

ROADWAY SAFETY MANAGEMENT SYSTEM



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OUTLINE

Turnpike Background

Turnpike Organization

Roadway Safety Management System

Examples of Success

Moving Forward



PA Turnpike: Background

PTC FAST FACTS

History & Usage

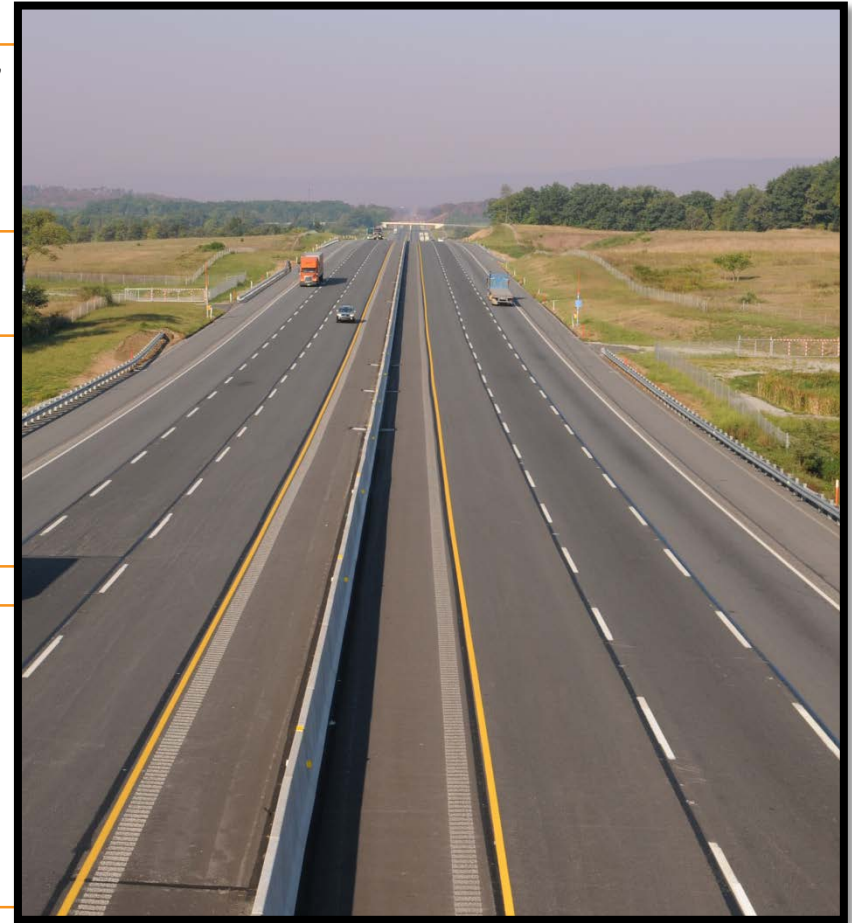
- Commission formed May 21, 1937
- 530,000 vehicles per day
- 194 million vehicles per year

Length of Turnpike

- Total turnpike miles: 552
- Total lane miles: 2,406

Infrastructure

- 17 service plazas
- 22 maintenance sections
- 5 tunnels
- 12 major bridges
- 68 fare collection facilities



CUSTOMER COMMUNICATION TOOLS



Access 24/7... You are never alone on the Pennsylvania Turnpike!



CUSTOMER CONVENIENCE

Service Plazas...

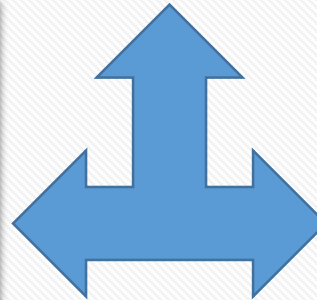


- new service plaza buildings
 - electric vehicle charging stations
 - CNG* fueling at some service plazas
- *compressed natural gas

SAFETY INITIATIVES BENEFITING CUSTOMERS

TRAFFIC OPERATIONS CENTER

- Safety Patrols
- Emergency Responders
- Contracted Authorized Service Providers
- *11
- Radio Communications



