

# **Arterial Street and Water Distribution System Platting Fees Nexus Study Update**

Sioux Falls City Council  
Land Use Committee  
February 16, 2016



# Executive Summary

- 2008 – Duncan Associates completed nexus study for arterial street and water distribution system platting fees
- 2009 – City implemented platting fees to fund arterial streets and water distribution systems in newly developing areas of the City
- 2015 – Duncan Associates updated original nexus study



# Executive Summary

- Methodology based on the cost to serve a prototypical section of land as follows:
  - 30% of the arterial street costs/section of land is divided by the number of trips generated by a section of land developed at the City-wide average to determine the cost/trip
  - The cost/trip is multiplied by trips generated per acre for land use categories to determine the cost/acre/land use



# Executive Summary

- Methodology based on the cost to serve a prototypical section of land as follows:
  - Water distribution system cost to serve a section of land is divided by the number of developable acres/section to determine the cost/acre
- Updated trip generation rates, construction costs, distribution of developable acres by land use, and development intensity



# 2015 Study Revisions

- Multi-family density
  - 8 units/acre to 16.1 units/acre
  - \$452.50/unit to \$516.09/unit (14.1%)
- Developable acres/section
  - 589 acres to 573.1 acres



# Arterial Street Platting Fees

Land Use	Zoning*	Current Fee/Acre	Updated Fee/Acre	Percent Change
Single-Family	RS, RT-1, RT-2, RD-1, RD-2, RHP, RR, MH	\$1,753	\$2,024	15%
Industrial	I-1, I-2, AP	\$3,488	\$4,019	15%
Office/Institutional	O, C-1, LW, S-1, S-2	\$6,457	\$7,455	15%
Multi-Family	RA-1, RA-2, RA-3	\$3,620	\$8,309	130%
Commercial	C-2, C-3, C-4	\$15,606	\$17,330	11%

\*The zoning classifications RCD-PUD, V-PUD, DT-PUD and PO-PUD fees assigned per Shape Places Ordinance are based on the highest zoning classification allowed. The zoning classifications AG, CN and REC are not charged platting fees.



# Water Distribution System Platting Fees

Land Use	Zoning*	Current Fee/Acre	Updated Fee/Acre	Percent Change
Single-Family, Industrial, Office/Institutional, Multi-Family & Commercial	RS, RT-1, RT-2, RD-1, RD-2, RHP, RR, MH, I-1, I-2, AP, O, C-1, LW, S-1, S-2, RA-1, RA-2, RA-3, C-2, C-3, C-4, RCD-PUD, V-PUD, DT-PUD & PO-PUD	\$1,653	\$1,970	19%

\*The zoning classifications AG, CN and REC are not charged platting fees.



# Plat

- A map of a piece of land subdivided into lots, parcels, tracts, blocks, right of way, and easements
- Required when land is divided for the purpose of sale, transfer of ownership, or in creating a building site prior to the issuance of a building permit

