OR 126 Main Street Safety Study

OR 126 (Main Street) Pedestrian Safety Study

Study Results from OR 126 Safety Study on Main Street in Springfield, OR

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Project Team

Consultants

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jla public involvement

Agency Involvement

Oregon Department of Transportation

SPRINGFIELD OREGON

Lane Transit District

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Problem Statement

- Main Street in Springfield, Oregon
  - Focal point of safety concerns for many years
  - Particular public concern for pedestrians
  - 9 pedestrian fatalities in past 10 years (40th Street to 57th Street)
  - Recent fatality of young women in 2009 while crossing the street after getting off the bus
  - Multiple related newspaper articles

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Newspaper Headlines

The Sunday Register-Guard

EUGENE, OREGON — MARCH 30, 2008 — $1.50

DANGER AFOOT

Day two of a five-day series on auto-pedestrian collisions

Springfield's deadliest strip

THE REGISTER-GUARD • SUNDAY, MARCH 30, 2008 — A11

DANGER AFOOT

East Main: Merchants opposed pedestrian islands at their locations

Continued from Page A1

is. If the pattern holds, more people are apt to die while trying to cross the street, and the families of the dead might use to hold government officials to account.

Pedestrian no-man's land

Traffic picks up speed in the four miles of East Main between 30th Street and 72nd Street as Thurston-area residents head for home and travelers make for the scenic McKenzie Highway.

At the same time, that stretch is a busy retail strip with many auto parts, auto repair and auto maintenance businesses. Add in the street's fast-food outlets and delis, laundromats and thrift shops, and the growing number of apartment complexes and assisted living centers built on land designated by the city for high-density residential use, and you've got a pedestrian-thick area.

The No. 11 bus that picks up riders all along Main Street is one of Lane Transit District's busiest urban routes. Riders crisscross East Main to catch the bus.

Not even the police expect these pedestrians to cross only at the smattering of traffic signals and marked crosswalks. There are so few traffic signals and crosswalks that at many stretches along the street, the detour for a pedestrian to reach an official crossing point and then get back to their original destination would be a mile or more of extra steps.

So, as drivers zip along, they see pedestrians standing in the center turn lane hoping for a gap in the traffic.

Pedestrians "are going to cross wherever they have an opportunity," Springfield police Sgt. Brent Carpenter said.

About four times a year on East Main, a darting shadow of a crossing pedestrian turns suddenly solid as a vehicle-pedestrian crash occurs. Bodies smash against fenders, break headlights and grills, fly

BRIAN DAVIES/The Register-Guard

Linda May's brother *William was struck and killed crossing Main Street in Springfield two years ago. After the accident, state highway crews installed a pedestrian island at the site but later removed much of it when adjacent businesses complained.*

hour or close your eyes and put on the gas and hope you don't get hit," she said.

A light at 48th Street would be a boon to the 180 residents of the Briarwood and Woodside assisted living residences adjacent to Jenna Village. Residents could cross the street there to catch the bus — otherwise, they have to walk to either 42nd Street or 54th Street to cross with the protection of a signal, and that's a prohibitive distance for the elderly.

If that stop light were sci-

OREGON WALKER SAFEGUARDS

The Oregon Legislature over time has adopted the following traffic laws to keep pedestrians safe. The penalties for violating the laws range from $237 to $12,500. As a general rule, drivers must stop for pedestrians if they can.

A DRIVER MUST NOT

- Pass a vehicle that has stopped at a corner or crosswalk to let a pedestrian cross.
- Drive too close to a pedestrian crossing the street at a painted crosswalk. The driver must stop and remain stopped for any pedestrian, but especially for a blind pedestrian.
- Here are the distances that drivers must by law stay clear of pedestrians: Before turning at a crosswalk with a signal, it's 1 + 6. That is, the driver's lane plus six feet. The driver must stop for the pedestrian,

right on a red light, or while turning too close to a blind pedestrian.

installed, said Charles Zegeer, associate director of the Highway Safety Research Center at the University of North Carolina Chapel Hill.

"Based around accident data," state highway engineer Carl Donton planned four islands on East Main: Near 34th and 35th streets, near 50th and 51st streets, near Chapman Lane, and near 57th and 58th streets, the agency's internal documents show.

Then, in fall 2006, as crews began constructing the islands, businesses along Main

friends, his sister, Linda May, said.

"He got thrown up on the car. He lost all of his blood on that street. And there were people all over that street that ran out and picked my brother's head up and held it in their hands. It was terrible."

Dave Weber, manager of Knecht's Auto Parts, didn't want the island that ODOT proposed in front of his business on East Main Street near 34th Street because it would block passage of semi-trucks that supply the distribution center behind his store.

"We don't have any customers that walk across the street to the store," Weber said. "Most of our customers are driving cars."

But people do cross East Main Street to get to Thomsen's Market, next door to Knecht's. Three people have been struck and injured in that block over the past 11 years, state reports show.

In response to merchant pressure, ODOT eliminated 2½ of the pedestrian refuges from its plans midproject and ordered the contractor — which had already poured two islands — to break 1½ of them apart and haul away the rubble: about 60 tons of freshly hardened concrete. In the end, 1½ of the four planned islands remain.

"It ended up that, as soon as there was any conflict with a business (driveway) approach, there was a lot of political push-back," the state agency's Kargel remembers. "Businesses were feeling that if there was any kind of a median near their driveway it would be detrimental. Things had to be changed during the construction."

The cost to taxpayers for ODOT's change of mind was $15,431.

Status quo on Main Street

No major safety improvements are in the works for East Main, and it's hard to say who's to blame.

Merchants who complained say they're not opposed to pedestrian refuges, per se, just

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Solution

- Corridor Safety Study
  - Collaborative effort
    - ODOT
    - City of Springfield
    - Lane Transit District
  - Determine short-term and long-term improvements
    - Emphasis on pedestrian crossing improvements at unsignalized locations
    - Corridor-wide improvements

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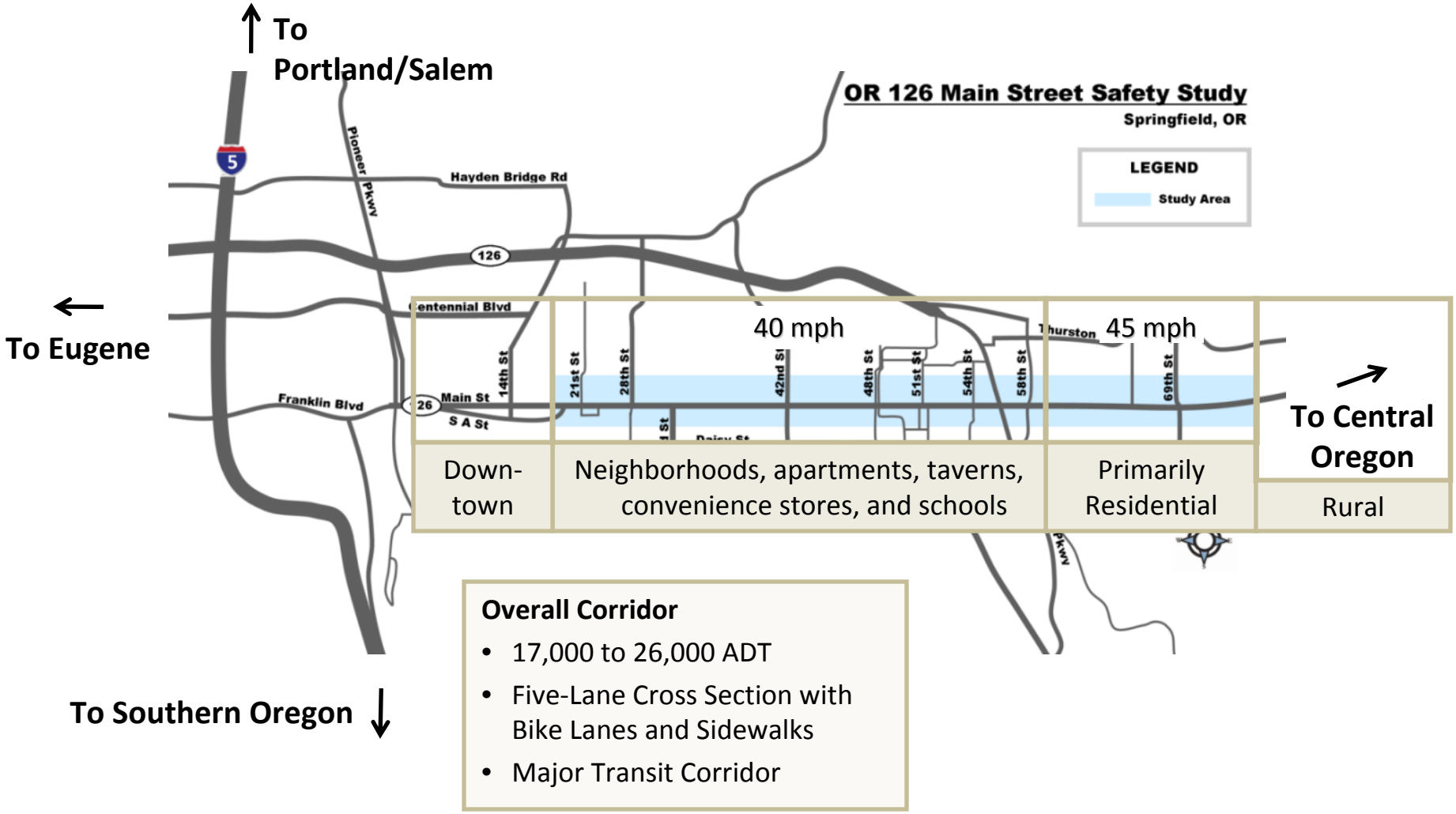
Main Street Study Corridor



