

Profile of Rail-Related Injuries for Greater San Antonio

A pedestrian or other road user is involved in a collision with a train every three hours in the U.S., and 1 in 10 of these involves children ages 19 and under.^{1,2} These incidents are often deadly, and, most importantly, are preventable. They are primarily the result of two types of incidents:

- **Trespassing injuries** occur when a person is injured while on private railroad property without permission. They are most often pedestrians taking a shortcut across or along tracks, but also include loiterers and those engaging in recreational activities such as hunting or jogging.¹
- **Railroad crossing injuries** are when a person or highway user is struck by a train while attempting to cross at a designated crossing where tracks intersect a roadway or walkway at the same level.

This profile describes data reported to the Federal Railroad Administration (FRA) on rail-related injuries occurring in the Greater San Antonio area. Data are for years 2011 to 2020 and are combined for the Texas counties of Bexar, Medina, Guadalupe, Comal, and Atascosa (no injuries were reported for Bandera, Kendall or Wilson Counties). Injuries are divided into trespassing injuries and railroad crossing injuries. Data include both fatal and nonfatal rail-related injuries. Excluded from this profile are injuries to rail passengers and rail workers, as well as cases of suicides and attempted suicide.

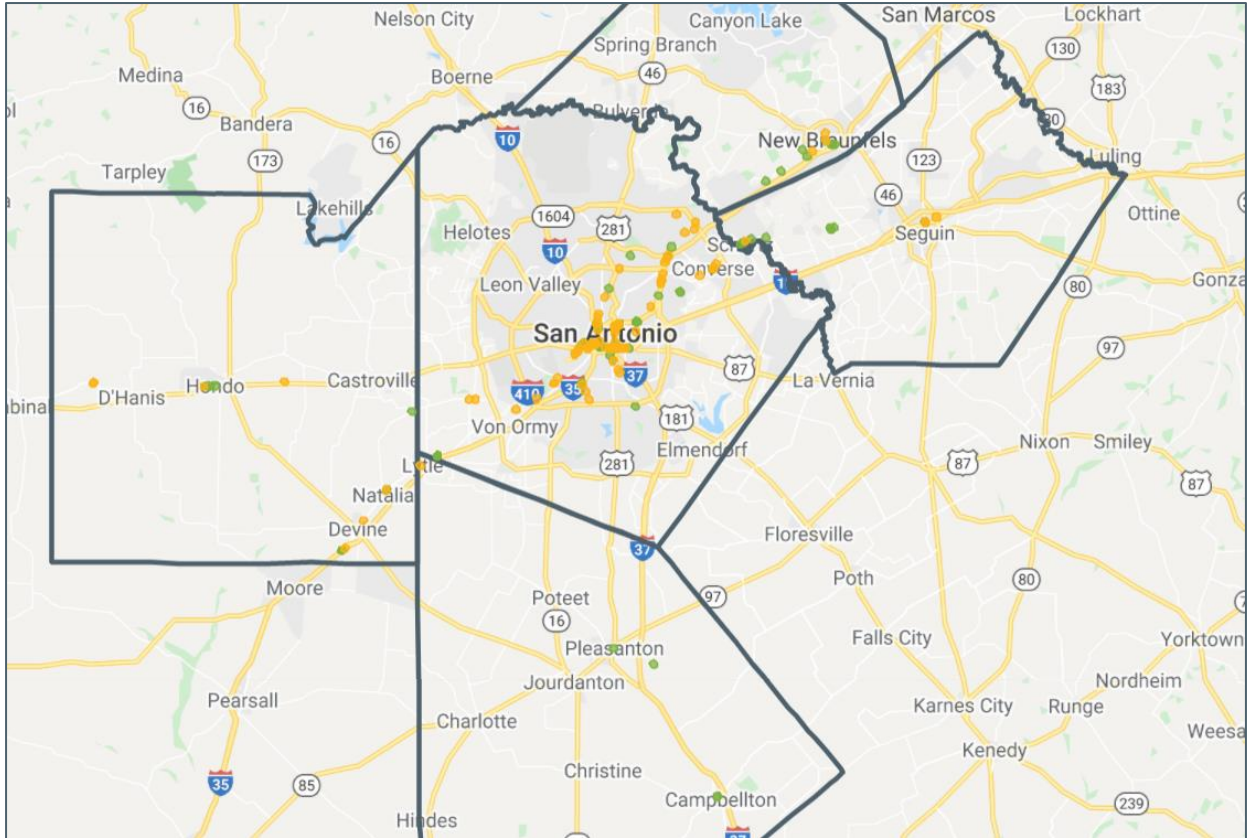
This report and other rail safety resources for families, educators and community partners can be downloaded from the **Safe Kids Rail Safety Station** online hub at safekids.org/RailSafetyStation.

Summary

- There were 174 rail-related injuries in the Greater San Antonio area from 2011 to 2020, most of which occurred in Bexar County.
- About 1 in 10 of those injured were children ages 19 and under. There was a relatively even distribution of injuries from ages 20 to 54 years old.
- Trespassing and railroad crossing incidents accounted for roughly equal proportions of injuries. However, trespassing incidents more often fatal than were railroad crossing injuries.
- More than 9 in 10 injuries involved on-track equipment, which were most often freight trains.
- Overall, injuries were less frequent during summer (Jun-Aug) and winter months (Dec-Feb).
- Injuries were most frequent on Friday and Saturday.
- Injuries were more frequent between 12:00 AM and 2:59 AM. Railroad crossing injuries predominated between 12:00 PM and 5:59 PM.
- About 4 in 10 railroad crossing injuries occurred during dark or low-light hours; of those, more than 6 in 10 occurred at crossings that weren't illuminated.
- The majority of incidents at railroad crossings involved a highway user going through or around crossing gates meant to block traffic.
- Of the 7 in 10 trespassers who were struck by on-track equipment, more than half were on the tracks when they were struck.



**Map 1. Rail-Related Injuries by Incident Type;
Bexar, Medina, Guadalupe, Comal and Atascosa Counties, TX**



● Railroad crossing injury ● Trespassing injury

See pages 9–18 for county-level maps by incident type and for children versus adults.



