



City of Dallas

Sanitation Refuse & Recycle Collection Route Safety & Efficiency

**Dallas City Council
June 18, 2024**

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Department of Sanitation Services
City of Dallas

Presentation Overview



- Purpose
- Background
- Current Collection Procedures
- Service & Cost Comparison
- Recommended Action
- Next Steps



Purpose



- Provide an overview of the current Sanitation refuse and recycle collection procedures in Dallas
- Address challenges and operational impacts of collections in alleyways
- Outline recommended actions and next steps for improving reliability, sustainability, and safety of sanitation services



Background



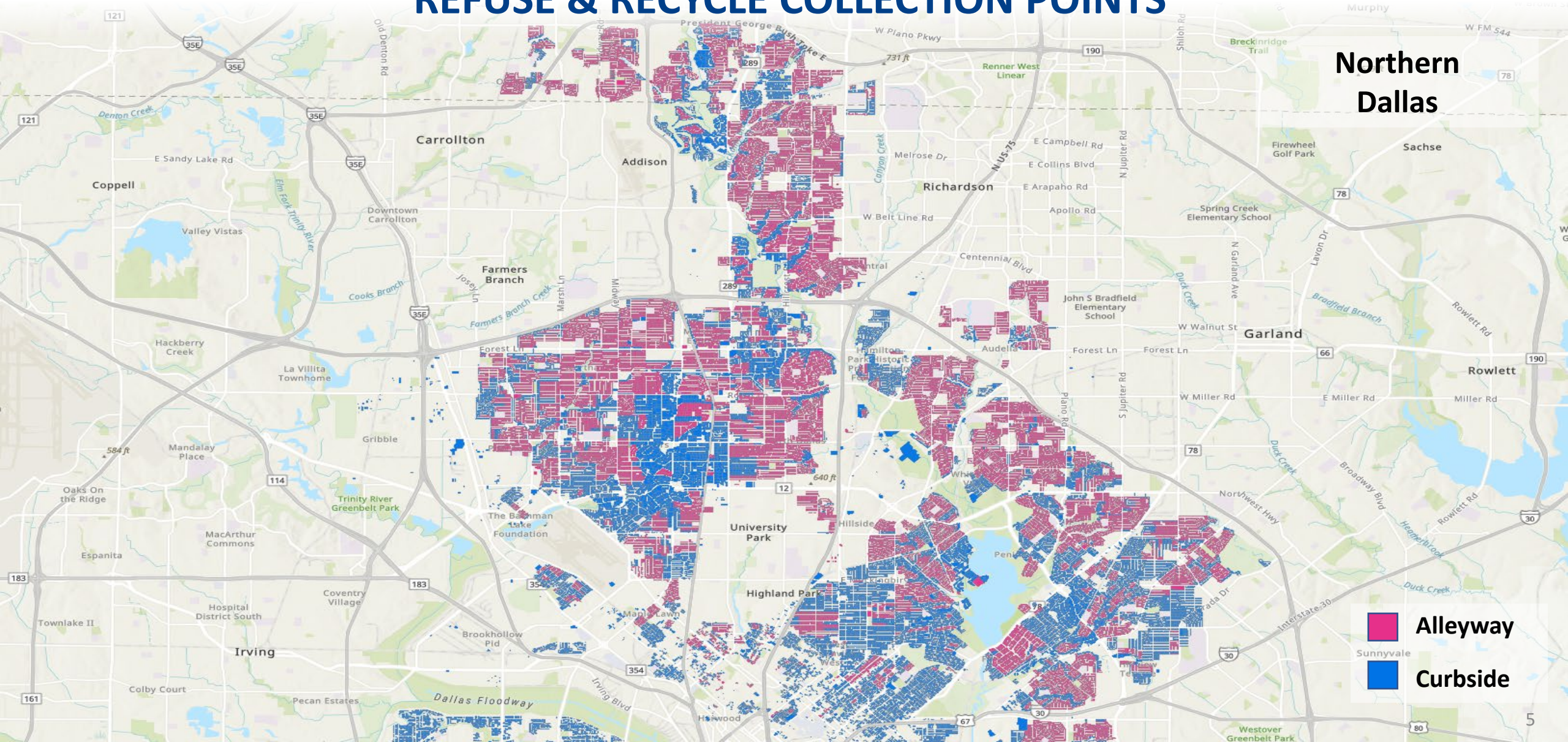
- Refuse and recycle collections are provided weekly to approximately 258,000 customer locations in Dallas
- 62% of collections occur curbside, 38% in alleyways
- Alleys vary in width (generally 8-10 ft) and condition, with some being gravel or unimproved
- Routes and equipment allocation optimized for service efficiency in December 2022