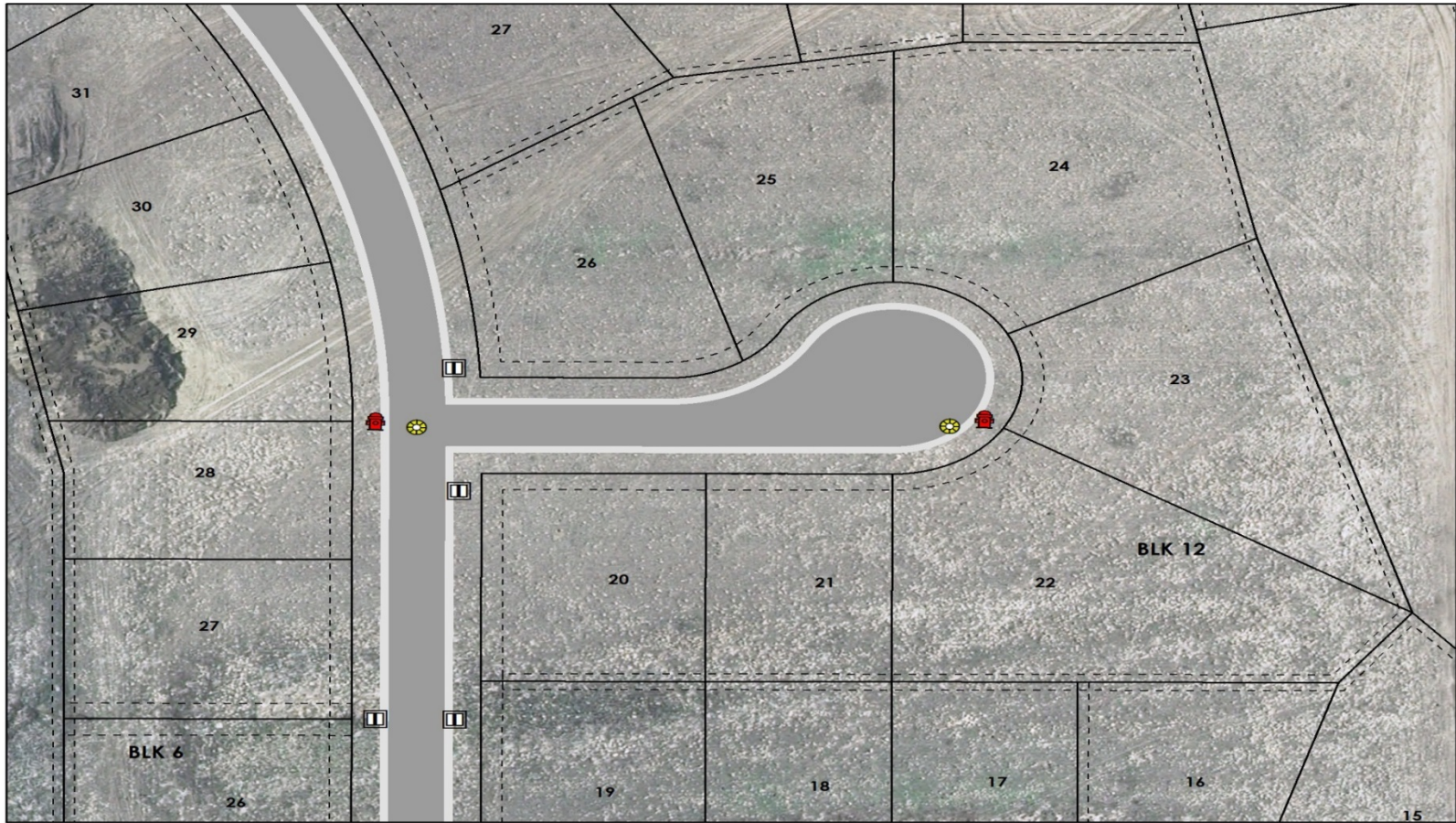




# Plat



# Plat



# Arterial Streets: Why 30% Funding?



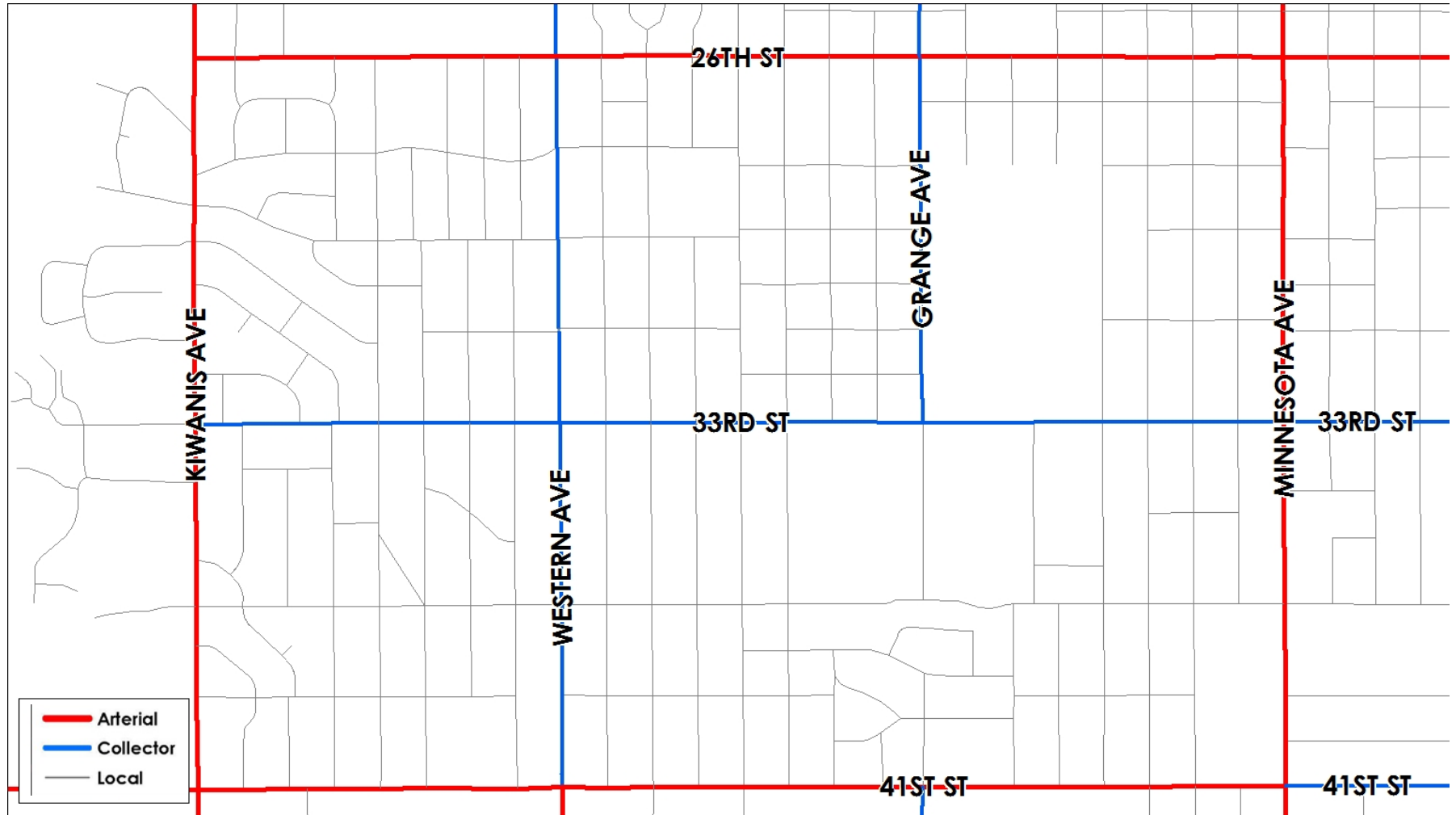
Arterial Street



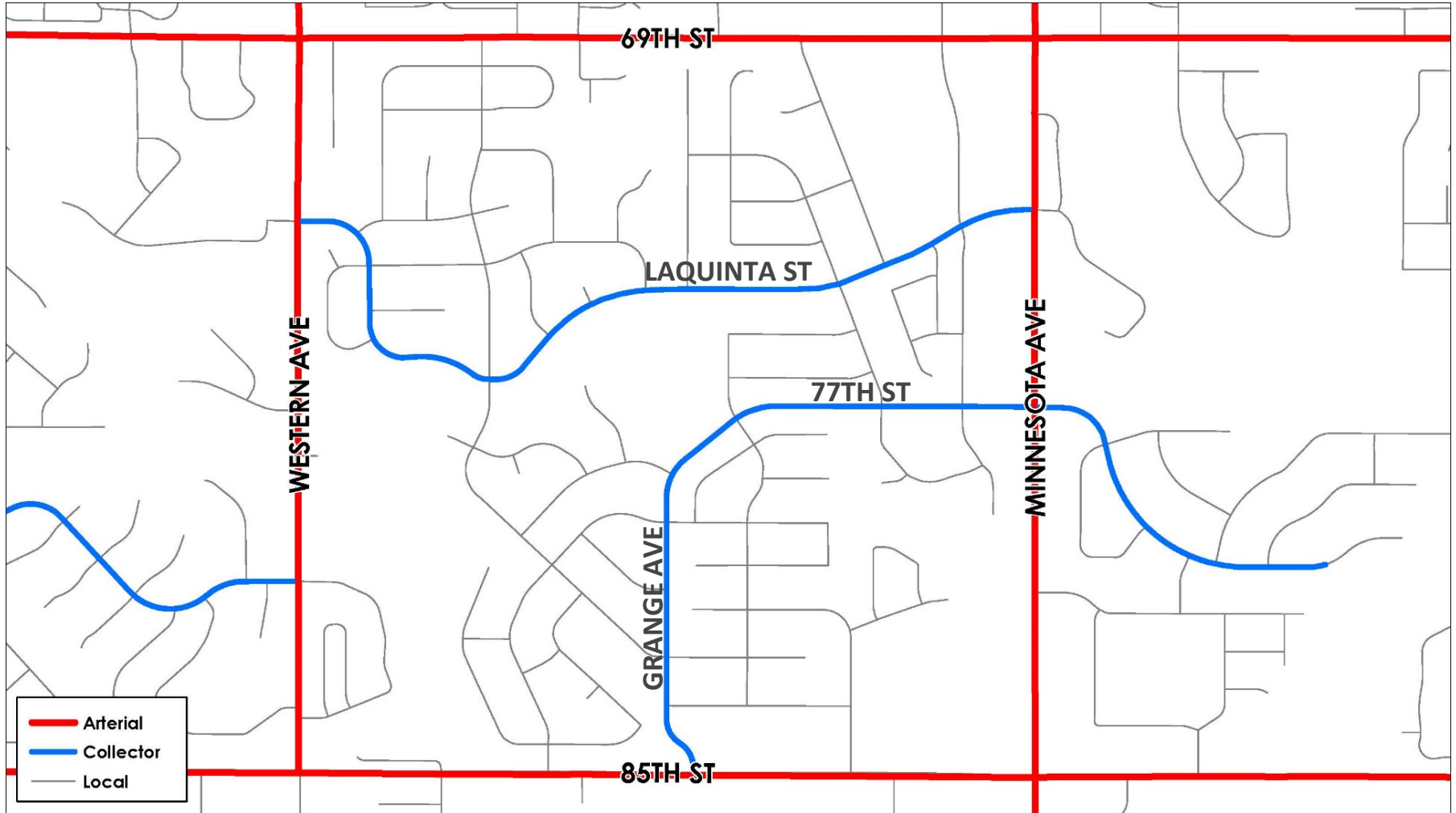
vs. Collector Street



# Traditional "Grid" Street Network



# “Curvilinear” Street Network



# Street Features by Classification

## Collector Street

66-80' Right-of-Way, 2 Lanes

5" Asphalt Typical Section

12" Water Main, 8" Sanitary Sewer, 24" Storm Sewer,  
Standard Lighting

## Arterial Street

100-120' Right-of-Way, 4+ Lanes

9" Concrete Typical Section

Minimum 16" Water Main, Oversized Storm Sewer  
and Street Lighting

Right and Left Turn Lanes, Deceleration Lanes

Center Median

Dedicated Bike Lanes or Pedestrian Side Path

