



# Route 460 Safety and Operations Study

## *Citizen Information Meeting #2*



February 2018

# Agenda

- Purpose
- Goal
- Objectives
- Study Area
- Operational Analysis
- Corridor Safety Assessment
  - Systemic Analysis
  - Site Specific Location
  - Mitigation Techniques
- Schedule

# Purpose

Based on known ***safety concerns*** and ***changes in traffic***, Isle of Wight & the City of Suffolk requested an evaluation of the Route 460 corridor for improved transportation safety and operations. This study identified areas for ***low cost improvements*** to address safety concerns.

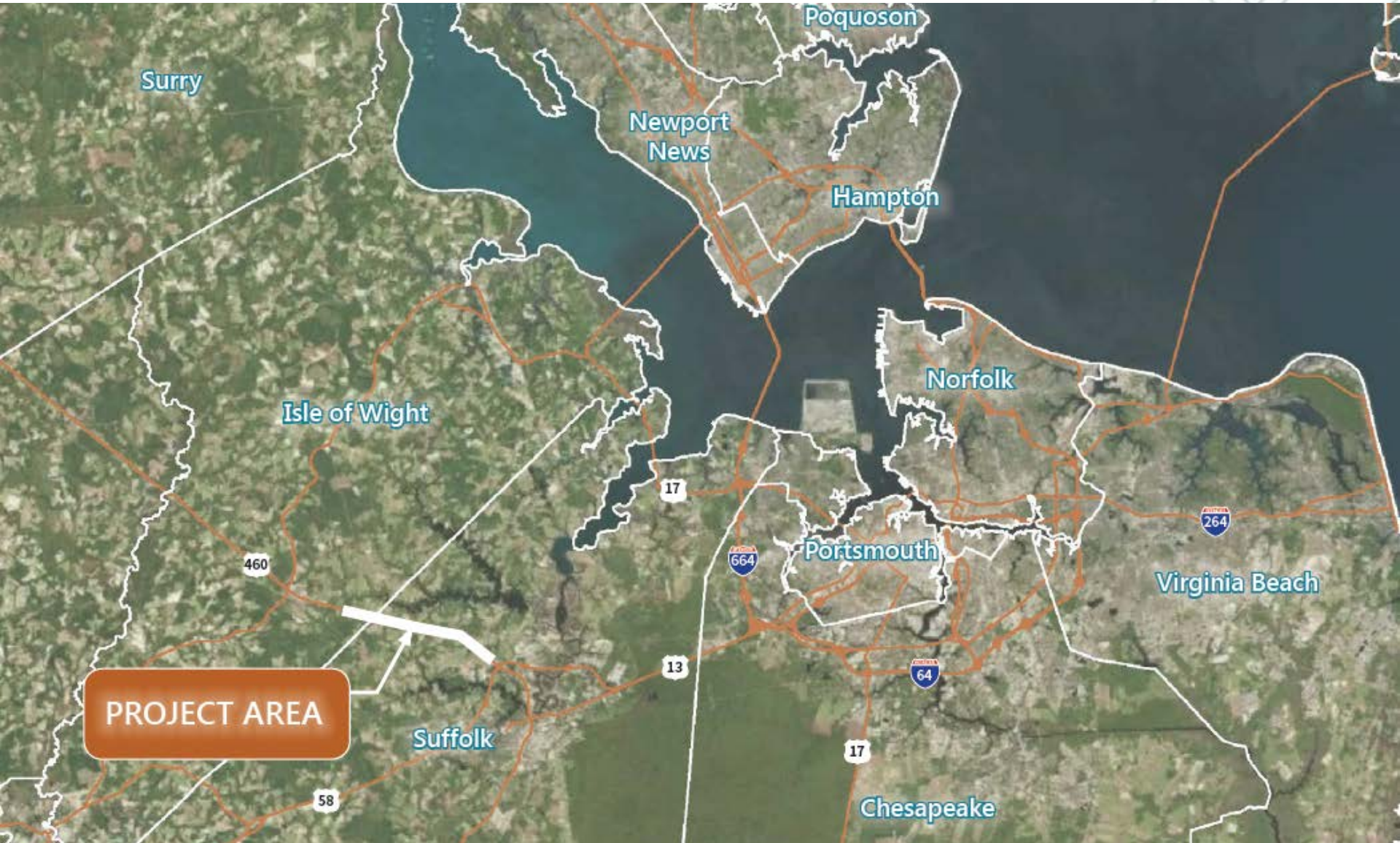
# Goal

Develop a set of ***low-cost tiered recommendations*** to enhance safety and operations on the Route 460 corridor. The ultimate goal is to implement these recommendations through maintenance or submit ***Smart Scale applications for funding.***

