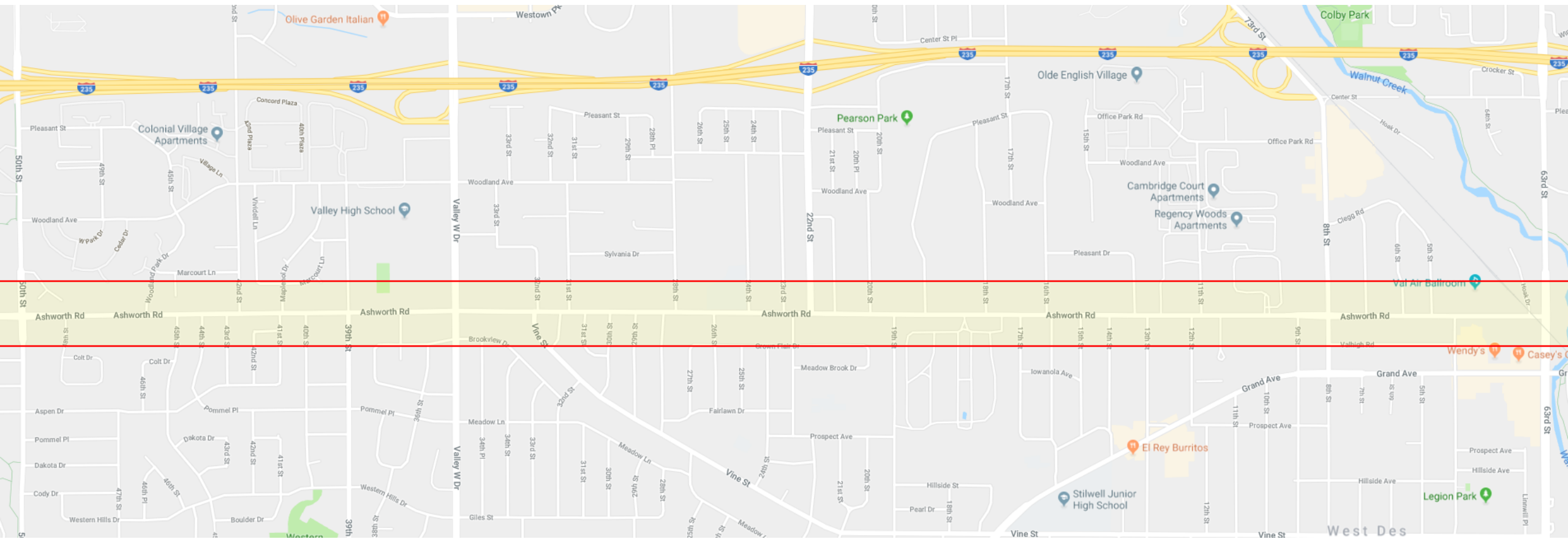
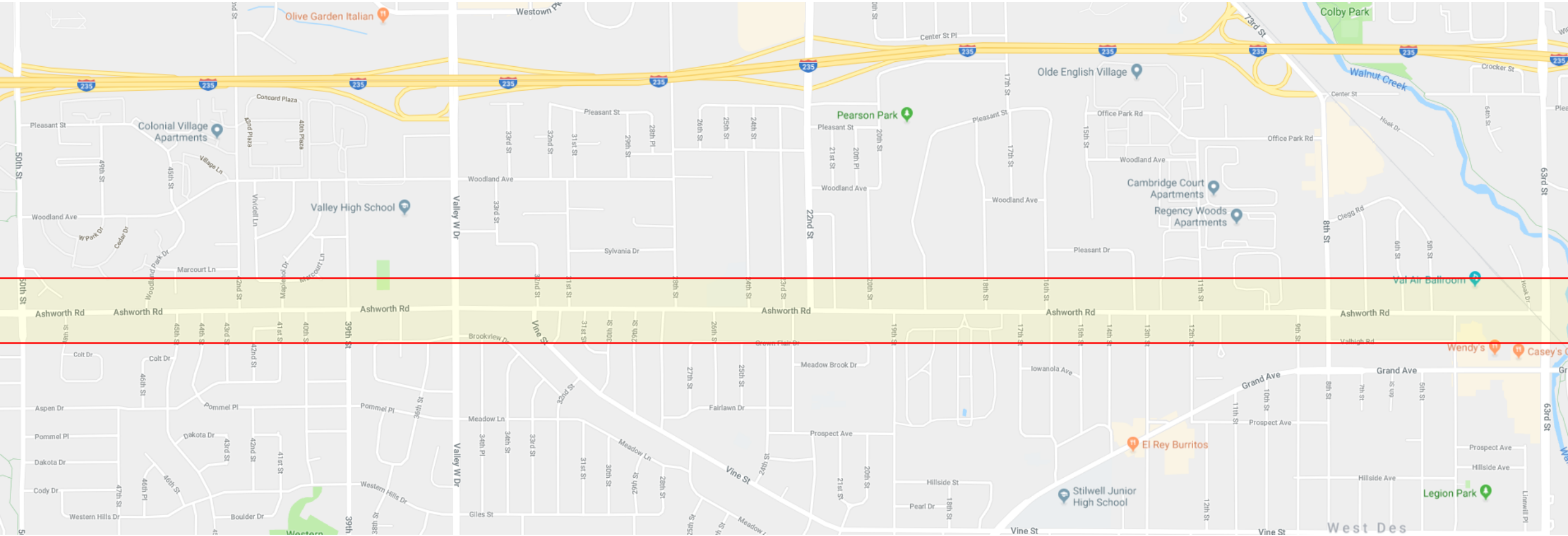


