

**Rough Proportionality
for
City of Austin & Travis County**

**City of Austin
Urban Transportation Commission
May 12, 2015**



Agenda

- Introduction
- Rough Proportionality Use
- Rough Proportionality Determination
- RP Examples
- Q&A



Introduction to Rough Proportionality

- Property taxes aren't enough to keep up with growth
 - The increase in taxes from development covers O&M, services, *but not infrastructure*
- Development should 'pay for itself'
 - Right-of-way dedication, street construction, intersection improvements, etc.
 - Should be 'fair'



Legal Background

Two important U.S. Supreme Court Cases established the principle of ‘Rough Proportionality ‘

- **Nollan vs. California Coastal Commission (1987)** - established that an exaction must have an *essential nexus* to legitimate public interests
- **Dolan vs. City of Tigard (1994)** - established a two-part test for exaction: 1) *essential nexus* and 2) *roughly proportional* in nature and extent of the impact of the development



Legal Background cont.

Rough Proportionality comes to Texas via Court of Appeals of Texas

- **Flower Mound vs. Stafford Estates (2002)** - established need for an “individualized determination” or “rough proportionality test”; allows for consideration of development impact to total facilities system; does not require “precise mathematical calculation”



Legal Background cont.

- Texas House Bill 1835
 - Adopted in September 2005
 - Amended Section 212 of the *Local Government Code (LGC)*
 - Dedications, fees, or construction costs
 - “[The] developer’s portion of the costs may not exceed the amount required for infrastructure improvements that are **roughly proportionate** to the proposed development...”



Use

- **What applies?**
 - Requirements not design standards
 - ROW/easement, boundary street construction, intersection improvements, TIA fiscal
 - Part of typical development approval process
- **How is ‘rough proportionality’ determined?**
 - Compare the **demand created** by development to the **supply required** by City/County
 - Excel spreadsheet comparison
 - Same approach to HB 1835 as ~30 other TX cities



Determination

How is 'rough proportionality' determined?

- **Transportation Demand**
 - *Generated by development*
 - Land Use Type
 - Intensity
 - Trip Length
 - Vehicle Miles Traveled
- **Transportation Supply**
 - *Required by City/County*
 - Roadway Classification
 - Length
 - Cross-Section



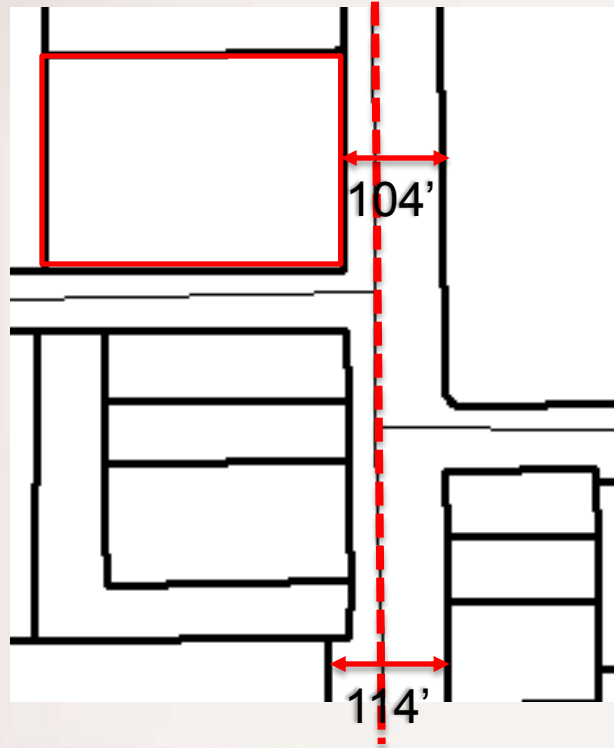
Proportionality Worksheet

Includes the following, primary tabs:

