Impact Fee Basics: Methodology and Design

Why Impact Fees?

- Infrastructure capacity is essential to accommodate new development
  - Quality of place is essential to attract/ retain millennials, boomers, and innovators
- Minimizes externalities like traffic congestion that is associated with “no-growth” sentiment
- Compared to negotiated agreements, streamlines approval process with known costs (predictability)
- Integrates comprehensive planning, economic development, and revenue strategies
  - Balance funding needs against economic competitiveness
  - Embrace multi-modal options and “willingness-to-pay” concept

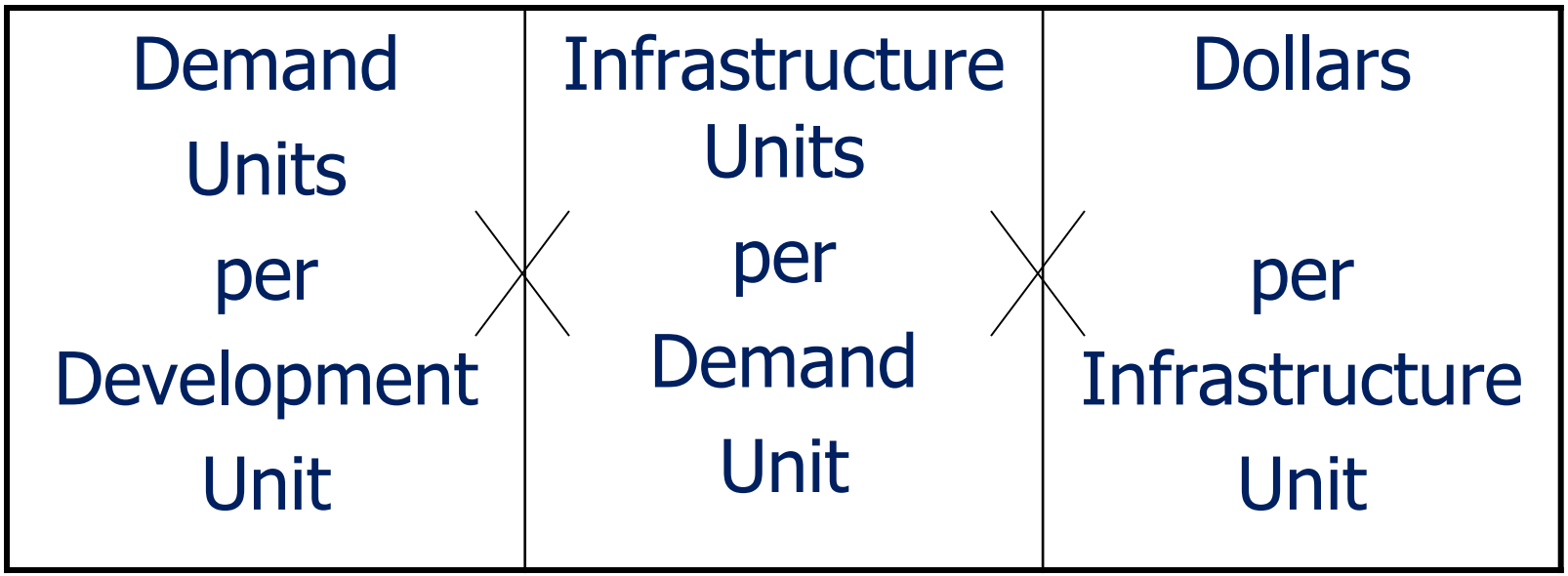
Basic Options for Funding Infrastructure

- Funding from broad-based revenues (general taxes)
- Growth pays for itself
  - Dynamic tension between "could" vs. "should"
- Accept lower levels of service
- Shift funding burden from collective system improvements to individual projects-level improvements, or a Special District / Authority

Eligible Costs

- Facilities/improvement required to serve new development - Yes
- Maintenance and repairs – No
- Excess capacity in existing facilities – Yes
- Improvements required to correct existing deficiencies – No
  - Unless there is a funding plan

Conceptual Impact Fee Calculation



2.5 persons per SFD unit x 5 acres per 1,000 persons x $100,000 per acre = 0.0125 acres per SFD Unit @ $1,250 per SFD Unit

Fee Methodologies

- Buy-In Approach (past)
  - New growth is "buying in" to the cost the community has already incurred to provide growth-related capacity
  - When Applicable
    - Near build-out
    - Community has oversized facilities in anticipation of growth
  - Other Common Names
    - Recoupment
    - Cost-recovery