# Ashworth Road, 1<sup>st</sup> Street to 50<sup>th</sup> Street



# Ashworth Road, 1<sup>st</sup> Street to 50<sup>th</sup> Street



## Current conditions

- 4-lane, minor arterial street
- One of only a few east/west corridors through the City
- Truck/bus route
- Detour route during incidents on I-235

## Ashworth Road, 1<sup>st</sup> Street to 50<sup>th</sup> Street

Lane widths of 9'-10'

- Driver comfort
  - Shy distance from curbs and adjacent traffic
  - Trucks, buses
- Loss in street capacity
  - Staggered driving
- Higher number of crashes

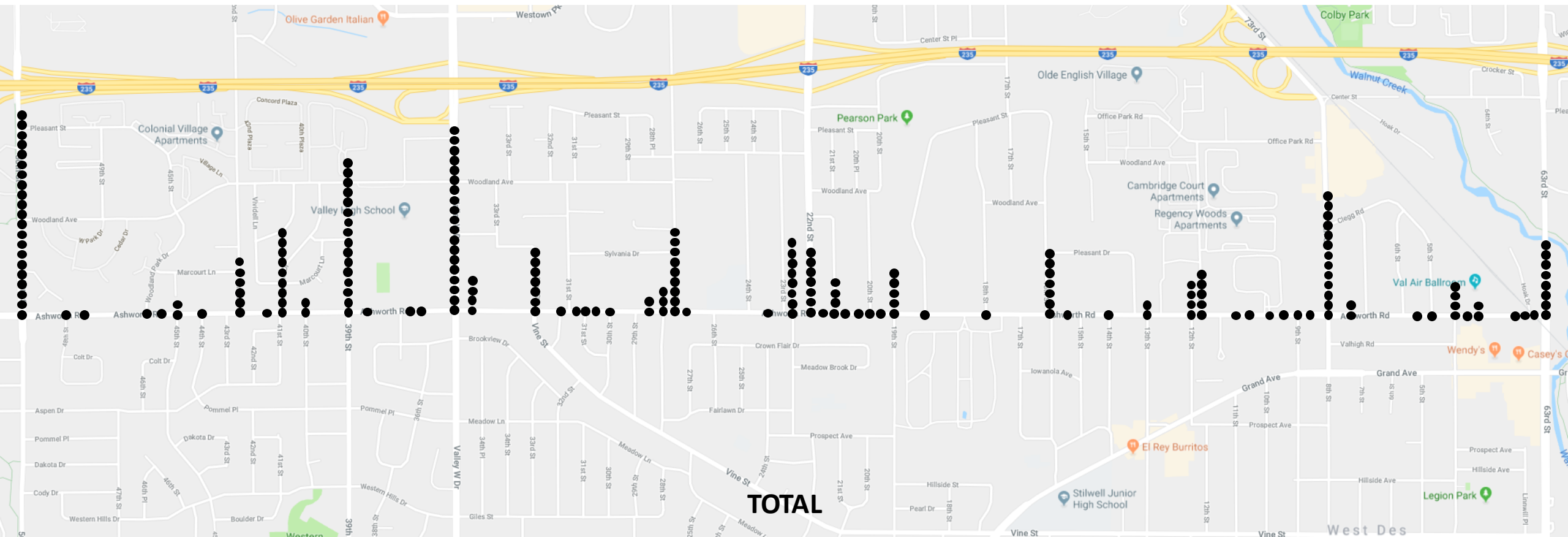
No left-turn lanes for most of the corridor



# Ashworth Road, 1<sup>st</sup> Street to 50<sup>th</sup> Street

6-year reported crash history (January 1, 2014 – December 31, 2019)

Does not include snow/ice, deer, alcohol, medical, intentional, or non-reported crashes