Overall Corridor

- 17,000 to 26,000 ADT
- Five-Lane Cross Section with Bike Lanes and Sidewalks
- Major Transit Corridor

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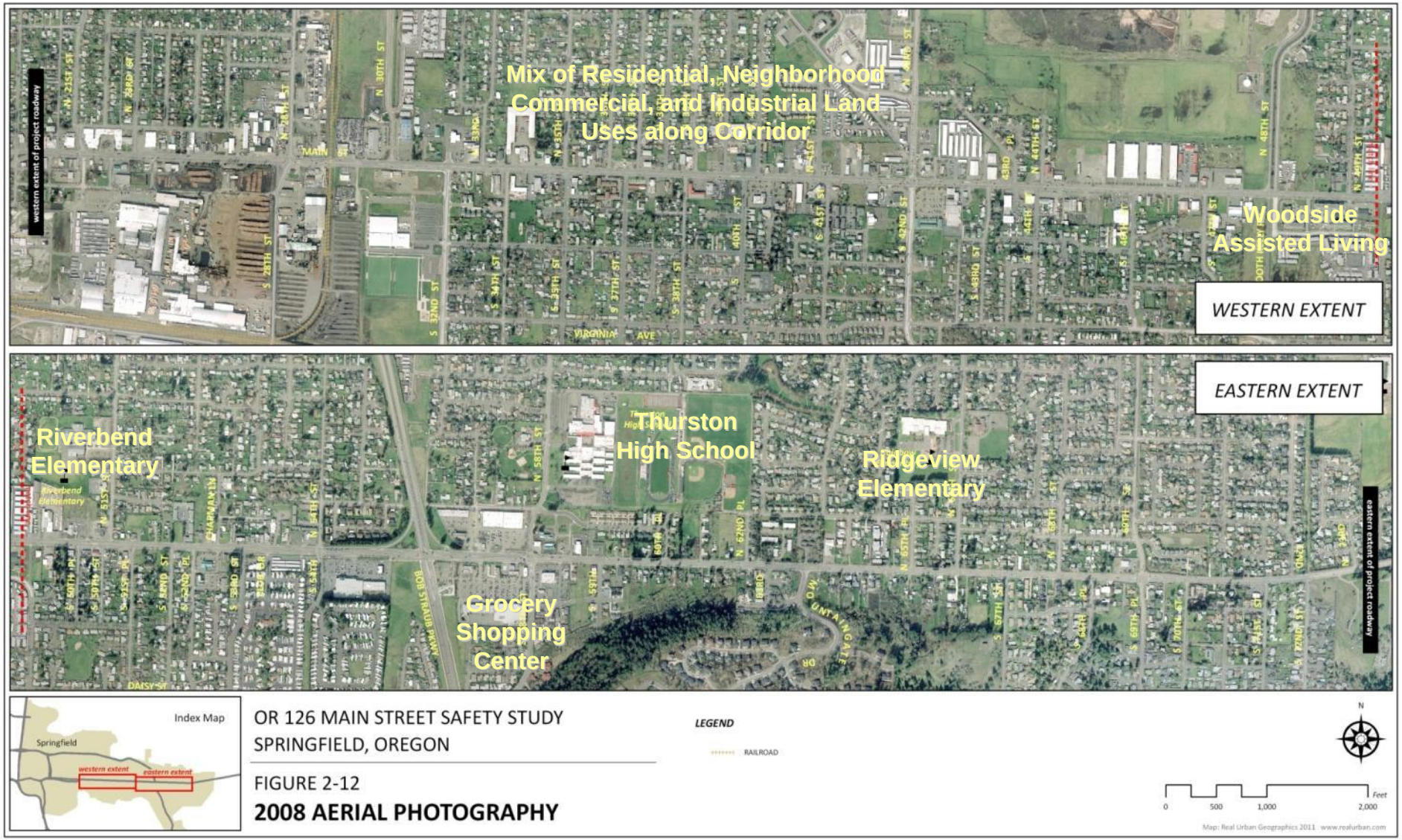
Aerial of Study Corridor



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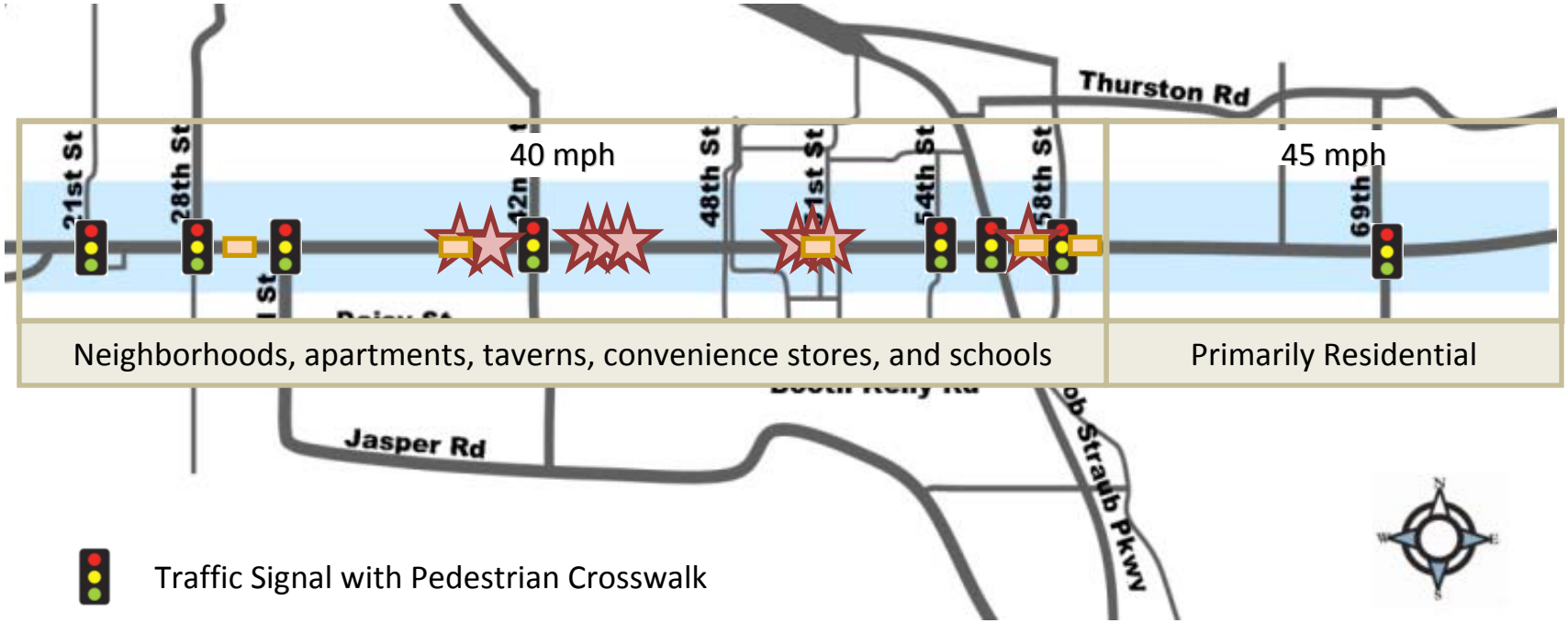
Crossing Accommodations and Pedestrian Fatalities