Storm Drainage Ponds

Landscaping Elements

Traffic Signal Systems

Traffic Signs and Pavement Markings

Temporary Business Access During Construction

Construction Incentive/Disincentive  
(Reduce Impact to High Volume Traffic)



# Arterial Street vs. Collector Street

- The land developer constructs collector streets to serve the neighborhood, which is 30% of the cost of an arterial street
- The City constructs arterial streets to carry traffic between neighborhoods and throughout the City
- Arterial street platting fee funds the 30% and the City funds the remaining 70%



# Trips/Acre

Land Use	Unit	Daily Trips/Unit*	Units/Acre	Trips/Acre
Single-Family	Dwelling	9.52	2.74	26.08*
Industrial	1,000 sq. ft.	6.97	7.43	51.79*
Office/Institutional	1,000 sq. ft.	11.03	8.71 <sup>a</sup>	96.07
Multi-Family	Dwelling	6.65	16.10 <sup>b</sup>	107.07
Commercial	1,000 sq. ft.	42.70	5.23 <sup>a</sup>	223.32

\* Data from Institute of Transportation Engineers, Trip Generation, 9<sup>th</sup> ed., 2012

<sup>a</sup> Based on 0.2 FAR for office/institutional and .012 FAR for commercial, from City of Austin, Floor Area Ratio Study, 1985

<sup>b</sup> Based on City staff analysis of recent multi-family projects





# Multi-Family Density

- Planning staff reviewed 40 projects constructed between 2010 and 2014 and 20 projects constructed before 2010
- Densities (# of units/acre) ranged from 4.3 to 61
- Average density was 16.1



