Waco is a city in central Texas along the Brazos River and I-35, halfway between Dallas and Austin. It is the county seat of McLennan County. The city has an estimated population of 138,486 according to the 2020 census. This chapter provides information on the City of Waco's collision statistics from 2014 to 2023. A total of 7,159 collisions occurred on Waco streets in the last 10 years, including 77 fatalities and 495 serious injuries. TxDOT roadways within Waco city limits had 4,995 collisions during the same period, with 49 fatalities and 314 serious injuries. The majority of injury collisions in both City and TxDOT rights-of-way involved possible injuries, with 54 percent each in the City and TxDOT right-of-way.

| COLLISIONS 2014 TO 2023 Total Collisions | CITY |  | TxDOT |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 7159 | 100 \% | 4995 | 100 \% |
| Fatal Injury | 77 | 1.08 \% | 49 | 0.98 \% |
| Serious Injury | 495 | 6.91 \% | 314 | 6.29 \% |
| Minor Injury | 2711 | 37.87\% | 1923 | 38.50 \% |
| Possible Injury | 3876 | 54.14 \% | 2709 | 54.23 \% |
|  |  |  |  |  |
| Total Persons Involved | 10819 | 100 \% | 7936 | 100 \% |
| Fatal Injury | 79 | 0.73 \% | 53 | 0.67 \% |
| Serious Injury | 586 | 5.42 \% | 369 | 4.65 \% |
| Minor Injury | 3731 | 34.49\% | 2843 | 35.82\% |
| Possible Injury | 6423 | 59.37 \% | 4671 | 58.86 \% |



COLLISIONS BY MODE - CITY


COLLISIONS BY MODE - TXDOT





| 7 \% | $0 \%$ | 4 \% | 22 \% | 2 \% | Fatal Injury |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 \% | $5 \%$ | 27 \% | 35 \% | 8 \% | Serious Injury |
| 66 \% | $38 \%$ | 52 \% | 29 \% | $38 \%$ | Minor Injury |
| $17 \%$ | 57 \% | 18 \% | 14\% | 53 \% | Possible Injury |
| 100 \% | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |  |

[^0] TxDOT facilities, and Mclennan County across various categories. On city streets in Waco there were a total of 7,159 collisions, resulting in 10,819 persons injured. In comparison, there were a total of 7,159 collisions, resulting in 10,819 persons injured. In comparison,
TxDOT reported a total of 4,995 collisions resulting in 7,936 persons injured within Waco city limits. Please note that Farm to Market roads are included as city streets within the City of Waco collision analysis.

This section also identifies several major collision trends on Waco city streets, including broadside collisions, hit object collisions, right-of-way violations by automobiles, and collisions involving unsafe speeds. On TxDOT roadways, the prominent trends were broadside collisions, rear end collisions, unsafe speed violations, and right-of-way violations by automobiles. A detailed summary analyzing these collision trends is provided in the Collision Profile section of this chapter.

The pie charts below compare the severity of collisions on roadways with different speed limits. Of the speed limits examined, the charts indicate that roads with a 70 mph speed limit accounted for the highest proportion of severe injury collisions while roads with 65 mph accounted for the highest proportion of fatal injury collisions.