Traffic Signal with Pedestrian Crosswalk

Raised Center Island (Not ADA Accessible)

Pedestrian Fatality

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Residential (East of 60th Street)

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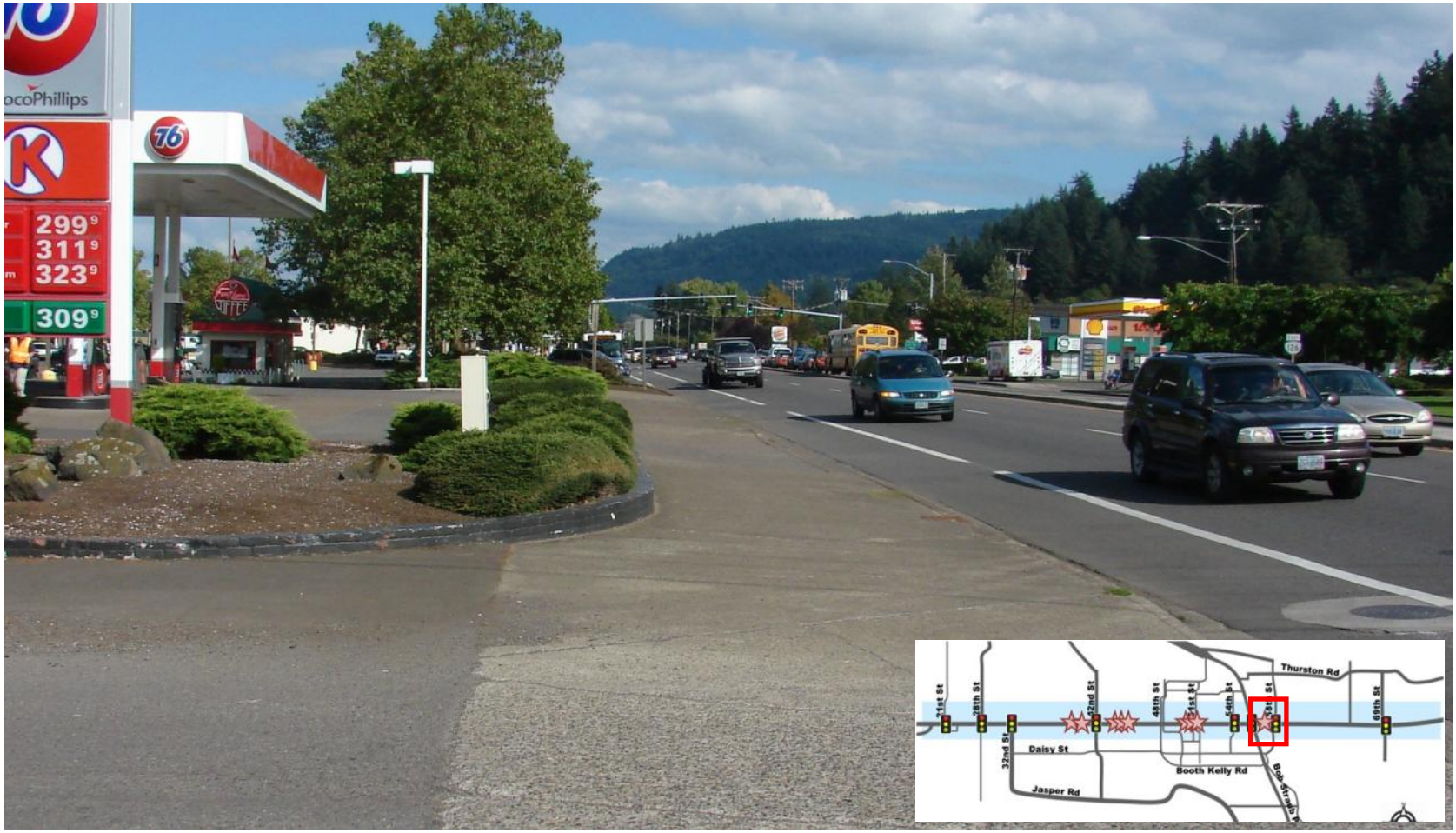
Retail Center (58th Street)



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Mixed Use (53rd Street)

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Small Commercial (41st Street)

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Service Commercial (40th Street)

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Mixed Use (35th Street)

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Do Pedestrians Really Try to Cross Main Street?

You can often find gaps if you
wait long enough.

Especially when the signals cause platoons.

The traffic separator islands are often used for staging.

The center two-way left-turn lane is also used for staging.

Sometimes very leisurely.

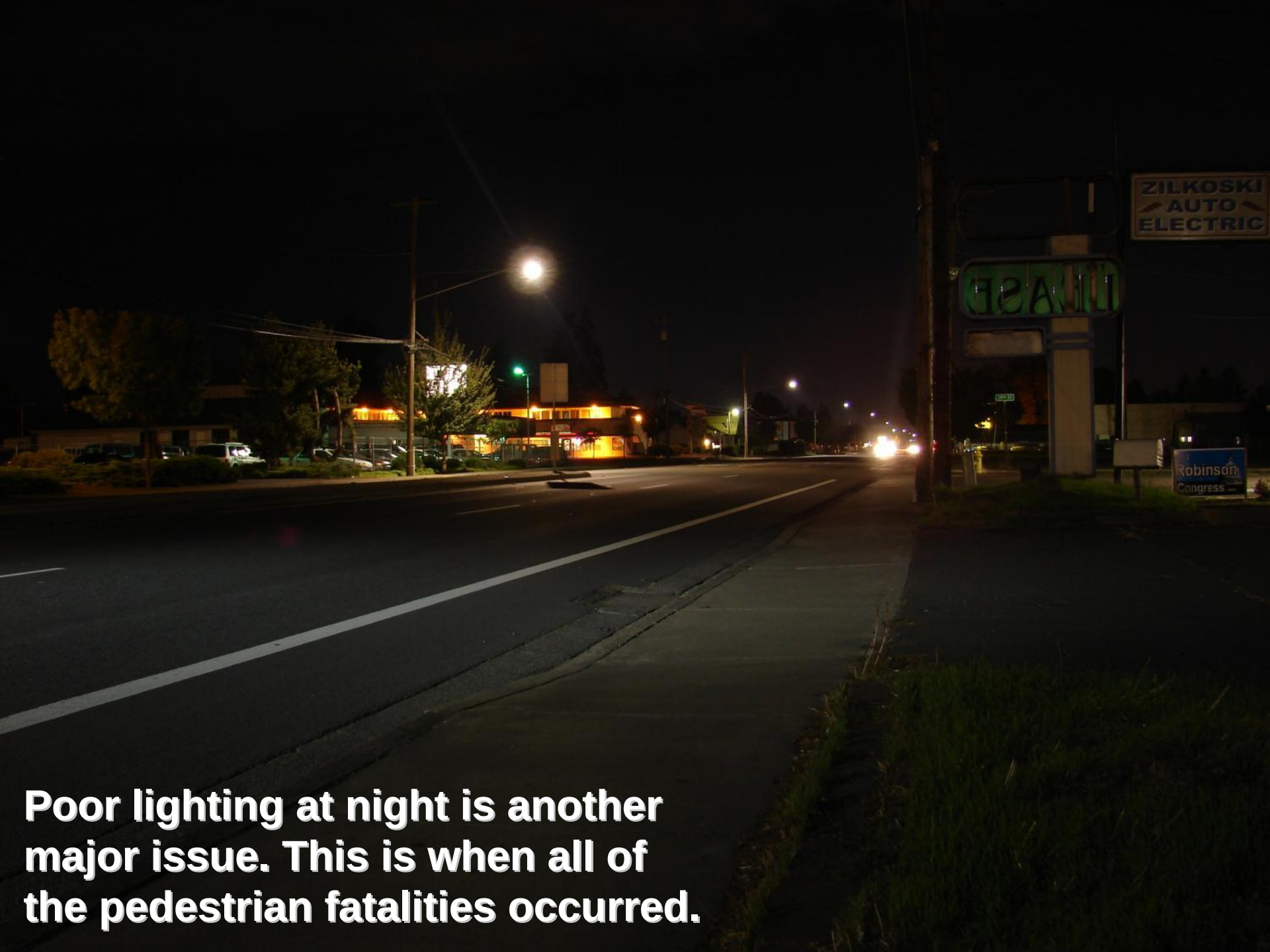
This often results in conflicts with left-turning vehicles.