- **User Guide** – brief descriptions of each section of and various inputs to the “Proportionality” tab
- **Proportionality** – the primary calculation worksheet
- **Land Use Chart** – a summary of the land uses for the demand calculations
- **Summary of Roadway Costs** – a summary of the costs and capacities provided by the various roadways
- **Pay Items** – a look up table for construction components costs
- **Detailed Roadway Costs Sheets** – tabs for each street type that calculate per mile construction and soft costs



RP Example: Infill Development



- Proposed Mixed Use development
 - 300 units multi-family
 - 2,500 SF retail
- 200 feet of frontage along arterial
- Existing MAD 4 at 104' ROW
- Ultimate MAD 4 per AMATP at 114' ROW
- Property line 47' from roadway centerline
- Require 10' ROW and new sidewalk



RP Example: Infill Worksheet

• Demand Calculation

DEMAND - Traffic Generated by Proposed Development:

Peak Period to Analyze:

- AM Peak
 PM Peak

Trip Generation Method:

- Linear Rates
 Regression Equations

Land Use Type ¹ :	Development Unit:	Intensity ² :	Peak Hour Trip Rate ³ :	Internal Capture Rate ⁴ :	Adjusted Trip Length ⁵ : (miles)	Trip Length ⁶ : (miles)	Demand: (vehicle-miles)	Impact of Development ⁷ : (\$)
Apartment/Multi-family	Dwelling Unit	300	0.61	0%	1.50	5.375	273.98	\$623,461
Shopping Center	1,000 SF GFA	2.5	13.36	0%	1.50	2.705	50.09	\$113,983

These rows allow for the entry of unique or uncommon land uses not included within the current ITE Trip Generation Manual; or when circumstances require manual entry of the development unit and/or trip rate. It shall only be used when (a) sufficient data is available to support an alternative calculation; and (b) it is agreed to by the City and/or County.

IMPACT OF DEMAND PLACED ON THOROUGHFARE SYSTEM:

324.07

\$737,444

Estimated Average Cost Per Vehicle Mile⁸: \$ 2,275.57

Notes: ¹ Per the ITE Trip Generation Manual; ² Intensity is the amount of the development unit that is proposed; ³ Trip Rate is the trip generation rate with a reduction for pass-by's per the ITE Trip Generation Handbook. When regression equations are used, the rate is derived from the equation at the given intensity. When this results in a negative value, the rate defers back to the linear method and the cell is shaded blue. For uses without a regression equation, the rate defers back to the linear method and the cell is shaded gray. ITE does not have data available for all land uses during the AM Peak; when data is unavailable the PM Peak Period may be used. ⁴ Internal Capture should only be used when supported by a traffic study; ⁵ A default, or adjusted, trip length of 1.5 miles is applied to all land use types; ⁶ Trip Length is the distance traveled by trips generated per land use type by the proposed development along the roadway network and within the City's full purpose jurisdiction ⁷ Based on the average cost to provide a typical vehicle mile of roadway in Austin, including costs for construction, engineering and administration, and right-of-way. ⁸ Estimated average cost per vehicle mile is calculated for each roadway classification and referenced from the Summary of Roadway Costs.



RP Example: Infill Worksheet

- Supply Calculation

Roadway Supply - Off-Site Roads to be Built or Funded by the Applicant:

Roadway Name:	Classification:	Roadway Length: (Feet)	Number of Thru Lanes:	Supply Cost Estimate ⁹ : (\$)	Supply Cost Estimate OR Detailed OPCC ¹⁰ : (\$)

ROADWAY SUPPLY ADDED TO SYSTEM SUBTOTAL: \$0

Other Improvements - Specific Improvements to be Built or Funded by the Applicant:

Location:	Description of Improvement:	Estimated Cost ¹¹ : (\$)
5' x 200' of sidewalk along Arterial	\$6 per square foot of concrete sidewalk	\$6,000

OTHER IMPROVEMENTS ADDED TO SYSTEM SUBTOTAL: \$6,000

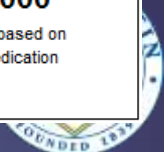
Right-of-Way Dedication - ROW to be dedicated by the Applicant:

ROW Dedication:	General Description of ROW Dedication:	Estimated Cost ¹² : (\$)
10' x 200' along Arterial	2014 TCAD or WCAD Market Value divided by Total Property Area	\$50,000
	\$1,500,000/60,000 sq ft = \$25 per square foot used in calculation	

RIGHT-OF-WAY DEDICATION SUPPLY ADDED TO SYSTEM SUBTOTAL: \$50,000

TOTAL VALUE OF SUPPLY ADDED TO THOROUGHFARE SYSTEM: \$56,000

Notes: ⁹ Based on an estimated cost to provide the roadway supply (construction and engineering) based on the classification; ¹⁰ Revised cost estimate, if available, for construction and engineering based on more detailed preliminary engineering and/or design; ¹¹ All estimated improvement costs; ¹² Cost of right-of-way should be estimated using County Appraisal District values (number of square feet of dedication multiplied by the County Appraisal District Market Values).



RP Example: Infill Worksheet

- Supply/Demand Comparison

SUPPLY / DEMAND COMPARISON:

A comparison of the capacity provided by a development against the traffic impacts of the proposed development.

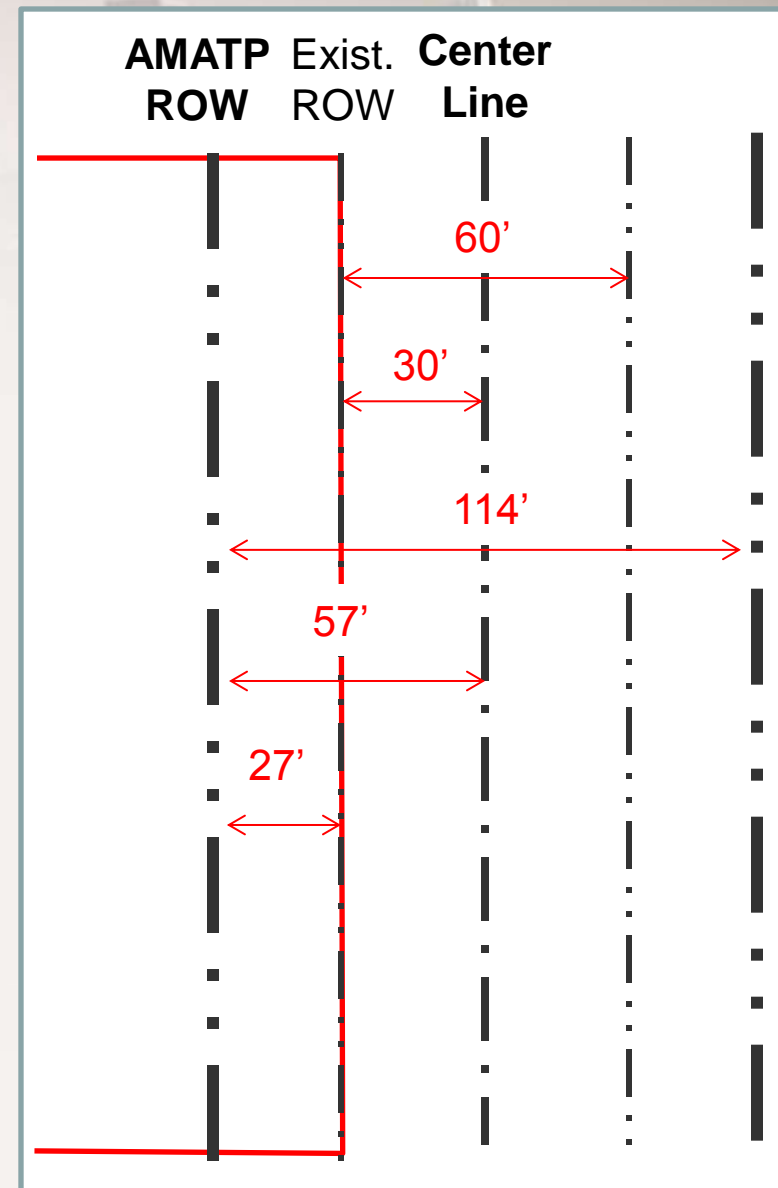
	Cost	Comparison
TOTAL IMPACT OF DEMAND PLACED ON THOROUGHFARE SYSTEM:	\$737,444	DEMAND > SUPPLY
TOTAL VALUE OF CAPACITY (SUPPLY) ADDED TO THOROUGHFARE SYSTEM:	\$56,000	1317%