Buy-In Example

Cost Recovery for Police Building

	Site	*Square Feet*
	Police Headquarters	28,000
Cost per Sq Ft =>		$295

	Proportionate Share	2026 Demand Units	Sq Ft per Demand Unit	Cost per Demand Unit
Residential	82%	50,928 population	0.45	$132.99
Nonresidential	18%	15,587 jobs	0.32	$95.38

Fee Methodologies (continued)

- Incremental Expansion Approach (present)
  - Formula-based approach based on existing levels of service
    - Park acres per capita
    - Square feet per student station
  - Fee is based on the current cost to replicate existing levels of service (i.e. replacement cost)
  - Provides flexibility
  - Other Common Names
    - Replacement cost
    - Level of service approach

Incremental Expansion Example

Current Level of Service and Cost Factors for Fire Stations

Site	Current Sq. Ft.
Station 52	10,000
Station 53	18,000
Station 54	5,425
Station 55	6,000
TOTAL Sq. Ft.	39,425

Cost per Sq. Ft. for New Station[1] ==> $203

	Proportionate Share	2011 Demand Units	Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	65.5%	105,181 Population	0.25	$49.84
Nonresidential	34.5%	34,266 Jobs	0.40	$80.54

1. Building cost is assumed to be $193.33 per sq. ft. for construction which is based on Very Good Class C construction from Marshall & Swift Valuation Service. According to the City of West Jordan, land cost for a new fire station is $10 per sq. ft.

Incremental Expansion Needs Analysis

Fire Station - Residential	0.25	square feet per person
Fire Station - Nonresidential	0.40	square feet per job
Fire Station Cost	$203	per square foot

		West Jordan		*Infrastructure Needed* Station SF	Station SF	TOTAL
	Year	Population	Jobs	Residential	Nonresidential	Station SF
Base	2011	105,181	34,266	25,829	13,596	39,425
Year 1	2012	106,075	34,768	26,048	13,796	39,844
Year 2	2013	106,968	35,271	26,267	13,995	40,262
Year 3	2014	107,861	35,774	26,487	14,195	40,682
Year 4	2015	108,755	36,277	26,706	14,394	41,100
Year 5	2016	111,535	36,603	27,389	14,524	41,913
Year 6	2017	114,315	37,036	28,072	14,696	42,768
Six-Year Increase =>		9,134	2,770	2,243	1,100	3,343

Total Growth-Related Cost of Fire Stations => $678,629

Fee Methodologies (continued)

- Plan-Based Approach (future)
  - Usually reflects an adopted CIP or master plan
  - May offer more "bang for the buck"
    - Growth-related costs are more refined
  - Will be scrutinized more closely by development community

Plan Based Example

Time Period	1 *2007-2008*	2 *2008-2009*	3 *2009-2010*	4 *2010-2011*	5 *2011-2012*	TOTAL
A. Growth-Related Treatment Projects						
Upgrade WWTP-Sub Basin Area 1	$4,000,000	$3,000,000	$42,700,000	$0	$0	$49,700,000
Subtotal	$4,000,000	$3,000,000	$42,700,000	$0	$0	$49,700,000
Net Increase in System Capacity (avg gal/day)						4,000,000
Capital Cost per Gallon of Capacity						$12.42
B. Growth-Related Collection System Projects						
Lift Stations	$150,000	$255,000	$0	$0	$0	$405,000
Subtotal	$150,000	$255,000	$0	$0	$0	$405,000
Net Increase in System Capacity (avg gal/day)						1,500,000
Capital Cost per Gallon of Capacity						$0.27
CFP TOTAL	$4,150,000	$3,255,000	$42,700,000	$0	$0	$50,105,000

Fee Methodologies (continued)

- Hybrid Approach
  - Available capacity in existing facilities
    - Typically a unique "one of" facility
  - Expect significant capacity expansions to serve new growth
  - Recovers costs of existing facilities and projected growth-related improvements

Fee Methodology Considerations

- ✧Available data to support the methodology
  - No adopted facility plans or "iffy" CIP
    - Incremental expansion
  - Long-term capital improvement plan or adopted facility master plans
    - Plan-based approach
- ✧LOS of service reflected in capital plan?
  - Current LOS versus existing LOS
  - Is it financially feasible?
  - How will existing deficiencies be funded?