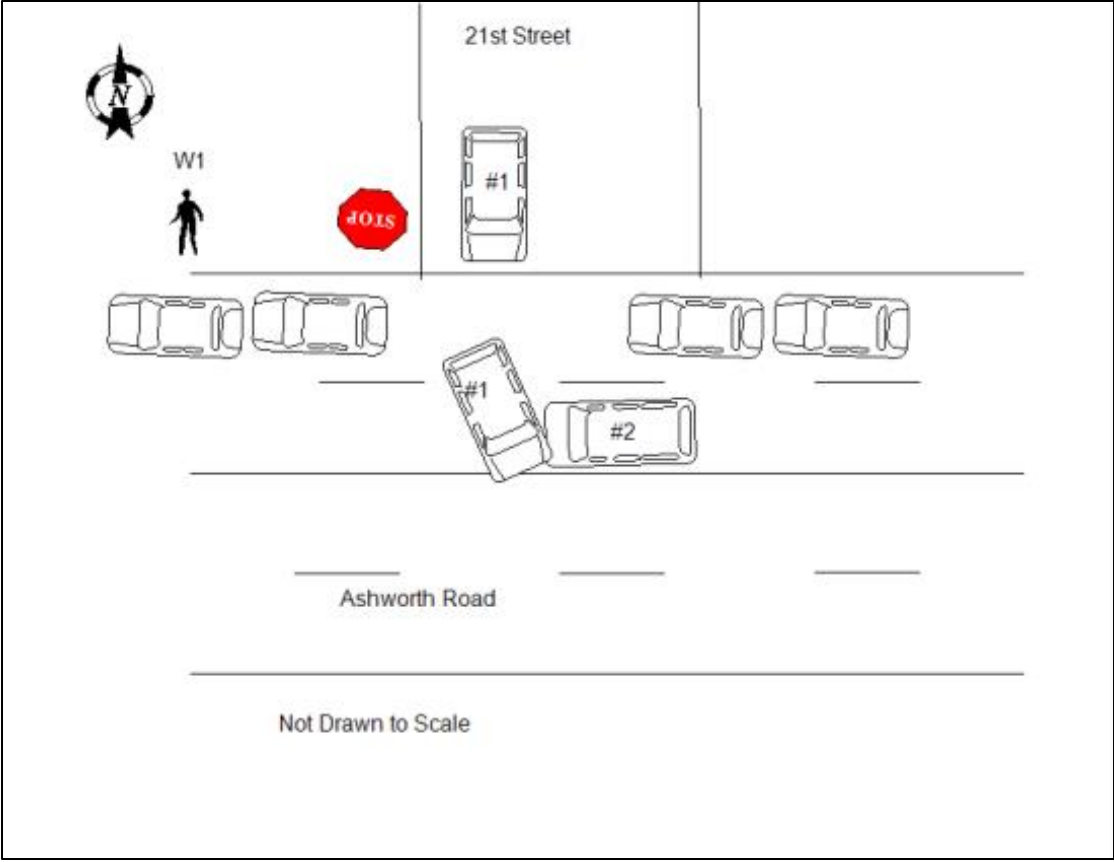
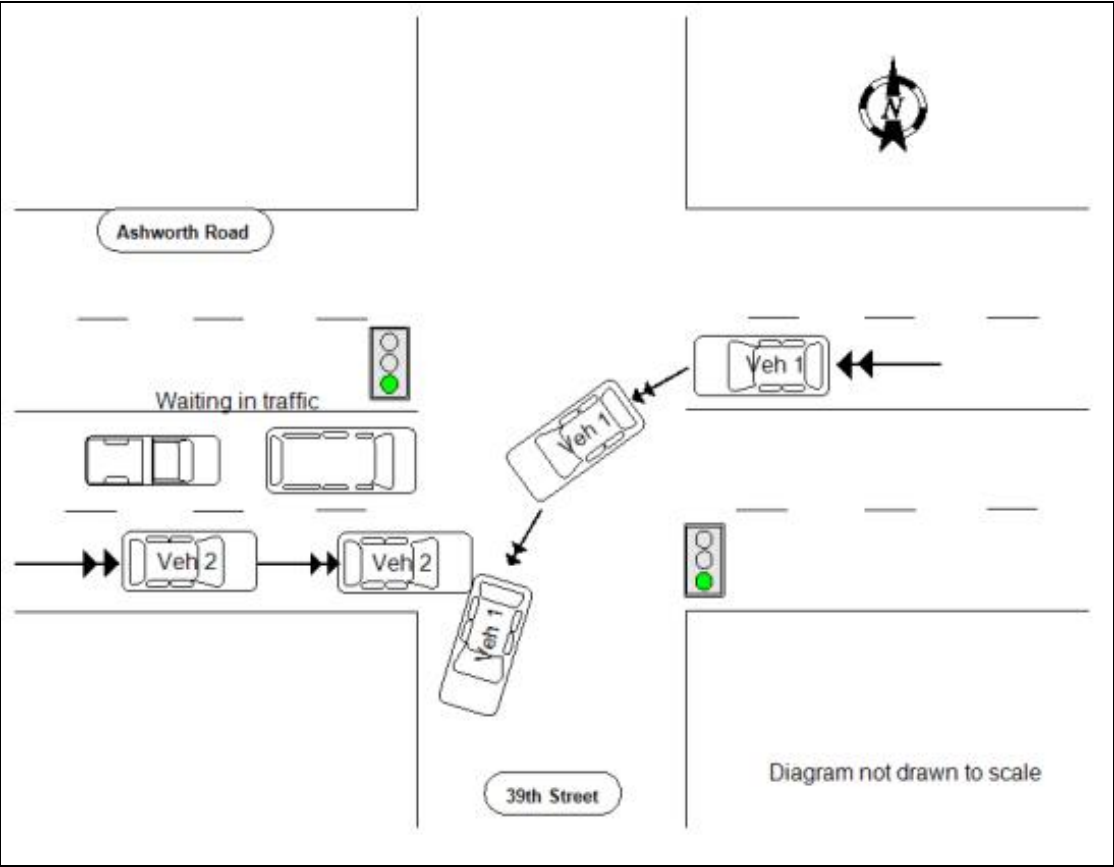