CITY : TxDOT
TOTAL COLLISIONS : TOTAL COLLISIONS
10819 : 7936
TOTAL PERSONS INJURED : TOTAL PERSONS INJURED

| PERSONS INVOLVED |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CITY |  |  |  | TxDOT |  |  |  |
| MODE |  |  |  |  |  |  |  |  |
|  | - | - |  | - | - | - |  | $\cdots$ |
| Bicycle | 0 \% | 0 \% | 1 \% | 0 \% | 0 \% | 0 \% | 0 \% | 0 \% |
| Car | 0 \% | 4 \% | 31 \% | 57 \% | $0 \%$ | 4 \% | $33 \%$ | $57 \%$ |
| Motorcycle | 0 \% | $1 \%$ | 1 \% | 0 \% | 0 \% | 1 \% | 1 \% | 0 \% |
| Pedestrian | 0 \% | 1 \% | 1 \% | 1 \% | 0 \% | 0 \% | 0 \% | 0 \% |
| Truck | 0 \% | 0 \% | 0 \% | 1 \% | 0 \% | 0 \% | 1 \% | 1 \% |
| AGE |  |  |  |  |  |  |  |  |
| Below 15 | 0 \% | 0 \% | 3 \% | 7 \% | 0 \% | 0 \% | 3 \% | 6 \% |
| 15-65 | 1\% | 5 \% | 29 \% | 47 \% | $1 \%$ | 4 \% | $30 \%$ | 47 \% |
| Above 65 | 0 \% | 0 \% | 3 \% | 5 \% | 0 \% | 0 \% | $3 \%$ | 5 \% |
| GENDER |  |  |  |  |  |  |  |  |
| Male | $1 \%$ | $3 \%$ | 16 \% | 25 \% | 0 \% | 3 \% | 16 \% | 23 \% |
| Female | $0 \%$ | $2 \%$ | 18 \% | $35 \%$ | $0 \%$ | 2 \% | $20 \%$ | $35 \%$ |
| SPEED LIMIT |  |  |  |  |  |  |  |  |

## CITY OF WACO VS. McLENNAN COUNTY COLLISIONS - RELATIVE SHARES

| CITY |  | TxDOT |  | McLENNAN COUNTY |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MODE |  |  |  |  |  |
| Bicycle | 2 \% | Bicycle | 1 \% | Bicycle | 1 \% |
| Car | 88 \% | Car | 86 \% | Car | 85 \% |
| Motorcycle | 3 \% | Motorcycle | $3 \%$ | Motorcycle | 4 \% |
| Pedestrian | $3 \%$ | Pedestrian | 2 \% | Pedestrian | 3 \% |
| Truck | 3 \% | Truck | 8 \% | Truck | 7 \% |
| FIRST HARMFUL EVENT |  |  |  |  |  |
| Motor Vehicle in Transport | 75 \% | Motor Vehicle in Transport | 85 \% | Motor Vehicle in Transport | 72 \% |
| Fixed Object | 13 \% | Fixed Object | 10 \% | Fixed Object | 17 \% |
| Overturned | 5 \% | Pedestrian | 2 \% | Overturned | 4 \% |
| MANNER OF COLLISION |  |  |  |  |  |
| Broadside | 53 \% | Broadside | 44 \% | Broadside | 42 \% |
| Hit Object | 25 \% | Rear End | $34 \%$ | Hit Object | 28 \% |
| Rear End | 16\% | Hit Object | 15 \% | Rear End | $24 \%$ |
| Sideswipe | 3 \% | Sideswipe | 6 \% | Sideswipe | 5 \% |
| VIOLATION CATEGORY |  |  |  |  |  |
| Automobile Right-of-Way | $31 \%$ | Unsafe Speed | 24 \% | Unsafe Speed | 23 \% |
| Unsafe Speed | 17 \% | Automobile Right-of-Way | 19 \% | Automobile Right-of-Way | 22 \% |
| Traffic Signals and Signs | 14 \% | Traffic Signals and Signs | 16 \% | Traffic Signals and Signs | 12 \% |
| Distracted Driving | 6 \% | Following Too Closely | 8 \% | Distracted Driving | 8 \% |
| Driving/ Bicycling under Influence | $5 \%$ | Distracted Driving | $6 \%$ | Other Improper Driving | $6 \%$ |
| Other Unforeseen Reasons | 5 \% | Other Unforeseen Reasons | $5 \%$ | Other Unforeseen Reasons | 6 \% |
| LOCATION |  |  |  |  |  |
| Intersection | 72 \% | Intersection | 64 \% | Intersection | $59 \%$ |
| Roadway | 28 \% | Roadway | 36 \% | Roadway | 41 \% |
| LIGHTING |  |  |  |  |  |
| Daylight | 70 \% | Daylight | 75 \% | Daylight | 70 \% |
| Dark, Lighted | 20 \% | Dark, Lighted | 18 \% | Dark, Lighted | 16 \% |
| Dark, Not Lighted | 8 \% | Dark, Not Lighted | 5 \% | Dark, Not Lighted | 11 \% |



| SPEED |
| :---: |
| Sum |
| $\mathbf{3 0}$ |


$\underset{\substack{\text { SREEP } \\ 45 \\ 45}}{\substack{\text { Lin } \\ \hline}}$

## C



Fatal Injury
Serious Injury Minor Injury

## BICYCLE \& PEDESTRIAN COLLISION BY SEVERITY



## SEVERITY INDEX



## ROADWAYS \& INTERSECTIONS

his section lists high risk roadway segments and intersections within the City f Waco. The accompanying graph depicts the name and limits of each roadway along with the number of collisions categorized by severity at that location. A severity index methodology was utilized to identify these high risk spots. This methodology assigns 3 points for each fatal or severe injury collision, 2 points for each minor injury collision, and 1 point for each possible injury collision.