Background



REFUSE & RECYCLE COLLECTION POINTS



Northern
Dallas

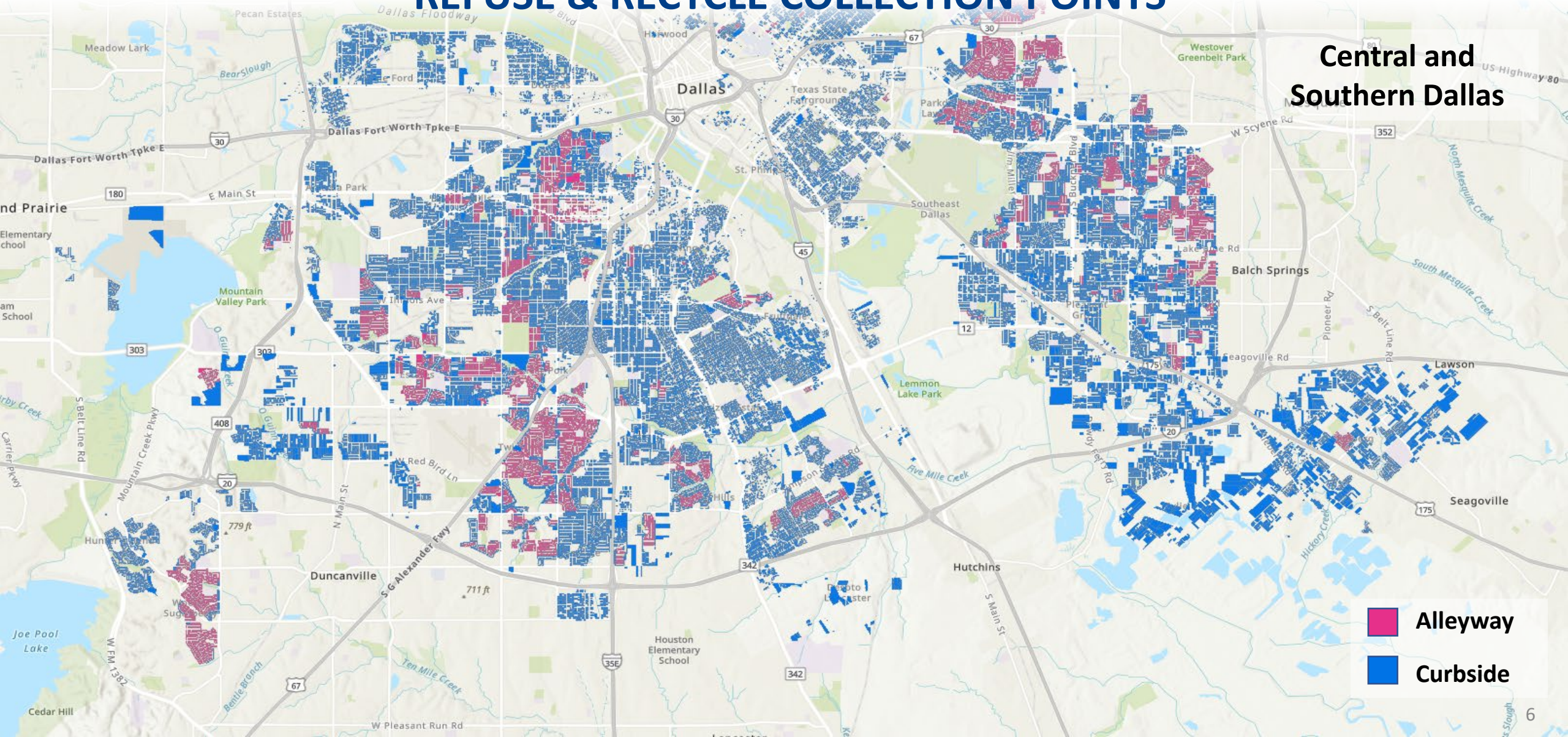
- Alleyway
- Sunnyvale
- Curbside

Background



REFUSE & RECYCLE COLLECTION POINTS

Central and Southern Dallas



- Alleyway
- Curbside

Collection Points By Area



Collection Points by Sanitation District

	Southeast	Southwest	Northwest	Northeast	Central	TOTAL
Alleyway	4,275	14,040	30,492	33,343	16,079	98,229
8ft or <	2,317	6,186	15,155	12,534	7,988	44,180
9ft	132	379	1,082	831	598	3,022
10ft or >	1,826	7,475	14,255	19,978	7,493	51,027
Curb	46,694	38,866	22,461	18,978	33,550	160,549
TOTAL	50,969	52,906	52,953	52,321	49,629	258,778

Collection Points by City Council District

	CD1	CD2	CD3	CD4	CD5	CD6	CD7	CD8	CD9	CD10	CD11	CD12	CD13	CD14	TOTAL
Alleyway	3,568	3,041	7,511	2,933	5,032	2,744	6,459	2,730	11,821	11,522	10,149	11,883	15,433	3,403	98,229
8 ft or <	2,144	2,342	2,611	1,936	2,630	1,879	2,458	1,169	8,000	3,565	3,041	544	9,774	2,087	44,180
9 ft	75	145	305	43	98	74	388	27	300	376	56	560	481	94	3,022
10 ft or >	1,349	554	4,595	954	2,304	791	3,613	1,534	3,521	7,581	7,052	10,779	5,178	1,222	51,027
Curb	18,074	12,354	12,016	21,036	16,429	10,417	12,570	16,951	10,578	3,684	2,998	4,193	7,678	11,571	160,549
TOTAL	21,642	15,395	19,527	23,969	21,461	13,161	19,029	19,681	22,399	15,206	13,147	16,076	23,111	14,974	258,778