Overview	Distribution of Rail-Related Injuries by County												
<p><u>2019 Population³</u></p> <p style="text-align: right; color: #0070C0; font-size: 1.2em;">2,429,347</p> <p><u>Number of Railroad Crossings⁴</u></p> <p style="text-align: right; color: #FFC000; font-size: 1.2em;">996</p> <p><u>Total Rail-Related Injuries, 2011–2020</u></p> <p style="text-align: right; color: #70AD47; font-size: 1.2em;">174</p> <p><u>Injuries per 100,000 People, 2011–2020</u></p> <p style="text-align: right; font-size: 1.2em;">0.76</p> <p><u>Percent Injured that were Ages 0–19 yr.</u></p> <p style="text-align: right; color: #D9534F; font-size: 1.2em;">9%</p>	<p>Figure 1. Seven in 10 injuries occurred in Bexar County.*</p> <table border="1"> <caption>Data for Figure 1: Distribution of Rail-Related Injuries by County</caption> <thead> <tr> <th>County</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Bexar</td> <td>72%</td> </tr> <tr> <td>Medina</td> <td>10%</td> </tr> <tr> <td>Guadalupe</td> <td>7%</td> </tr> <tr> <td>Comal</td> <td>6%</td> </tr> <tr> <td>Atascosa</td> <td>3%</td> </tr> </tbody> </table> <p style="text-align: center;"><i>Red indicates the category with the highest percent.</i></p> <p><small>* Total percent does not equal 100 due to rounding.</small></p>	County	Percentage	Bexar	72%	Medina	10%	Guadalupe	7%	Comal	6%	Atascosa	3%
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Overall Injuries																																																				
<p>Figure 2. On average, there were 17 injuries per year in the decade from 2011 to 2020. The most injuries in the last 10 years occurred in 2017.</p> <p style="text-align: center;">Number of Rail-Related Injuries by Year (N=174)</p> <table border="1"> <caption>Data for Figure 2: Number of Rail-Related Injuries by Year</caption> <thead> <tr> <th>Year</th> <th>Number of Injuries</th> </tr> </thead> <tbody> <tr><td>2011</td><td>18</td></tr> <tr><td>2012</td><td>21</td></tr> <tr><td>2013</td><td>14</td></tr> <tr><td>2014</td><td>13</td></tr> <tr><td>2015</td><td>12</td></tr> <tr><td>2016</td><td>23</td></tr> <tr><td>2017</td><td>25</td></tr> <tr><td>2018</td><td>11</td></tr> <tr><td>2019</td><td>19</td></tr> <tr><td>2020</td><td>18</td></tr> </tbody> </table> <p>Figure 3. About 1 in 10 of those injured were children ages 19 and under. The distribution of injuries was relatively evenly distributed between the ages of 20 to 54 years.*</p> <p style="text-align: center;">Rail-Related Injuries by 5-Year Age Groups (N=174)</p> <table border="1"> <caption>Data for Figure 3: Rail-Related Injuries by 5-Year Age Groups</caption> <thead> <tr> <th>Age Group</th> <th>Percentage</th> </tr> </thead> <tbody> <tr><td>0-4</td><td>1%</td></tr> <tr><td>5-9</td><td>0%</td></tr> <tr><td>10-14</td><td>1%</td></tr> <tr><td>15-19</td><td>7%</td></tr> <tr><td>20-24</td><td>10%</td></tr> <tr><td>25-29</td><td>9%</td></tr> <tr><td>30-34</td><td>10%</td></tr> <tr><td>35-39</td><td>11%</td></tr> <tr><td>40-44</td><td>13%</td></tr> <tr><td>45-49</td><td>10%</td></tr> <tr><td>50-54</td><td>9%</td></tr> <tr><td>55-59</td><td>4%</td></tr> <tr><td>60-64</td><td>5%</td></tr> <tr><td>65+</td><td>9%</td></tr> </tbody> </table> <p><small>* Total percent does not equal 100 due to rounding.</small></p>	Year	Number of Injuries	2011	18	2012	21	2013	14	2014	13	2015	12	2016	23	2017	25	2018	11	2019	19	2020	18	Age Group	Percentage	0-4	1%	5-9	0%	10-14	1%	15-19	7%	20-24	10%	25-29	9%	30-34	10%	35-39	11%	40-44	13%	45-49	10%	50-54	9%	55-59	4%	60-64	5%	65+	9%
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Figure 4. Trespassing and railroad crossing incidents accounted for roughly equal proportions of injuries. However, trespassing injuries were more often fatal than railroad crossing injuries.

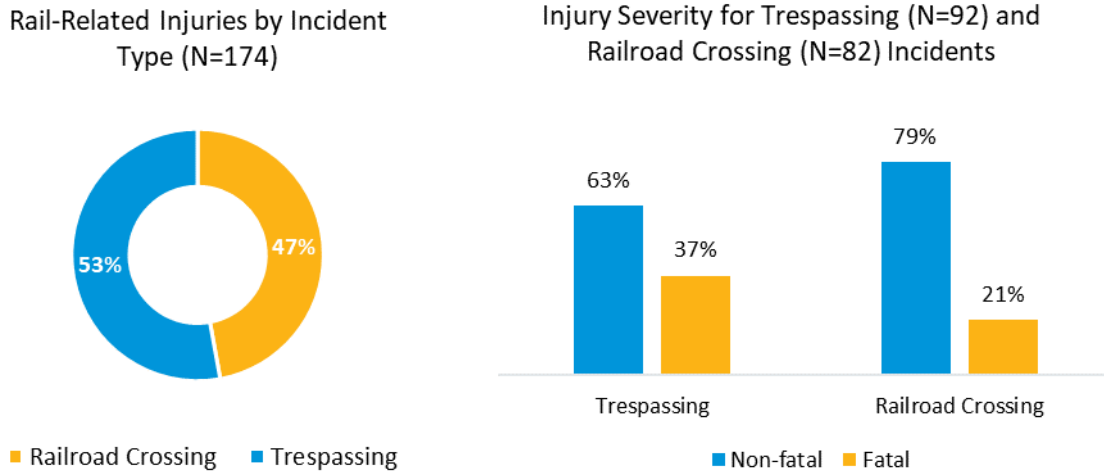
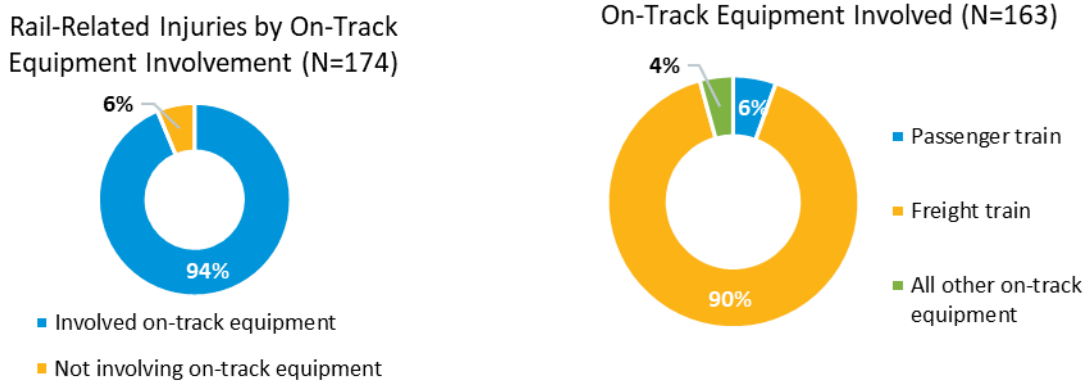
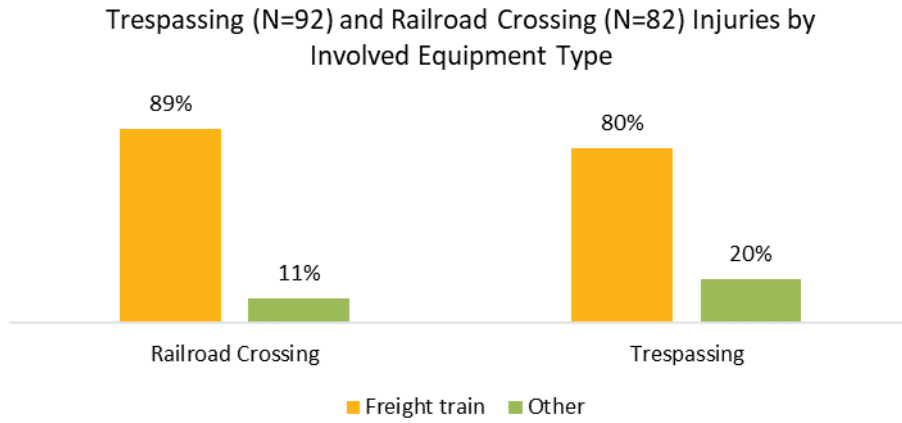


Figure 5. More than 9 in 10 injuries involved on-track equipment,* which were most often freight trains.



* On-track equipment includes freight cars and trains, passenger trains and cars, locomotives, inspection vehicles, maintenance of way equipment and other on-track equipment.

Figure 6. Freight trains were involved in about 9 in 10 trespassing injuries and 8 in 10 railroad crossing injuries. *



* Other includes on-track and not on-track equipment. On-track equipment includes freight cars and trains, passenger trains and cars, locomotives, inspection vehicles, maintenance of way equipment and other on-track equipment.

Figure 7. Overall, injuries were less frequent during the summer and winter months.