Based on the results of this rough proportionality analysis, the anticipated impact of demand on the system exceeds the value of capacity (supply) provided by the proposed development. Given these assumptions, the anticipated impact of demand of the development exceeds the value of capacity supplied by approximately 1,316 %. Therefore, the roadway improvements required by the City are justified (i.e. the applicant is adding less capacity than needed to support their development).



RP Example: Greenfield Development

- Proposed Single-Family development
 - 300 households
- 1,200' frontage along arterial
- Existing MNR 2 at 60' ROW
- Ultimate MAD 4 per AMATP at 114' ROW
- Property line 30' from roadway centerline
- Require 27' ROW and ½ of MAD 4



RP Example: Greenfield Worksheet

- Supply Calculation

Roadway Supply - Off-Site Roads to be Built or Funded by the Applicant:

Roadway Name:	Classification:	Roadway Length: (Feet)	Number of Thru Lanes:	Supply Cost Estimate ⁹ : (\$)	Supply Cost Estimate OR Detailed OPCC ¹⁰ : (\$)
New Arterial	Major Arterial Divided 4-Lane	1,200	2	\$818,736	\$818,736

ROADWAY SUPPLY ADDED TO SYSTEM SUBTOTAL: \$818,736

Other Improvements - Specific Improvements to be Built or Funded by the Applicant:

Location:	Description of Improvement:	Estimated Cost ¹¹ : (\$)

OTHER IMPROVEMENTS ADDED TO SYSTEM SUBTOTAL: \$0

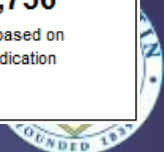
Right-of-Way Dedication - ROW to be dedicated by the Applicant:

ROW Dedication:	General Description of ROW Dedication:	Estimated Cost ¹² : (\$)
27' x 1200' along Arterial	2014 TCAD or WCAD Market Value divided by Total Property Area	\$162,000
	\$17,500,000/3,500,000 sq ft = \$5 per square foot used in calculation	

RIGHT-OF-WAY DEDICATION SUPPLY ADDED TO SYSTEM SUBTOTAL: \$162,000

TOTAL VALUE OF SUPPLY ADDED TO THOROUGHFARE SYSTEM: \$980,736

Notes: ⁹ Based on an estimated cost to provide the roadway supply (construction and engineering) based on the classification; ¹⁰ Revised cost estimate, if available, for construction and engineering based on more detailed preliminary engineering and/or design; ¹¹ All estimated improvement costs; ¹² Cost of right-of-way should be estimated using County Appraisal District values (number of square feet of dedication multiplied by the County Appraisal District Market Values).



RP Example: Greenfield Worksheet

- Supply/Demand Comparison

SUPPLY / DEMAND COMPARISON:

A comparison of the capacity provided by a development against the traffic impacts of the proposed development.

	Cost	Comparison
TOTAL IMPACT OF DEMAND PLACED ON THOROUGHFARE SYSTEM:	\$964,000	SUPPLY \approx DEMAND
TOTAL VALUE OF CAPACITY (SUPPLY) ADDED TO THOROUGHFARE SYSTEM:	\$980,736	98%

Based on the results of this rough proportionality analysis, the value of capacity (supply) provided by the proposed development roughly equals the anticipated impact of demand it places on the system. Therefore, the roadway improvements are roughly proportional to the demand placed on the system (i.e. the applicant is adding roughly the same amount of capacity as what is needed to support the development).



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