Current Collection Procedures



- **Curbside collection (~160,000 locations)**
 - Best practice for residential solid waste collections
 - Primarily serviced by automated side load trucks (~45% of fleet)
 - 1 driver/operator
 - Typically up to 233 collections per hour in most areas
 - More maneuverable for larger trucks
 - Primary hazards are mailboxes and parked cars
 - Increased service reliability



Current Collection Procedures

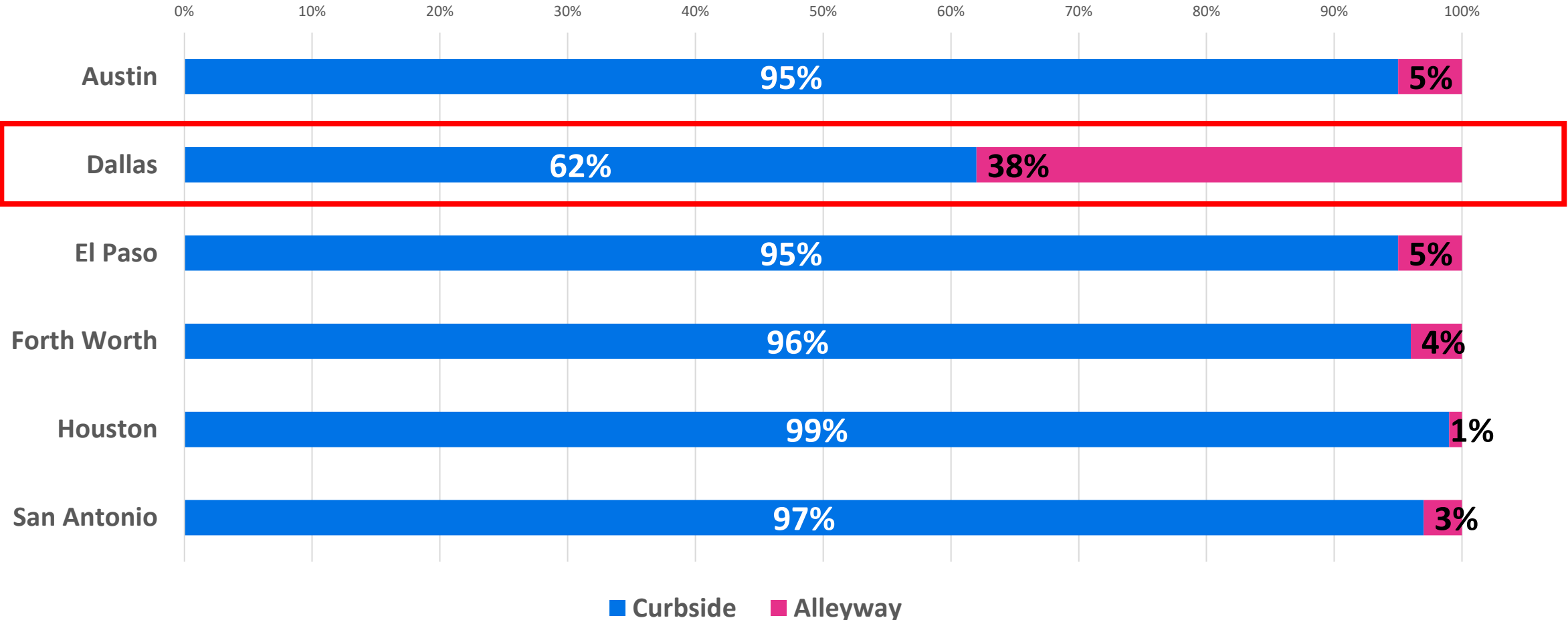


- **Alleyway collections (~98,000 locations)**
 - Legacy service pre-dating modern solid waste management best practices
 - Primarily serviced by rear-load trucks (~55% of fleet)
 - 1 driver, 2 helpers (contracted temporary laborers)
 - Typically 125 collections per hour in most areas
 - Alley pavement and right-of-way often too narrow for trucks to operate appropriately, and for carts to be placed in compliance with regulations
 - Hazards include extreme heat and cold, overhead utility lines, gas meters, retaining walls, embankments, fences, and ruts
 - Alleyway Service Criteria provides decision criteria for changing point-of-service to curb (*see Appendix A*)

Current Collection Procedures



Curbside vs. Alleyway Collections in Major Texas Cities



Source: Survey of solid waste directors of subject cities on June 11, 2024





VIDEO OF ALLEY INCIDENTS



Current Collection Procedures



- **Special Collections**

- Helping Hands Program
 - Cart collection assistance for physically disabled customers without an able-bodied adult residing in the home
 - Sanitation driver retrieves cart from collection point at side of home, empties and returns
 - No additional monthly charge
- Pack-Out Collection Service
 - Same service as Helping Hands
 - Available to all customers
 - \$132.29/month



Temporary Labor



- Approximately 160 temporary laborers staff rear-load trucks daily to empty rollcars
- Temporary labor staffing agency utilized due to high turn-over nature of work, ensuring daily staffing needs are met
- \$10 million cost in FY 2022-23
 - FY21 living wage of \$15.21/hour
- Work consistently in the top 10 deadliest jobs as reported by U.S. Bureau of Labor Statistics¹