**208** total reported crashes from 1<sup>st</sup> to 50<sup>th</sup> over 6-year period

On average, 1 crash every 10 days

**#1** 86 failure-to-yield-left-turn collisions

26 collisions where a non-contact vehicle blocked a driver's visibility



**208** total reported crashes from 1<sup>st</sup> to 50<sup>th</sup> over 6-year period

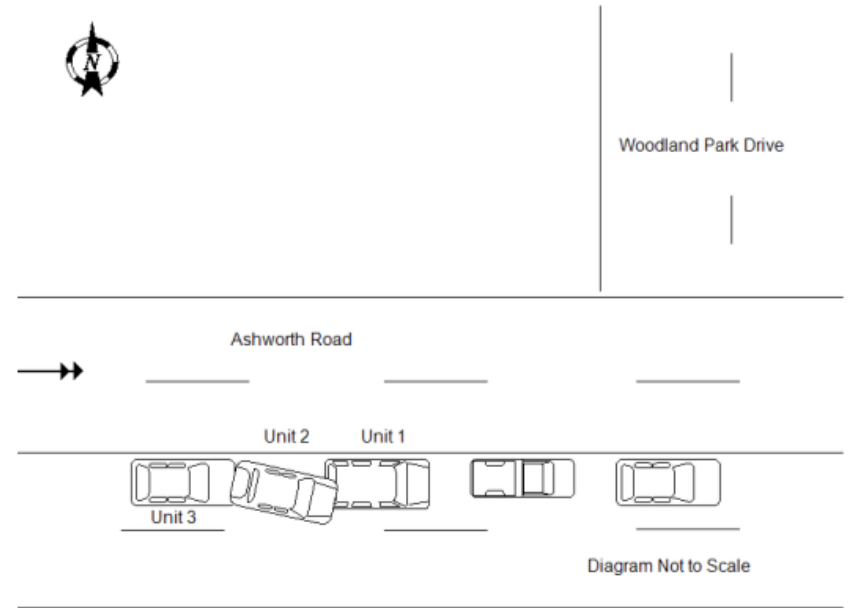
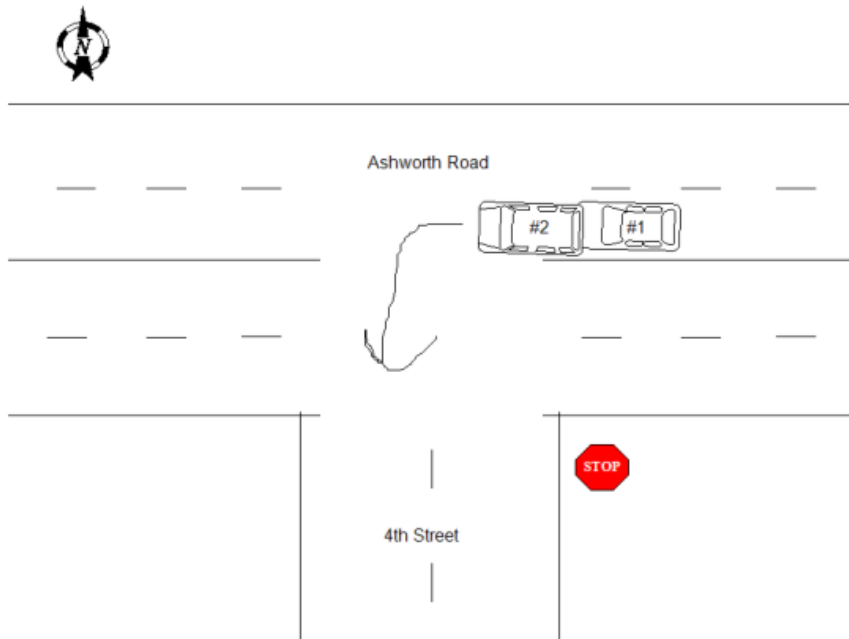
On average, 1 crash every 10 days

#1 86 failure-to-yield-left-turn collisions

26 collisions where a non-contact vehicle blocked a driver's visibility

#2 57 rear-end collisions

32 collisions involved stopped traffic in the inside lanes due to a left-turning vehicle



**208** total reported crashes from 1<sup>st</sup> to 50<sup>th</sup> over 6-year period

On average, 1 crash every 10 days

#1 86 failure-to-yield-left-turn collisions

26 collisions where a non-contact vehicle blocked a driver's visibility

#2 58 rear-end collisions

32 collisions involved stopped traffic in the inside lanes due to a left-turning vehicle

#3 38 lane-departure collisions

20 sideswipe collisions, with most drivers changing lanes and not seeing adjacent vehicles

13 collisions where a vehicle (mostly large trucks) struck another vehicle while turning

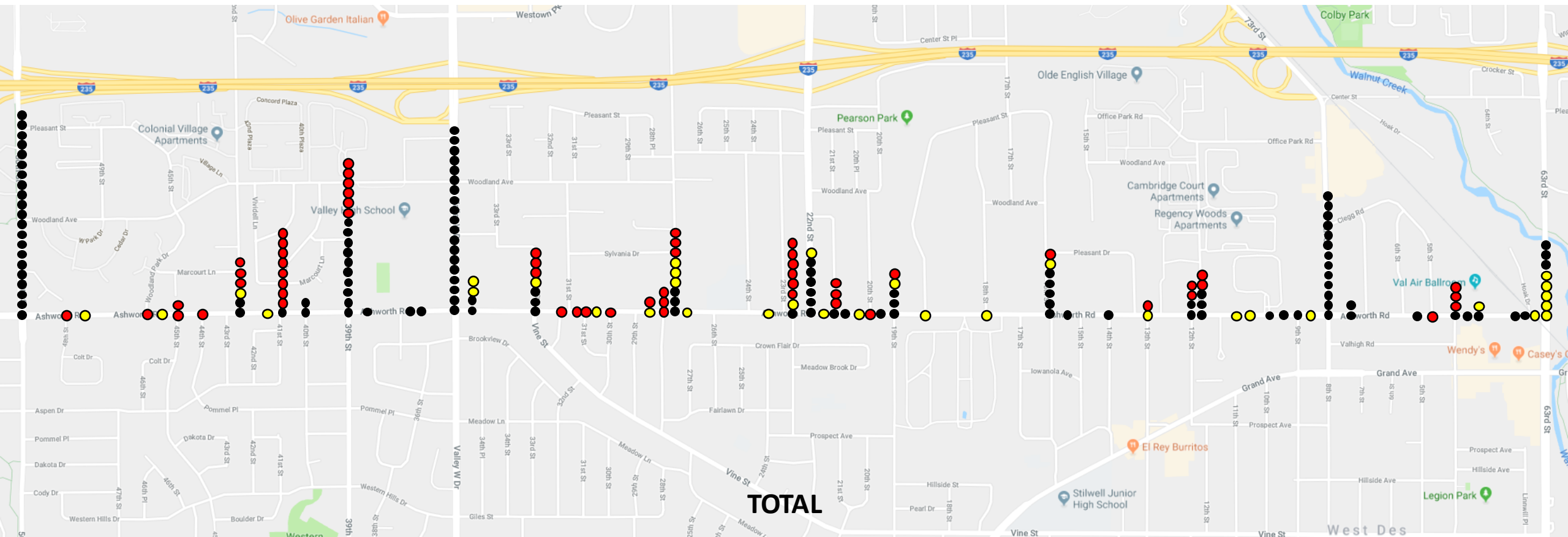
5 collisions where a vehicle ran off the road

