

Appendix D

Traffic Demand Assessment Summary

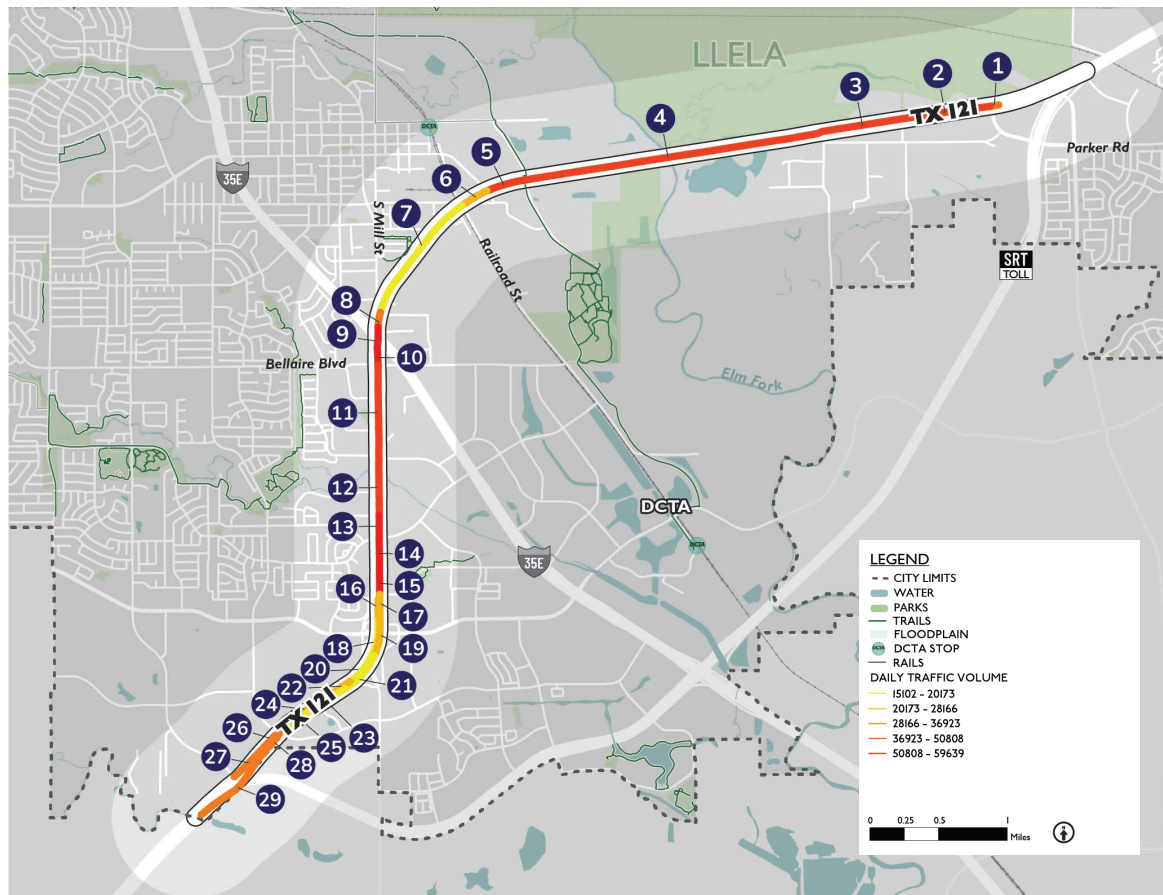


BUSINESS 121 CORRIDOR PLAN

TRAFFIC DEMAND
ASSESSMENT
JULY 2024

2023 DAILY TRAFFIC VOLUME

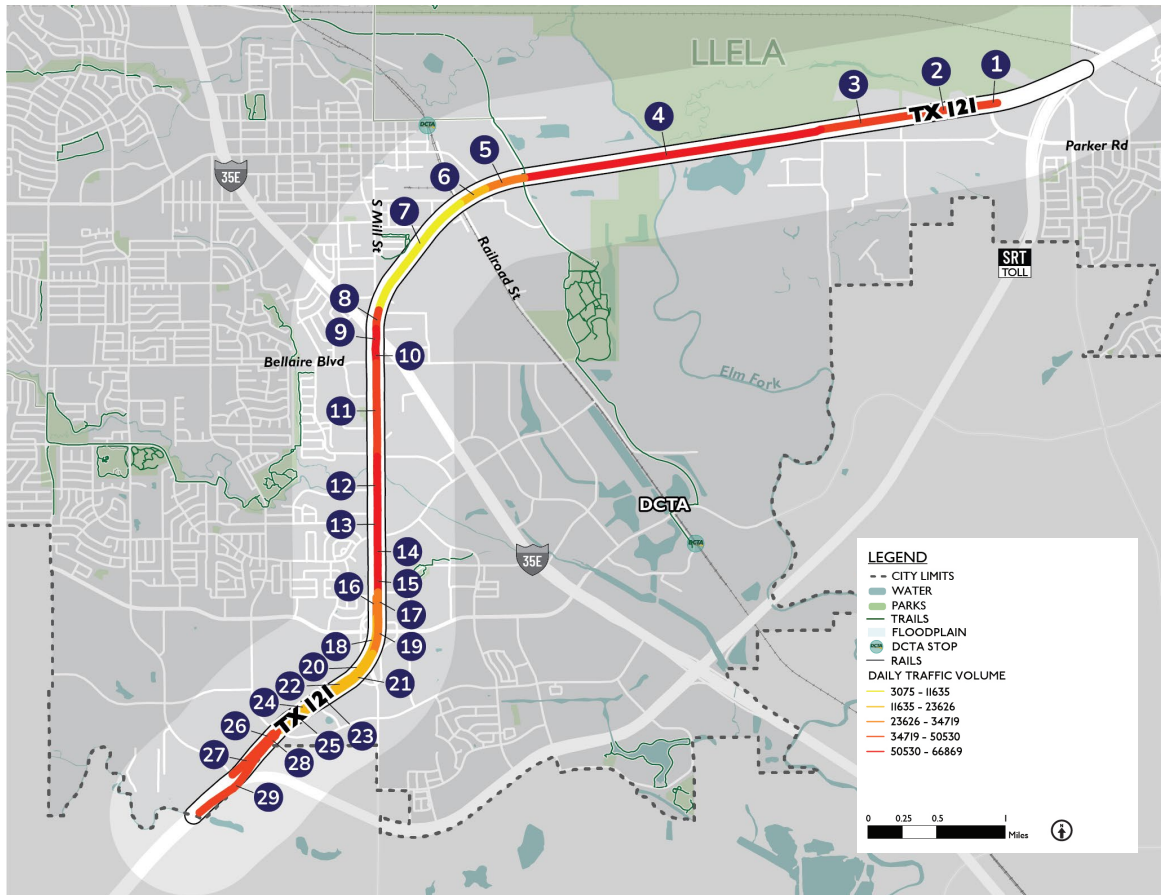
Source: NCTCOG Travel Demand Model



ID	Roadway Segment	Daily Traffic Volume	Daily Truck Volume	% Truck Traffic
1	SRT merge to FM 544	34,013	1,737	5.1%
2/3	FM 544 to Huffines	46,069	2,552	5.5%
4	Huffines to Valley Ridge	50,808	2,626	5.2%
5	Valley Ridge to Main	45,317	2,263	5.0%
6	Main to Railroad	23,098	1,587	6.9%
7	Railroad to Texas	15,102	1,189	7.9%
8	Texas to I-35E NB Frontage	34,756	2,511	7.2%
9	I-35E NB to SB Frontage	56,212	2,873	5.1%
10	I-35E SB Frontage to Bellaire	53,766	2,017	3.8%
11	Bellaire to Southwest	45,360	2,039	4.5%
12	Southwest to Valley View	49,609	2,094	4.2%
13	Valley View to Corporate	59,639	2,238	3.8%
14/15	Corporate to Forestbrook	56,711	3,445	6.1%
16	121 SB between ramps	28,166	1,839	6.5%