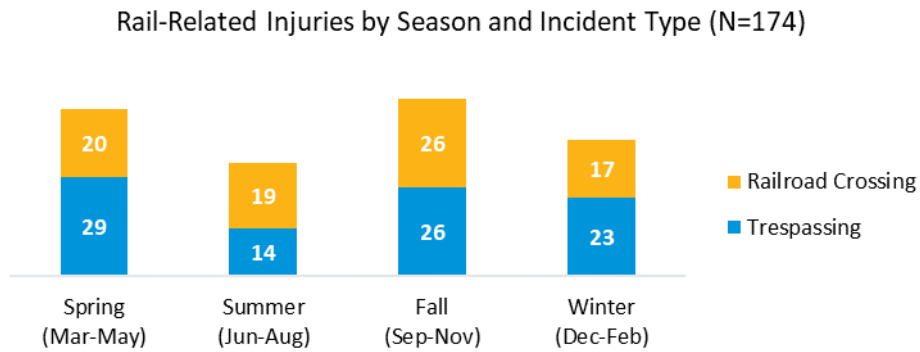


Figure 8. Injuries were most frequent on Friday and Saturday.

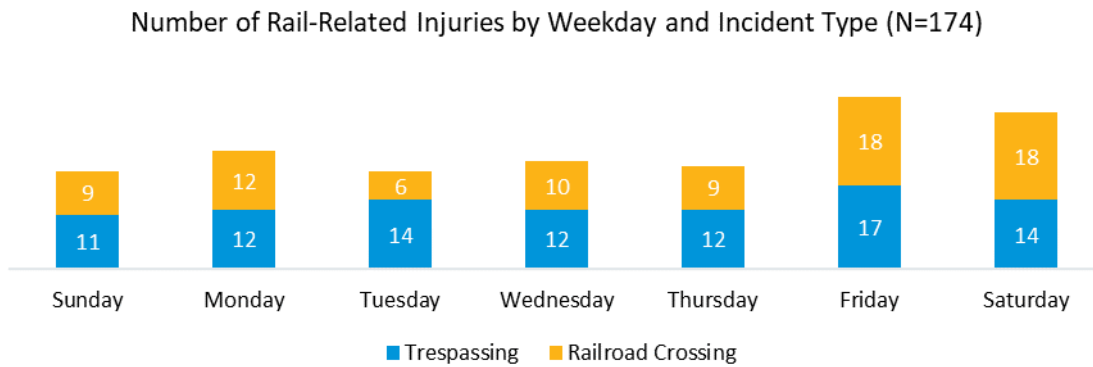
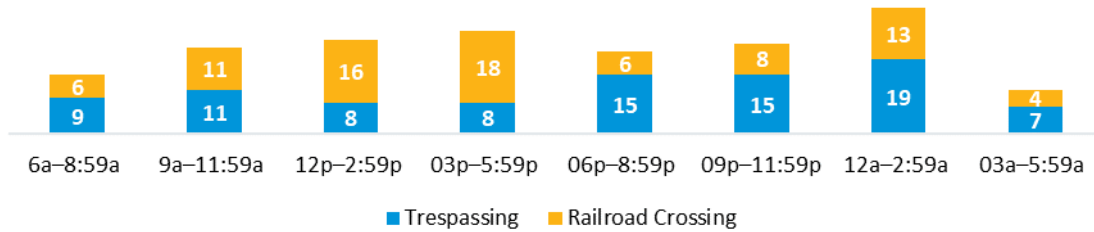


Figure 9. Overall, injuries were most frequent between 12 AM and 2:59 AM. Railroad crossing injuries predominated between 12 PM and 5:59 PM and trespassing injuries between 6 PM and 2:59 AM.

Number of Rail-Related Injuries by Time of Day and Incident Type (N=174)



Railroad Crossing Circumstances

Figure 10. Seven in 10 of those injured at railroad crossings were motor vehicle occupants, and nearly 1 in 4 were pedestrians.

Railroad Crossing Injuries by Highway User Type (N=82)

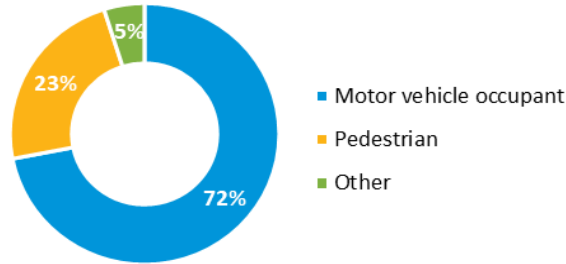
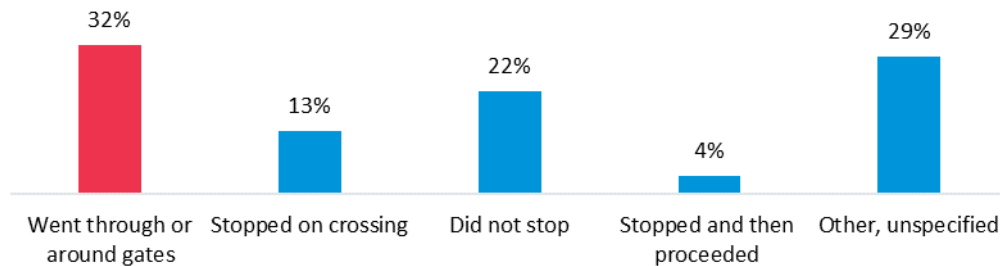


Figure 11. Going through or around the gates was the activity most associated with injury at railroad crossings.

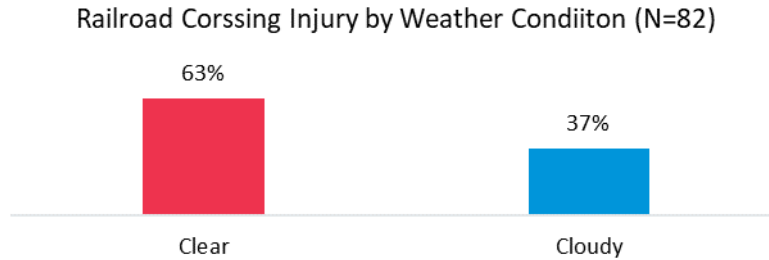
Railroad Crossing Injuries by Action of Highway Users (N=82)



Red indicates the category with the highest percent.

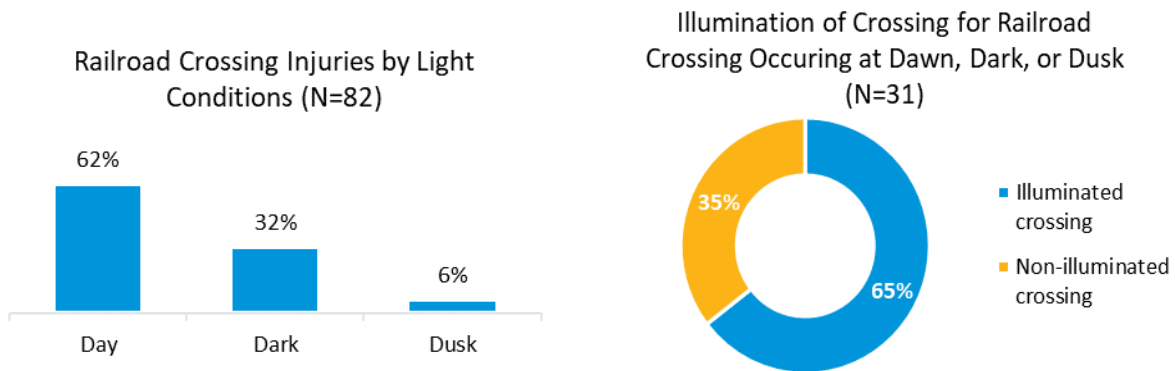


Figure 12. Six in 10 railroad crossing injuries occurred when the weather was clear, and 1 in 3 occurred when the weather was cloudy.