Evaluate Need for Credits

- ✧Site specific
  - Developer constructs a capital facility included in fee calculations
- ✧Debt service
  - Avoid double payment due to existing or future bonds
- ✧Dedicated revenues
  - Property tax, local option sales tax, gas tax

Credit Example

School Year	District Capital Taxes	CO & DS	Sales Tax	Students (FTE)	Credit per Student
2015-2016	$43,950,335	$200,000	$29,337,747	40,860	$1,798.53
2016-2017	$45,455,472	$200,000	$30,511,257	41,445	$1,837.77
2017-2018	$48,365,856	$200,000	$15,865,854	42,030	$1,532.99
2018-2019	$51,437,952	$200,000	$0	42,615	$1,211.72
2019-2020	$54,930,816	$171,397	$0	43,200	$1,275.50
TOTAL	**$244,140,431**	**$971,397**	**$75,714,858**		**$7,657**

Discount Rate	**5.5%**
Net Present Value	**$6,615.49**

Fee Schedule

- Mechanism for determining the cost to be recovered from new development
  - How will fees be assessed?
  - Residential?
  - Nonresidential?
- Usually in current dollars
  - Many communities adjust annually for inflation using ENR Index or CPI

Fee Schedule

RESIDENTIAL DEVELOPMENT	DEVELOPMENT FEES PER UNIT					
Type of Development	Library	Parks & Recreation	Police	General Government	Transportation	TOTAL
Single Family Detached	$123	$916	$193	$0	$502	$1,733
Multi-Family	$99	$735	$155	$0	$345	$1,333
All Other Types of Housing	$121	$901	$190	$0	$262	$1,473

NONRESIDENTIAL DEVELOPMENT	DEVELOPMENT FEES PER 1 SQUARE FOOT OF BUILDING (UNLESS OTHERWISE NOTED)					
Type of Development	Library	Parks & Recreation	Police	General Government	Transportation	TOTAL
Com / Shop Ctr 25,000 SF or less	N/A	N/A	$0.86	$0.00	$0.99	$1.85
Com / Shop Ctr 25,001-50,000 SF	N/A	N/A	$0.83	$0.00	$0.96	$1.79
Com / Shop Ctr 50,001-100,000 SF	N/A	N/A	$0.78	$0.00	$0.89	$1.67
Com / Shop Ctr 100,001-200,000 SF	N/A	N/A	$0.67	$0.00	$0.77	$1.45
Com / Shop Ctr over 200,000 SF	N/A	N/A	$0.60	$0.00	$0.69	$1.30
Office / Inst 10,000 SF or less	N/A	N/A	$0.54	$0.00	$0.34	$0.87
Office / Inst 10,001-25,000 SF	N/A	N/A	$0.54	$0.00	$0.34	$0.87
Office / Inst 25,001-50,000 SF	N/A	N/A	$0.43	$0.00	$0.27	$0.71
Office / Inst 50,001-100,000 SF	N/A	N/A	$0.37	$0.00	$0.23	$0.60
Office / Inst over 100,000 SF	N/A	N/A	$0.32	$0.00	$0.20	$0.51
Business Park	N/A	N/A	$0.27	$0.00	$0.17	$0.44
Light Industrial	N/A	N/A	$0.33	$0.00	$0.21	$0.54
Warehousing	N/A	N/A	$0.17	$0.00	$0.11	$0.27
Manufacturing	N/A	N/A	$0.18	$0.00	$0.11	$0.29
Hotel (per room)	N/A	N/A	$133	$0	$83	$216
Nursing Homes (per bed)	N/A	N/A	$63	$0	$39	$102

Fee Schedule

Utility Development Fees (based on water meter size) - Citywide

Meter Size (inches)	*Type*	*Water*	*Water Resources*	*Wastewater*	*TOTAL*
0.75	Displacement	***$3,080***	***$1,709***	***$4,193***	***$8,982***
1.00	Displacement	***$5,237***	***$2,905***	***$7,128***	***$15,270***
1.50	Displacement	***$10,170***	***$5,641***	***$13,841***	***$29,652***
2.00	Displacement/Compound	***$16,260***	***$9,019***	***$22,130***	***$47,409***
3.00	Compound	***$33,890***	***$18,797***	***$46,124***	***$98,811***
3.00	Turbine	***$36,857***	***$20,443***	***$50,162***	***$107,462***
4.00	Compound	***$52,347***	***$29,034***	***$71,244***	***$152,625***
4.00	Turbine	***$63,145***	***$35,023***	***$85,939***	***$184,107***
6.00	Compound	***$101,700***	***$56,407***	***$138,411***	***$296,519***
6.00	Turbine	***$126,946***	***$70,410***	***$172,772***	***$370,128***
8.00	Compound	***$164,317***	***$91,138***	***$223,632***	***$479,087***
8.00	Turbine	***$185,363***	***$102,811***	***$252,276***	***$540,449***