## TxDOT ROADWAYS

$\binom{$ (TX }{ A }

( ${ }_{(1 \times 2}^{\text {I }}$

| US 84 (w Waco Dr) (within City Limits) |
| ---: |
| IH |
| IH 35 (within City Limits) |
| SH 6 (within City Limits) |
|  |

(ix)



PROFILE 3 －AUTOMOBILE RIGHT－OF－WAY


2，209 COLLISIONS

| SEVERITY |  |
| :---: | :---: |
| A $1 \%$ |  |
| $8$ $36 \text { \% }$ |  |
| LOCATION |  |
| 開 $98 \%$ |  |
| LIGHTING |  |
| ） $81 \%$ | 2 \％ |
| 且 $13 \%$ | 且 4 \％ |



PROFILE 4 －UNSAFE SPEED


1，230 COLLISIONS

## SEVERITY



PROFILE 3 - UNSAFE SPEED


PROFILE 4 - AUTOMOBILE RIGHT-OF-WAY


1,200 COLLISIONS



State Loop 2 (17th \& 18th Street), a three-lane minor arterial where 17th Street serves northbound traffic and 18th Street serves southbound traffic runs through commercial, residential, and industrial areas from Colcord Drive to IH 35 Southbound Frontage Road. The speed limits vary from 30 mph to 55 mph along the corridor. This corridor passes by schools including West Avenue Elementary School, Waco Montessori School, Bell's Hill Elementary School, and Cesar Chavez Middle School.


- TRENDS

| INTERSECTION | BROADSIDE | DISREGARD OF SIGNS \& SIGNALS | NIGHTtime |
| :---: | :---: | :---: | :---: |
|  |  |  | $\frac{8}{\substack{0}}$ |
| 89\% | 73\% | 43\% | 25\% |
| 464 COLLISIONS | 384 COLLISIONS | 223 COLLISIONS | 130 COLLISIONS |

EXISTING CONDITIONS


## ESTIMATED COST OF IMPROVEMENT

| 1: 17TH \& 18TH ST- CORRIDOR SAFETY IMPROVEMENTS |  |  |  |
| :---: | :---: | :---: | :---: |
|  | IMPROVEMENTS | LOCATIONS | ESTIMATED COST |
|  | Install Buffered Bike Lane |  | \$213,200 |
|  | Install Sidewalk |  | \$5,160,900 |
|  | Lane Reduction |  | \$24,400 |
|  | Fill Sidewalk Gaps |  | \$587,700 |
|  | Install Street Lighting | 17th St and 18th St from Colcord Ave to IH 35 | \$1,350,100 |
|  |  | CONTINGENCY COST | \$1,467,300 |
|  |  | ENGINEERING COST | \$3,081,300 |
|  |  | TOTAL COST | \$11,884,900 |



FM 1637 (China Spring Road, N 19th Street and N 18th Street), a four-lane minor arterial with a center two-way left turn lane, provides access to a mix of commercial, residential, and agricultural areas from Steinbeck Bend Drive to US-84 (Waco Drive). The speed limits vary, with 30 mph through more populated areas and 55 mph in less developed sections along the corridor. This corridor is close to several schools, including Premier High School of Waco, McLennan Community College, Cedar Ridge Elementary School, and North Waco Elementary School. INJURY COLLISION STATISTICS