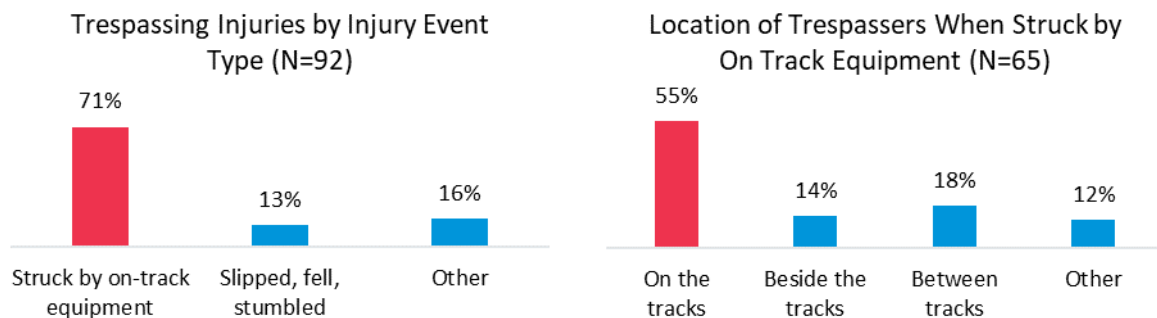
Red indicates the category with the highest percent.

Figure 13. Nearly 4 in 10 railroad crossing injuries occurred during dark or low-light hours. Of those, more than 6 in 10 occurred at crossings that were not illuminated by streetlights or special lights.



Trespassing Circumstances

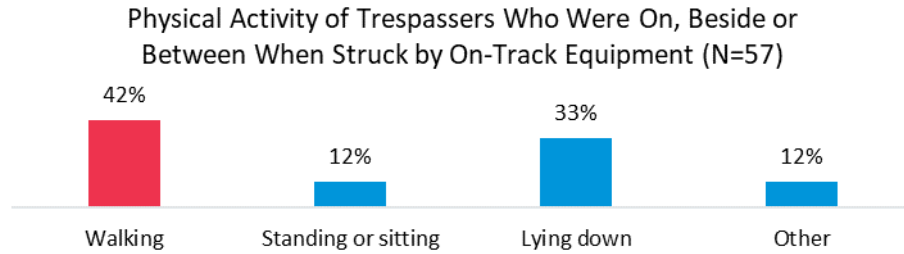
Figure 14. Seven in 10 trespassers who were injured had been struck by on-track equipment. Of those, more than half were on the tracks at the time of impact.



Red indicates the categories with the highest percents.



Figure 15. Of trespassers who were either on, beside or between the tracks when struck by on-track equipment, 4 in 10 were walking, and 1 in 3 were lying on or near the tracks at the time of impact.

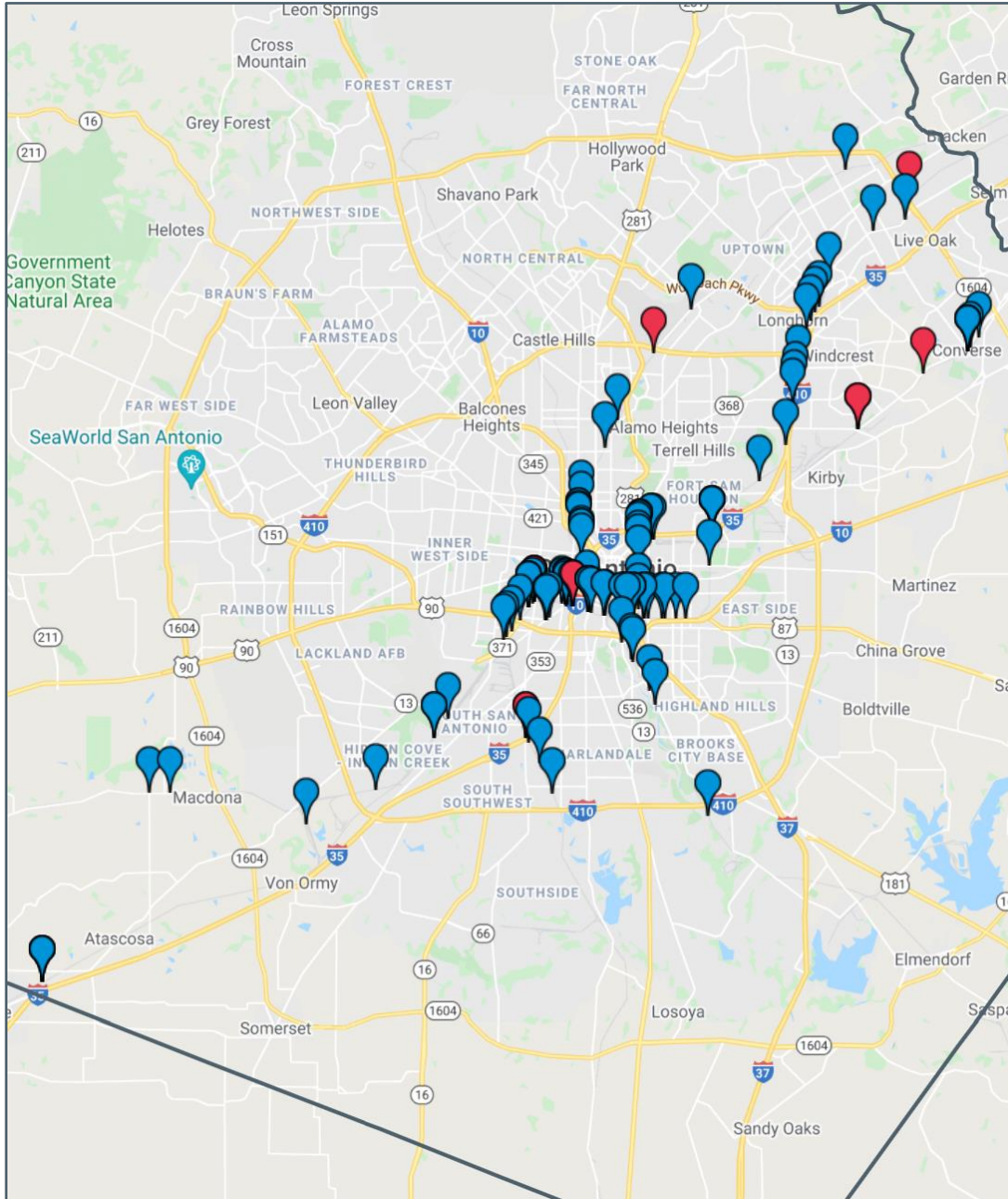


Red indicates the category with the highest percent.