17	121 NB between ramps	27,812	1,602	5.8%
18	121 SB at Round Grove	20,173	1,588	7.9%
19	121 NB at Round Grove	27,168	1,599	5.9%
20	121 SB merge	20,713	1,588	7.7%
21	121 NB merge	18,191	1,355	7.4%
22	121 SB merge to High Point Oaks	22,531	1,712	7.6%
23	121 NB merge to High Point Oaks	19,859	1,480	7.5%
24	121 SB High Point Oaks to Vista Ridge	22,531	1,712	7.6%
25	121 NB High Point Oaks to Vista Ridge	19,859	1,480	7.5%
26/27	121 SB Vista Ridge to Valley Pkwy	35,660	2,031	5.7%
28	121 NB Ramp	36,677	1,915	5.2%
29	121 NB Ramp to Valley Pkwy	36,923	1,918	5.2%

2045 FORECASTED DAILY TRAFFIC VOLUME

Source: NCTCOG Travel Demand Model



ID	Roadway Segment	Daily Traffic Volume	Daily Truck Volume	% Truck Traffic
1	SRT merge to FM 544	38,360	2,127	5.5%
2	FM 544 to Fish Hatchery	47,109	2,715	5.8%
3	Fish Hatchery to Huffines	46,535	2,699	5.8%
4	Huffines to Valley Ridge	53,791	2,911	5.4%
5	Valley Ridge to Main	34,719	2,187	6.3%
6	Main to Railroad	19,305	1,013	5.2%