1. Census of Fatal Occupational Injuries, 2022, Civilian occupations with high fatal work injury rates, U.S. Bureau of Labor Statistics, <https://www.bls.gov/charts/census-of-fatal-occupational-injuries/civilian-occupations-with-high-fatal-work-injury-rates.htm>

Service & Cost Comparison



	Curbside <i>Primarily serviced by Automated Side-Load Trucks</i>	Alleyway <i>Primarily serviced by Rear-Load Trucks</i>
Collection Points	160,000	98,000

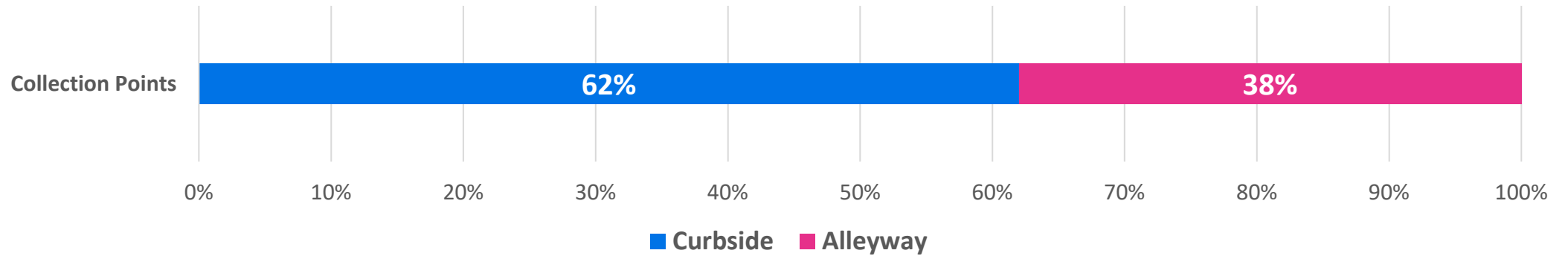
	Automated Side-Load Truck <i>Primarily used for Curbside Collections</i>	Rear-Load Truck <i>Primarily used for Alleyway Collections</i>
Number of Trucks	94	114
Number of Staff / Temp. Labor	94	342
FY23 Approx. Total Operating Cost	\$11.2 million	\$18.1 million



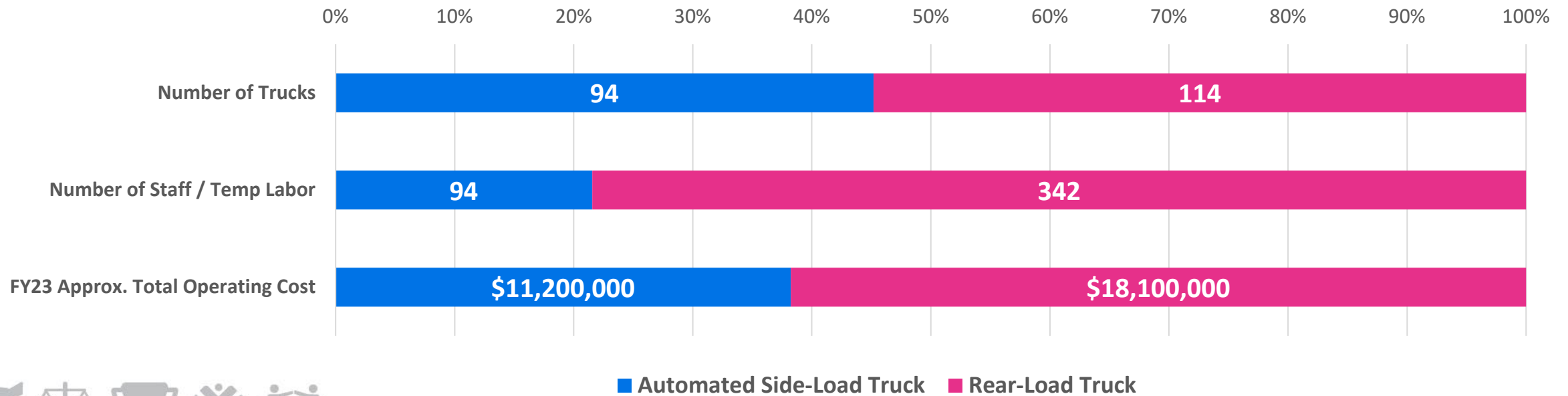
Service & Cost Comparison



Curbside vs. Alleyway Collection Points



Automated Side-Load Trucks vs. Rear-Load Trucks



Sanitation Rate History



Monthly Sanitation Utility Rate FY 2018-19 through FY 2023-24

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Residential Rate	\$28.64	\$30.52	\$34.30	\$35.81	\$37.98
<i>Percent increase from previous year</i>	4.9%	6.6%	12.4%	4.4%	6.1%

- Rate supports total cost of Sanitation collection utility
 - Garbage, recycle, brush and bulky waste collection
 - Household chemical drop-off and collection events
 - Support service functions
- 32.6% increase since FY 2019-20
 - Personnel
 - Temporary labor
 - Equipment acquisition, fuel, maintenance
 - Contractor services