New and Innovative Approaches

- Progressive residential fee schedules
- Impact fees that increase with distance from urban areas
- Link fees to plans and a funding strategy for infrastructure
- City/County cooperation to implement fees
- Mobility/Multimodal Fees

Linking Fees to Overall Funding Strategy

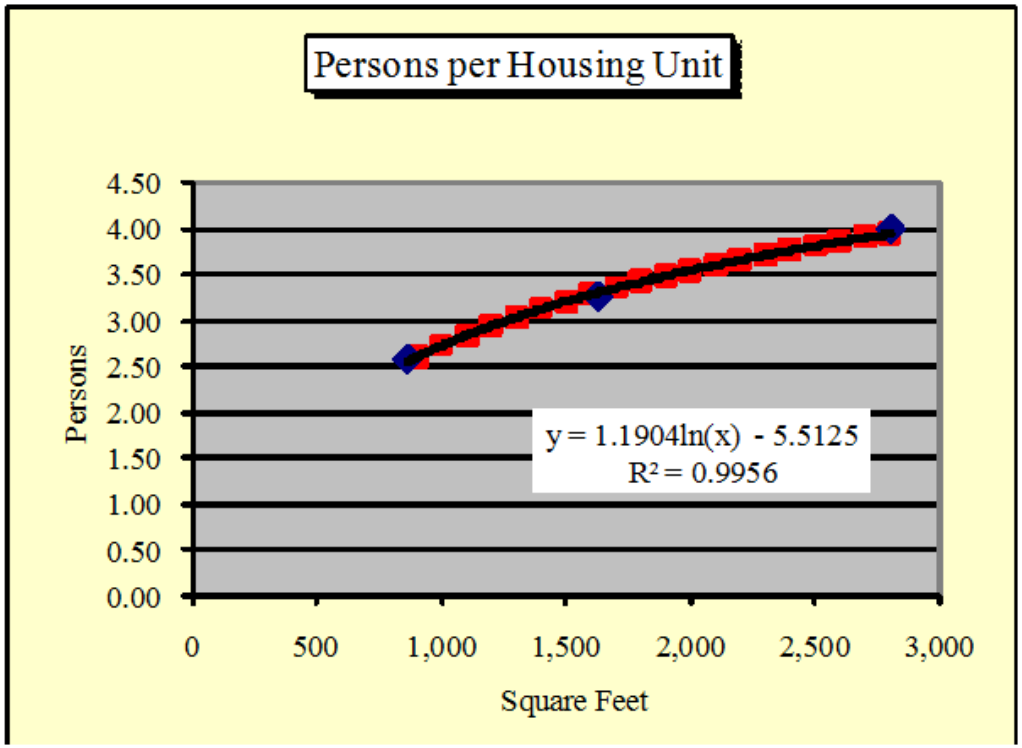
	SCENARIO ONE	SCENARIO TWO	SCENARIO THREE	SCENARIO FOUR
	CAPITAL FUNDING NEEDS			
Capital Facilities	$642,181,161	$642,181,161	$642,181,161	$642,181,161
	LESS CURRENT FUNDING SOURCES			
Five Year Total Revenue	$422,020,196	$422,020,196	$422,020,196	$422,020,196
	EQUALS ESTIMATED FUNDING SHORTFALL			
Estimated Shortfall	$220,160,965	$220,160,965	$220,160,965	$220,160,965
	POTENTIAL FUNDING SOURCES			
Estimated Fund Balance (2006)	$19,000,000	$19,000,000	$19,000,000	$19,000,000
Implementation of New Impact Fees *	$41,617,267 $5,342/SFD @100% of Max. Fee	$41,617,267 $5,342/SFD @100% of Max. Fee	$35,706,628 $4,808/SFD @90% of Max. Fee	$32,751,927 $4,541/SFD @85% of Max. Fee
School Capital Outlay Surtax Annual Surtax for Five Year Period	$170,000,000 @ .05%		$170,000,000 @ .05%	$170,000,000 @ .05%
Bond Issuance with Tax Levy Estimated Annual Debt Service for 20 Year Bond Annual Millage for 20 year Bond		$165,015,958 $12,795,952 0.492		
Estimated Five Year Total New Funding Sources	$230,617,267	$225,633,225	$224,706,628	$221,751,927
	ESTIMATED ENDING FUND BALANCE			
Estimated Ending Fund Balance	$10,456,302	$5,472,260	$4,545,663	$1,590,962