7	Railroad to Texas	11,636	639	5.5%
8	Texas to I-35E NB Frontage	44,094	2,188	5.0%
9	I-35E NB to SB Frontage	56,254	2,076	3.7%
10	I-35E SB Frontage to Bellaire	63,394	2,011	3.2%
11	Bellaire to Southwest	50,530	2,117	4.2%
12	Southwest to Valley View	54,959	2,184	4.0%
13	Valley View to Corporate	66,870	2,275	3.4%
14/15	Corporate to Forestbrook	65,141	3,465	5.3%
16	121 SB between ramps	32,198	1,724	5.4%
17	121 NB between ramps	31,102	1,709	5.5%
18	121 SB at Round Grove	20,841	1,461	7.0%
19	121 NB at Round Grove	29,930	1,701	5.7%
20	121 SB merge	20,841	1,461	7.0%
21	121 NB merge	16,022	1,332	8.3%
22	121 SB merge to High Point Oaks	23,626	1,563	6.6%
23	121 NB merge to High Point Oaks	18,027	1,453	8.1%
24	121 SB High Point Oaks to Vista Ridge	22,922	1,561	6.8%
25	121 NB High Point Oaks to Vista Ridge	17,756	1,453	8.2%
26/27	121 SB Vista Ridge to Valley Pkwy	39,963	2,143	5.4%
28/29	121 NB Ramp to Valley Pkwy	40,363	2,247	5.6%