# Objectives

- Identify key issues affecting safety along corridor
- Review previous studies, recommended improvements and effectiveness
- Evaluate crash data and existing conditions
- Conduct an operational analysis
- Develop low-cost recommendations that address deficiencies and a phased implementation plan
- Provide planning level cost estimates

# Study Area

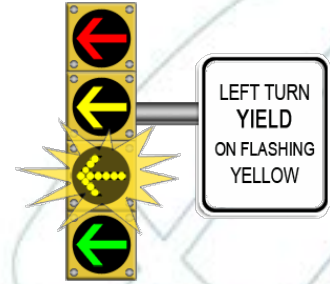


# Operational Analysis

- Modeled and evaluated
  - Existing conditions
  - 2040 No Build condition
  - 2040 Build condition
- Conducted signal warrant screening
  - Old Suffolk Road and Route 460



# Operational Analysis



- Proposed improvements
  - Increase side street green time
    - Route 460 and Rob's Drive
  - Change lane usage
    - Southbound approach at Route 460 and Kings Fork Road
  - Implement Flashing Yellow Arrow (FYA) on the mainline and update signal phasing
    - Route 460 and Kings Fork Road
    - Route 460 and Providence Road/Lake Prince Drive





# Corridor Safety Assessment

- Systemic Analysis

- Templates
- Assignments

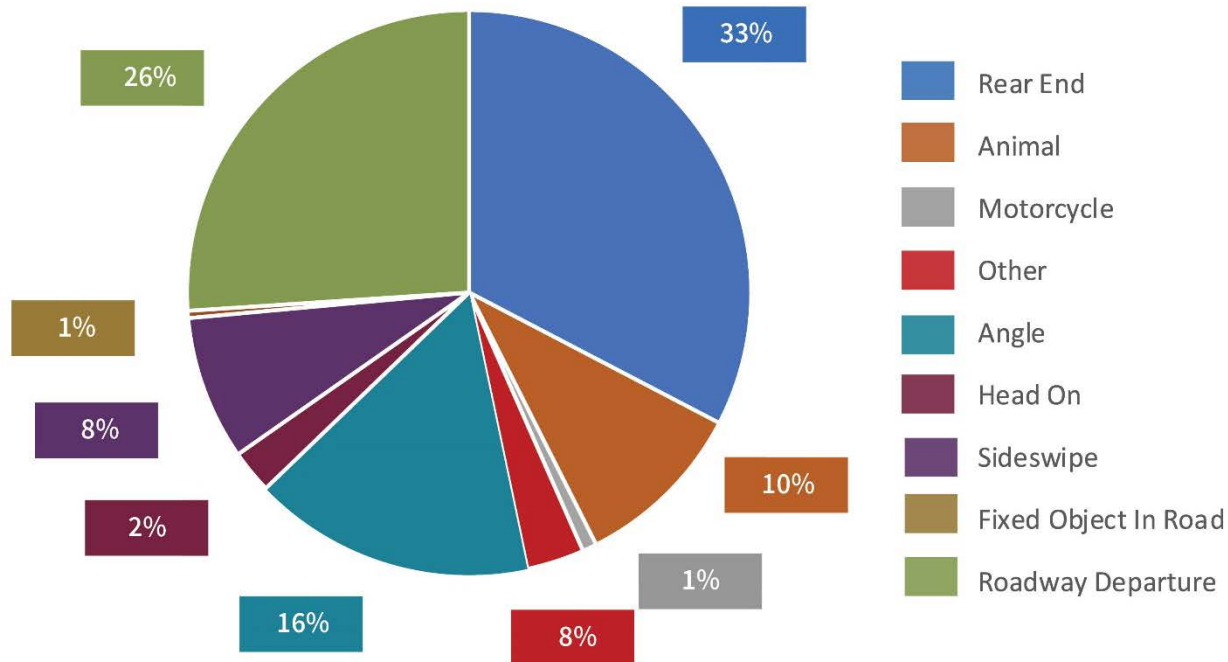
- Site Specific Locations

- 11 locations

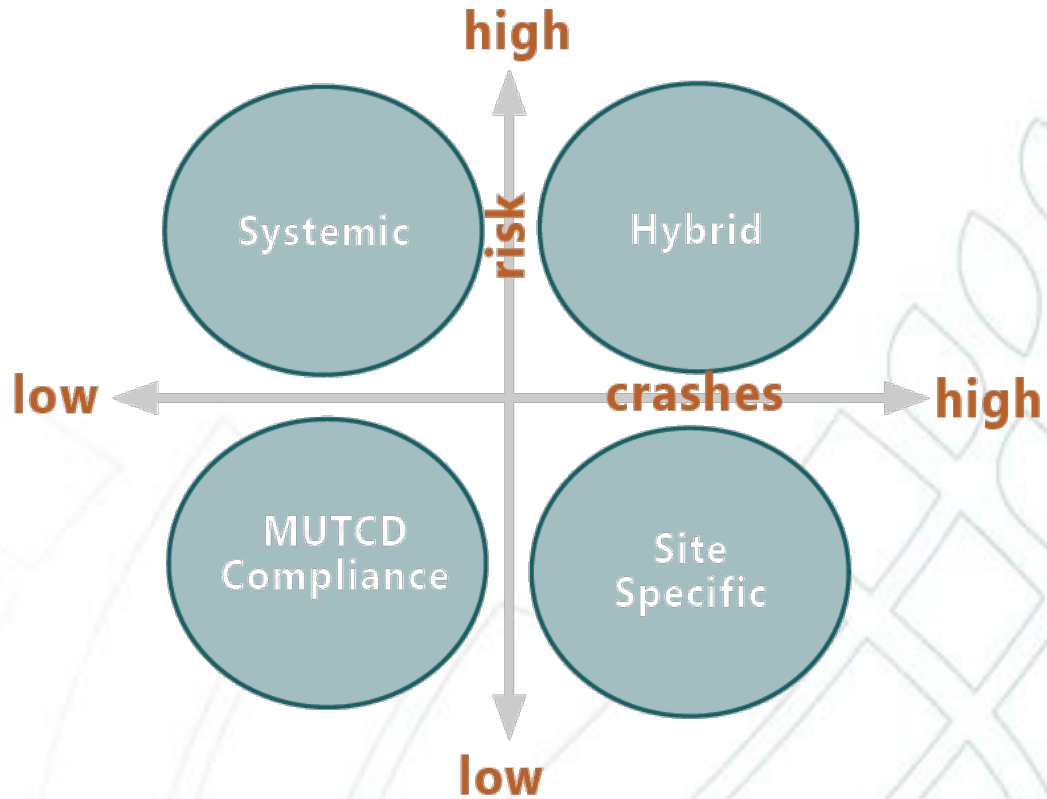
- Northfield Drive
- Rob's Drive
- Kings Fork Road
- Lake Prince Drive
- Prudence Road
- 1,200' East of Gardner Lane
- Gardner Lane
- Old Myrtle Road
- 2,200' West of Old Myrtle Road
- 1,750' East of Ennis Mill Road
- 1,000' East of Old Suffolk Road