**The estimates include only the increased revenue over the existing impact fees.*

Progressive Residential Demand Factors

Source: Persons by bedroom range from ACS PUMS. Living space (square feet) from City of Tulare building permits..

Actual Averages		
Bedrooms	*Square Feet*	*Persons*
2 or less	863	2.56
3 bedrooms	1,632	3.24
4 or more	2,811	3.97

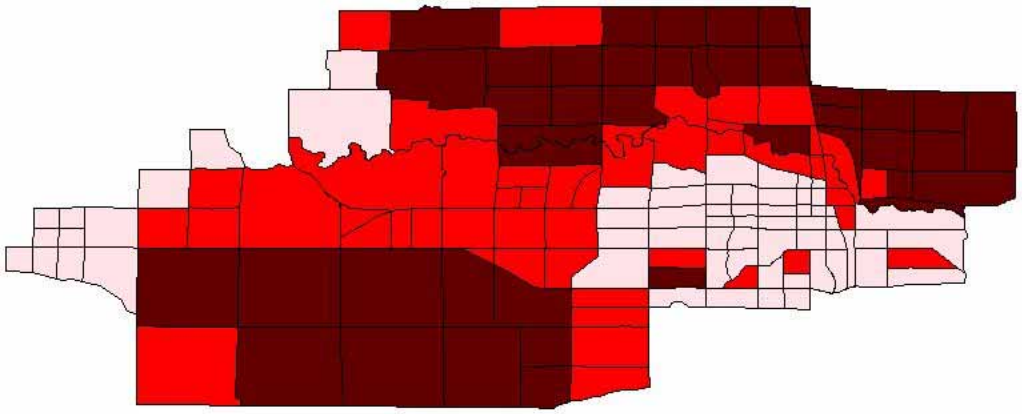


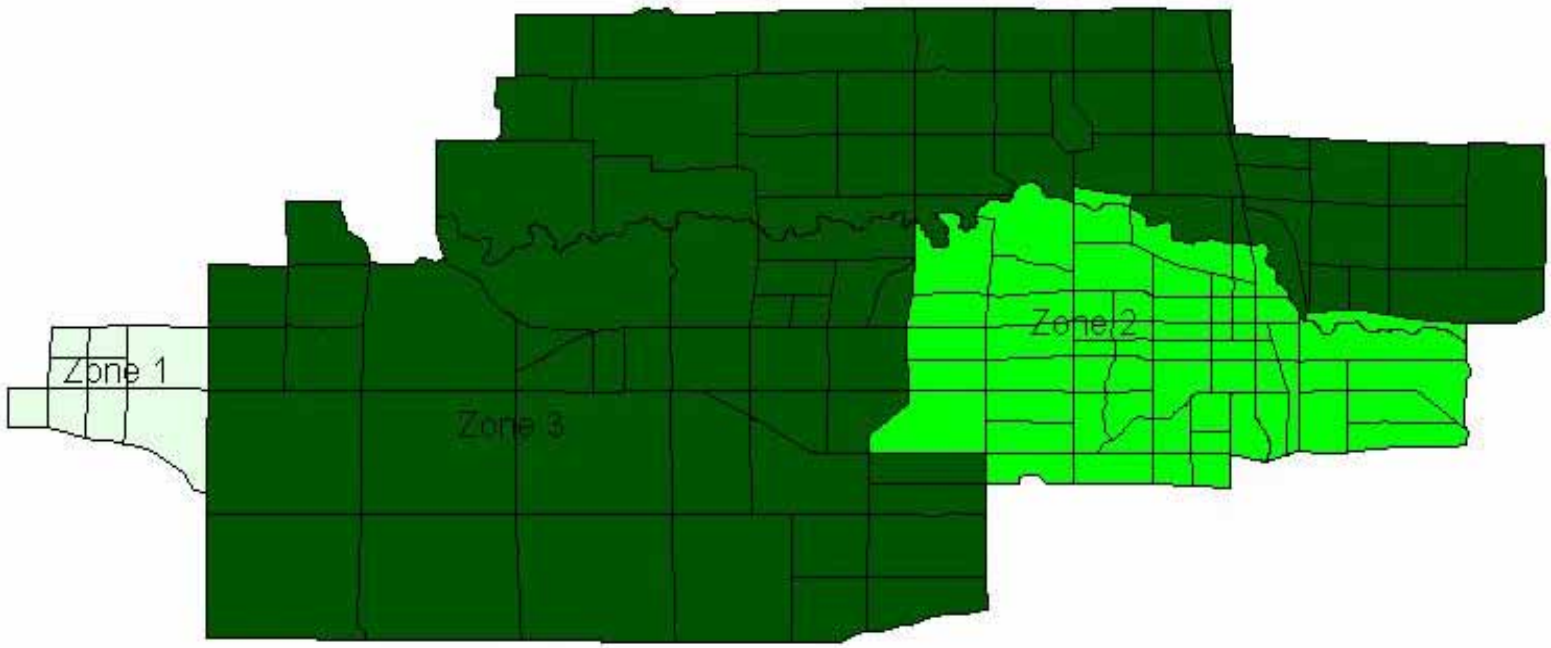
Square Feet	Persons
900	2.58
1,000	2.71
1,100	2.82
1,200	2.92
1,300	3.02
1,400	3.11
1,500	3.19
1,600	3.26
1,700	3.34
1,800	3.41
1,900	3.47
2,000	3.53
2,100	3.59
2,200	3.64
2,300	3.70
2,400	3.75
2,500	3.80
2,600	3.84
2,700	3.89
2,800	3.93