2023 – 2045 CHANGE IN TRAFFIC VOLUMES

Source: NCTCOG Travel Demand Model

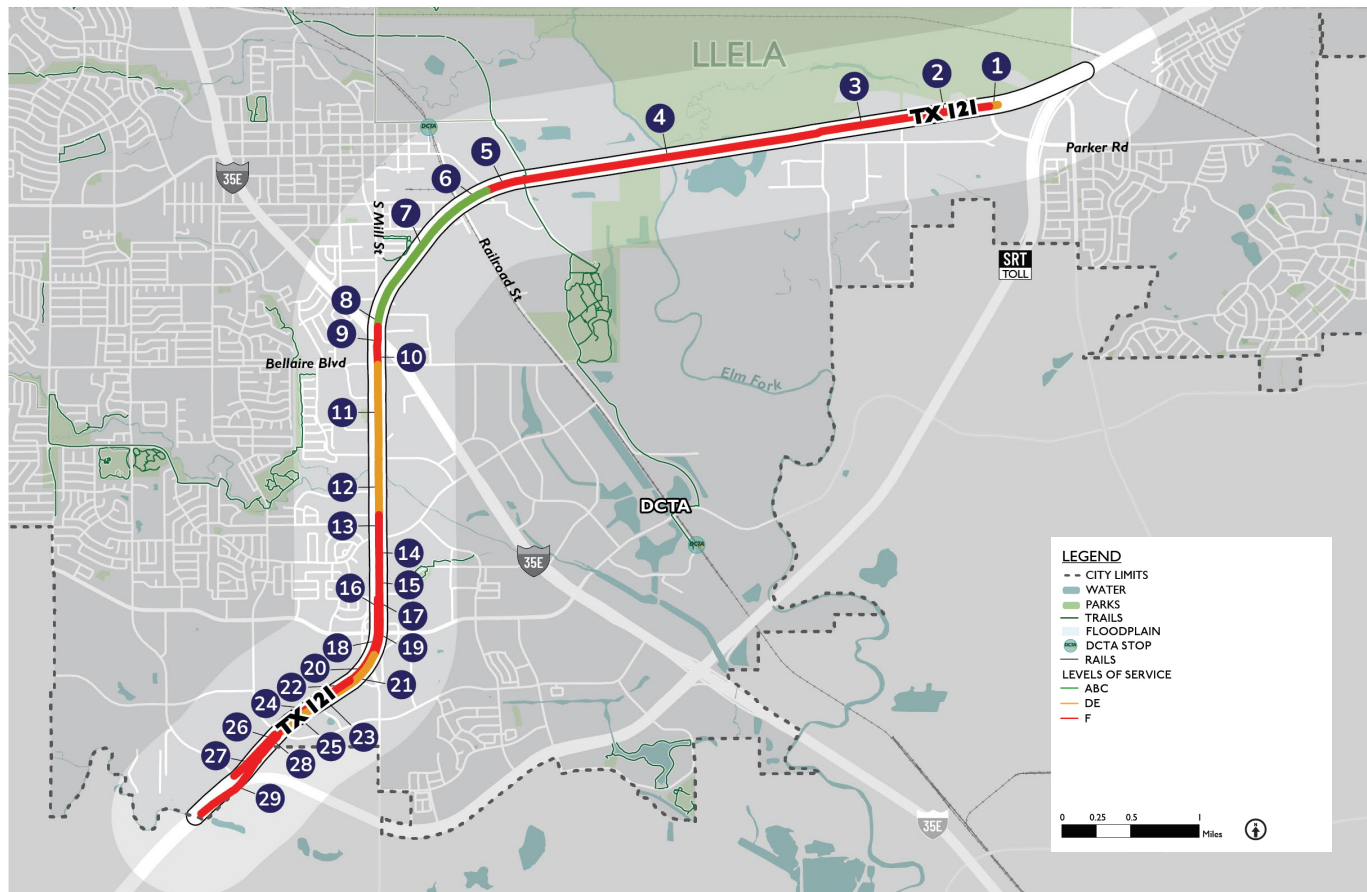
KEY TAKEAWAYS – TRAFFIC VOLUMES

- In 2023, the **Corporate Drive sub-area and the I-35E interchange** experienced **the highest traffic volumes**; this is projected to remain the same in 2045
- **Total projected increase** in traffic volumes along corridor from 2023 to 2045 is **66,592 daily trips**, which equates to a **6.4% increase**
- Roadway segments that are anticipated to **experience less traffic in 2045** than they do today are primarily from **Valley Ridge to Texas St**
- **Total truck traffic volumes** are expected to decrease along the corridor from 2023 to 2045 by 748 daily trips, which equates to a **1.3% decrease**