#4 26 red-light-running collisions

# Ashworth Road, 1<sup>st</sup> Street to 50<sup>th</sup> Street

6-year reported crash history (January 1, 2014 – December 31, 2019)

Does not include snow/ice, deer, alcohol, medical, intentional, or non-reported crashes



**Red dots – crashes at intersections with no left-turn lanes that are of a type correctable by adding left-turn lanes**

**Yellow dots – lane departure crashes (sideswipe and run-off-road)**

**Black dots – all other crashes**



## Ashworth Road, 1<sup>st</sup> Street to 50<sup>th</sup> Street

6-year reported crash history (January 1, 2014 – December 31, 2019)

Does not include snow/ice, deer, alcohol, medical, intentional, or non-reported crashes

In the 4-lane sections of Ashworth that have no left-turn lanes (i.e., removing crashes at 1<sup>st</sup>, 8<sup>th</sup>, Valley West, and 50<sup>th</sup>)

- 147 total crashes
- Lack of left-turn lanes was a contributor in 40-50% of reported crashes
- Narrower lanes, tighter corners, etc., was a contributor in 10-20% of reported crashes
- Nearly 40% of crashes resulted in injuries, with 3 crashes resulting in serious injuries

## Comparison of lane departure crashes on Ashworth compared to other 4-lane streets with 11-12' lanes

In the 4-lane sections of Ashworth Rd that have no left-turn lanes (i.e., removing crashes at 1<sup>st</sup>, 8<sup>th</sup>, Valley West, and 50<sup>th</sup>)

- 14% of total crashes, or 10 crashes/mile, were lane-departure crashes
  - 19 sideswipe crashes (14 in same direction, 5 in opposing direction)
  - 6 crashes while turning on/off
  - 5 run-off-road crashes

In the 4-lane sections of EP True Pkwy that have no left-turn lanes (i.e., removing crashes at Valley West)

- 7% of total crashes, or 2.4 crashes/mile, were lane-departure crashes
  - 1 sideswipe crash (same direction)
  - 2 crashes while turning on/off
  - 0 run-off-road crashes

For lane-departure crashes (where lane width is a key contributor), the crash rate on Ashworth Rd is approximately **4 times higher** than on similar sections of EP True Pkwy where there are 12' lanes.

Could be even higher than this, since:

- Lane-departure crashes are often low damage and may not get reported.
- Snow/ice-related crashes were not included, but narrower lanes provide less room for drivers to recover if they lose control.

## Feasibility of a 3-Lane Ashworth Rd

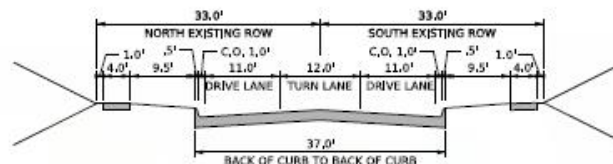
- Safety improvements
  - Research is overwhelmingly clear that 4-to-3-lane conversions provide safer operation
    - Studies in Iowa, for 15 before-and-after locations:
      - 21-25% reduction in crash density
      - 19-29% reduction in crash rate
      - 11% reduction in major-injury crashes and 30% reduction in possible-injury crashes
    - One of the top safety countermeasures according to FHWA, DOT
- Funding – good candidate for traffic safety grants
- Center two-way left-turn lanes are safe and effective in other areas of the City
- Minimizes ROW needs and impacts to utilities (impacts are just at major intersections)
- Analysis – Will 3-lanes “work” from a capacity standpoint, or what would it take to make it work?

## Feasibility of a 3-Lane Ashworth Rd

- “Do nothing” option is not viable. With eventual reconstruction, the road must have wider lanes.
- “Pilot project”
- Design standards are developed and modified over time based on research.
- Ultimately up to engineering judgement
- Potential liability with constructing infrastructure that is below standards

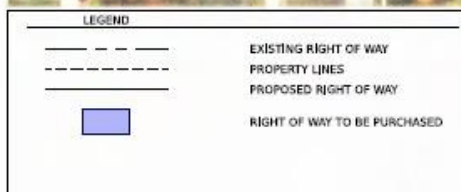
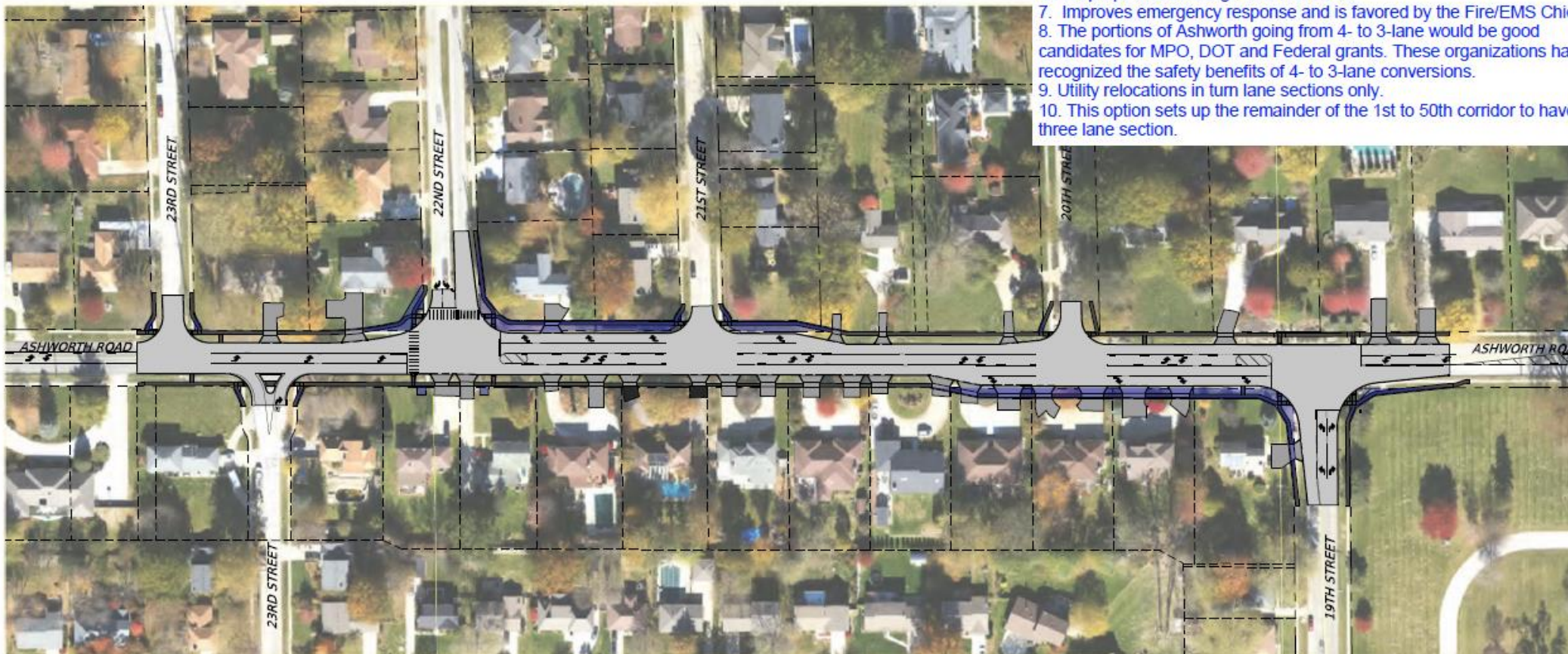
**Reasons some may not prefer this option:**

