDOT



Keeping Utah Moving





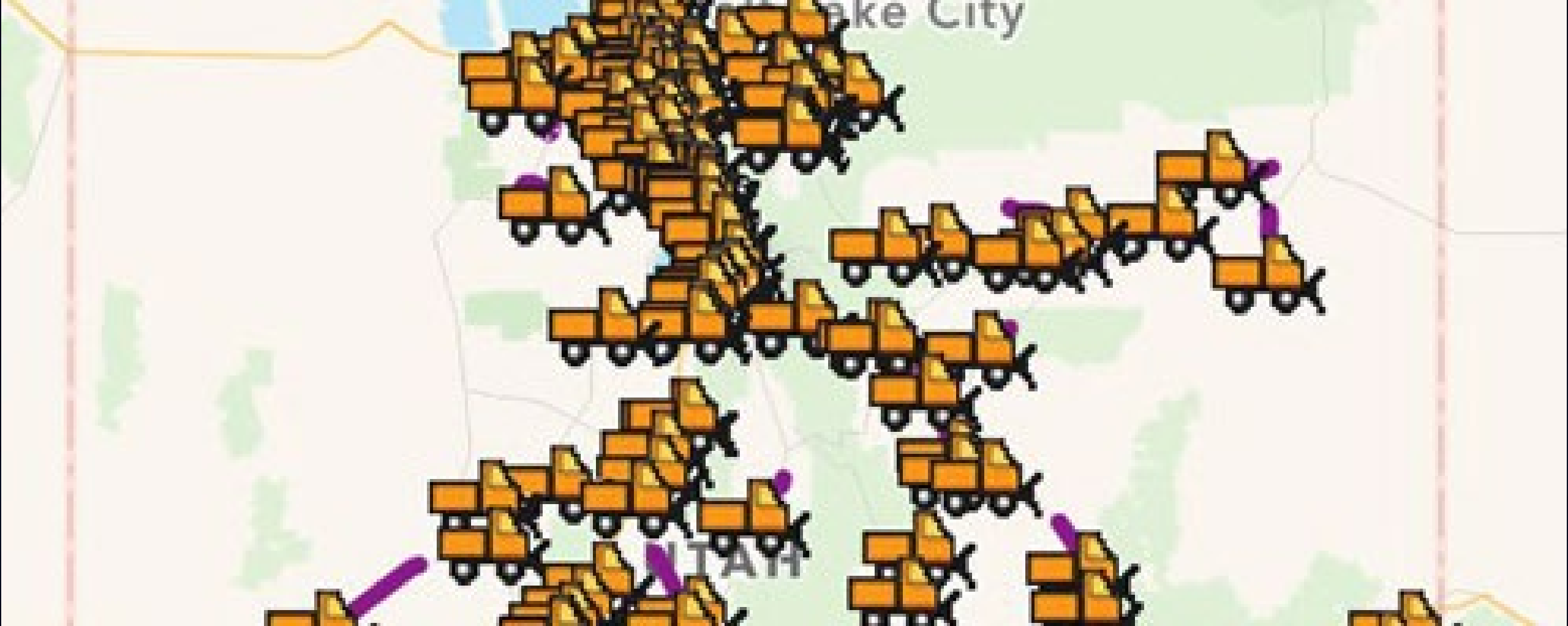


15 NORTH
Salt Lake

EXIT 305 A-D
WEST
West Valley
2100 So.
1300 So.
900 So.
EXIT ONLY

FINE IMPOSED FOR HOURLY VIOLATION

MAK



Where's the Plow?

Effective 5/8/2018

72-7-108.

Longitudinal telecommunication access in the interstate highway system -- Definitions -- Agreements -- Compensation -- Restrictions -- Rulemaking.

(1) As used in this section:

- (a) "Longitudinal access" means access to or use of any part of a right-of-way of a highway on the interstate system that extends generally parallel to the right-of-way for a total of 30 or more linear meters.
- (b) "Statewide telecommunications purposes" means the further development of the statewide network that meets the telecommunications needs of state agencies and enhances the learning purposes of higher and public education.
- (c) "Telecommunication facility" means any telecommunication cable, line, fiber, wire, conduit, innerduct, access manhole, handhole, tower, hut, pedestal, pole, box, transmitting equipment, receiving equipment, power equipment, or other equipment, system, and device used to transmit, receive, produce, or distribute via wireless, wireline, electronic, or optical signal for communication purposes.