ID	Roadway Segment	Overall Traffic Volumes		Truck Traffic Volumes	
		Absolute Change	% Change	Absolute Change	% Change
1	SRT merge to FM 544	+ 4,347	12.8%	+ 390	22.5%
2	FM 544 to Fish Hatchery	+ 1,040	2.3%	+ 163	6.4%
3	Fish Hatchery to Huffines	+ 466	1.0%	+ 147	5.8%
4	Huffines to Valley Ridge	+ 2,983	5.9%	+ 285	10.9%
5	Valley Ridge to Main	- 10,598	-23.4%	- 76	-3.4%
6	Main to Railroad	- 3,793	-16.4%	- 574	-36.2%
7	Railroad to Texas	- 3,466	-23.0%	- 550	-46.3%
8	Texas to I-35E NB Frontage	+ 9,388	26.9%	- 323	-12.9%
9	I-35E NB to SB Frontage	+ 42	0.1%	- 797	-27.7%
10	I-35E SB Frontage to Bellaire	+ 9,628	17.9%	- 6	-0.3%
11	Bellaire to Southwest	+ 5,170	11.4%	+ 78	3.8%
12	Southwest to Valley View	+ 5,350	10.8%	+ 90	4.3%
13	Valley View to Corporate	+ 7,231	12.1%	+ 37	1.7%
14/15	Corporate to Forestbrook	+ 8,430	14.9%	+ 20	0.6%
16	121 SB between ramps	+ 4,032	14.3%	- 115	-6.3%
17	121 NB between ramps	+ 3,290	11.8%	+ 107	6.7%
18	121 SB at Round Grove	+ 668	3.3%	- 127	-8.0%
19	121 NB at Round Grove	+ 2,762	10.2%	+ 102	6.4%
20	121 SB merge	+ 128	0.6%	- 127	-8.0%
21	121 NB merge	- 2,169	-11.9%	- 23	-1.7%
22	121 SB merge to High Point Oaks	+ 1,095	4.9%	- 149	-8.7%
23	121 NB merge to High Point Oaks	- 1,832	-9.2%	- 27	-1.8%
24	121 SB High Point Oaks to Vista Ridge	+ 391	1.7%	- 151	-8.8%
25	121 NB High Point Oaks to Vista Ridge	- 2,103	-10.6%	- 27	-1.8%
26/27	121 SB Vista Ridge to Valley Pkwy	+ 4,303	12.1%	+ 112	5.5%
28	121 NB Ramp	+ 3,686	10.0%	+ 332	17.3%
29	121 NB Ramp to Valley Pkwy	+ 3,440	9.3%	+ 329	17.2%