Summary



- Majority of Dallas already receives curbside refuse and recycle collection
- Most areas serviced via alleyway can be serviced more safely and efficiently from the curb with automated side-load trucks
- Rear-load trucks make up more than half the fleet, cost \$7 million more to operate per year, and primarily service the 38% of customers receiving alley collection
- Curbside collection with automated trucks can service nearly twice the number of locations in a day with 1/3 the staff
- More trucks assigned to northern Sanitation districts of the City than the southern districts to accommodate slow alley collections
- Rear-load truck work is dangerous and should be replaced with a more efficient and safer method



Recommended Action



- Sanitation to revise its current Alley Service Criteria
 - Phased transition to curbside collections in areas currently serviced in alleyways:
 - 12 months – 8 ft wide alleys
 - 18 months – 9 ft wide alleys
 - 24 months – All other alleys not safe or efficient to operate in
 - Special consideration for hilly areas with steep front-yards and other unique circumstances
- As rear-load trucks age out of service, replace with automated collection trucks



Benefits of Recommended Action



- Safer, more efficient and consistent service delivery
- Achieve CECAP goal related to solid waste collection efficiency, reducing miles driven and supporting improvements to air quality
- Significant reduction in temporary laborer staffing
- Opportunity to reduce fleet size
- Further standardization of equipment, and the skills and processes to maintain
- Slow the growth of the Sanitation utility rate

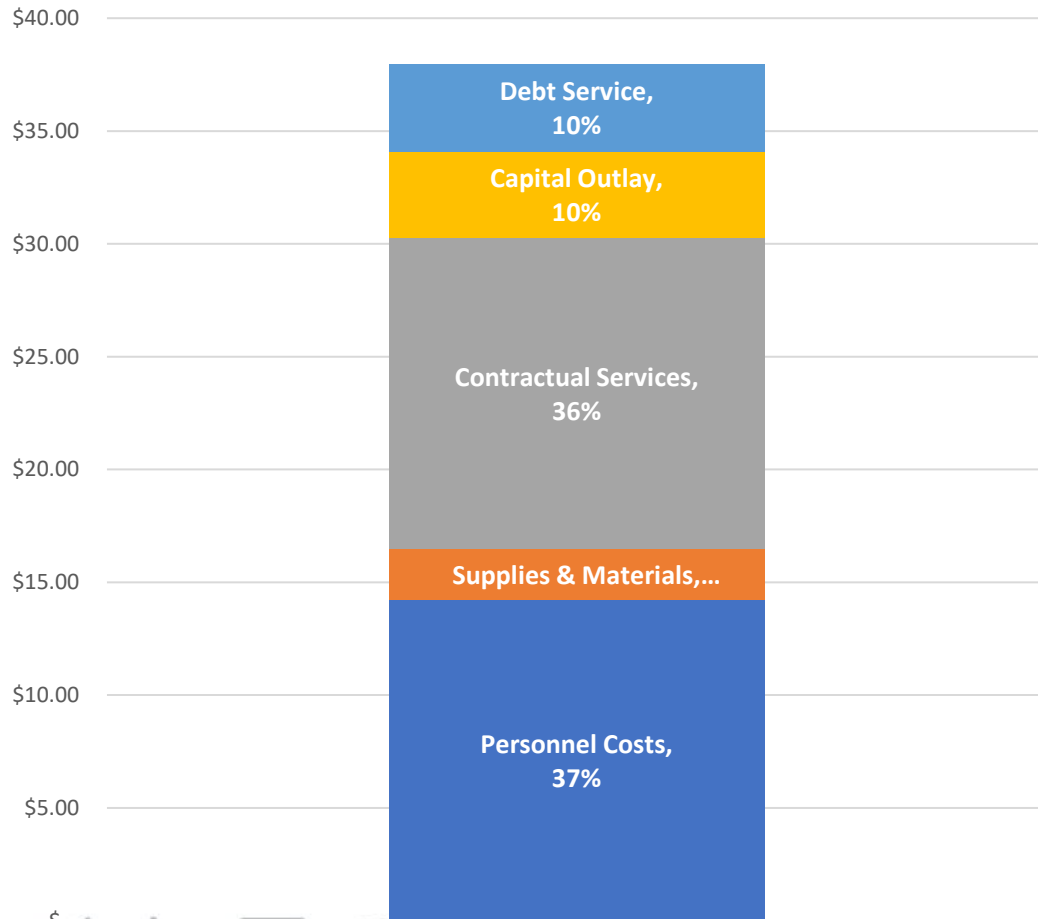


Rate Impact



Monthly Sanitation Utility Rate – Current 5-Year Forecast

Residential Rate Components



	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
Projected Residential Rate	\$39.38	\$40.61	\$42.11	\$43.71	\$45.37
Percent increase from previous year	3.7%	3.1%	3.7%	3.8%	3.8%

- Average rate increase is 3.6% annually over the next 5 years
- Main drivers of this increase are personnel and contractual services (73% of the rate)
- Each dollar in the rate generates approximately \$2.9M
- Reducing personnel and contractual expenses could result in significant impacts to the overall rate
- Rate study in progress to evaluate impact of implementation of recommended action