*Total percent does not equal 100 due to rounding



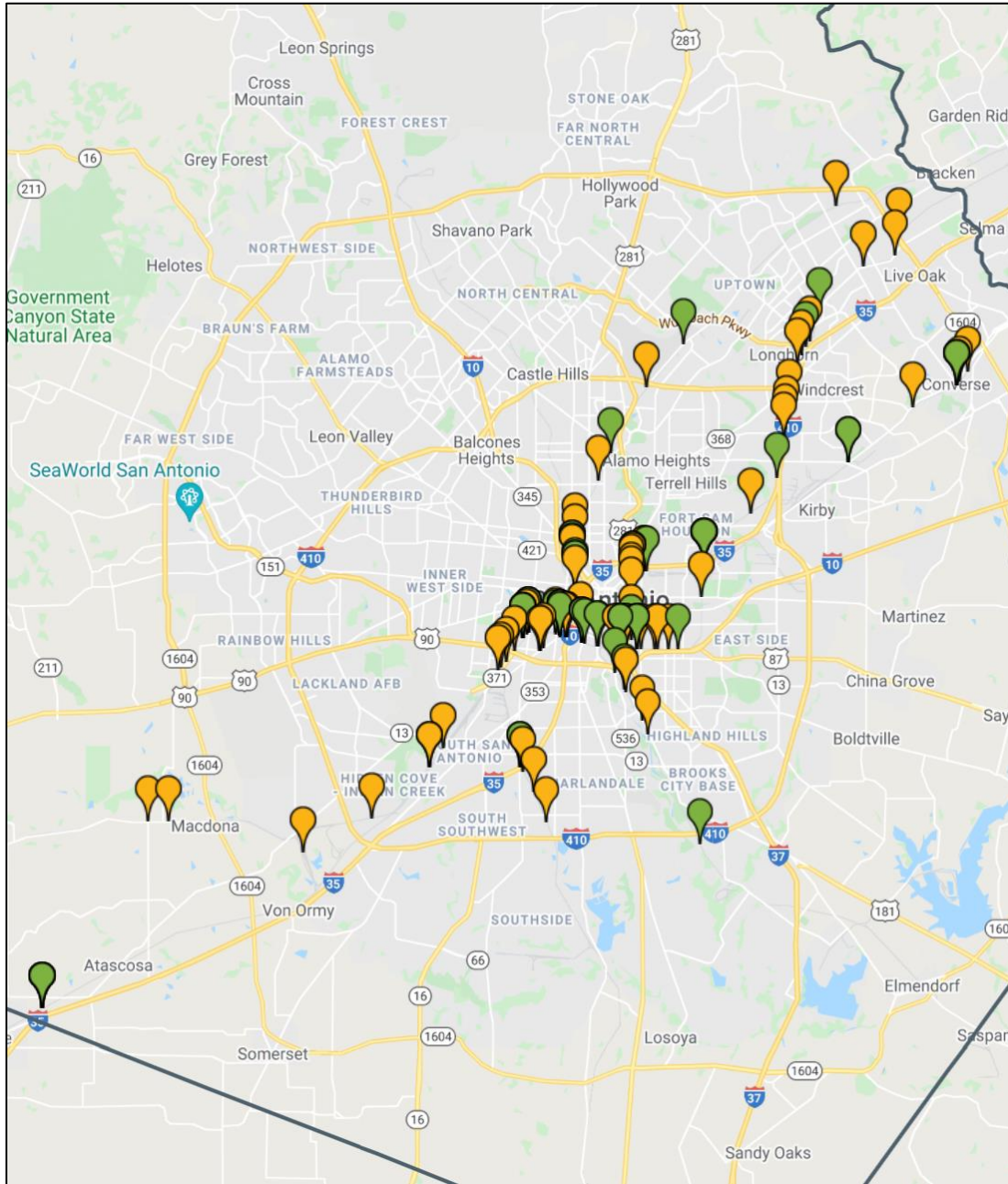
Map 2. Bexar County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



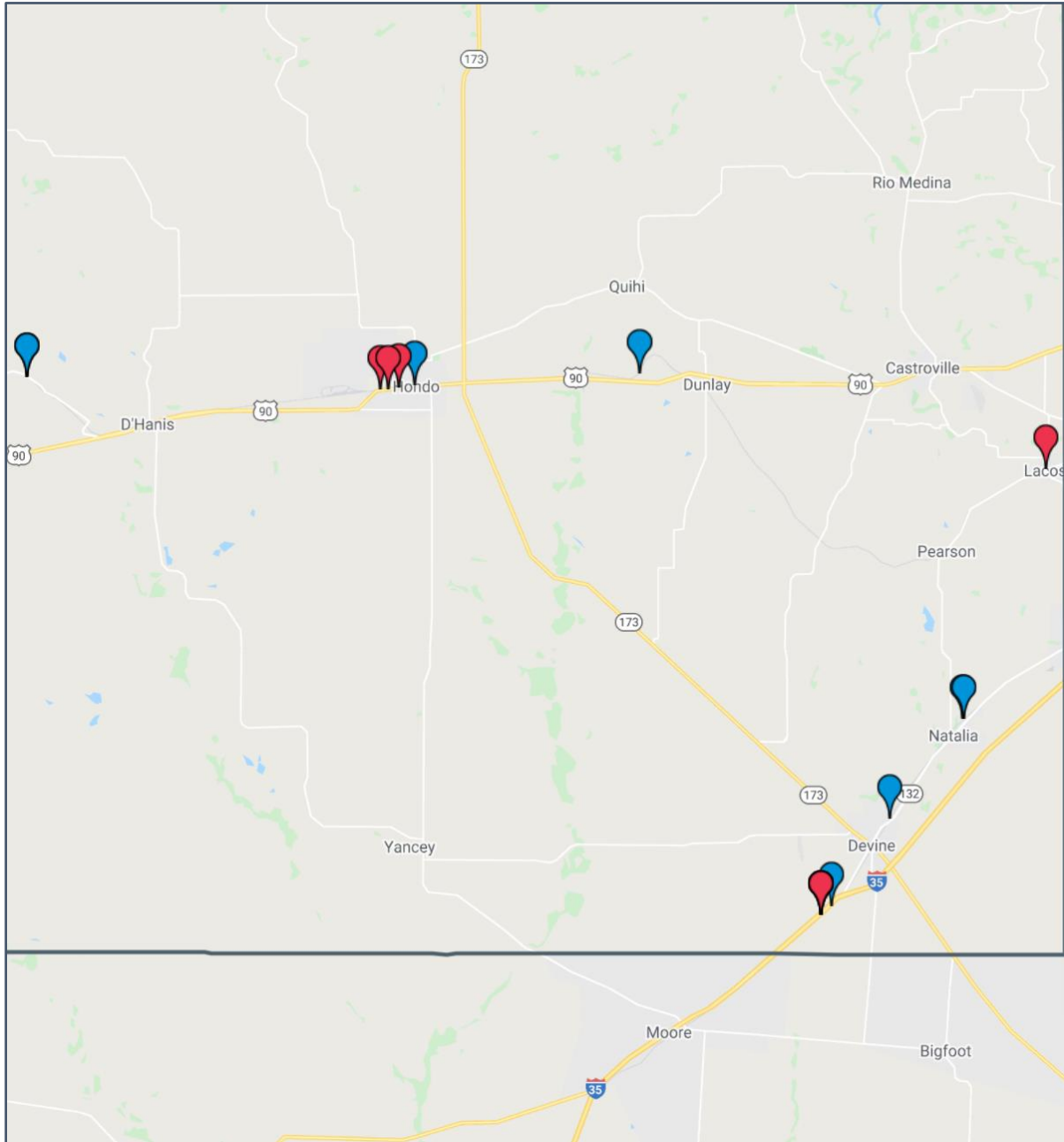
Map 3. Bexar County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



