CAPE HORN TRAFFIC SAFETY CORRIDOR

GOLDENDALE DETACHMENT
Scanning – CAPE HORN TRAFFIC SAFETY CORRIDOR

We are here

You are here
Scanning – CAPE HORN TRAFFIC SAFETY CORRIDOR
Problem Oriented Public Safety (POPS)

SARA model supported this process

• (SCANNING) - Identified and defined the problem.
• (ANALYSIS) - Output data was conducted to establish baseline.
• (RESPONSE) - Action plan was developed with a specific goal.
• (ASSESSMENT) - Outcome of our effort was measured.
Problem Definition

A 15.3 mile stretch of State Route 14 in Skamania County had unusually high crash rates and particular crash types. Compared to other state highways, and similar highways in the same region of the state, this section SR14 reported a higher rate of contributing causes of collisions including: Exceeding Safe Speeds, Over the Centerline, DUI, and Operating Defective Equipment.
Awareness of Problem

- Local Law Enforcement
- Known past problems
- On-going collisions
Awareness of Problem

- Calls for Service
- Citizen complaints
- Local Government Concerns
SR 14 CAPE HORN
TRAFFIC SAFETY CORRIDOR
Statistical Baseline
2000-2002 (3 years)

- Total # Collisions Before 174 Collisions (58 / year)
- Total # Fatal/Disabling Collisions 18 (6 / year)
- Total # Alcohol-Related Collisions 21 (7 / year)

- 19% of collisions involved locals
Three Areas of Focus

- Law Enforcement
- Engineering
- Education
Methods-Data-Information

- Collision Data (3 years)
  Locations, Types, Weather, Time, Age, Special Events, Commercial Vehicles, M/C’s, Violations, Driving History, etc.

- Traffic Stops (2 years)
Methods-Data-Information

- Signage!
  (A lot of signs)
- Public Information
Methods-Data-Information

Exceeding Safe Speed Crashes

Similar Hwy’s 86% higher
Washington Hwy’s 375% higher

Over the Centerline Crashes

Similar Hwy’s 375% higher
Washington Hwy’s 740% higher
Methods-Data-Information

DUI Crashes

Similar Hwy’s: 13% higher
Washington Hwy’s: 40% higher

Defective Equipment Crashes

Similar Hwy’s: 40% higher
Washington Hwy’s: 108% higher

Analysis – CAPE HORN TRAFFIC SAFETY CORRIDOR
Window Error: Press any key to continue
FATAL ERROR:???.1234SARA1234SARA1234SARA1234
Underlying Causes

Leading Collision Types

• Hit Fixed Object
• Overturn
• Sideswipe (Opposite Direction)
Underlying Causes

Leading Collision Types

- Wildlife
- Rear-end
- Angle
- Head On
Underlying Causes

Leading Collision Causes

- Exceeding Safe Speed
- Over Center Line
- Under Influence of Alcohol
- Operating Defective Equip.
Underlying Causes

Leading Collision Causes

• Inattention
• Improper Passing
• Apparently Asleep
Underlying Causes

Law Enforcement

• Speeds too fast for conditions
• Drivers are passing illegally
• Aggressive driving
• DUI
Underlying Causes

Law Enforcement

- Impeding Traffic
- Enforcement and Patrol difficulties
- Oversize commercial loads are a hazard
Underlying Causes

Engineering

• Awareness
• Roadway alignment
• Sign layout
Underlying Causes

Engineering

• Weather conditions

• Unique characteristics in roadway
Underlying Causes

Engineering

- Pedestrians traffic on narrow bridges
- Roadside vegetation impacting sight distance
Underlying Causes

Engineering

- Skamania Store has uncontrolled access
- Truck route - When SR-14 & I-84 closes, no alternative
• An unawareness of roadway characteristics
• A diverse audience uses roadway
• Advisory speed signs
Underlying Causes

Education

• Scenic drivers unaware of pullout limitations

• Other drivers unaware of scenic drivers
Underlying Causes

Education

- Roadway is shared by cyclists
- Drivers are unaware of WA Laws for:
  - Speed too fast for conditions
  - Passing
  - Delay of 5 vehicles illegal
Who might be the specific stakeholders for this type of project that we could partner with to fix these problems?
Cape Horn Steering Committee

- Beacon Rock State Park
- Columbia River Gorge National Scenic Area
- Educational Service District 112
- Gorge Commission
- Port of Skamania
- Skamania County
- Skamania County Chamber of Commerce
- Skamania County Public Works
- Skamania County Sheriff’s Office
- Skamania School District #2
- WKO (Lumber Mill)
- Washington Department of Transportation
- Washington State Patrol
- Washington Traffic Safety Commission
Heed the speed on Highway 14

Sponsored by
Cape Horn
Traffic Safety Corridor
Steering Committee

CAPE HORN TRAFFIC SAFETY CORRIDOR - Response
The goal of the Cape Horn Traffic Safety Corridor Project was to increase traffic safety along SR14 and reduce the number of deaths, injuries and property damage resulting from traffic collisions by using low-cost, near-term solutions that focused on enforcement, engineering, and educational efforts.
Objectives-Performance measures to resolve the problem.