To catch a bus, pedestrians will take more risks.

And hope that bus drivers are accommodating.

Cyclists also don’t want to be left out of the action.

And kids are also adventurous, especially with friends.



Poor lighting at night is another major issue. This is when all of the pedestrian fatalities occurred.

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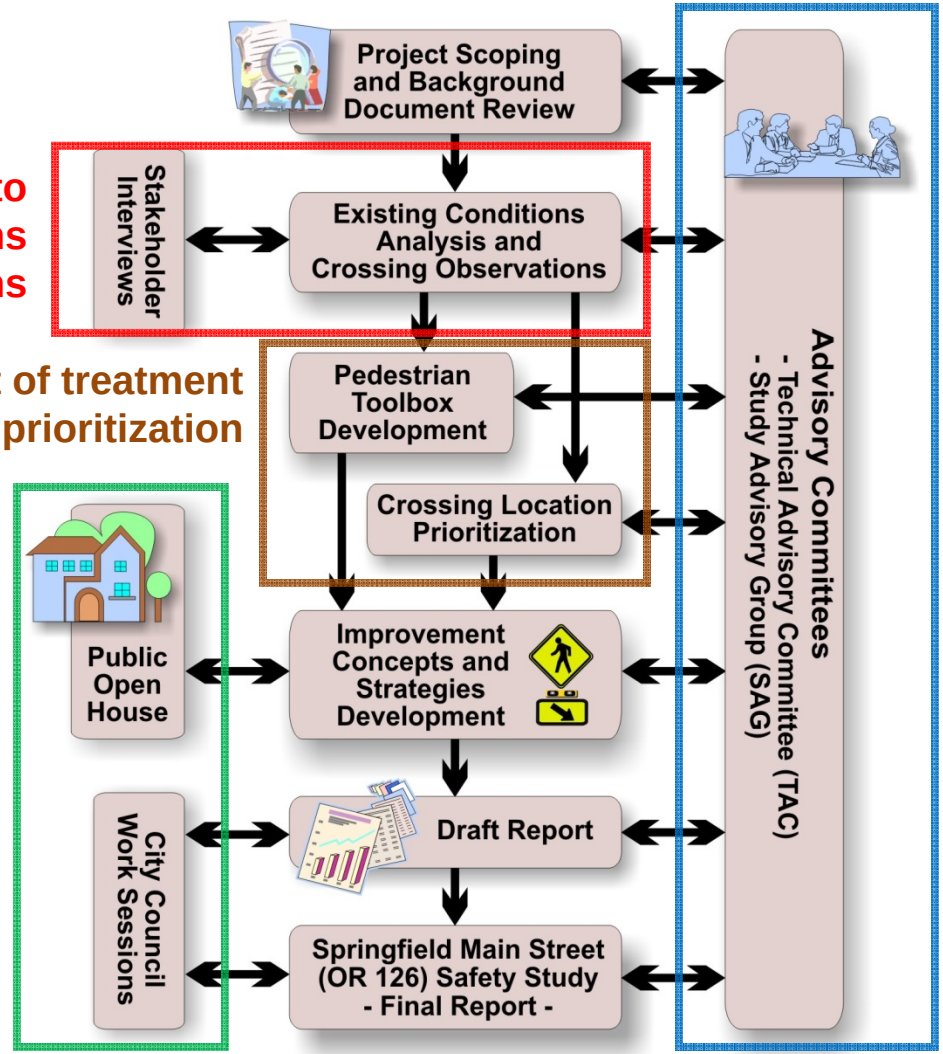
Project Process

Extra initial effort to understand concerns and observe conditions

Parallel development of treatment toolbox and location prioritization

Obtained input, feedback, and support of community members and elected officials



Consistent and dedicated involvement of agency staff and citizen committee members for duration of project

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Existing Conditions- Key Points

1. Stakeholder interviews with eight community members and 5 LTD Bus Operators for Route #11

   Provided a clear understanding of the community perspective

2. Data collection was significant including intersection and 24-hour counts, pedestrian crossing counts, and LTD ridership info

   Data proved helpful for prioritizing locations

3. Conflict analysis was conducted on several different days to have a clear understanding of the pedestrian and bike issues

   Seeing issues with own eyes and taking photos was invaluable to understanding problem

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Pedestrian Toolbox Development

1. Identify all potential crossing treatments
2. Determine which treatments are not applicable to study corridor
3. Evaluate remaining treatments
   - Pros/Cons
   - Applicability Criteria
   - Cost Estimates

Crossing Treatments Determined Not Applicable

- Curb Extensions
- Traffic Calming Measures (i.e. speed humps, narrow lanes)
- In-Roadway Lighting
- Grade-Separated Pedestrian Crossing (i.e., Pedestrian Bridge or Tunnel)

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Crossing Treatments Considered

- **Median Refuge Islands**
- **Street Lighting**
  - Supplementary Lights on Utility Poles
  - New Cobra Head Lighting
- **Active Traffic Control**
  - Rectangular Rapid Flashing Beacon (RRFB)
  - Overhead Flashers
  - Pedestrian Hybrid Beacon- High intensity Activated Crosswalk (HAWK)
  - Pedestrian Traffic Signal

Location Prioritization

Calculated Weighting for Cross Streets

- Fatal and Pedestrian Collisions (Highest Weighting)
- High Pedestrian Crossing Volumes (A.M., Midday, and P.M. Peak Hours)
- Nearby Pedestrian Generators
  - Schools, Taverns/Bars, Markets/Convenience Stores, Recreation Center, Elderly Care Facility
- Transit Stops (Boarding levels)
- ODOT Safety Priority Index System (SPIS) Rankings

Resulting Prioritization

1.	41st Street	Top 6 Locations (Short-Term) *Current ODOT Project (Leaves 5 New Locations)
2.	51st Street*	
3.	43rd/44th Streets	
4.	57th Street	
5.	34th/35th Streets	
6.	40th Street	
7.	Chapman Lane	Next 3 Locations (Mid-Term)
8.	48th/49th Streets	
9.	38th Street	

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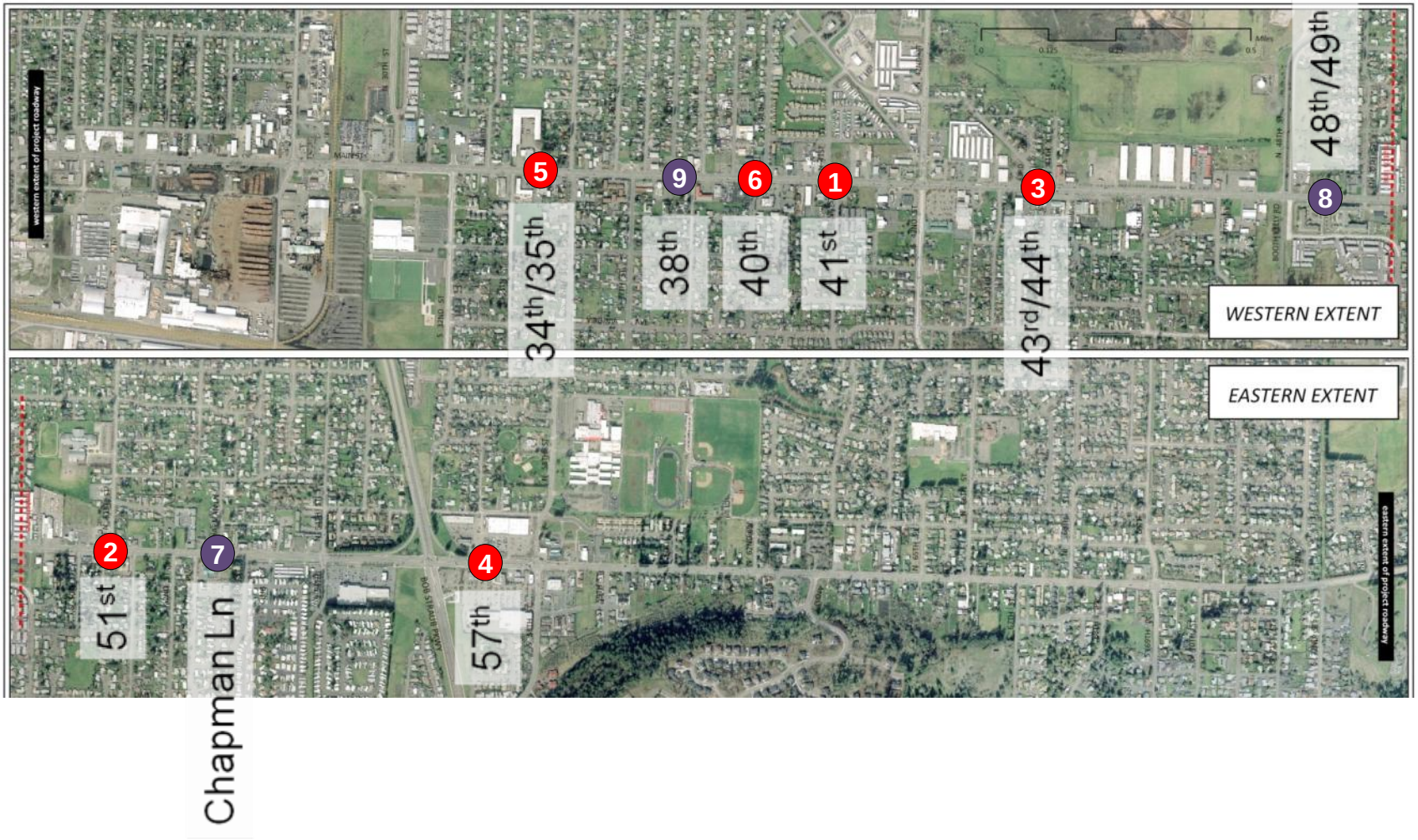
Prioritized Locations