2023 LEVEL OF SERVICE

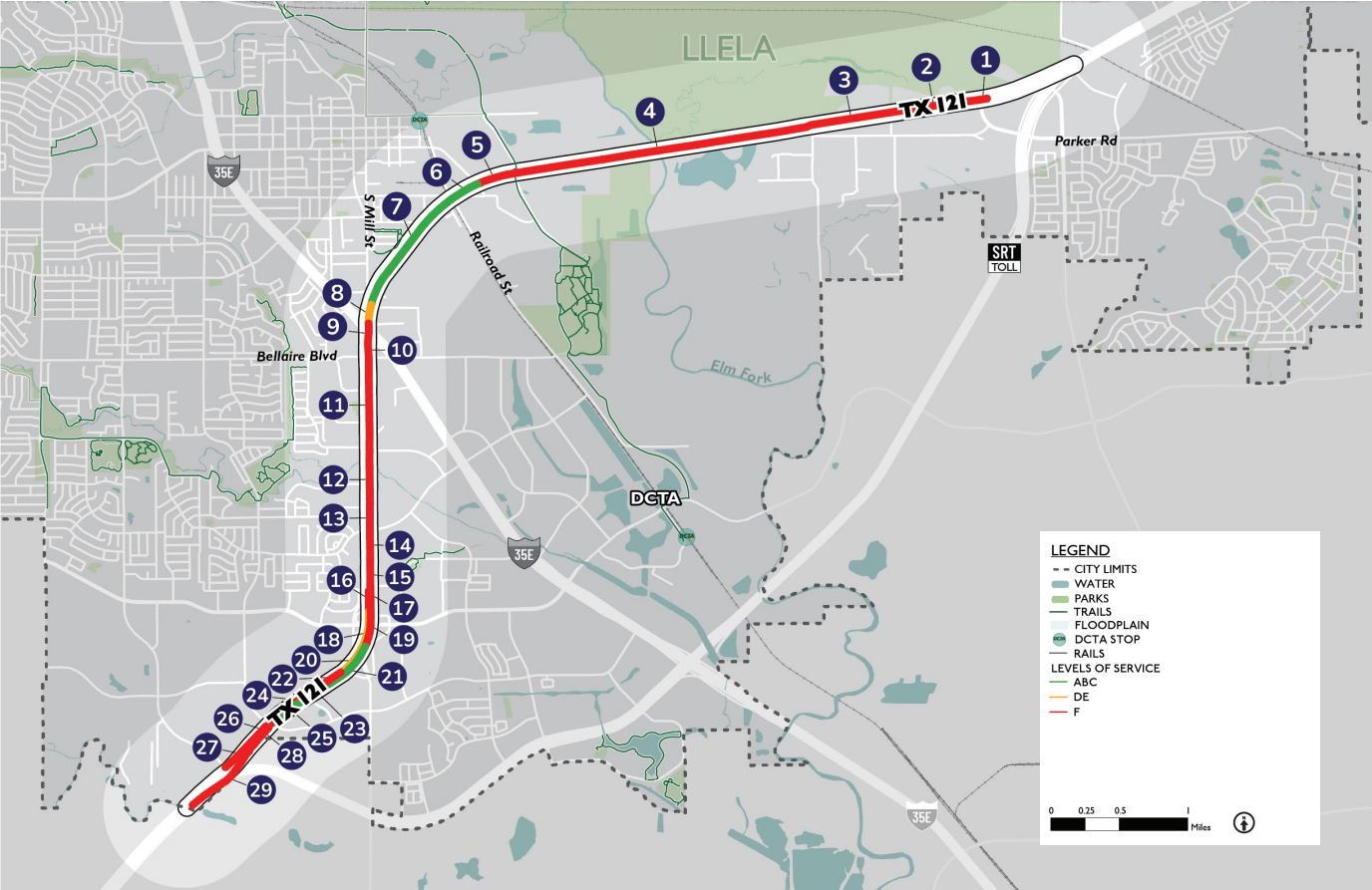
Source: NCTCOG Travel Demand Model



ID	Roadway Segment	LOS
1	SRT merge to FM 544	DE
2/3	FM 544 to Huffines	F
4	Huffines to Valley Ridge	F
5	Valley Ridge to Main	F
6	Main to Railroad	ABC
7	Railroad to Texas	ABC
8	Texas to I-35E NB Frontage	ABC
9	I-35E NB to SB Frontage	ABC
10	I-35E SB Frontage to Bellaire	F
11	Bellaire to Southwest	F
12	Southwest to Valley View	DE
13	Valley View to Corporate	F
14/15	Corporate to Forestbrook	F
16	121 SB between ramps	F
17	121 NB between ramps	F
18	121 SB at Round Grove	F
19	121 NB at Round Grove	F
20	121 SB merge	F
21	121 NB merge	DE
22	121 SB merge to High Point Oaks	F
23	121 NB merge to High Point Oaks	DE
24	121 SB High Point Oaks to Vista Ridge	F
25	121 NB High Point Oaks to Vista Ridge	DE
26/27	121 SB Vista Ridge to Valley Pkwy	F
28	121 NB Ramp	F
29	121 NB Ramp to Valley Pkwy	F