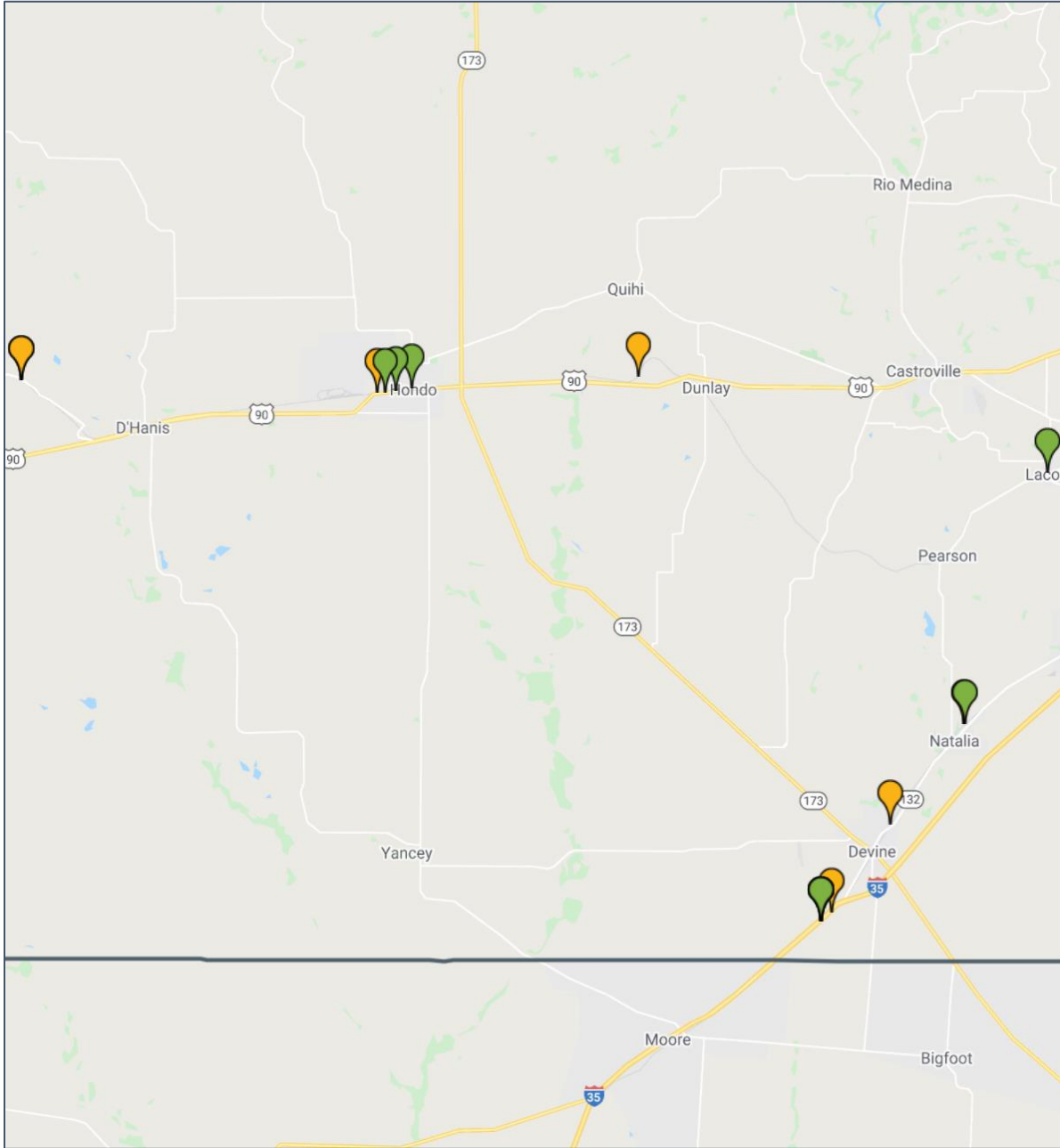
Map 4. Medina County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



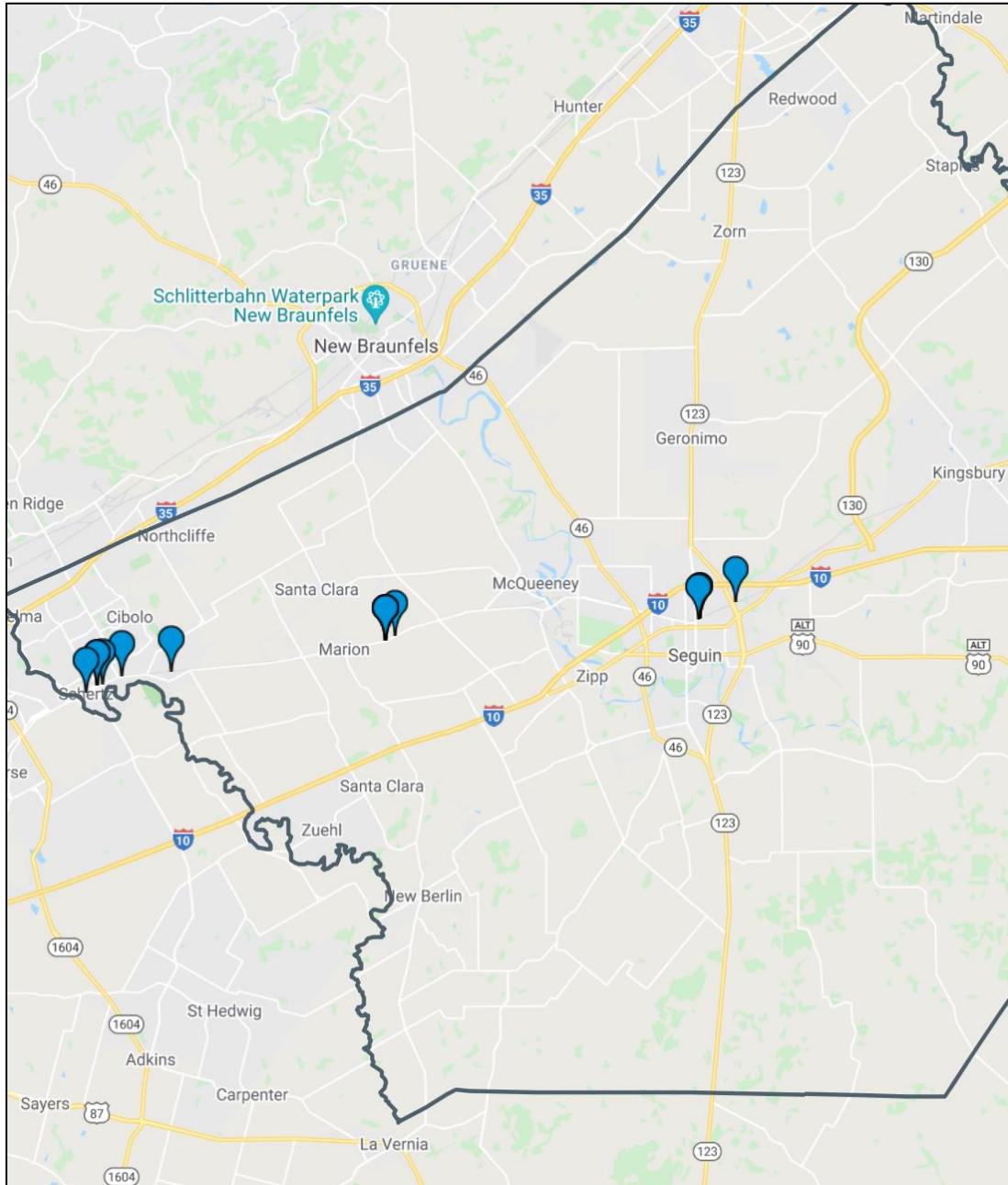
Map 5. Medina County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