Tiered Transportation Fee

- Greeley, CO
  - Tiered road fee based on VMT
    - As density and mix of development decreases VMT increases
    - Fees should vary by Traffic Analysis Zone (TAZ) based on Vehicle Miles of Travel
    - Geographic service areas determined by $/trip

Tiered Transportation Fee





Next Generation Transportation Impact Fees

- Higher density, mixed use development is becoming increasingly popular
- Significant national demographic changes
- Shifting market preferences for walkable urbanism
- Next generation transportation impact fees/proffers are an important implementation mechanism in the smart governance tool box

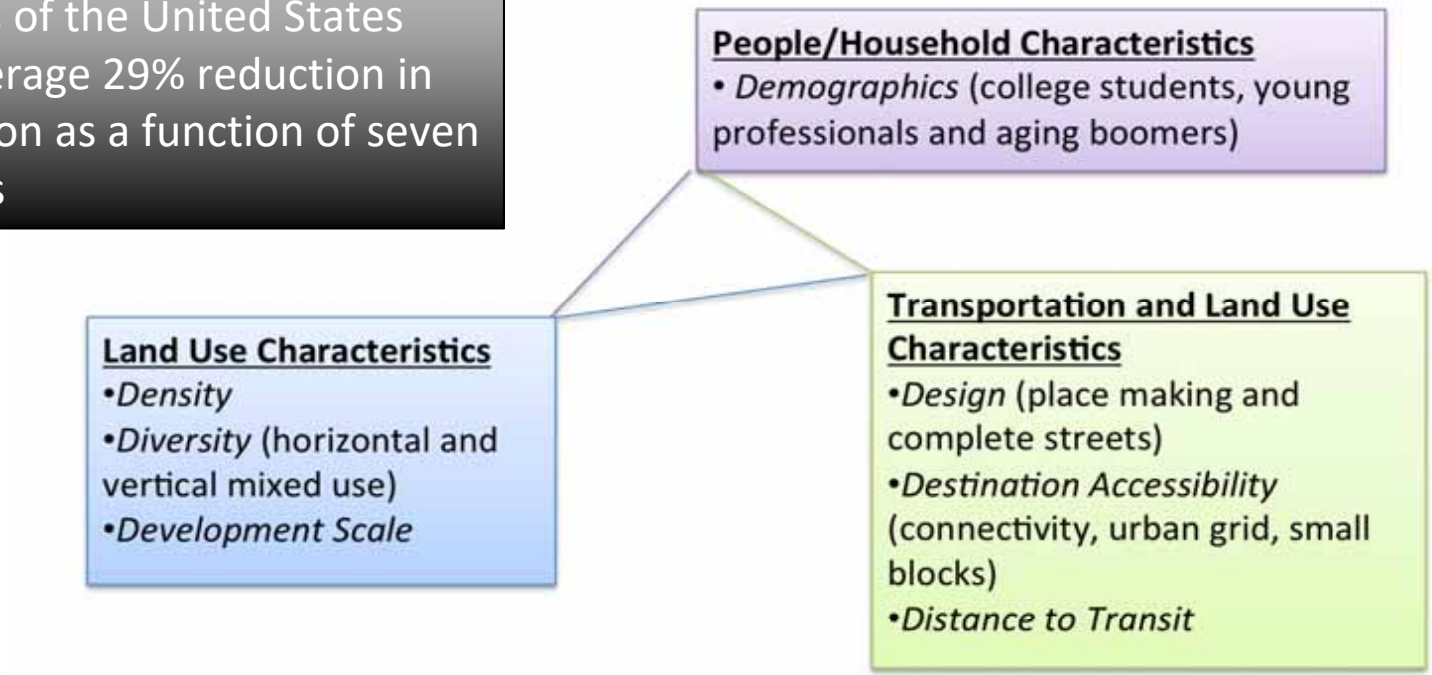
Progression of Thought

- General paradigm shift from a revenue source (based on suburban, vehicular travel) to a form of land use regulation helping to shape development patterns

Old School Fees	*Next Generation Fees*
"pay to play" revenue source	contractual arrangement to build improvements
driven by generic formulas	driven by plans and policy
long range to buildout	five to ten year planning horizon
one and done	ongoing planning and budgeting process
suburban focus	apply transect concept
uniform across jurisdiction	vary geographically
moving vehicles	moving people
vehicle trips	inbound vehicle miles of travel
one size fits all	residential by dwelling size
loose cost analysis and generous credits	specific improvements with a funding strategy

Think Spatially About Transportation & Land Use Interaction

Analysis of mixed-use developments in six regions of the United States found an average 29% reduction in trip generation as a function of seven "D" variables