2045 FORECASTED LEVEL OF SERVICE

Source: NCTCOG Travel Demand Model



ID	Roadway Segment	LOS
1	SRT merge to FM 544	F
2/3	FM 544 to Huffines	F
4	Huffines to Valley Ridge	F
5	Valley Ridge to Main	F
6	Main to Railroad	ABC
7	Railroad to Texas	ABC
8	Texas to I-35E NB Frontage	DE
9	I-35E NB to SB Frontage	F
10	I-35E SB Frontage to Bellaire	F
11	Bellaire to Southwest	F
12	Southwest to Valley View	F
13	Valley View to Corporate	F
14/15	Corporate to Forestbrook	F
16	121 SB between ramps	F
17	121 NB between ramps	F
18	121 SB at Round Grove	DE
19	121 NB at Round Grove	F
20	121 SB merge	DE
21	121 NB merge	ABC
22	121 SB merge to High Point Oaks	F
23	121 NB merge to High Point Oaks	ABC
24	121 SB High Point Oaks to Vista Ridge	F
25	121 NB High Point Oaks to Vista Ridge	ABC
26/27	121 SB Vista Ridge to Valley Pkwy	F
28	121 NB Ramp	F
29	121 NB Ramp to Valley Pkwy	F

2023 – 2045 CHANGE IN LEVEL OF SERVICE

Source: NCTCOG Travel Demand Model

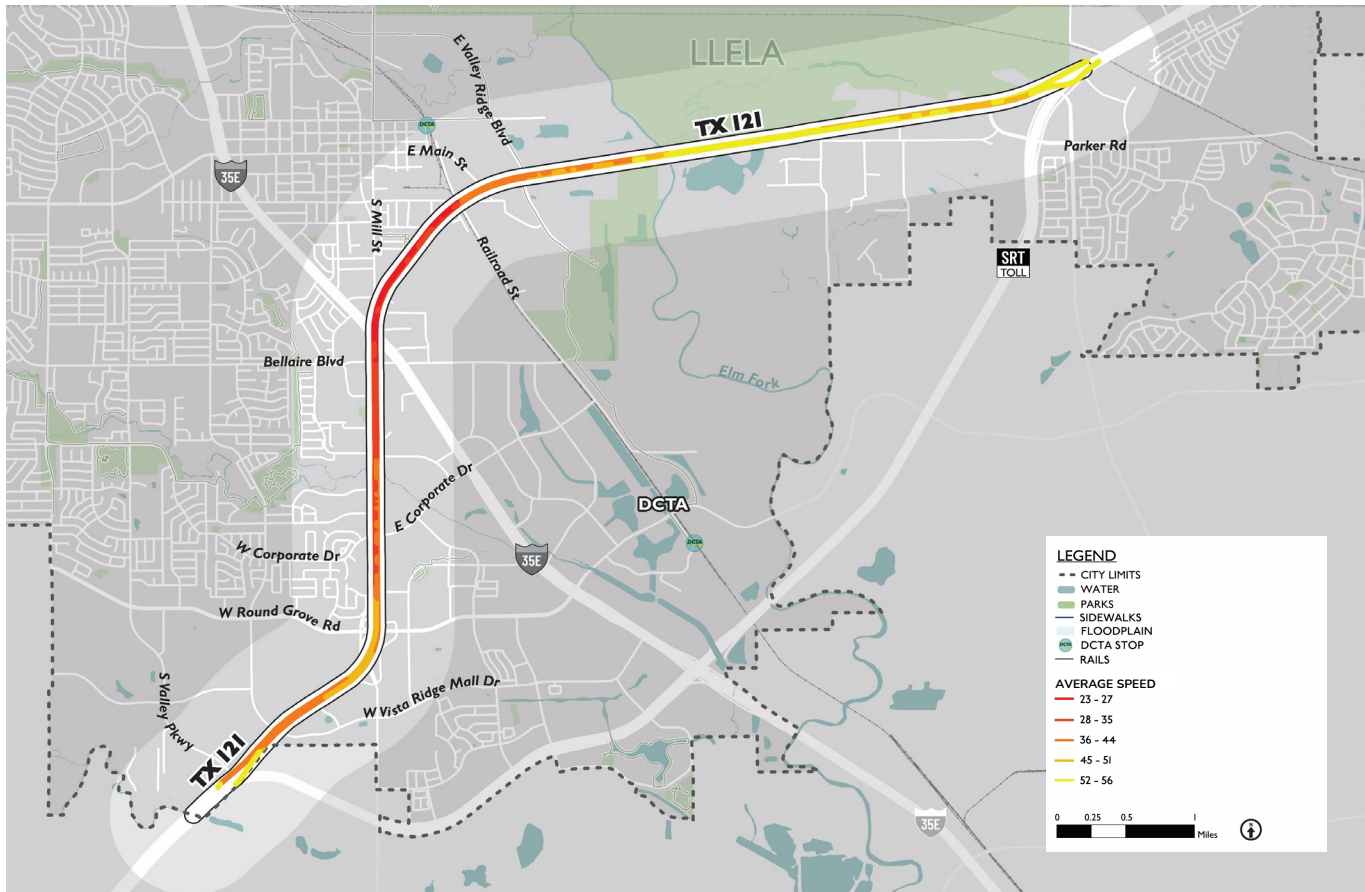
KEY TAKEAWAYS – LEVEL OF SERVICE

- Level of service is a measure that evaluates the level of congestion based on the **speed and number of vehicles** on a given roadway segment.
- A designation of **ABC represents free-flowing conditions** while **LOS F is stop and go traffic**.
- In 2023 and 2045, the area between **Main to Texas** is the only segment that is **LOS ABC** in both forecast years