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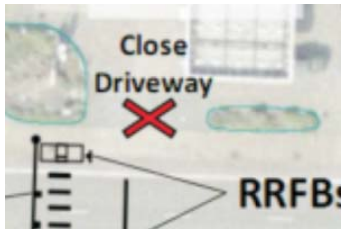
Preferred Crossing Improvement

- Rectangular Rapid Flashing Beacons (RRFBs) were preferred crossing treatment
  - Lowest cost among active traffic control devices
  - Less delay to vehicles
  - Appropriate for all priority crossing locations (given existing driveway spacing and pedestrian levels)
- Other Benefits of RRFBs
  - Interim approval from FHWA
  - Pedestrian actuated
  - High driver compliance rate

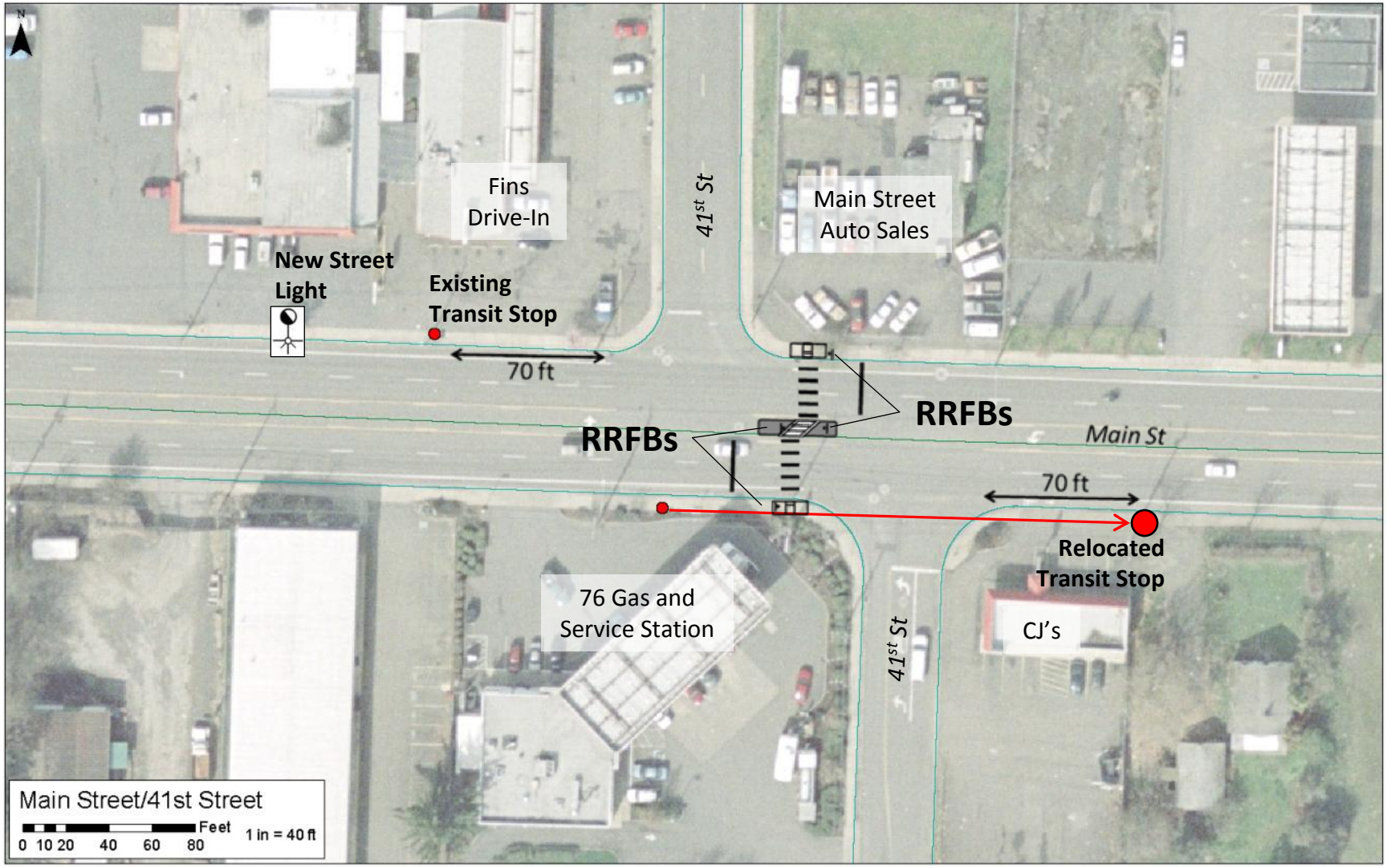
Source- ODOT

Supplemental Treatments

- Advanced stop bar
- Median pedestrian refuge (Diagonal Cut)
- Supplemental overhead RRFBs (at 2 of the 9 priority locations)
- Street lighting
- Transit stop relocation (at far-side of crossing)
- Driveway closures near crosswalks