Source: TischlerBise graphic based on Reid Ewing, Michael Greenwald, Ming Zhang, Jerry Walters, Mark Feldman, Robert Cervero, Lawrence Frank, and John Thomas. 2011. "Traffic Generated by Mixed-Use Developments: Six-Region Study Using Consistent Built Environmental Measures." Journal of Urban Planning and Development 137(3): 248–61.

Example of Service Area Results

- On average, urban residential has fewer vehicles available and persons per unit, thus lowering vehicular trip generation rates
- Urban settings provide options for walking, biking, and transit travel, thus lowering the vehicular mode share
- Mixed land use, more compact development, and better jobs-housing balance reduces average trip length

Service Area	Urban	Suburban
Vehicles Available per Housing Unit	1.05	1.70
Persons per Housing Unit	1.98	2.32
Single Units	40%	76%
2+ Units per Structure	60%	24%
Average Weekday Vehicle Trip Ends per Single Unit	7.02	8.44
Average Weekday Vehicle Trip Ends per 2+ Unit	4.51	5.70
Autos to Work	74%	90%
Walk/Bike/Bus to Work	26%	10%
Average Vehicle Trip Miles	3.93	5.40

Source: Commission on Local Government

Better Proportionality for Residential Fees

Garfield County, Colorado

Bedrooms	Persons (1)	Trip Ends (2)	Vehicles Available (1)	Trip Ends (3)	Average Trip Ends	Housing Units (1)	Recommended Multipliers: Trip Ends per Housing Unit	Recommended Multipliers: Housing Mix
0-1	32	114	23	138	126	39	3.2	8%
2	188	571	162	951	761	119	6.4	26%
3	457	1,282	398	2,316	1,799	193	9.3	42%
4+	250	740	227	1,328	1,034	108	9.6	24%
Total	927	2,707	810	4,733	3,720	459	8.1	100%