(2) (a) Except as provided in Subsection (4), the department may allow a telecommunication facility provider longitudinal access to the right-of-way of a highway on the interstate system for the installation, operation, and maintenance of a telecommunication facility.

(b) The department shall enter into an agreement with a telecommunication facility provider and issue a permit before granting it any longitudinal access under this section.

(i) Except as specifically provided by the agreement, a property interest in a right-of-way may not be granted under the provisions of this section.

(ii) An agreement entered into by the department under this section shall:

- (A) specify the terms and conditions for the renegotiation of the agreement;
- (B) specify maintenance responsibilities for each telecommunication facility;
- (C) be nonexclusive; and
- (D) be limited to a maximum term of 30 years.

- (3) (a) The department shall require compensation from a telecommunication facility provider under this section for longitudinal access to the right-of-way of a highway on the interstate system.
- (b) The compensation charged shall be:
- (i) fair and reasonable;
 - (ii) competitively neutral;
 - (iii) nondiscriminatory;
 - (iv) open to public inspection;
 - (v) established to promote access by multiple telecommunication facility providers;
 - (vi) established for zones of the state, with zones determined based upon factors that include population density, distance, numbers of telecommunication subscribers, and the impact upon private right-of-way users;
 - (vii) established to encourage the deployment of digital infrastructure within the state;
 - (viii) set after the department conducts a market analysis to determine the fair and reasonable values of the right-of-way based upon adjacent property values;
 - (ix) a lump sum payment or annual installment, at the option of the telecommunications facility provider; and
 - (x) set in accordance with Subsection (3)(f).

- (c) (i) The compensation charged may be cash, in-kind compensation, or a combination of cash and in-kind compensation.
- (ii) In-kind compensation requires the agreement of both the telecommunication facility provider and the department.
- (iii) The department shall determine the present value of any in-kind compensation based upon the incremental cost to the telecommunication facility provider.
- (iv) The value of in-kind compensation or a combination of cash and in-kind compensation shall be equal to or greater than the amount of cash compensation that would be charged if the compensation is cash only.
- (d) (i) The department shall provide for the proportionate sharing of costs among the department and telecommunications providers for joint trenching or trench sharing based on the amount of conduit innerduct space that is authorized in the agreement for the trench.
- (ii) If two or more telecommunications facility providers are required to share a single trench, each telecommunications facility provider in the trench shall share the cost and benefits of the trench in accordance with Subsection (3)(d)(i) on a fair, reasonable, competitively neutral, and nondiscriminatory basis.
- (e) The department shall conduct the market analysis described in Subsection (3)(b)(viii) at least every five years and shall apply any necessary adjustments only to agreements entered after the date of the new market analysis.
- (f) In accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, the department shall establish a schedule of rates of compensation for any longitudinal access granted under this section.

- (4) The department may not grant any longitudinal access under this section that results in a significant compromise of the safe, efficient, and convenient use of the interstate system for the traveling public.
- (5) The department may not pay any cost of relocation of a telecommunication facility granted longitudinal access to the right-of-way of a highway on the interstate system under this section.
- (6) (a) Monetary compensation collected by the department in accordance with this section shall be deposited with the state treasurer and credited to the Transportation Fund.
- (b) Any telecommunications capacity acquired as in-kind compensation shall be used exclusively for statewide telecommunications purposes and may not be sold or leased in competition with telecommunication or Internet service providers.
- (7) In accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, the department shall make rules:
- (a) governing the installation, operation, and maintenance of a telecommunication facility granted longitudinal access under this section;
 - (b) specifying the procedures for establishing an agreement for longitudinal access for a telecommunication facility provider;
 - (c) providing for the relocation or removal of a telecommunication facility for:
 - (i) needed changes to a highway on the interstate system;
 - (ii) expiration of an agreement; or
 - (iii) a breach of an agreement; and
 - (d) providing an opportunity for all interested providers to apply for access within open right-of-way segments.