ESTIMATED COST OF IMPROVEMENT
2: FM 1637- CORRIDOR SAFETY IMPROVEMENTS

|  | IMPROVEMENTS | LOCATIONS | ESTIMATED COST |
| :---: | :---: | :---: | :---: |
|  | Install Street Lighting |  | \$488,800 |
|  | Install Median |  | \$2,980,800 |
|  | Install Median | 18th St and 19th St from Lake Shore Dr to Vivian Ave | \$4,356,200 |
|  | Fill Sidewalk Gaps \& Install Street Lighting | Herring Ave from 18th St to 4th St | \$1,860,100 |
|  | Install Street Lighting | 18th St and 19th St from Lake Shore Dr to Herring Ave | \$621,000 |
|  | Fill Sidewalk Gaps \& Speed Feedback Signs | 18th St and 19th St from Lake Shore Dr to Herring Ave | \$5,461,900 |
|  | Install Bike Lane | 4th St from Herring Ave to US 84 (Waco Dr) | \$70,000 |
|  | Install Street Lighting \& Sidewalk \& Parking Striping | 4th St and 5th St from Herring Ave to US 84 (Waco Dr) | \$4,532,800 |
|  |  | CONTINGENCY COST | \$4,074,400 |
|  |  | ENGINEERING COST | \$8,556,100 |
|  |  | TOTAL COST | \$33,002,100 |



Hewitt Drive, a four-lane minor arterial with a center two-way left turn lane, provides access to commercial and industrial areas. The speed limit is set at 45 mph along the entire corridor. Hewitt Drive provides primary access to Midway Middle School.

INJURY COLLISION STATISTICS

|  | 3 |
| :---: | :---: |
| 实 | 2 |
| ठ可 | 11 |
| ¢- | 180 |
| ¢ | 8 |



## TRENDS

| INTERSECTION | REAR END | BROADSIDE | AUTOMOBILE ROW |
| :---: | :---: | :---: | :---: |
|  | $\underbrace{1}_{0}$ | Exil |  |
| 74\% <br> 151 COLLISIONS | 47\% <br> 95 COLLISIONS | 46\% <br> 93 COLLISIONS | 32\% <br> 65 COLLISIONS |

EXISTING CONDITIONS


## ESTIMATED COST OF IMPROVEMENT

3: HEWITT DR- COMPLETE STREETS MULTIMODAL PROJECT

|  | IMPROVEMENTS | LOCATIONS | ESTIMATED COST |
| :---: | :---: | :---: | :---: |
|  | Access Management and Install Median |  | \$2,416,200 |
|  | Speed Feedback Signs |  | \$34,500 |
|  | Install Street Lighting | From Regal Dr to Waco Dr | \$678,500 |
|  | Install Sidewalk |  | \$2,872,300 |
|  | Complete Streets Multimodal Project |  | \$7,877,500 |
|  |  | CONTINGENCY COST | \$2,775,800 |
|  |  | ENGINEERING COST | \$5,829,200 |
|  |  | TOTAL COST | \$22,484,000 |



Bosque Boulevard, a four-lane undivided major arterial, provides access through commercial and residential developments from $N$ Valley Mills Drive to Rambler Drive. The speed limit is set at 35 mph along the corridor. Bosque Boulevard is within 0.25 mile of Parkdale Elementary School, Eagle Christian Academy, and Harmony Science Academy.

## INJURY COLLISION STATISTICS




## - TRENDS



170 COLLISIONS


estimated cost of improvement
4: BOSQUE BLVD- CORRIDOR SAFETY IMPROVEMENTS

|  | IMPROVEMENTS | LOCATIONS | ESTIMATED COST |
| :---: | :---: | :---: | :---: |
| - | Install Median and Access Management | From N Valley Mills Dr to Colonial Ave | \$4,641,500 |
| ** | Fill Sidewalk Gaps |  | \$1,544,500 |
|  | Fill Sidewalk Gaps | From N Valley Mills Dr to Rambler Dr | \$2,306,900 |
|  |  | CONTINGENCY COST | \$1,698,600 |
|  |  | ENGINEERING COST | \$3,567,100 |
|  |  | TOTAL COST | \$13,758,600 |



S New Road, a four-lane major arterial with a center two-way left turn lane, provides access through commercial and residential areas from Franklin Avenue to Old Robinson Road. The speed limit is set at 45 mph along the corridor. This corridor provides access to University High School and the Waco ISD Stadium.