- Comprehensive response plan...
- Took the problem one by one...
- Stating the problems clearly...
- Providing solutions...
- Recognizing obstacles...

Target = local residents, tourists, commercial vehicles, bicyclists, pedestrians...

- Response
Solutions

• Extra Traffic Enforcement

• Minor Engineering Improvements

• Public Education

CAPE HORN TRAFFIC SAFETY CORRIDOR - Response
Budget

- Equipment Requests (Lasers/Radar/Camera's)
  - Enforcement = $36,000
  - Equipment = $27,000
  - Education = $32,000
  - Engineering = $100,000

TOTAL = $195,000

$$ From Traffic Safety Commission
Accountability and Target Dates

- Education
  Monthly - Press Events

- Engineering
  Seasonal – Yearly

- Law Enforcement
  Monthly

- Response
Accountability and Target Dates

- Monthly/Quarterly Meetings
- Flexibility
- #’s sources and solutions looked at
- Meetings dissected each collision (Cause-possible prevention)
Difficulties

• Wildlife (Deer collisions)
  22% of all collisions

• Engineering updates—Slow

• Too much law enforcement hampered contacts… but was also a good thing

• Weather (RAIN!)
L. E. Objectives

- Multi-agency effort between Washington State Patrol and Skamania County Sheriff's Office

- New Lasers Speed Measuring Devices used to enforce speed limits (New to area)
L. E. Objectives

• Speed/DUI Emphasis Patrols

• Enforcement of following to closely

• Commercial Vehicle Patrols

- Response
Engineering Objectives

• Plan to add centerline rumble strips throughout the corridor

• Shoulder rumble strips added in specific areas
Engineering Objectives

- Update location of traffic signs throughout the corridor
- Conduct a speed study
Education Objectives

• Build awareness of project and safe driving habits along the corridor

• Develop and distribute education materials

• Increase understanding of those living in the area and also from outside the area
Law Enforcement Response

- Emphasis patrols on drinking and driving on peak evenings
- Encourage drivers to use “slow moving vehicle turnouts”
- Emphasis patrols utilizing extra troopers (Motorcycle’s & Commercial Vehicle Division)
Law Enforcement Response

• Letter drafted to WA Department Of Transportation recommending oversize restrictions

The pilot car request was approved for vehicles over 10' in width rather than the 9' as was stated in the letter.
Law Enforcement Response

- Lasers used to enforce speed limits
- Commercial vehicle patrols
- M/C’s
Law Enforcement Response

- Emphasis patrols
- Court Stamp
Engineering Response

- Update location of traffic signs
- Installed corridor project signage
- Improved alignment of two of the most difficult curves
Engineering Response

- The Brake Check signs changed to "Emergency Parking Only"
- Installed centerline rumble strips
Engineering Response

• Updated signage layout plan

• Installed road condition warnings using a Highway Advisory Radio (HAR) system
Engineering Response

• Took out cross walk at Beacon Rock State Park
Engineering Response

• Chain Up Signs (Locked)

• The construction project (now slated for the ‘10-'12 biennium) will add a lane and allow passing
HWY. 14
TRAFFIC SAFETY CORRIDOR AHEAD

CAPE HORN TRAFFIC SAFETY CORRIDOR - Response
Education Response

• Build awareness of project and safe driving habits along the corridor

• Billboard

• Fairs

• Distributed safe driving materials and brochures
Cape Horn Traffic Safety Corridor

Working together for a safe scene on highway 14

Heed the speed on Highway 14

CAPE HORN TRAFFIC SAFETY CORRIDOR

- Response
Education Response

• Increase awareness of those living in the area and also from outside the area

• Drivers Ed Program

• Large Corridor Slogan on Semi Trailers
The success of the Corridor program was measured by changes in collision levels. Fatal and disabling injury collisions are of the greatest concern.
Method for Evaluation of Results

- What did we address and why?
- Evaluating questions.
- Specified information/data needed.
- Criteria of standards.
Method for Evaluation of Results

• Clear what we’re trying to find out.

• Negative consequences.