- 1. The amount of property acquisition is larger than other options for those affected, although a much smaller number of properties are affected overall.
- 2. There would be more delay for drivers who are behind slower moving vehicles, but there is still adequate capacity.



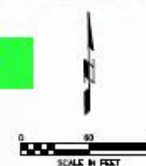
**Reasons to choose this option:**

- 1. ROW Acquisition not needed for all properties.
- 2. All lanes are aligned without any shifting.
- 3. This layout will handle anticipated traffic volumes.
- 4. This option is the safest, due to TWLTL.
- 5. With single through lane, drivers will be traveling at the same pace as vehicles in front of them. This reduces passing conflicts, decreases traffic speeds, and reduces the ability for drivers to travel excessively fast.
- 6. Little additional right-of-way needed from majority of 1st Street - 50th Street properties abutting Ashworth Road.
- 7. Improves emergency response and is favored by the Fire/EMS Chief.
- 8. The portions of Ashworth going from 4- to 3-lane would be good candidates for MPO, DOT and Federal grants. These organizations have recognized the safety benefits of 4- to 3-lane conversions.
- 9. Utility relocations in turn lane sections only.
- 10. This option sets up the remainder of the 1st to 50th corridor to have a three lane section.



**THIS IS THE RECOMMENDED OPTION**

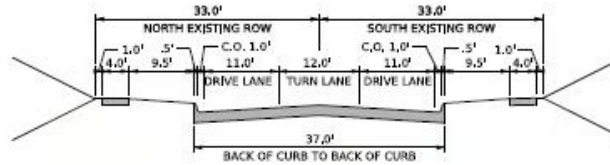
Approximate ROW Acquisition Needed From 19th Street to 23rd Street : 13,000 SF