Utah Code 72-7-108

https://le.utah.gov/xcode/Title72/Chapter7/72-7-S108.html?v=C72-7-S108_2018050820180508

Utah Code Rules R907-64 and 65

<https://adminrules.utah.gov/public/rule/R907-64/Current%20Rules?searchText=R907>

<https://adminrules.utah.gov/public/rule/R907-65/Current%20Rules?searchText=R907>



To new
beginnings
[Signature]

**DEAD
END**

20

To New
beginnings

RFB



Arizona Department of Transportation (ADOT)

Broadband Office

Brad Burgess
Broadband Program Administrator
April 2024

Why Charge for R/W Occupancy?

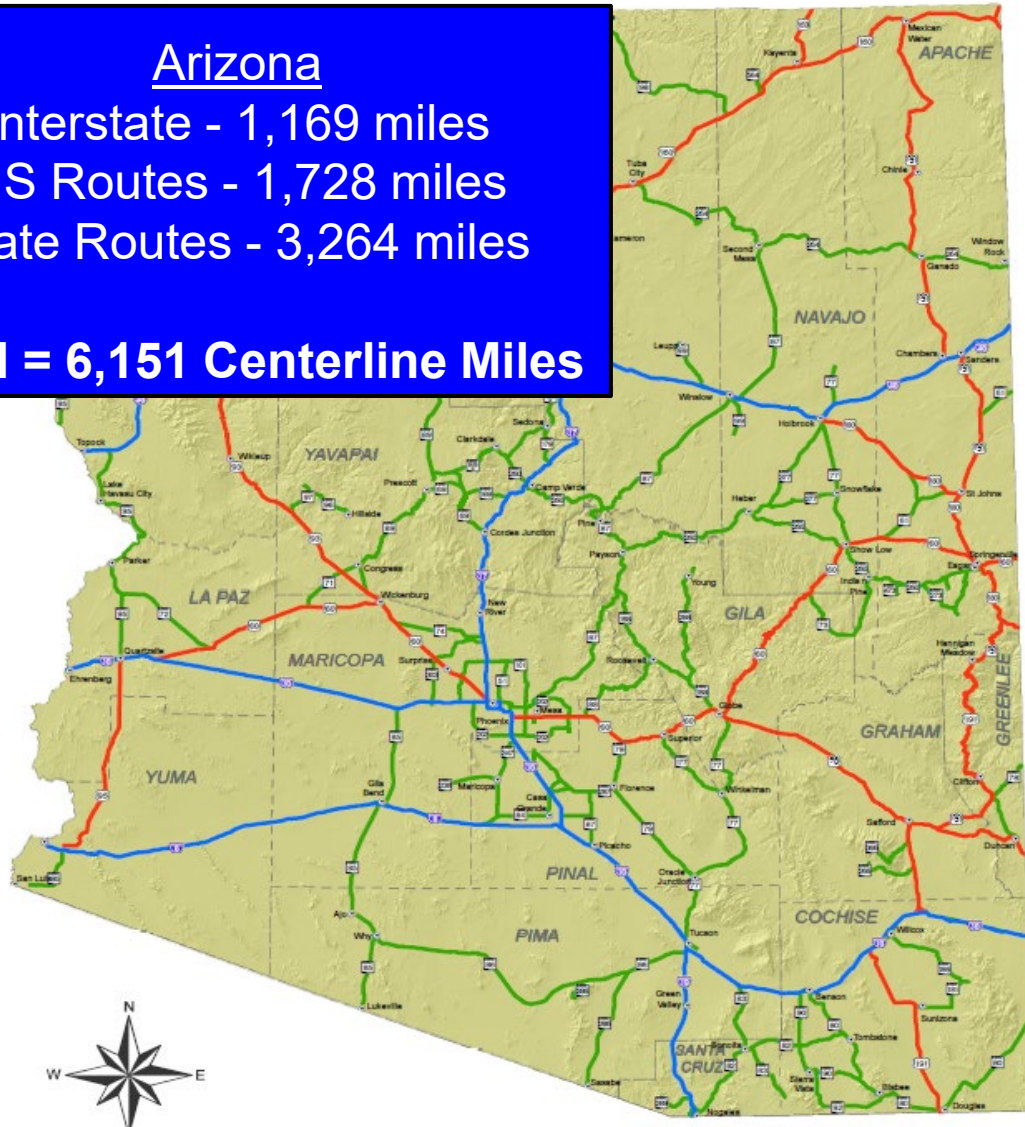
Arizona

Interstate - 1,169 miles

US Routes - 1,728 miles

State Routes - 3,264 miles

Total = 6,151 Centerline Miles



A Valuable Asset

A key principle to the success of public private partnerships is the property value of interstate Rights-of-Way. When the highway system was built, billions of dollars were spent to purchase expansive linear corridors, remove all longitudinal utility lines and consolidate utility crossings.