1 41st Street



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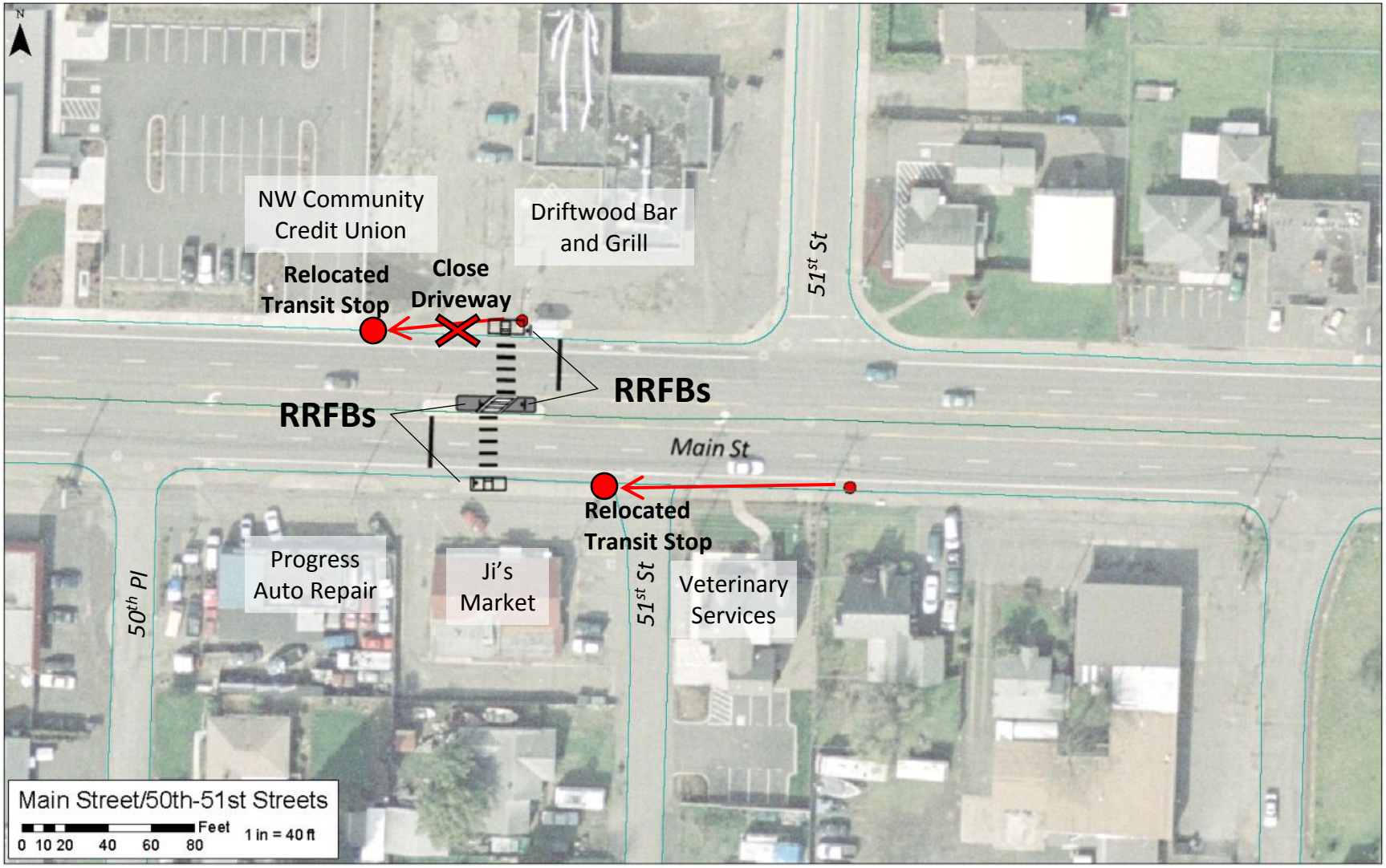
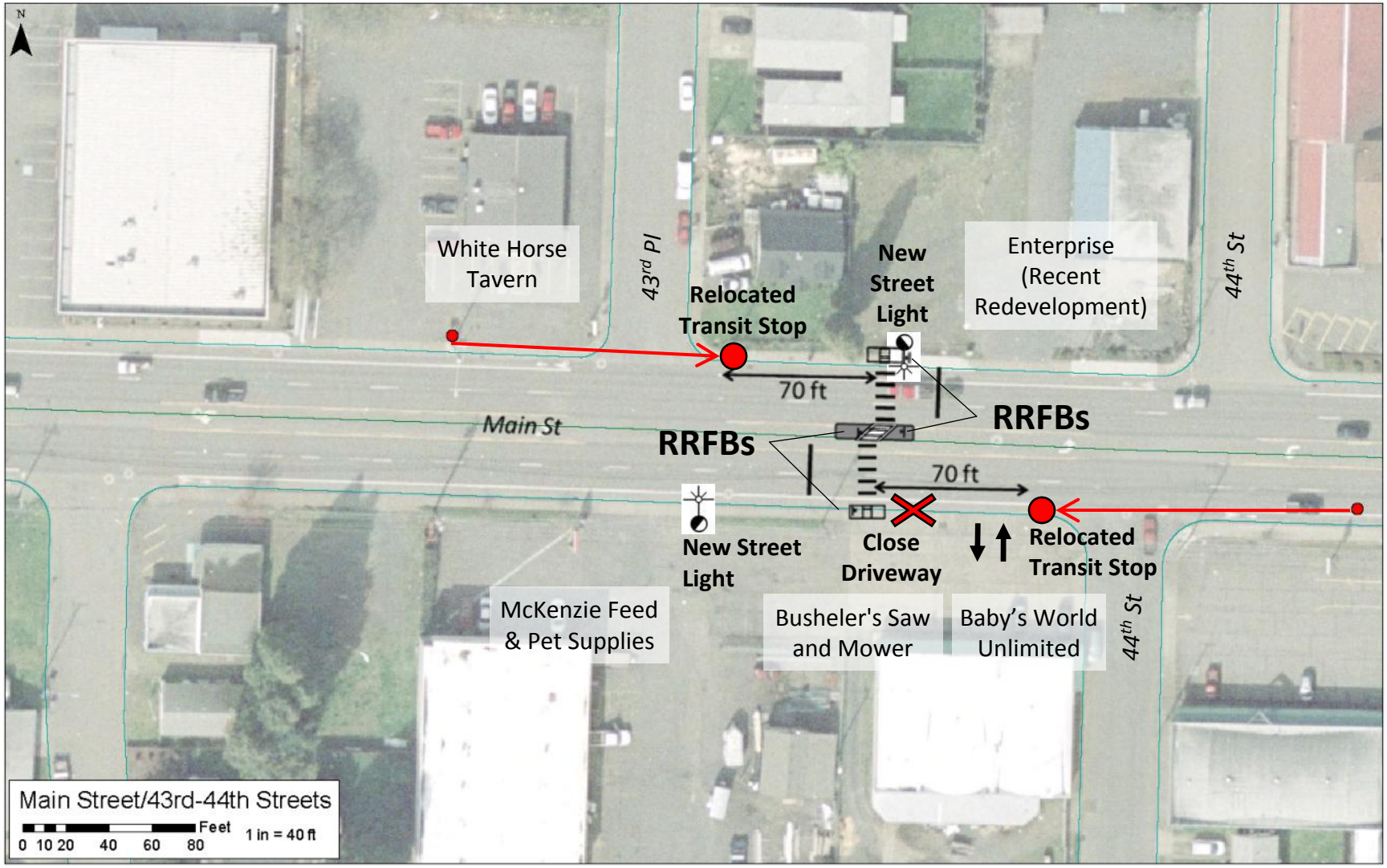
2 51st Street *ODOT Planned Improvement*