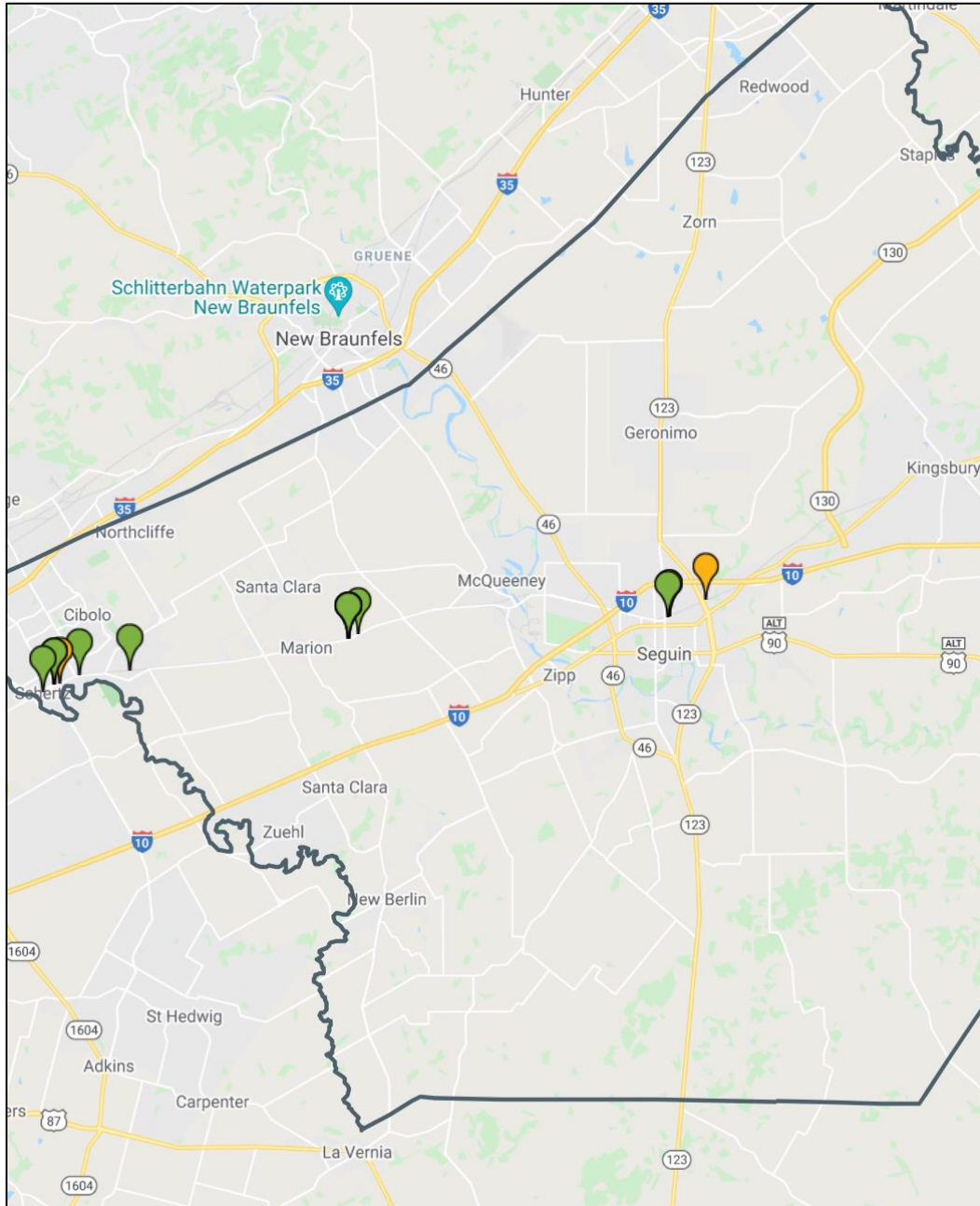
Map 6. Guadalupe County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



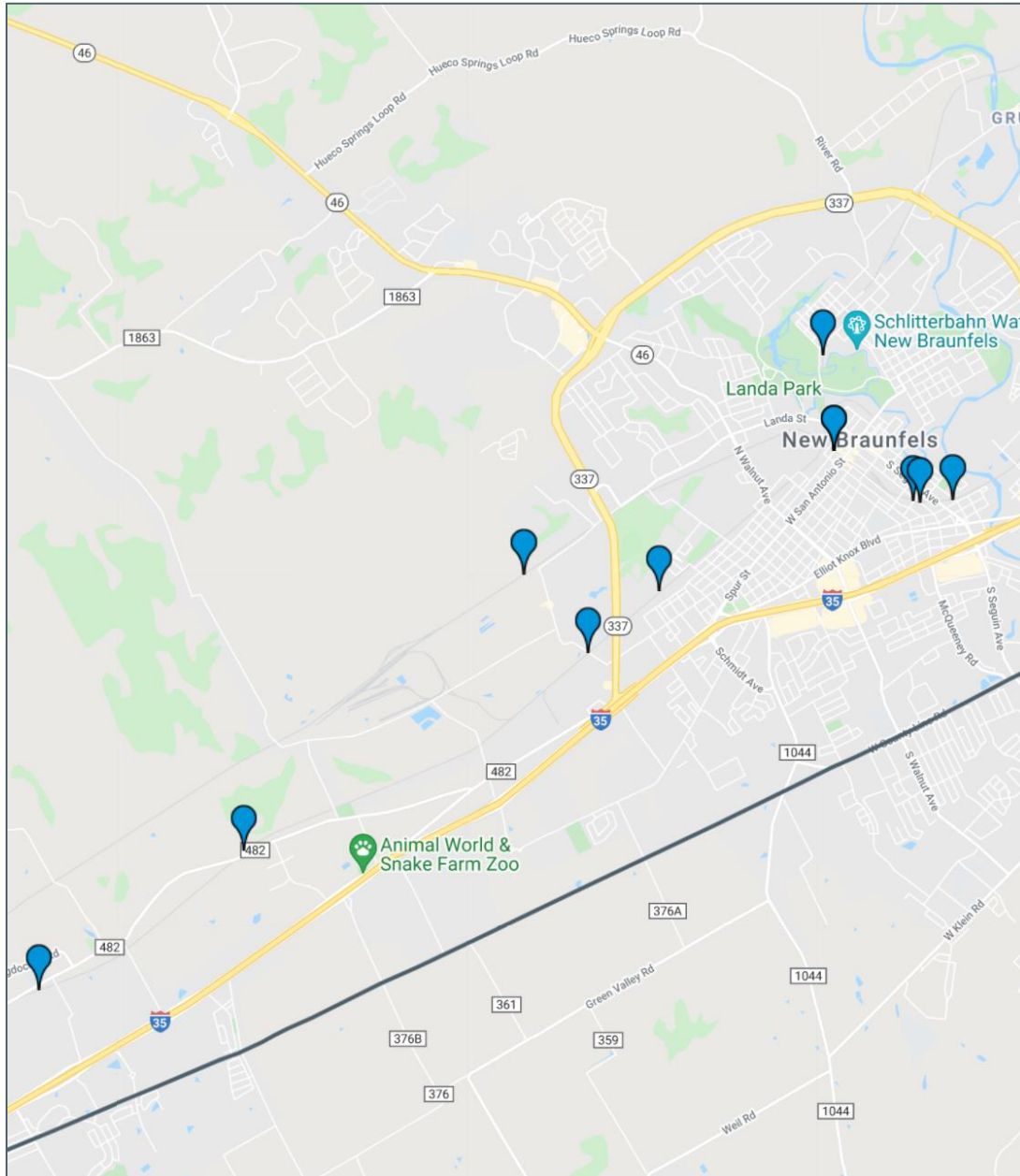
Map 7. Guadalupe County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