The primary purpose of a highway is to move people and goods by vehicles. A secondary benefit of highway rights-of-way is accommodation of public utilities. Use of a highway right-of-way by utilities is subordinate to vehicular usage.

The property value of linear highway corridors, and open access to those corridors, is a major incentive enabling public private partnerships. As such, where the return on investment can be justified to the state, and a public private partnership recognizes the value of using expansive linear corridors relatively free of obstructions and other utilities, public private partnerships make sense for all parties.

R/W Occupancy: Compensation Structures & Approaches

States

- UT: \$0.01/ft to \$15.90/ft (Avg \$4.66/ft)
- TN: \$0.17/ft to \$0.51/ft
- IA: \$2.27/ft
- MD: \$3.54/ft to \$4.28/ft

Municipalities (AZ)

- Gilbert: \$1.47/ft
- Tucson: \$2.39/ft
- Scottsdale: \$0.31/ft
- Pima County: \$2.39/ft

Fair Market Value

- I-40: CA to NM
 - ~360 miles
 - Year: 2020
 - \$1.95/ft (Annual)
- I-17: AZ State Land Department (ASLD)
 - ~18 miles
 - Year: 2022
 - \$3.39/ft (One-Time Cost)

Cost-Based

- ADOT Encroachment Permits
 - Labor: Permit Staff + Overhead
 - Inspections: Traffic + Construction
 - Review: Technical + Engineering
- Estimated Cost: \$0.73/ft*

*Does not include costs to administer, manage, maintain or acquisition of R/W

ADOT Broadband Office: Right-of-Way Occupancy Compensation Overview

- [AZ HB 2596 \(Laws 2021\)](#) and [A.A.C. R17-3-602](#) requires ADOT to collect compensation from telecommunication providers for longitudinal access to highways
 - General:
 - encroachment permits on/after January 1, 2023
 - new installations only (aerial or underground)
 - 30 meters or greater (parallel to the highway)
 - traverse crossings are exempt
 - installing fiber into existing conduit is exempt
 - Compensation:
 - compensation can be monetary or in-kind
 - in-kind trade/swap will not compete with provider
 - annual, 20-year, or 30-year agreements
 - monetary compensation goes directly to O&M of state-owned conduit or future broadband projects (as required by law)



Questions?

Contact the [ADOT Broadband Office](#)

ADOT Broadband Office: Right-of-Way Occupancy Compensation Overview

Example: New Installation of 5 Miles of Underground or Aerial Conduit Along Different Highway Types

Type of Highway	Rate (2023)	Annual (Per Year)	20-Year*	Actual Effective Rate Per Foot**	30-Year*	Actual Effective Rate Per Foot**
Interstate (I-10)	\$1.00/ft	\$26,400	\$224,758	\$0.28/ft	\$248,871	\$0.31/ft
Controlled Access (SR-303)	\$0.50/ft	\$13,200	\$112,379	\$0.14/ft	\$124,435	\$0.16/ft
Non-Controlled Access (SR-64)	\$0.25/ft	\$6,600	\$56,190	\$0.07/ft	\$62,218	\$0.08/ft

***Incentivizing Long-Term Agreements:** 10% Discount Rate applied to Net Present Value (NPV) formula

****Effective Rate:** This is the actual rate per foot after the Discount Rate is applied to 20 and 30 Year Agreements

Today's presenters



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Roy Sturgill
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Brad Burgess
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Upcoming events for you