- The majority of segments **maintained the same level of service** from 2023 to 2045
- Some segments south of Round Grove are anticipated to **experience an improvement** in level of service between 2023 to 2045

ID	Roadway Segment	2023 LOS	2045 LOS	2023 to 2045 Change
1	SRT merge to FM 544	DE	F	↓
2/3	FM 544 to Huffines	F	F	=
4	Huffines to Valley Ridge	F	F	=
5	Valley Ridge to Main	F	F	=
6	Main to Railroad	ABC	ABC	=
7	Railroad to Texas	ABC	ABC	=
8	Texas to I-35E NB Frontage	ABC	DE	↓
9	I-35E NB to SB Frontage	ABC	F	↓
10	I-35E SB Frontage to Bellaire	F	F	=
11	Bellaire to Southwest	F	F	=
12	Southwest to Valley View	DE	F	↓
13	Valley View to Corporate	F	F	=
14/15	Corporate to Forestbrook	F	F	=
16	121 SB between ramps	F	F	=
17	121 NB between ramps	F	F	=
18	121 SB at Round Grove	F	DE	↑
19	121 NB at Round Grove	F	F	=
20	121 SB merge	F	DE	↑
21	121 NB merge	DE	ABC	↑
22	121 SB merge to High Point Oaks	F	F	=
23	121 NB merge to High Point Oaks	DE	ABC	↑
24	121 SB High Point Oaks to Vista Ridge	F	F	=
25	121 NB High Point Oaks to Vista Ridge	DE	ABC	↑
26/27	121 SB Vista Ridge to Valley Pkwy	F	F	=
28	121 NB Ramp	F	F	=
29	121 NB Ramp to Valley Pkwy	F	F	=

2023 AVERAGE SPEED

Source: Replica



Along the corridor, average speeds are lowest between Railroad Street and Southwest Parkway and are highest between the Elm Fork and Huffines.

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