# Corridor Safety Assessment

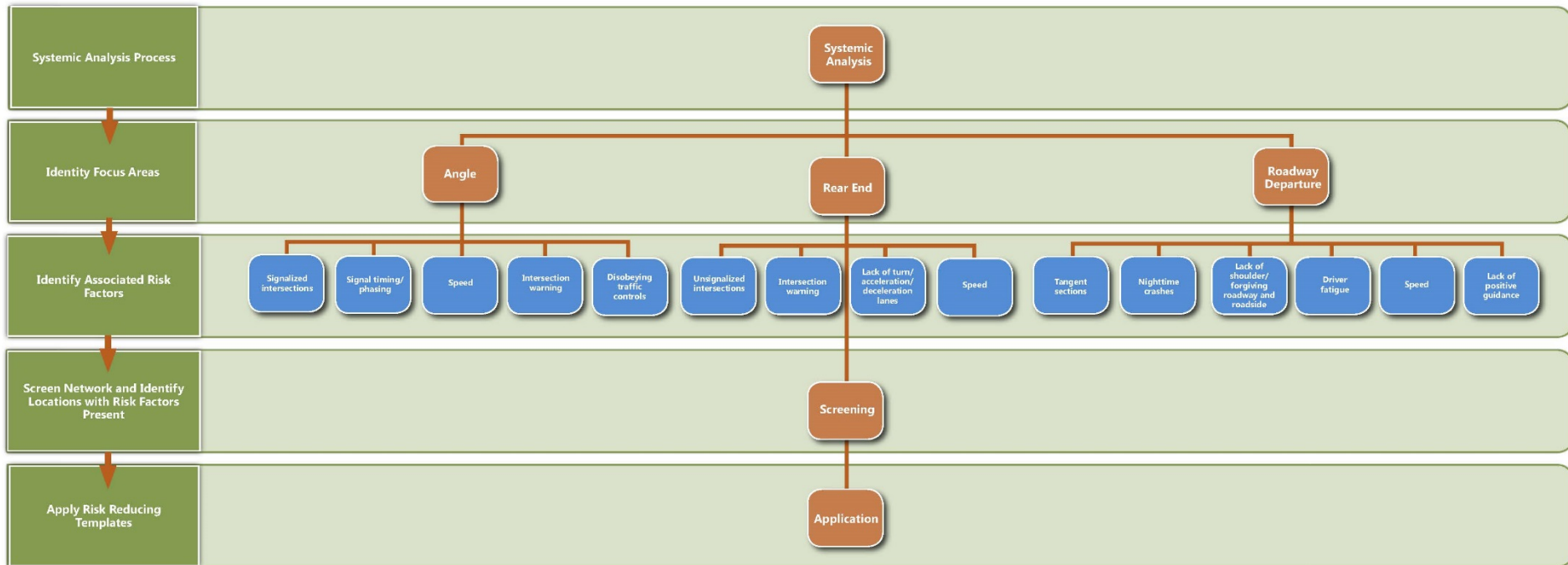
**242 Crashes  
in the  
2012-2016  
data set**