April 25, 2024

TRB Webinar: Aggregate
Sustainability—Applications

May 9, 2024

TRB Webinar: The Future of Ferry
Electrification in Rural Areas

[https://www.nationalacademies.org/trb/
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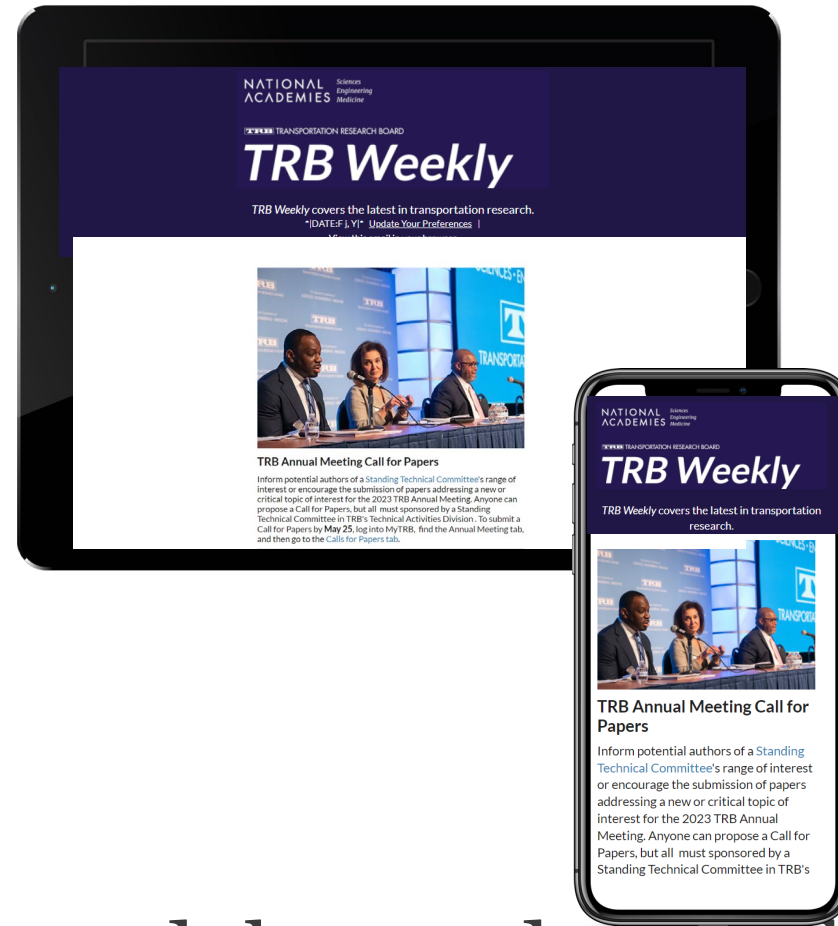


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by June 14.



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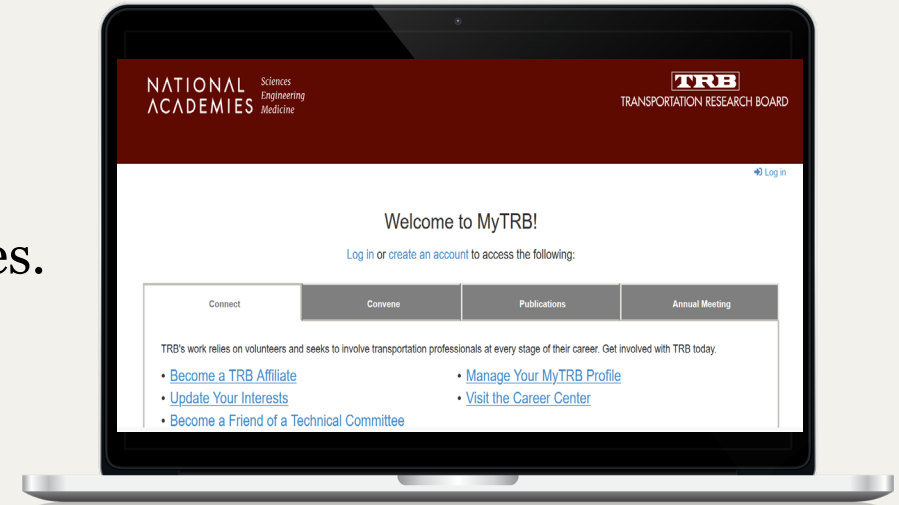
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