• Reviewed our evaluation overall.
L. E. Results
(2 Year period)

• DUI arrests increased 55%
  (From 20 to 31)

• Speed contacts increased 103%
  (From 1,522 to 3,093)

• Seat belt contacts increased 73.2%
  (From 205 to 355)
L. E. Results
(2 Year period)

• Aggressive Driver contacts increased 70.8%
  (From 65 to 111)
  
  (2 or more moving violations and/or 20+ mph)

• Total contacts increased 158%
  (From 2,290 to 5,910)
L. E. Results
(2 Year period)

• Speed—52% of total contacts
• Total Tickets: 1,785
• NOI’s increased 110%
• Enforcement Rate of 30%

CAPE HORN TRAFFIC SAFETY CORRIDOR
- Assessment
Collisions by Mile

CAPE HORN TRAFFIC SAFETY CORRIDOR - Assessment
Leading Collision Types

- Hit Fixed Object: 1 (Fatal/Disabling), 44 (Non-Fatal/Disabling)
- Wildlife: 13 (Non-Fatal/Disabling)
- Overturn: 9 (Non-Fatal/Disabling)
- Driveway-Related: 7 (Non-Fatal/Disabling)
- Rear End: 6 (Non-Fatal/Disabling)
- Sideswipe (Opposite Direction): 2 (Non-Fatal/Disabling)
- Angle: 3 (Non-Fatal/Disabling)
- Head On: 11 (Non-Fatal/Disabling)

CAPE HORN TRAFFIC SAFETY CORRIDOR - Assessment
Collision Type Before & After Comparison (Avg. Year)
SR 14 Milepost 21.77 to 37.04
5/13/00-5/12/03 vs 5/13/04-5/12/06

- Hit Fixed Object
  - Before: 27
  - After: 23

- Overturn
  - Before: 7
  - After: 5

- Sideswipe (Opposite)
  - Before: 4
  - After: 2

- Wildlife
  - Before: 7
  - After: 4

- Rearend
  - Before: 3
  - After: 3

- Angle
  - Before: 2
  - After: 2

- Head On
  - Before: 2
  - After: 1

CAPE HORN TRAFFIC SAFETY CORRIDOR - Assessment
Leading Driver Contributing Causes

- Exceeding Safe Speed: 34, 1
- Over Centerline: 6, 2
- Inattention: 5, 1
- Following Too Close: 5
- Failing to Yield: 4
- Operating Defective Equipment: 4
- Under Influence of Alcohol: 3
- Apparently Asleep: 3

Legend:
- Blue: Fatal / Disabling Collisions
- Black: Non-Fatal / Disabling Collisions
Contributing Causes Before & After Comparison (Avg. Year)

SR 14 Milepost 21.77 to 37.04
5/13/00-5/12/03 vs 5/13/04-5/12/06

- Exceeding Safe Speed: 28 Before, 18 After
- Over Centerline: 10 Before, 4 After
- Under Influence of Alcohol: 5 Before, 2 After
- Operating Defective Equipment: 4 Before, 2 After
- Inattention: 3 Before, 3 After
- Apparently Asleep: 3 Before, 2 After
- Following Too Close: 2 Before, 2 After
- Improper Passing: 1 Before, 1 After

CAPE HORN TRAFFIC SAFETY CORRIDOR - Assessment
### Type Of Vehicles

<table>
<thead>
<tr>
<th>Type</th>
<th>Fatal / Disabling Collisions</th>
<th>Non-Fatal / Disabling Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Car</td>
<td>1</td>
<td>85</td>
</tr>
<tr>
<td>Light Truck</td>
<td>10</td>
<td>46</td>
</tr>
<tr>
<td>Heavy Truck</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Motorcycle</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

- Assessment
How much $$$ do Collisions Cost Society?
Cost of Collisions to Society

WA State 2002 = $5.6 Billion

City, County, and Other Road Costs - $3.09 Billion
State Highway Costs - $2.45 Billion

Source: WSDOT Transportation Data Office
Collision Results

• **Total Collisions**
  Before = 174 (58 / year)
  After = 94 (47 / year)

• **Total Alcohol-Related**
  Before = 21 (7 / year)
  After = 6 (3 / year)

• **Total Fatal/Disabling Injury**
  Before = 17 (5.7 / year)
  After = 4 (2 / year)
Collision Results

- # Hit Fixed Object Collisions-- (#1 Type) – **Down 17%**
- # Speeding Drivers in Collisions- (#1 Cause) – **Down 37%**
- # Total Collisions – **Down 19%**
- # Alcohol-Related Collisions – **Down 57%**
- # Fatal / Disabling Collisions – **Down 65%**
Estimated $5.7
Compared Results
Compared to all other past Corridor Projects in Washington State:

<table>
<thead>
<tr>
<th>All Others</th>
<th>Cape Horn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in total collisions.</td>
<td>6% vs. 19%</td>
</tr>
<tr>
<td>Reduction in alcohol-related collisions.</td>
<td>19% vs. 57%</td>
</tr>
<tr>
<td>Reduction in total injuries.</td>
<td>11% vs. 45%</td>
</tr>
<tr>
<td>Reduction of fatal/disabling collisions</td>
<td>33% vs. 65%</td>
</tr>
</tbody>
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CAPE HORN TRAFFIC SAFETY CORRIDOR - Assessment
The Cape Horn Corridor Traffic Safety Project has not only been successful in building community relationships and inter-agency collaboration, but also in making SR14 safer for motorists and passengers.
Why it worked ...

1. Leadership!
2. Focus on all 4 phases of SARA!
3. Media-Education!
4. Fun-Making a Difference!
Thank You

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