# 2014 Multi-Family Projects over \$1,000,000

Name	Address	Units	Acres	Density (Units/Acre)
Dakota Pointe	41 <sup>st</sup> & Grange	276	12	23.0
The Bluffs at Willow Run	E Highway 42	163	6.5	25.1
The Village at Three Fountains	85 <sup>th</sup> & Western	182	9.5	19.2
Sunset Villas	26 <sup>th</sup> & Katie	104	4.2	24.8
Whispering Wood Commons	57 <sup>th</sup> & Graystone	145	9.2	15.8
Killarney Crossing	57 <sup>th</sup> & Solberg	157	8.6	18.3
Ridgeview East	6 <sup>th</sup> & Cleveland	36	3.2	11.2
Santa Rosa Estates	77 <sup>th</sup> & Cliff	88	8.8	10.0
Westwood Apartments	32 <sup>nd</sup> & Ellis	56	13	4.3
Judee Estates	69 <sup>th</sup> & Cliff	56	5.8	9.7

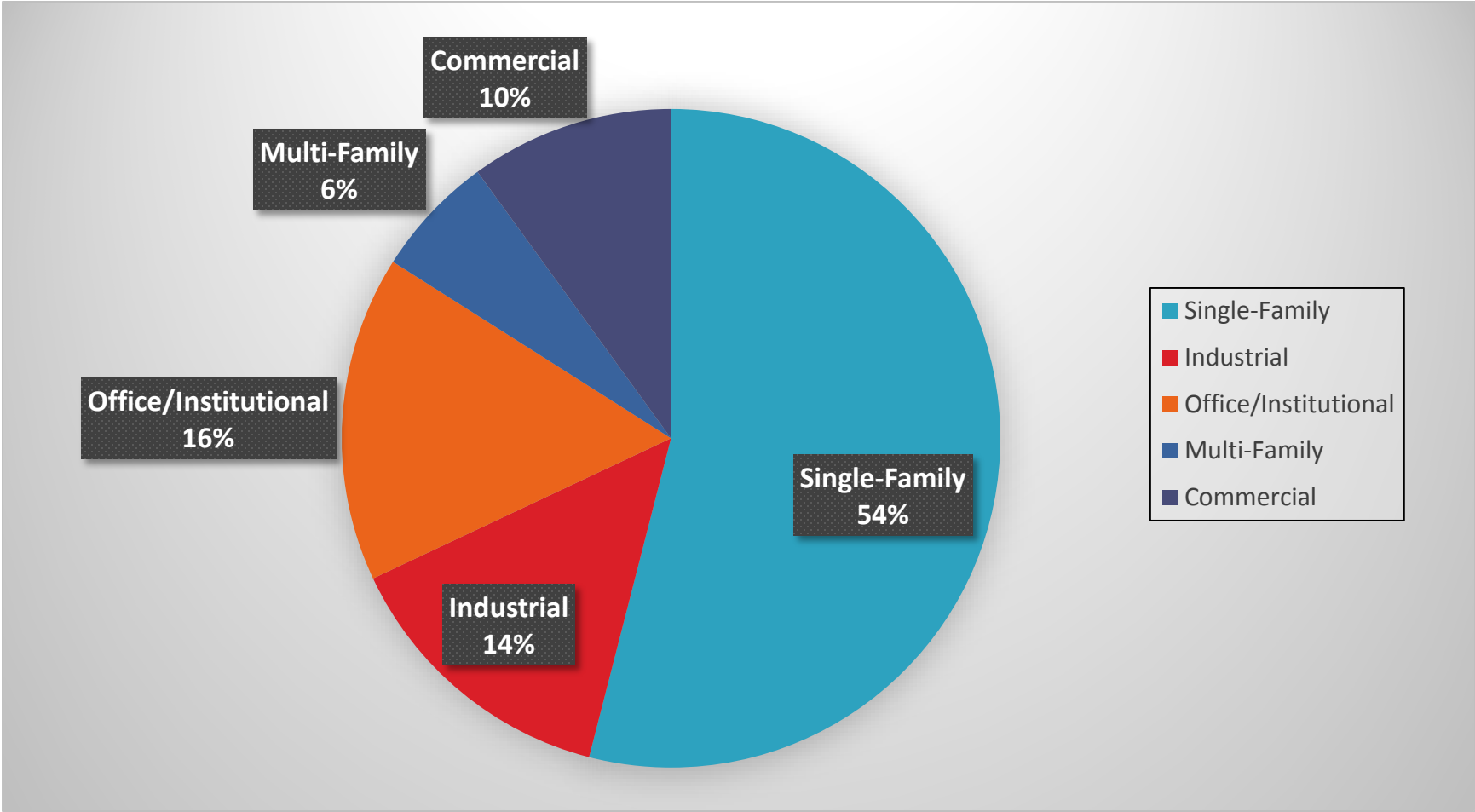


# Developable Acres/Section

	2008	2015
Total Acres/Section	640	640
- Arterial ROW Acres/Section	-24*	-24*
- Drainageways & Park Acres/Section	<u>-27*</u>	<u>-42.9*</u>
Developable Acres/Section	589	573.1
Data provided by City staff		
*Arterial street platting fees are not collected on these acres		