EXISTING CONDITIONS


## ESTIMATED COST OF IMPROVEMENT




N Valley Mills Drive，a four－to six－lane minor arterial with a center two－way left turn lane，runs through a mix of commercial and residential areas from Bishop Drive to Franklin Avenue．The speed limits vary，set at 40 mph from Bishop Drive and New Road and 55 mph between New Road and Franklin Avenue．Schools－including the Valor Preparatory Academy，Eagle Christian Academy，and Harmony Science Academy－are within 0.25 mile of this corridor．

## INJURY COLLISION STATISTICS



## －TRENDS




312 COLLISIONS

| AUTOMOBILE ROW | NIGTTIME |
| :---: | :---: |
|  | 令 |
| 32\％ | 29\％ |
| 182 COLLISIONS | 165 COLLISIONS |



## Existing Condition：

N Valley Mills Dr at Sanger Ave facing west


ESTIMATED COST OF IMPROVEMENT
6：N VALLEY MILLS DR－COMPLETE STREET IMPROVEMENTS

|  | IMPROVEMENTS | LOCATIONS | ESTIMATED COST |
| :---: | :---: | :---: | :---: |
|  | Road Diet |  | \＄558，900 |
|  | Access Management and Install Medians |  | \＄3，747，700 |
|  | Street Lighting | N Valley Mills Dr from Bishop Dr to Franklin Ave | \＄1，069，500 |
|  | Speed Limit Reduction |  | \＄3，800 |
|  | Pedestrian Connectivity Improvements （Sidewalk and Crosswalks） |  | \＄4，739，700 |
|  |  | CONTINGENCY COST | \＄2，024，000 |
|  |  | ENGINEERING COST | \＄4，250，300 |
|  |  | TOTAL COST | \＄16，393，900 |



Lake Shore Drive，a four－lane minor arterial with a center two－way left turn lane，runs through a mix of commercial and residential areas from Mt Car－ mel Drive to N 19th Street．The speed limits vary，set at 40 mph from Mt Carmel Drive and Hillcrest Drive and 50 mph between Hillcrest Drive and N 19th Street．Lakeshore Drive is within 0.25 mile of Vanguard Preparatory School．


EXISTING CONDITIONS


ESTIMATED COST OF IMPROVEMENT
7－A：LAKE SHORE DR－CORRIDOR SAFETY IMPROVEMENTS
IMPROVEMENTS
LOCATIONS

|  | MPROVEM | LOCATIONS | ESTIMATED COST |
| :---: | :---: | :---: | :---: |
| 为 | Shared Use Path |  | \＄3，606，800 |
| 林 | Bridge Improved Pedestrian Access |  | \＄110，400 |
| 0 | Install Median | From N 19th St to Mt Carmel Dr | \＄8，245，000 |
| （17） | Install Street Lighting |  | \＄1，547，900 |
| 析 | Improve Sight Distance |  | \＄31，100 |
|  |  | CONTINGENCY COST | \＄1，958，600 |
|  |  | ENGINEERING COST | \＄4，113，100 |
|  |  | TOTAL COST | \＄15，864，600 |



Lake Shore Drive/N Valley Mills Drive, a two-lane undivided minor arterial, runs through a mix of residential and recreational areas from Mt Carmel Drive to Bishop Drive. The speed limit is set at 40 mph . Lakeshore Drive is within 0.25 miles of Vanguard Preparatory School.

INJURY COLLISION STATISTICS


## : TRENDS

| INTERSECTION | BROADSIDE | UNSAFE SPEED | HIT OBJECT |
| :---: | :---: | :---: | :---: |
|  |  | $\underset{\sim}{2}$ |  |
| 45\% <br> 23 COLLISIONS | 34\% <br> 10 COLLISIONS | 45\% <br> 13 COLLISIONS | 38\% <br> 11 COLLISIONS |

ESTIMATED COST OF IMPROVEMENT
7-B: LAKE SHORE DR/N VALLEY MILLS DR- CORRIDOR SAFETY IMPROVEMENTS

|  | IMPROVEMENTS | LOCATIONS | ESTIMATED COST |
| :---: | :---: | :---: | :---: |
|  | Install Street lighting |  | \$201,300 |
| B | Minor Streets Sight Distance Improvements | Mt Carmel Dr to Bishop Dr | \$15,000 |
|  | Install Speed Feedback Sign |  | \$34,500 |
|  |  | CONTINGENCY COST | \$50,200 |
|  |  | ENGINEERING COST | \$105,400 |
|  |  | TOTAL COST | \$406,400 |




[^0]:    Note : Each box represents one fatal or severe injury collision.