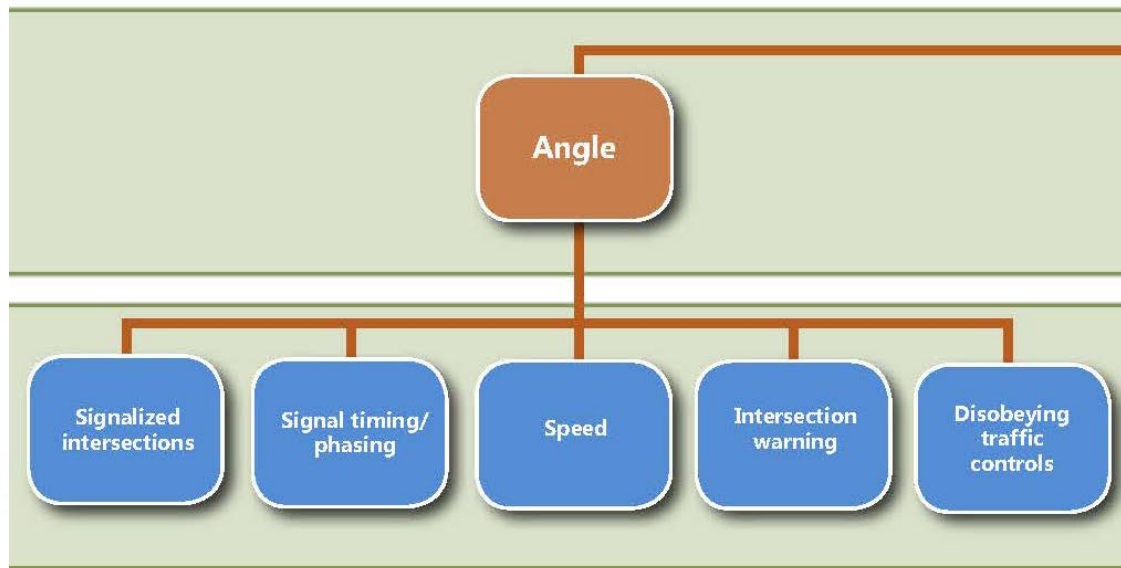
# Systemic Analysis



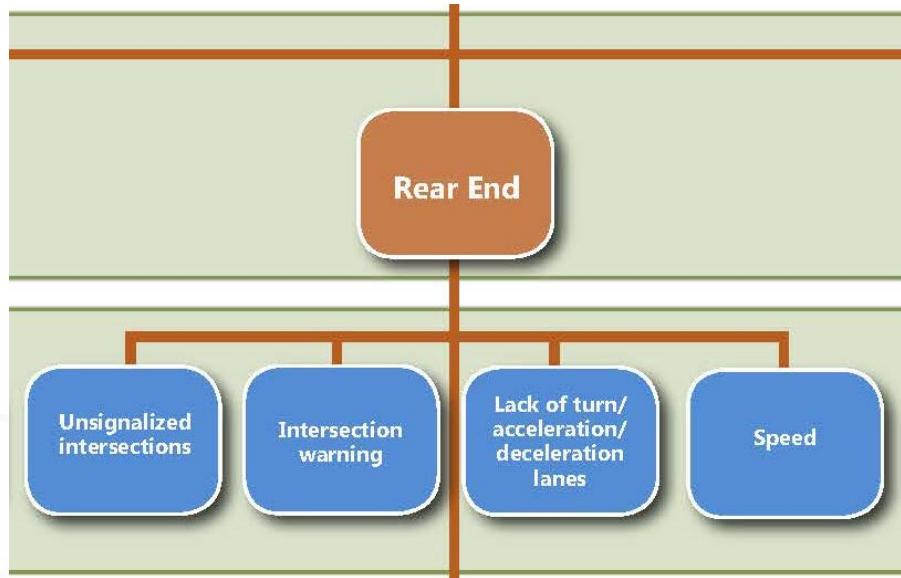
# Systemic Analysis



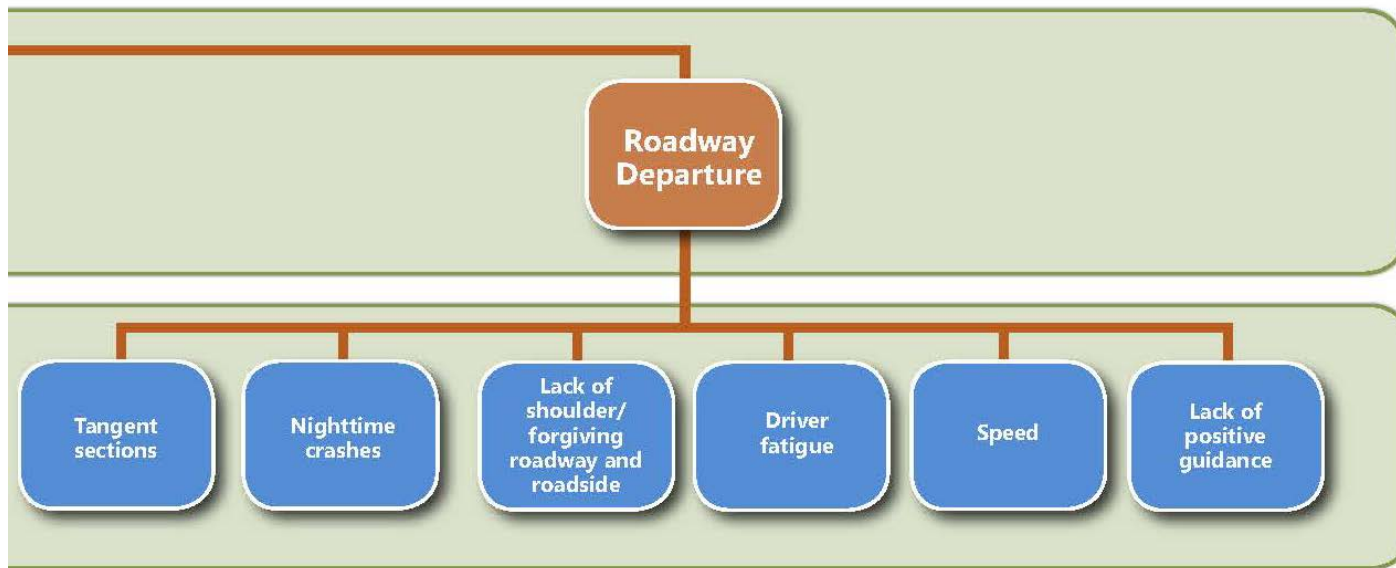
# Systemic Analysis



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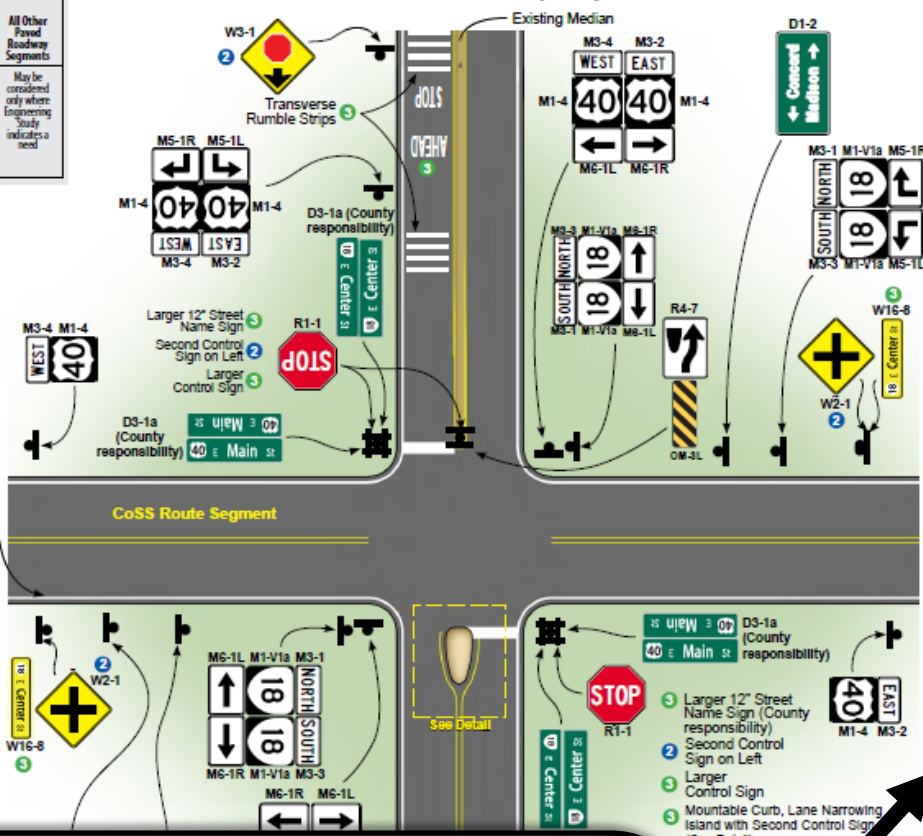
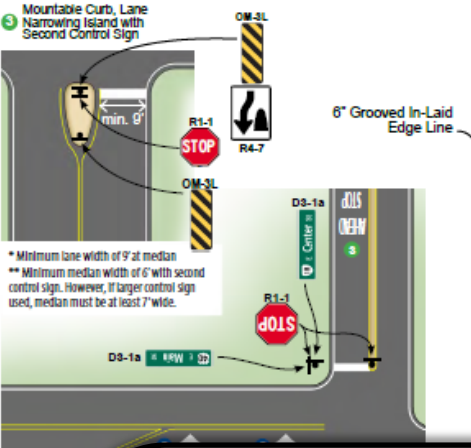
# Systemic Analysis



## Template 1 - Unsignalized Intersection - 4-leg (2-way stop controlled), Undivided (3 Tiers)

Pave-ment Width	Traffic Volume	Roadway Type					
		Undivided Limited Access	Bi-directional multi-lane	Two-lane Pav'd Roads with Center Line & without Curb and Gutter	Other Rural Arterials and Collectors	Local Residential	All Other Pav'd Roadway Segments
≥ 20 feet	≥ 3,000 vpd	Required	Required	Required	Recommended	Not Recommended unless primarily serving through traffic	May be considered only where Engineering Study indicates a need
< 20 feet	≥ 3,000 vpd	Required	Required	May be consid-ered only where Engineering Study indicates a need	Optional	Recommended	
	< 3,000 vpd	Required	Required	Required	Optional (if warranted)	Recommended	

Pave-ment Width	Traffic Volume	Roadway Type				
		Undivided Limited Access	Bi-directional multi-lane	Other Non-Local Residential	Other Local Residential	Local Residential
≥ 18 feet	≥ 500 vpd	Required	Required	Required	Recommended	Recommended
< 18 feet	≥ 500 vpd	Required	Required	May be considered only where Engineering Study indicates a need	Optional	Recommended
	< 500 vpd	Required	Required	Required	Optional	Recommended