# Developable Acres/Section of Land



# Developable Acres/Section by Land Use

Land Use	% of Developable Acres	Developable Acres/Section
Single-Family	54	309.5
Industrial	14	80.2
Office/Institutional	16	91.7
Multi-Family	6	34.4
Commercial	<u>10</u>	<u>57.3</u>
<b>Total</b>	<b>100</b>	<b>573.1</b>
Data provided by City staff		



# Trip Generation/Section by Land Use

Land Use	Trips/Acre	Developable Acres/Section	Trips/Section
Single-Family	26.08	309.5	8,072
Industrial	51.79	80.2	4,154
Office/Institutional	96.07	91.7	8,810
Multi-Family	107.07	34.4	3,683
Commercial	223.32	57.3	12,796
<b>Total</b>		<b>573.1</b>	<b>37,515</b>



# Arterial Street Cost/Trip

Construction Cost/Linear Feet	\$804.96
Linear Feet of Arterial Street/Section	<u>x10,392</u>
Construction Cost/Section	\$8,365,184
Engineering Cost (16%)	<u>+\$1,338,430</u>
Total Cost/Section	\$9,703,614
Percent Collected Through Platting Fee	<u>x30%</u>
Platting Fee Amount/Section	\$2,911,084
Trips/Section	<u>÷37,515</u>
<b>Cost/Trip</b>	<b>\$77.60</b>



# Arterial Street Cost/Acre

Land Use	Zoning	Trips/Acre	Cost/Trip	Cost/Acre
Single-Family	RS, RT-1, RT-2, RD-1, RD-2, RHP, RR, MH	26.08	\$77.60	\$2,024
Industrial	I-1, I-2, AP	51.79	\$77.60	\$4,019
Office/Institutional	O, C-1, LW, S-1, S-2	96.07	\$77.60	\$7,455
Multi-Family	RA-1, RA-2, RA-3	107.07	\$77.60	\$8,309
Commercial	C-2, C-3, C-4	223.32	\$77.60	\$17,330





# Water Distribution System Cost/Trip

Construction Cost/Section	\$973,341
Engineering Cost (16%)	<u>+\$155,735</u>
Total Cost/Section	\$1,129,076
Developable Acres/Section	<u>÷573.10</u>
<b>Cost/Acre</b>	<b>\$1,970</b>



# Multi-Family Implementation – One-time Increase vs. 3-year Increase and 2.5% Annually

	Current	2017	2018	2019	2020	2021
One-Time	\$3,620	\$8,309	\$8,517	\$8,730	\$8,948	\$9,172
3-Year	\$3,620	\$4,854	\$6,510	\$8,730	\$8,948	\$9,172



# Recommendation

## Arterial Street Platting Fee (\$/acre)

Land Use	Current	2017	2018	2019	2020	2021
Single-Family	\$1,753	\$2,024	\$2,075	\$2,126	\$2,180	\$2,234
Industrial	\$3,488	\$4,019	\$4,119	\$4,222	\$4,328	\$4,436
Office/ Institutional	\$6,457	\$7,455	\$7,641	\$7,832	\$8,028	\$8,229
Multi-Family	\$3,620	\$4,854	\$6,510	\$8,730	\$8,948	\$9,172
Commercial	\$15,606	\$17,330	\$17,763	\$18,207	\$18,663	\$19,129



# Recommendation

## Water Distribution System Platting Fee (\$/acre)

Land Use	Current	2017	2018	2019	2020	2021
Single-Family, Industrial, Office/Institutional, Multi-Family & Commercial	\$1,653	\$1,970	\$2,019	\$2,070	\$2,121	\$2,175



# Platting Fee Implementation Timeline

- IRAB
- Home Builders Association
- Multi-Family Developers
- **Land Use Committee**
- City Council
- Implementation January 1, 2017
- Annual increase of 2.5% after 2021