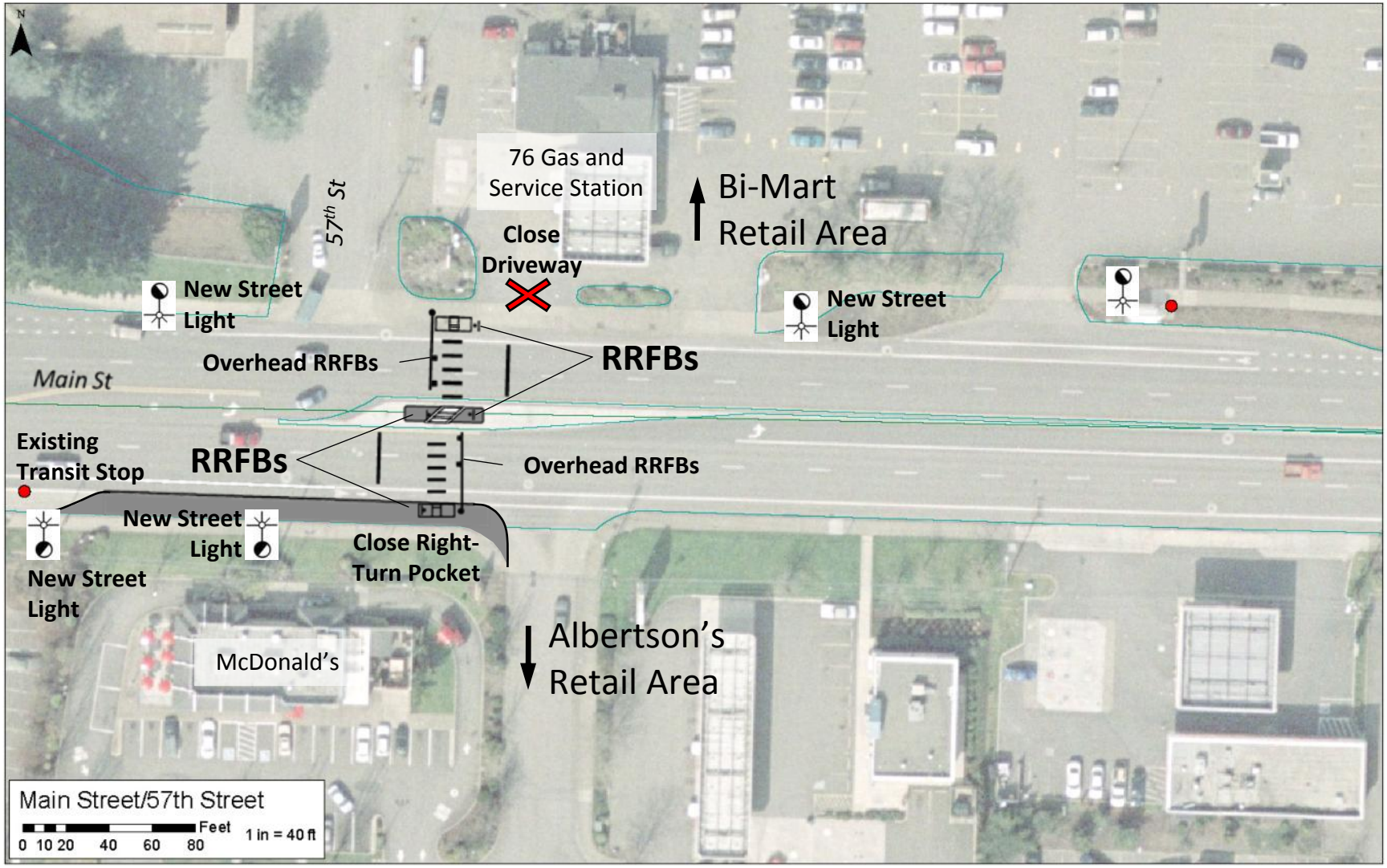


ODOT Installation of 51st Street RRFB

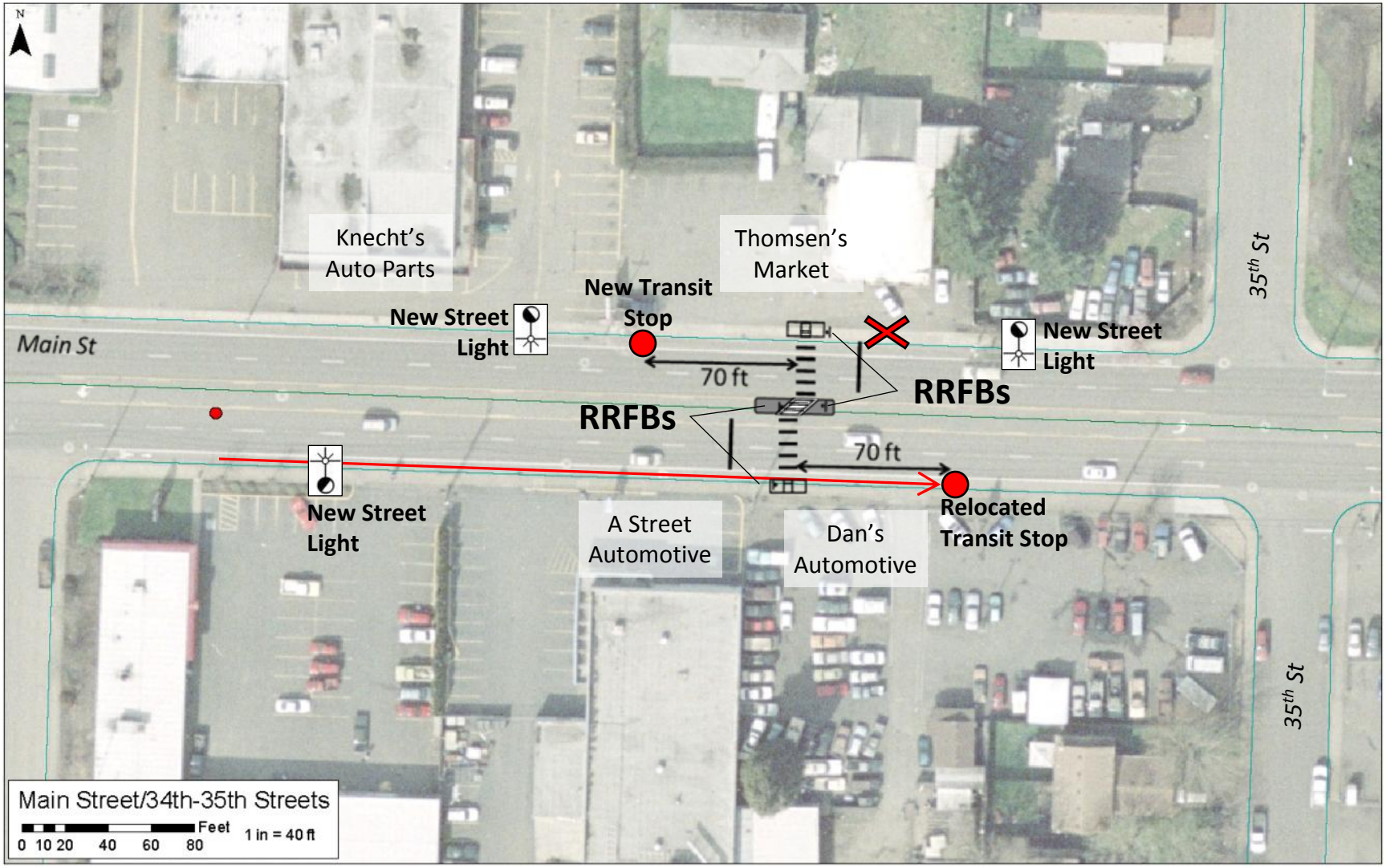
3 43rd-44th Streets



4 57th Street



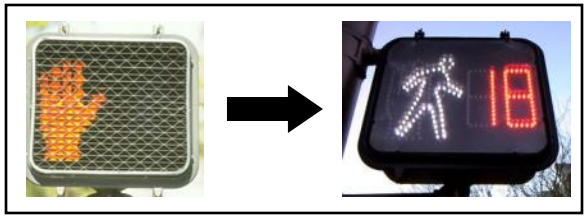
5 34th-35th Streets

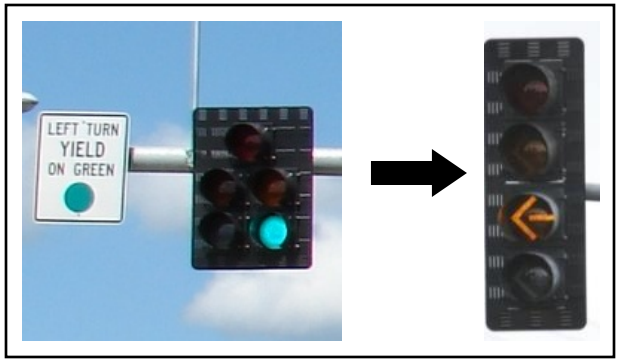


Overall Corridor Strategies

- Additional Corridor Strategies
  - Transit Stop Relocation
  - Pedestrian Timing/Phasing at Existing Traffic Signals
  - Speed Feedback Signs
  - Access Management Plan
  - Corridor Street Lighting