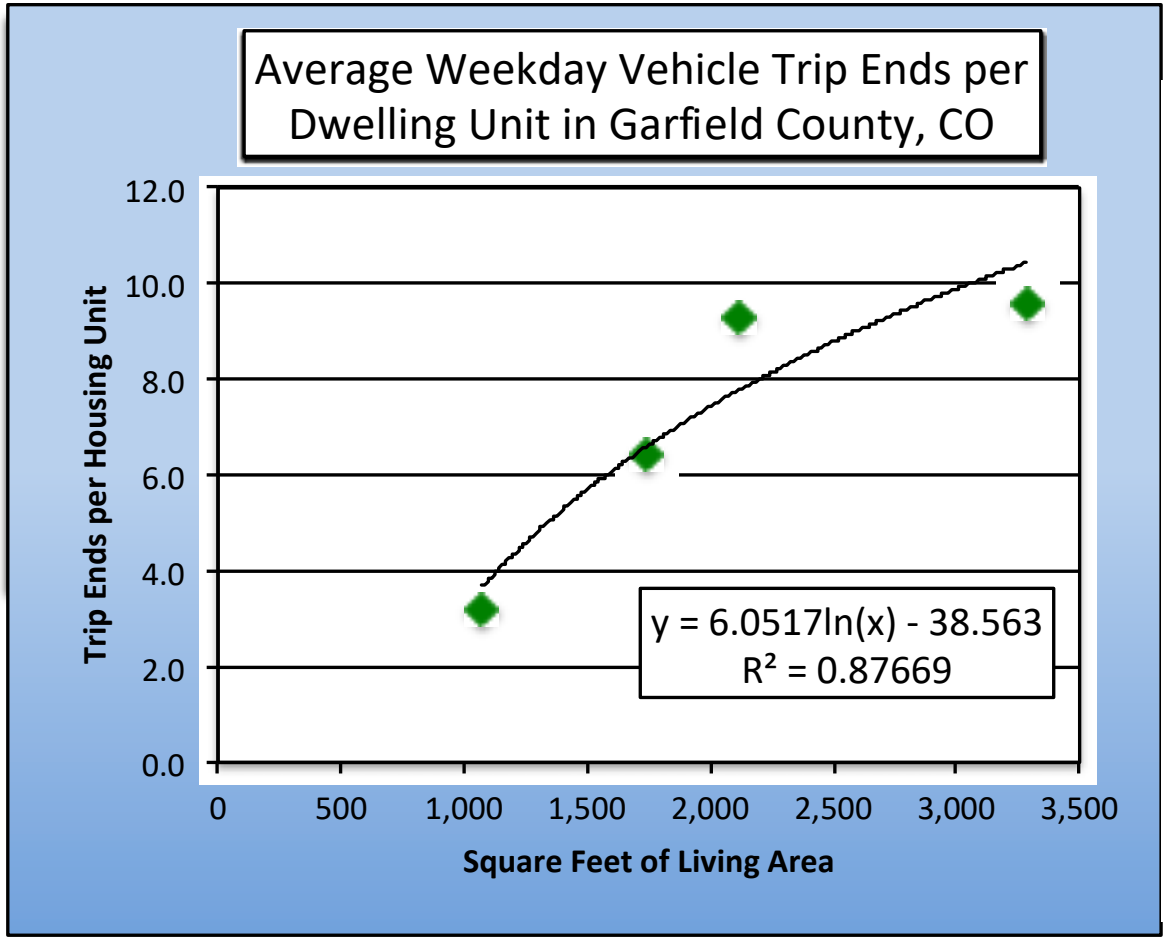
(1) American Community Survey, Public Use Microdata Sample for CO PUMA 200 (2013 1-Year unweighted data).

*(2) Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is EXP(0.91*LN(persons)+1.52). To approximate the average population in the ITE studies, persons were divided by 2 and the equation result multiplied by 2.*

*(3) Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.81). To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 3 and the equation result multiplied by 3.*

Vehicle Trip Ends by Dwelling Size

Actual Averages per Hsg Unit			Fitted-Curve Values	
Bedrooms	Square Feet	Trip Ends	Sq Ft Range	Trip Ends
0-1	1,076	3.2	900 or less	2.60
2	1,744	6.4	901 to 1400	5.28
3	2,115	9.3	1401 to 1900	7.12
4+	3,283	9.6	1901 to 2400	8.54
			2401 or more	9.68



Average weekday vehicle trip ends per housing unit are derived from 2013 ACS PUMS data (PUMA 200). U.S. Census Bureau is the data source for average square feet by bedroom range. Unit size for 0-1 bedroom is the average of multifamily units constructed in the West Census Region during 2013. Unit size for 2, 3, and 4+ bedrooms is from 2013 Survey of Construction microdata for single detached and attached units in the Mountain West Census Division.