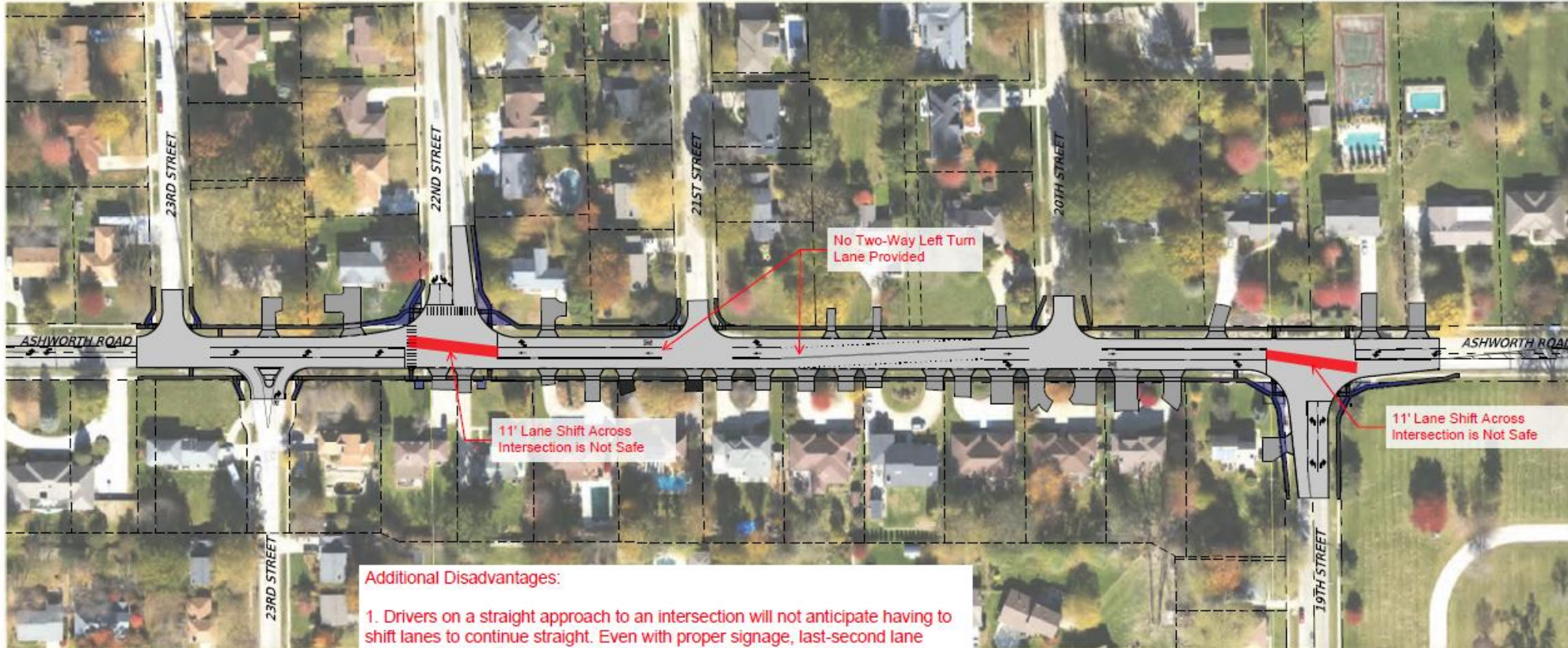
NO.	REVISION DESCRIPTION	APPROVED	DATE

Reasons this option does not work:

1. 11' lane shift across the intersection is not safe.
2. Opposing traffic is head to head in the center lanes at 19th and 22nd. This creates confusion, particularly at night when headlight glare will blind both drivers.
3. In order to make this option safe, the left-only turn lanes opposite the red shifts would have to be repurposed to accept through traffic, which would severely limit the capacity of these intersections.



**THIS OPTION DOES NOT WORK SHOWN FOR REFERENCE ONLY**



Additional Disadvantages:

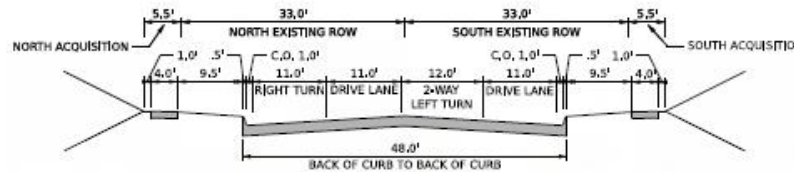
1. Drivers on a straight approach to an intersection will not anticipate having to shift lanes to continue straight. Even with proper signage, last-second lane changes and drivers in the right-turn lane continuing straight may lead to conflicts and potential collisions.
2. There is no two-way left turn lane provided between 19th and 22nd, thus no TWLTL safety or capacity benefits. Left-turning drivers must stop in the through lanes and wait to turn left.
3. Shifting back and forth can lead to lane departures, especially in low visibility conditions.

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NO.	REVISION DESCRIPTION	APPROVED	DATE

Reasons this option is not ideal:

1. Lane shifts are not intuitive to through traffic and can lead to lane departures, especially in low visibility conditions. Even with proper signage, last-second lane changes and drivers in the right-turn lane continuing straight may lead to conflicts and potential collisions.
2. This option requires more ROW Acquisition area than the preferred option and it requires acquisition from more properties.
3. This option would cost more than the preferred option since it requires more pavement.
4. Significant utility relocation required.
5. There would be more delay for drivers who are behind slower-moving vehicles, but there is still adequate capacity.



Reasons to choose this option:

1. More even ROW acquisition distribution.
2. This option sets up the remainder of the 1st to 50th corridor to have a three lane section.
3. With single through lane, drivers will be traveling at the same pace as vehicles in front of them. This reduces passing conflicts, decreases traffic speeds, and reduces the ability for drivers to travel excessively fast.
4. The portions of Ashworth going from 4- to 3-lane would be good candidates for MPO, DOT and Federal grants. These organizations have recognized the safety benefits of 4- to 3-lane conversions.



**LEGEND**

- EXISTING RIGHT OF WAY
- - - PROPERTY LINES
- PROPOSED RIGHT OF WAY
- RIGHT OF WAY TO BE PURCHASED

Approximate ROW Acquisition Needed From 19th Street to 23rd Street : 16,000 SF



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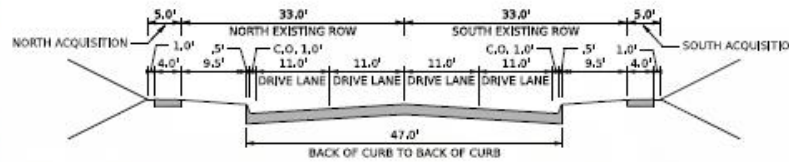
NO.	REVISION DESCRIPTION	APPROVED	DATE

**Reasons this option is not ideal:**

1. Lane alignment causes a mandatory lane change movement in order for cars to travel through this section to stay on Ashworth Road.
2. This option requires more ROW Acquisition area than the preferred option and it requires acquisition from more properties.
3. This option would cost more than the preferred option since it requires more pavement.
4. There is no two-way left turn lane provided between 19th and 22nd, thus no TWLTL safety benefits. Left-turning drivers must stop in the through lanes and wait to turn left.
5. Drivers that are traveling straight don't anticipate having to change lanes to continue straight. Even with proper signage, last-second lane changes and drivers in the right-turn lane continuing straight may lead to conflicts and potential collisions.
6. Significant utility relocation required.

**Reasons to choose this option:**

1. More even ROW acquisition distribution.
2. This option sets up the remainder of the 1st to 50th corridor to have a three lane section.
3. The portions of Ashworth going from 4- to 3-lane would be good candidates for MPO, DOT and Federal grants. These organizations have recognized the safety benefits of 4- to 3-lane conversions.