Map 8. Comal County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



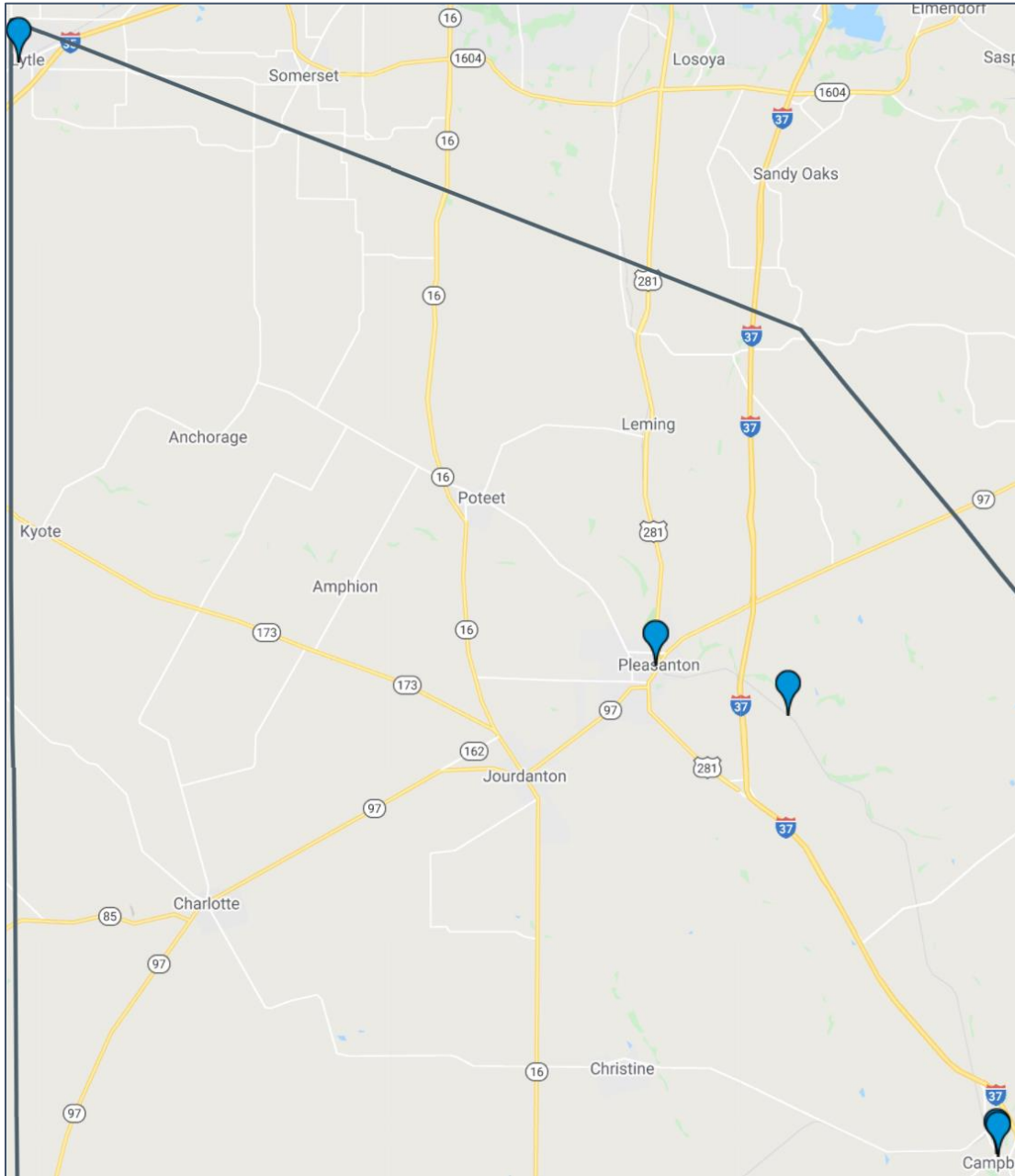
Map 9. Comal County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



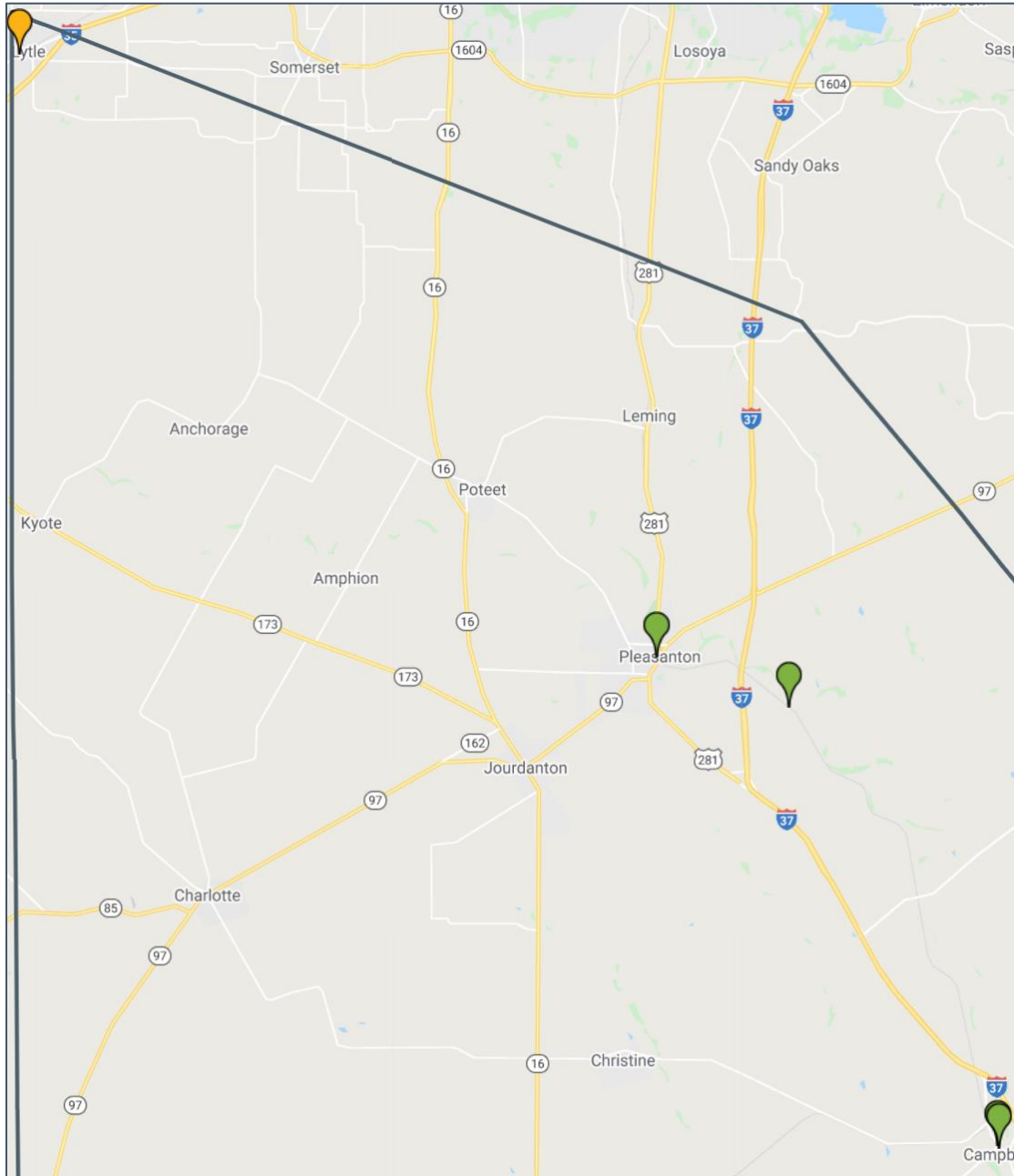
Map 10. Atascosa County – Injuries by Age Group



● Adult injury ● Child injury (ages 0-19 years)



Map 11. Atascosa County – Injuries by Incident Type



● Railroad crossing injury ● Trespassing injury



Notes

Data source

Data on rail-related injuries presented in this profile were obtained from the Federal Railroad Administration's (FRA) Safety Railroad Casualties (form 6180.55A) and Highway Rail Accidents (form 6180.57) databases for years 2011–2020. Excluded were rail workers and rail passengers as well as cases of suicide or attempted suicide. Maps reflect locations of injuries where longitude and latitude data are provided in each case file.

References

1. Federal Railroad Association. Fact Sheet - Highway Rail Crossing & Trespassing. 2016. Available from: <https://railroads.dot.gov/sites/fra.dot.gov/files/2019-10/rrx-fact-sheet-final12716.pdf>. Accessed August 26, 2021.
2. Federal Railroad Association. Accident Data as Reported by Railroads 2009-2018. Available from: https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/on_the_fly_download.aspx. Accessed August 26, 2021.
3. U.S. Census Bureau. Quick Facts. Available from: <https://www.census.gov/quickfacts>. Accessed August 26, 2021.
4. Current Crossing Data for State of Texas. 2021. Available from: <https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/DownloadCrossingInventoryData.aspx>. Accessed August 31, 2021.

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