Next Steps



- Gather and integrate feedback from City Council
- Further assess route conditions, accounting for pavement and right-of-way widths, pavement conditions, utility poles and lines, topography, and other operating constraints
- Develop revised Alley Service Criteria for phased transition from alleyway to curbside collections
- Complete rate analysis for switch to automated curbside collections
- Brief City Council in Q1 FY 2024-25 on revised Alley Service Criteria

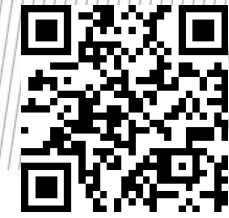




APPENDIX



Appendix A: Alley Service Criteria



Regarding alley collection service, Dallas City Code Section 18-4(b) provides, in part, "except as may be otherwise authorized by the director of sanitation, it shall be unlawful for any person to place any container within any alley within the city."

Sanitation provides residential recycling and garbage collection services from the curbside in front of homes, or from alleyways, by exception, when conditions and route efficiency permits.

In general, Sanitation can safely and efficiently provide service in alleyways that are well maintained and meet current design standards as provided in the Dallas Development Code, Sec. 51A-8.507(b), which provides, in part, that:

- Alleys must have a minimum right-of-way of 15 feet in width.
- Alleys must consist of at least 10 feet of pavement.
- Permanent dead-end alleys are not allowed unless all access is prohibited between the alley and public rights-of-way. Alleys must either intersect with a dedicated public or private undivided street or an existing alley.
- Where an alley intersects a street, a 15-foot visibility triangle (alley sight easement) is required.
- A rollcart must be placed for collection so that there is a minimum clearance of three feet to each side of the rollcart and one and one-half feet to the rear of the rollcart from any fence, gas meter, telephone pole, utility box, tree, shrub, additional collection container, or other potential obstruction. A rollcart must be placed so that its handle faces the dwelling unit (Sec. 18-3(a)(3)(A)).

In addition to the Development Code requirements, in order to meet the requirements for rollcart placement listed above, generally, a minimum 2-foot utility easement abutting the alley right-of-way is required for each side where collections occur. The ground should be at-grade with the pavement to allow crews to wheel rollcarts to the trucks without lifting. The easement requirement may be waived in cases of rear-entry driveway access where all rollcarts on the block may be placed at the edge of the driveway, or where an at-grade fence carve-out exists and meets the clearance requirements. Vegetation must not extend into the right-of-way, and 14 feet of overhead clearance is required.

Sanitation may determine that collections must occur from the curb even when an alleyway meets the conditions stated above. This may be necessary to support routing requirements based on available staff and equipment resources, or when it would be inefficient to provide service in one or several alley segments in an area otherwise serviced from the curb.

In cases where Sanitation currently services alleyways that do not meet the requirements stated above, upon the occurrence of an incident such as downed powerlines or damaged utility poles, damage to a gas meter or utility box, damaged City equipment, having to be towed or backed out under supervision, or repeat minor damage to the right-of-way or private property, Sanitation will suspend alleyway collections at the location and notify customers of a point-of-service change pending further review and remediation of issues impeding Sanitation's safe transit and operations in the alleyway, in accordance with the requirements stated above. A point-of-service change may also be required for customers in the vicinity of the location in order to maintain timely and efficient operations.

Consult Article I of the Dallas Municipal Solid Waste Code for further regulations related to recycling and solid waste collection. The collection rules are summarized and presented in a more user-friendly format on our website at DallasCityHall.com/Sanitation.