- NOTES:**
- Signage**
- Upgraded signs with current MUTCD standards (font, size, retroreflectivity, placement, message, etc.)
  - Fluorescent yellow sheeting on change of Direction Warning signs
  - Street Name sign (D3-1a or D3-1 for local roads) (County responsibility)
  - Larger 12" Street Name sign (D3-1a) (County responsibility)
  - Control sign (R1 Series)
  - Second Control sign (R1 Series) on left if median is present and is greater than 6' in width, with a "Keep Right" sign (R4-7) and an Object Marker (OM3-L) facing opposite direction
  - Larger Control sign (R1 Series)
  - Mountable curb, lane narrowing island with second control sign (see detail)
  - OM3-L object marker and R4-7 "Keep Right" sign at end of mountable curb island
  - Intersecting Route and Directional sign (M1, M3, & M6 Series). Include signs for through movements on primary routes only where through movement is a different route number
  - Advance Intersecting Route and Directional sign (M1, M3, & M5 Series) on primary routes and secondary routes with AADT ≥ 2000 vpd
  - Confirmation Route signs (M1 and M3 series) on primary routes
  - Destination/guide sign (D1 series) on primary routes
  - Advance Intersection Lane Control signs (R3-8 Series) on approaches with turn lanes, or "Begin Right Turn Lane" sign (R3-20R) where only a right-turn lane is present
  - Intersection Warning sign (W2 series) on approaches that are not stop-controlled
  - Street Name (W16-8 series) signs on CoSS approaches
  - Stop Ahead sign (W3-1) on stop-controlled approaches
- Pavement Markings**
- Stop bar/yield line (MUTCD Section 3B.16)
  - 6" grooved/in-laid edge line on primary routes
  - 4" edge line on secondary routes (see table for application guidance)
  - 4" center line pavement markings on secondary routes (see table for application guidance)
  - Solid lane and center line approaching intersection
  - Mini-skip marks delineating turn lanes through the intersection when dual turn lanes are present
  - Mini-skip marks at turn lane when taper length is greater than 100'
  - Lane use pavement markings (MUTCD Section 3B.20)
  - "Stop Ahead" or "Yield Ahead" pavement markings (MUTCD Section 3B.20)
  - Use rumble stripe for 6" markings
- Other**
- If pedestrian accommodations are present, ensure minimum requirements for crossing (6" solid lines offset minimum 6' and placed 4' in advance of the stop bar) and crosswalk warning sign
  - ReflectORIZED sign posts (MUTCD Section 2A.15)
  - Add transverse rumble strips on stop-controlled approach to CoSS
  - Trim vegetation to provide adequate sight distance
  - Mark obstructions within clear zone (OM1, 2, or 3 series)
  - Remove or provide a barrier for obstructions within clear zone
- NOTE:** Signage and pavement marking placement is not to scale. Depending upon site conditions, signs should share the same post to the extent possible in order to reduce sign clutter. Actual placement will be determined on a site by site basis based on MUTCD and/or VA Supplement design standards and guidance. Signs should not be placed in the median unless the median is ≥ 4' wide and the sign is smaller than the median.
- 1 Tier 1 Recommendations  
2 Tier 2 Recommendations  
3 Tier 3 Recommendations

The template contains a listing & description of measures by tier. The tier is identified by the number listed on the left.



# Site Specific Location

## Implementation Plan:

- Pavement resurfacing
- Enhanced pavement markings
- Reflective signal backplates
- Shoulder improvements or safety edge
- Additional intersection lighting
- Curb and gutter maintenance
- Positive guidance on northern side of intersection

Location #1



# Mitigation Techniques

- Corridor wide recommendations
  - Signage
  - Enhanced pavement markings
  - Signal upgrades/modifications
  - Geometric improvements

# Schedule

- Notice to Proceed
  - Data Collection - start
  - Scoping Meeting
  - Pre-Field Analysis and Study Review(s)
  - Data Collection – finish
  - Citizen Information Meetings – Round 1
  - Stakeholder Meeting
  - Citizen Information Meetings – Round 2
  - Draft Report Submittal
  - Final Report
- May 11, 2017
  - May 16, 2017
  - June 1, 2017
  - July 2017
  - August 2017
  - October 2017
  - December 14, 2017
  - February 2018
  - February 2018
  - March 2018

Questions?