See Transit Stop Relocation Plan





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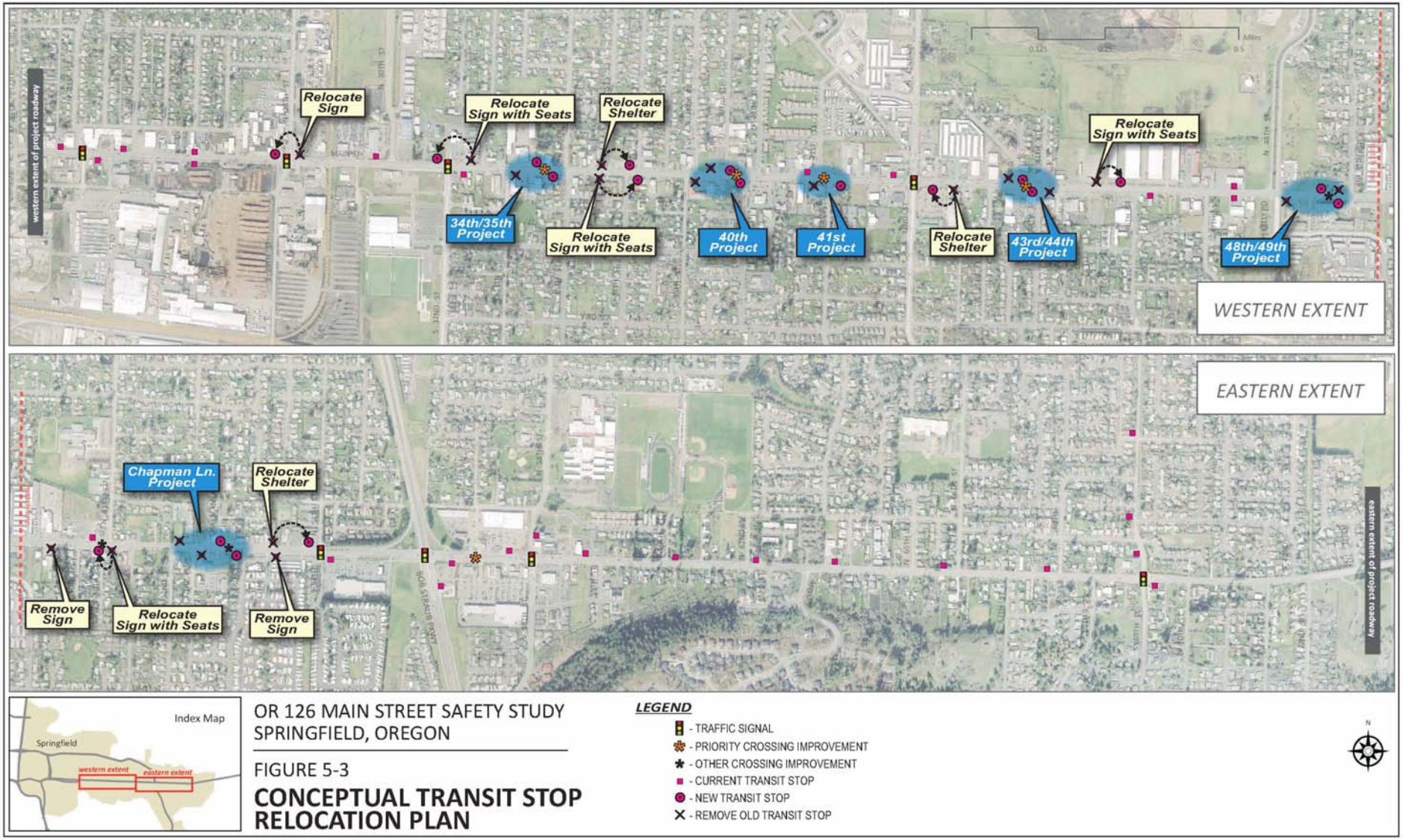
Transit Stop Relocation Plan



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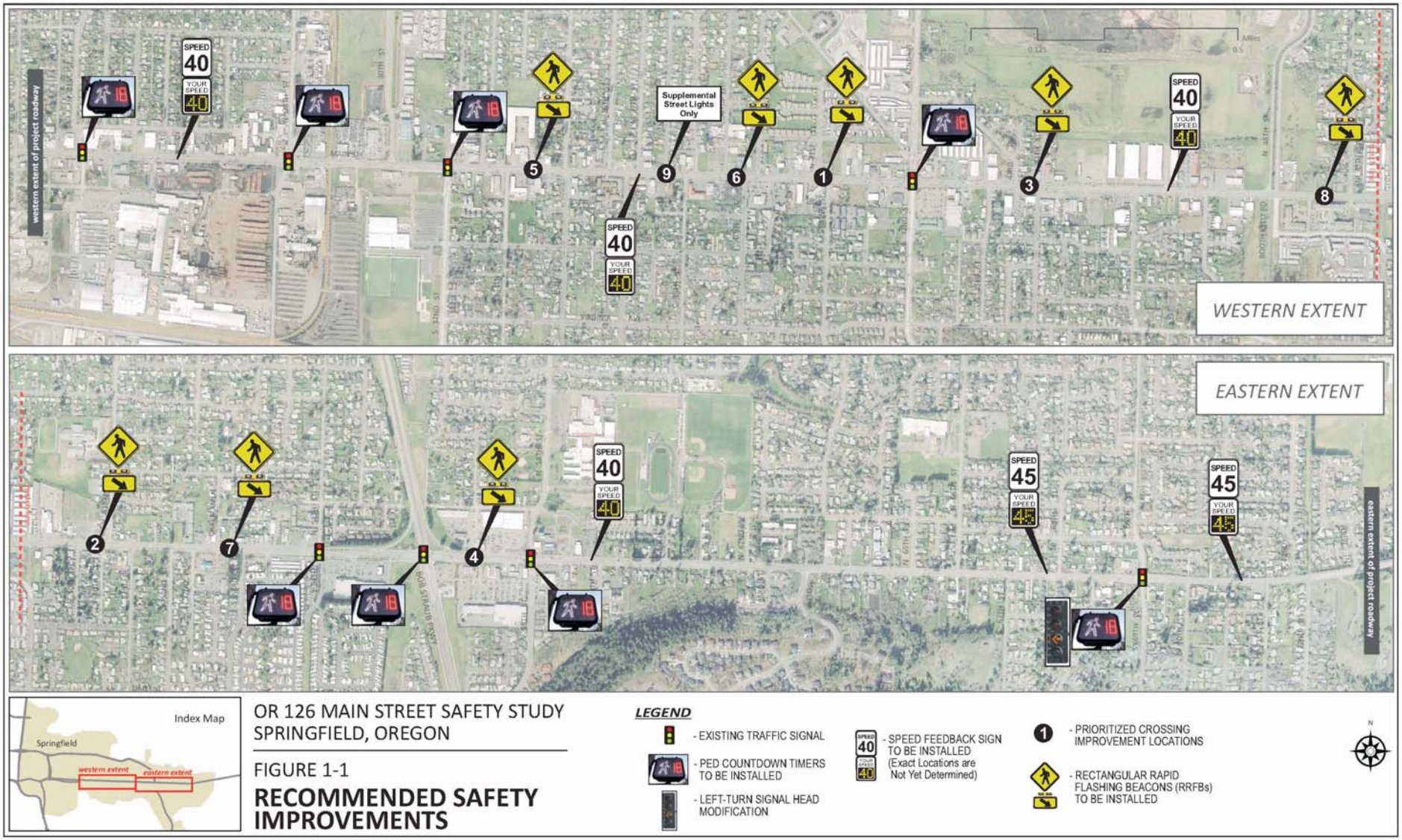
Recommended Improvements



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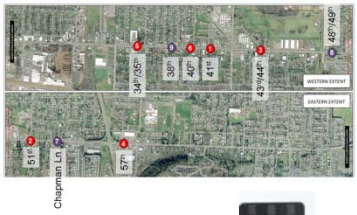
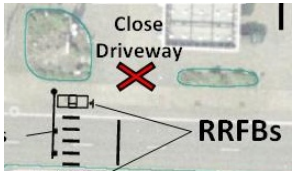
Prioritized Safety Improvements





Improvement Type	Projects Listed by Priority		
	Short-Term	*Mid-Term*	*Long-Term*
Pedestrian Crossing Improvement	• **41st Street** • **51st Street[a]** • **43rd Street/44th Street** • **57th Street** • **34th Street/35th Street** • **40th Street**	• **Chapman Lane** • **48th Street/49th Street** • **38th Street**	
Traffic Signal Improvement	• **Pedestrian Countdown Timers (All Traffic Signals)** • **Left-Turn Signal Head Modification (69th Street)**		
Street Lighting	• **At Crossing Improvements**	• **At Crossing Improvements** • **Supplemental Lights on Utility Poles (Especially Near Transit Stops)**	• **New Cobraheads along Entire Corridor (Remove Lights on Utility Poles)**
Transit Stop Relocation	• **At Crossing Improvements**	• **At Crossing Improvements** • **Remaining Transit Stop Relocation Plan**	
Speed Feedback Sign	• **Between 21st and 28th (40 mph)** • **Between 36th and 40th (40 mph)** • **Between 46th and 47th (40 mph)** • **Between 58th and 60th (40 mph)** • **Between 66th and 69th (45 mph)** • **Between 69th and 73rd (45 mph)**		
Access Management	• **At Crossing Improvements** • **Prepare Corridor Access Management Plan**	• **At Crossing Improvements** • **Implement Plan as Opportunities Arise**	• **Implement Plan as Opportunities Arise**

[a] ***Improvement project currently being constructed by ODOT, though some additional improvements above and beyond those included in the current project are still recommended.***

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Questions?