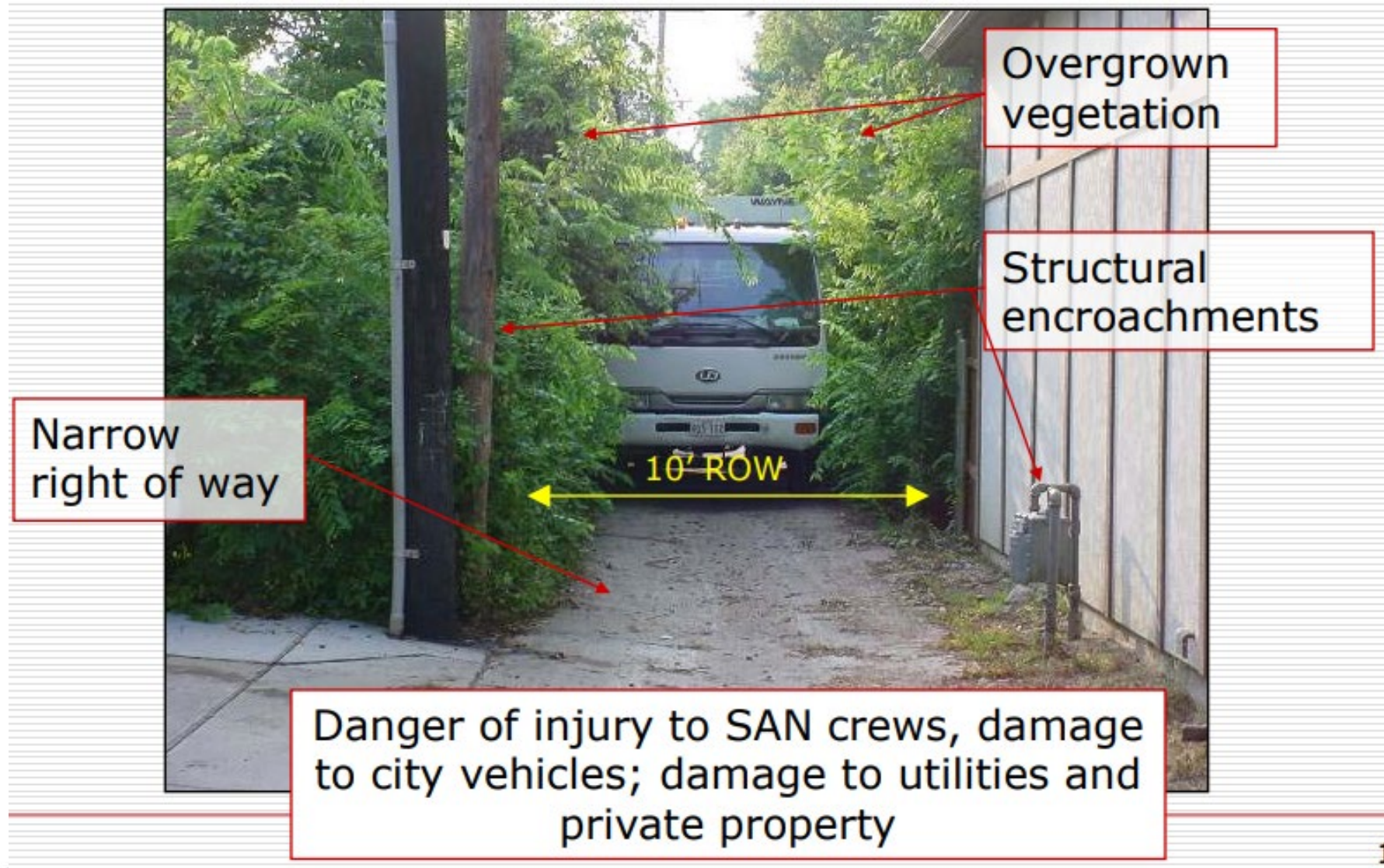
Appendix B – Ideal Alley Conditions



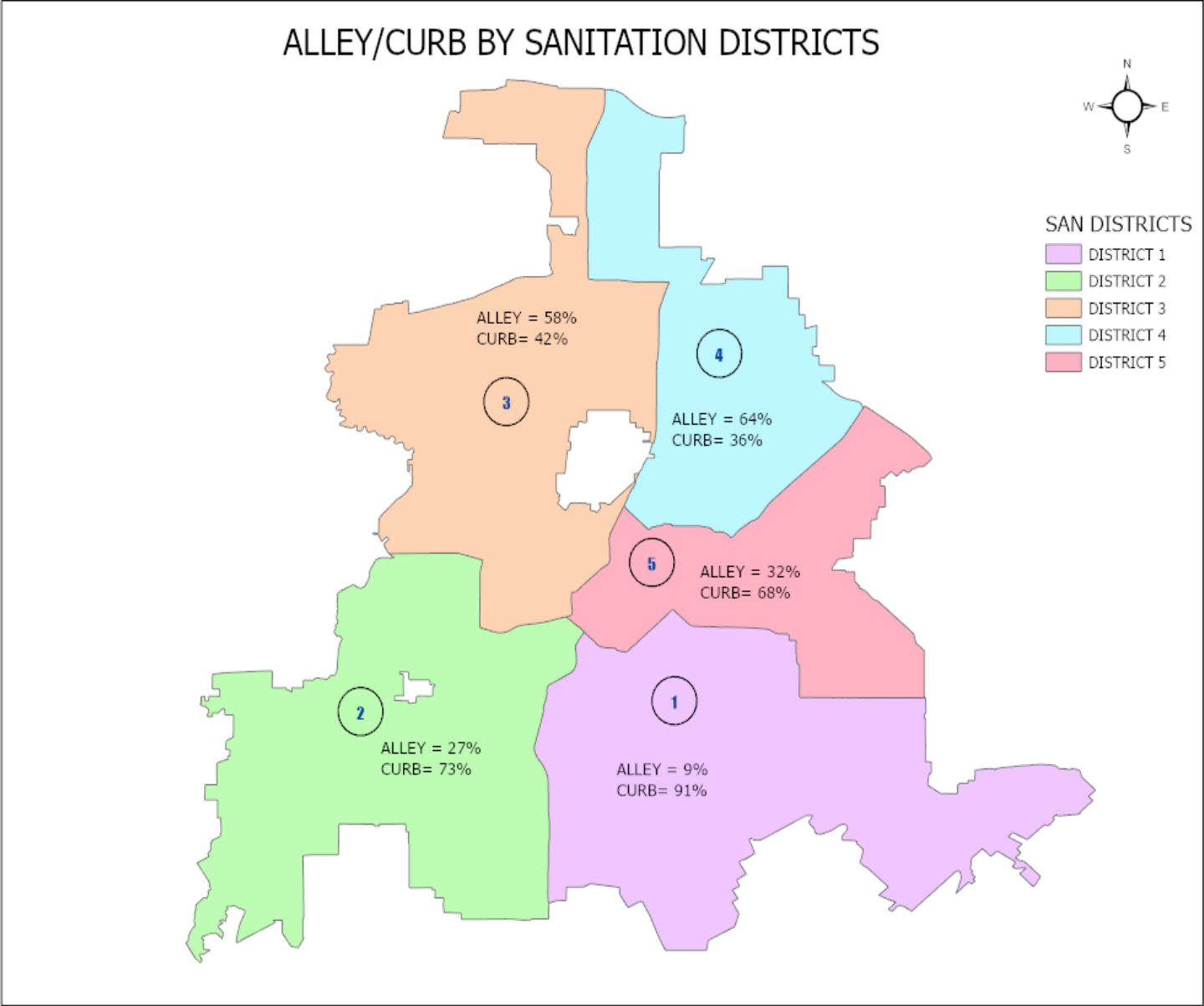
Appendix C – Common Alley Conditions



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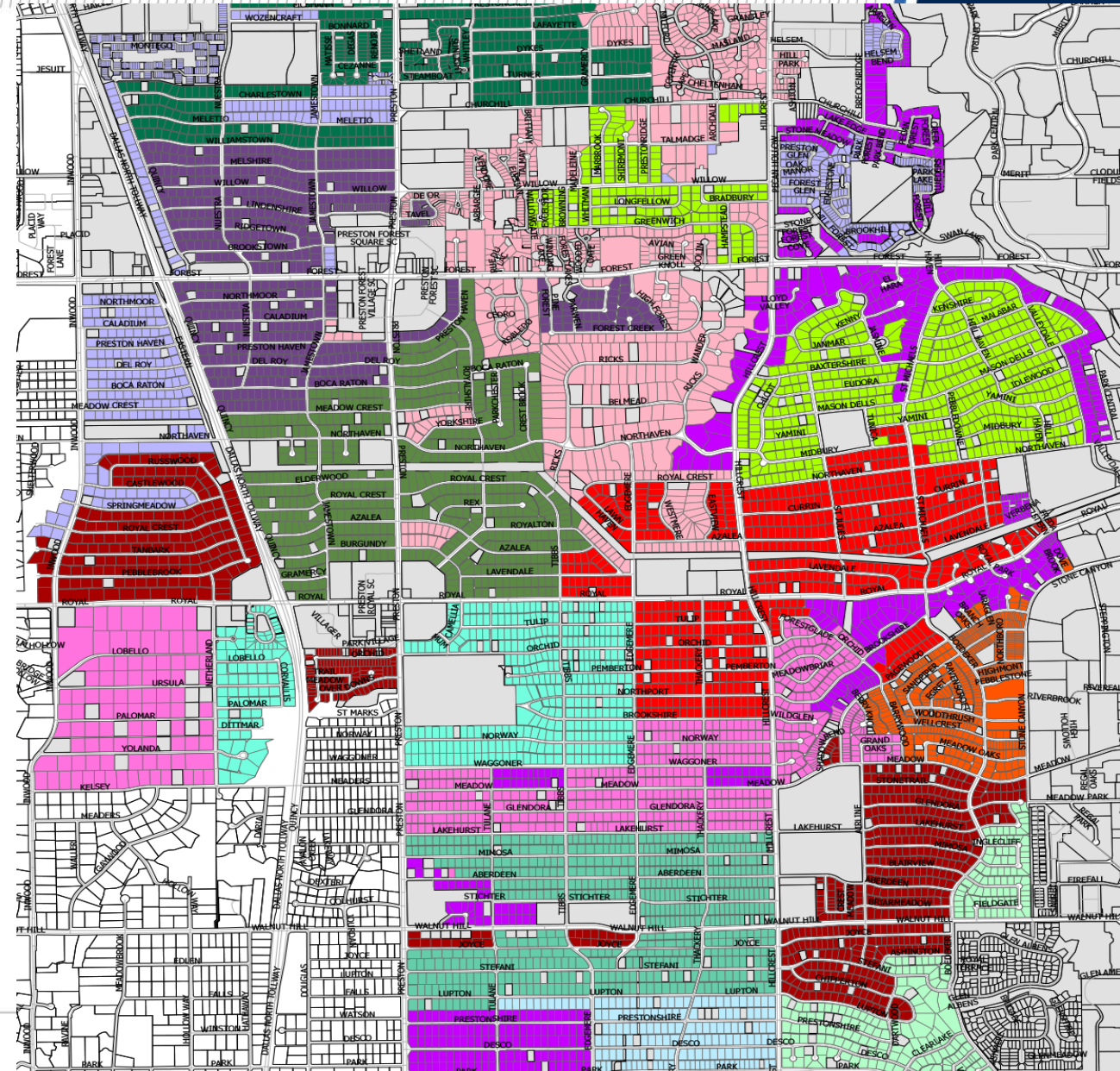
Appendix D – Alley/Curb Collection Points



Appendix E – Routing Example



- Typical route maps
 - Colors represent different routes on a service day in one district
 - Many routes are noncontiguous in order to match with trucks that can fit in alleyways





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