**LEGEND**

- EXISTING RIGHT OF WAY
- PROPERTY LINES
- PROPOSED RIGHT OF WAY
- RIGHT OF WAY TO BE PURCHASED

Approximate ROW Acquisition Needed From 19th Street to 23rd Street : 16,000 SF



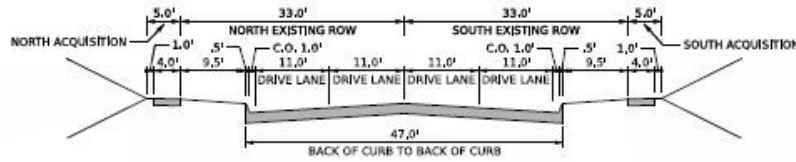
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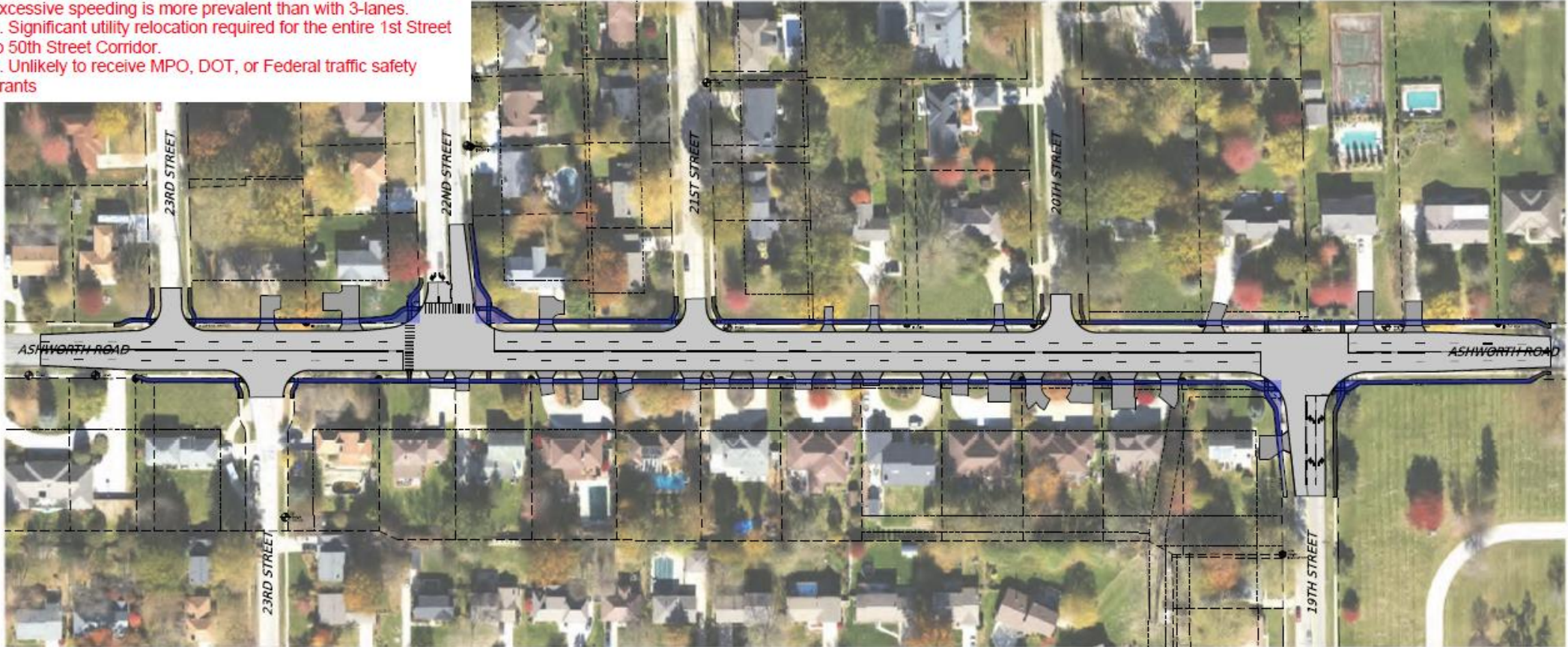
**Reasons this option is not ideal:**

1. This option does not have a TWLTL and thus does not achieve the safety improvement of options with the TWLTL
2. This option requires more ROW Acquisition area than the recommended option and it requires acquisition from more properties. This option requires ROW Acquisition for the entire 1st Street to 50th Street corridor.
3. This option would cost more than the preferred option (option 1) since it requires more pavement.
4. The overall widening of the street may lead to slightly higher speeds on the corridor. Increases would be minimal; however, excessive speeding is more prevalent than with 3-lanes.
5. Significant utility relocation required for the entire 1st Street to 50th Street Corridor.
6. Unlikely to receive MPO, DOT, or Federal traffic safety grants



**Reasons to choose this option:**

1. Driver familiarity to local traffic.
2. Uniform ROW acquisition distribution.
3. Would still allow for future 4- to 3-lane conversion in the future.



**LEGEND**

- EXISTING RIGHT OF WAY
- PROPERTY LINES
- PROPOSED RIGHT OF WAY
- RIGHT OF WAY TO BE PURCHASED

Approximate ROW Acquisition Needed From 19th Street to 23rd Street : 18,000 SF  
 ROW Acquisition will be required from every property owner along each subsequent phase if this option is chosen.



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NO.	REVISION DESCRIPTION	APPROVED	DATE

## Summary

- The proposed configuration is not perfect, but it is recommended over other options because it:
  - ✓ Meets current design standards
  - ✓ Improves safety
    - Primarily due to addition of left-turn lane, but also with slightly wider lanes
  - ✓ Is a strong candidate for traffic safety grants
  - ✓ Provides adequate capacity for the forecasted traffic volumes
  - ✓ Calms traffic speeds
  - ✓ Accommodates trucks, buses, and other large vehicles
  - ✓ Minimizes ROW needs, reducing impacts to residents and utilities
    - Needing ROW from 8 properties rather than 234 properties if 4-lane