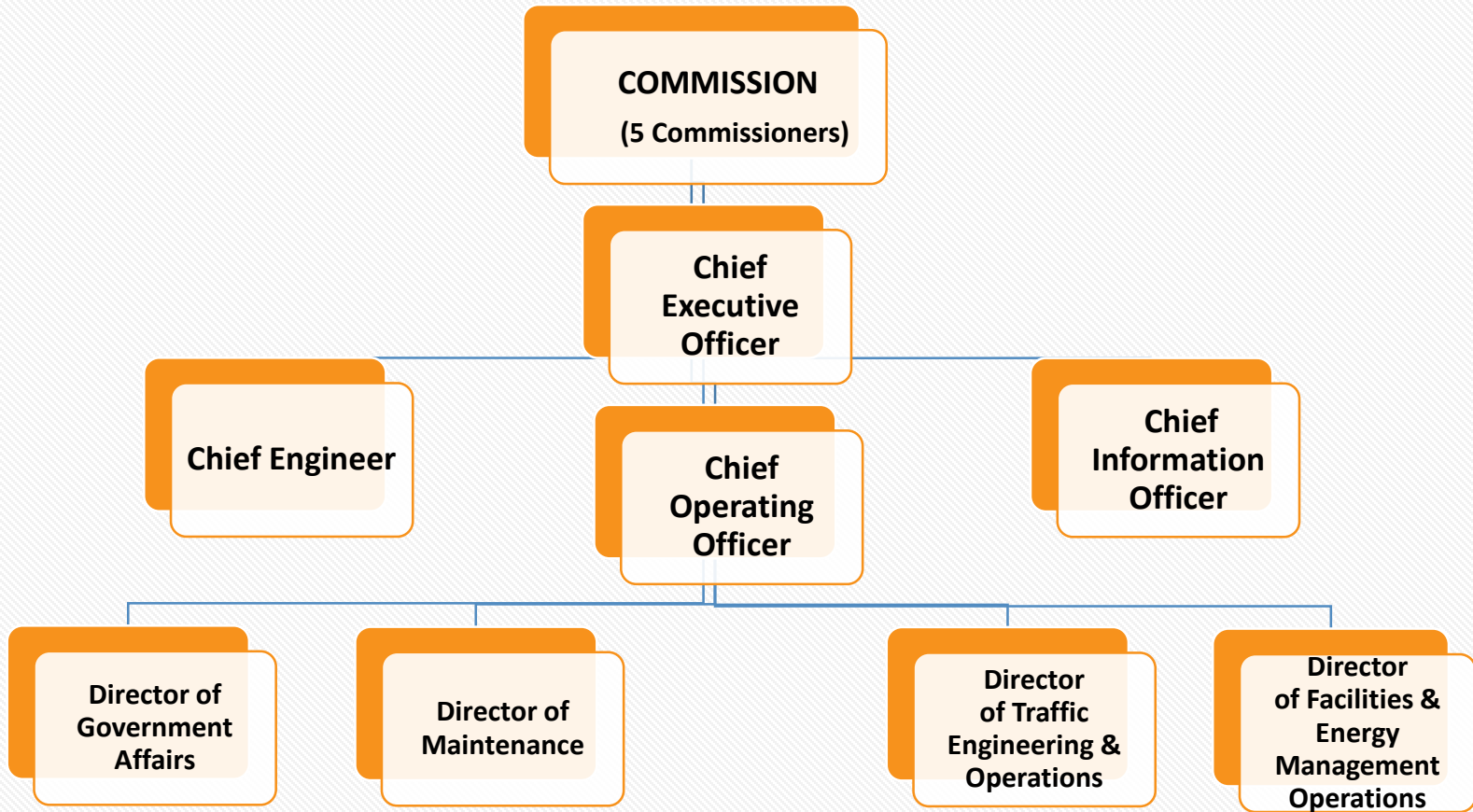
PUBLIC SAFETY CAMPAIGNS



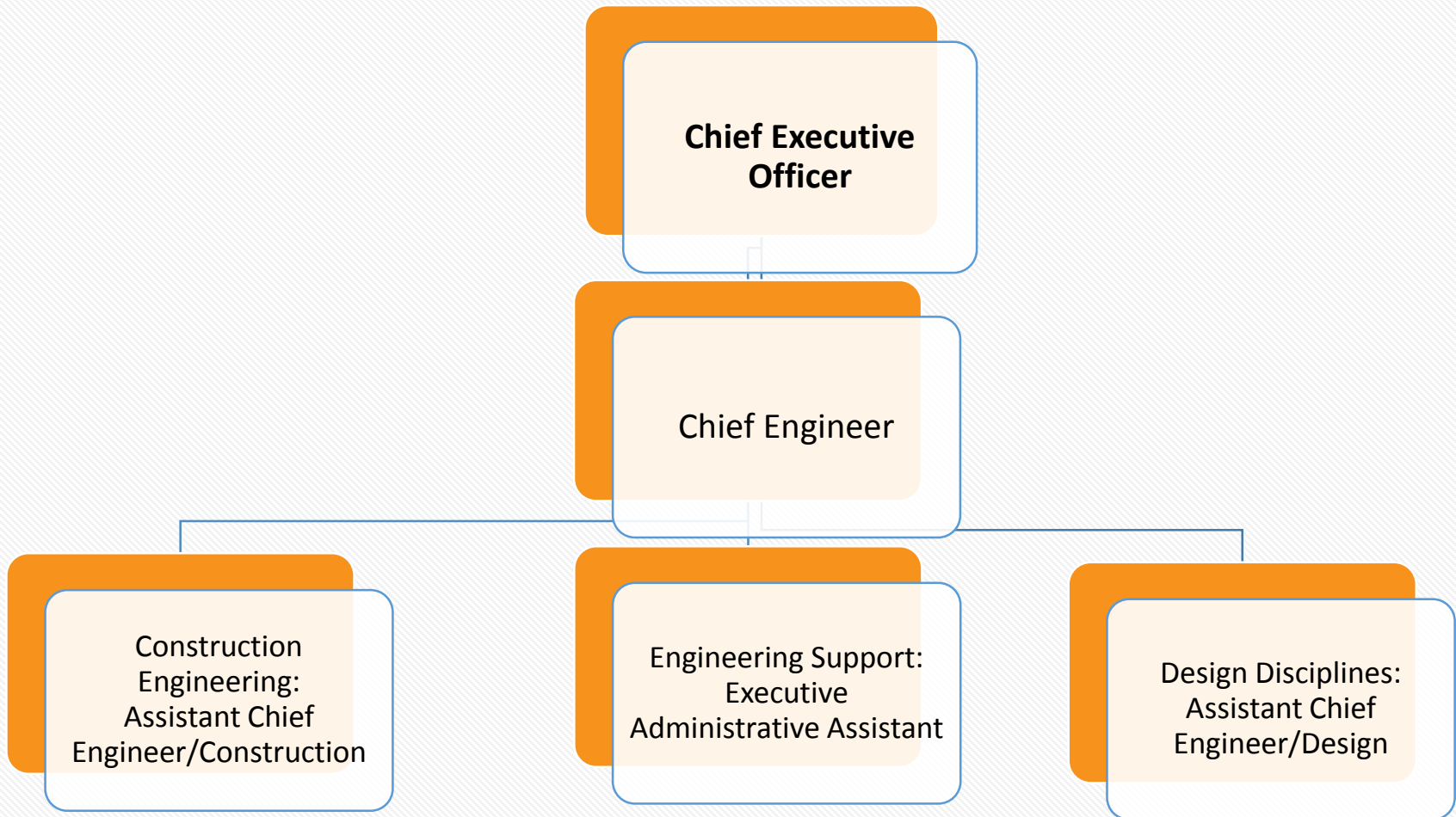


PA Turnpike: Organization

ORGANIZATIONAL CHART



ENGINEERING ORGANIZATIONAL CHART



Michael Baker

I N T E R N A T I O N A L



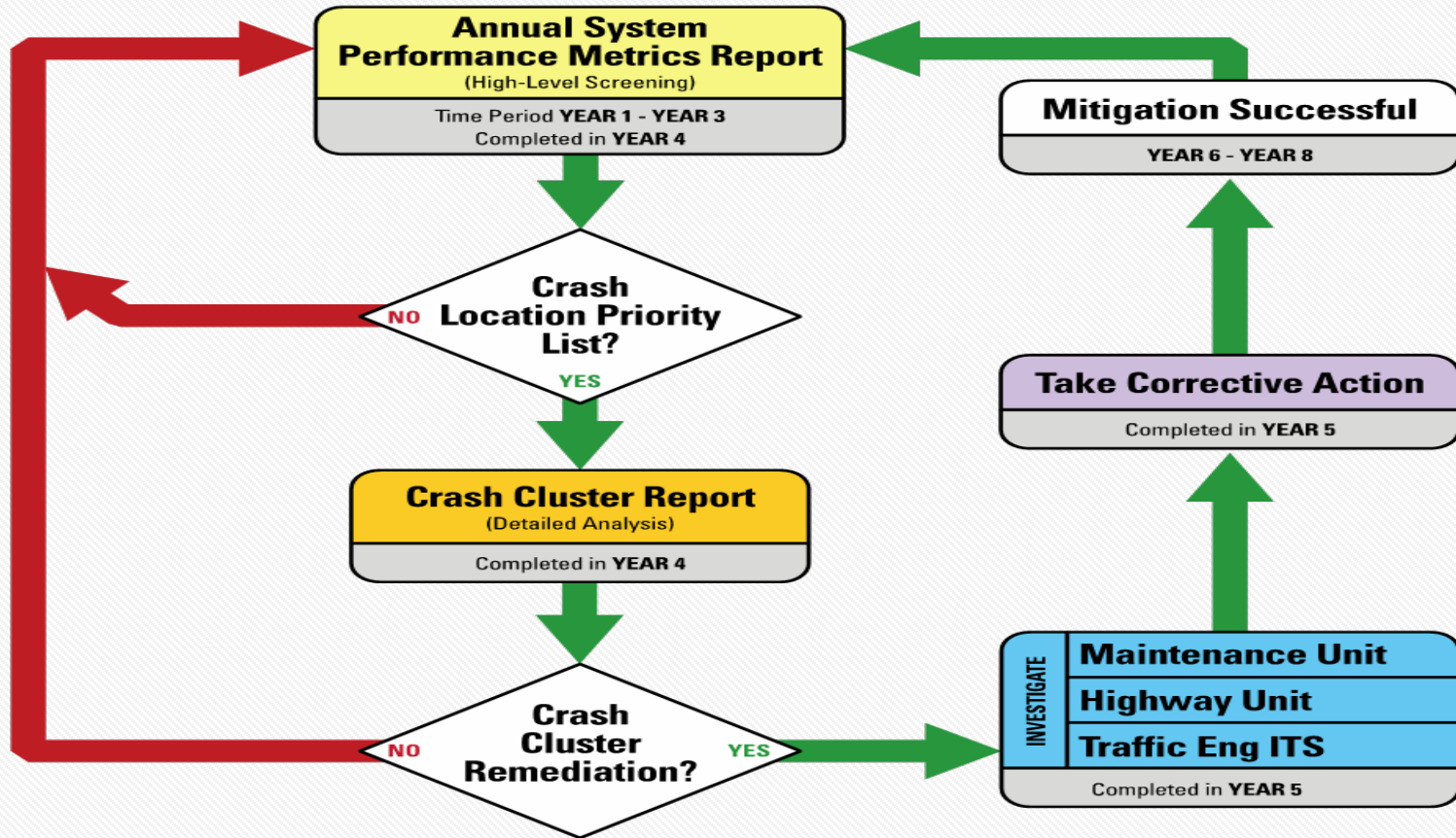
LARRY BANKERT, P.E., PTOE
Director of Toll Road Operations, Baker

- Trust Indenture: Requires the Commission to employ an Independent Engineer/Firm
- National Reputation: Skill and experience as Consulting Engineer
 - Capital budget review
 - Annual metrics review
 - Performing conditions assessments



Roadway Safety Management System

CRASH REMEDIATION FLOW CHART



YEAR 1 THROUGH YEAR 3												
YEAR 4	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
YEAR 5	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
YEAR 6 THROUGH YEAR 8												

Annual System Performance Metrics Report
 Crash Cluster Report
 ??? Investigations
 Capital Plan
 Corrective Action



CRASH CLUSTER REMEDIATION PROCESS

CRASH CLUSTER

- Analyzes most recent 3 years crash data
- Determines top 20 crash cluster locations

METRICS REPORT

- Analyzes system's performance:
 - Travel time reliability
 - Bridge rating
 - Pavement condition

INVESTIGATE

- Investigates crash clusters
- Identifies top 20 crash cluster locations
- Determines what mitigation can be implemented

MITIGATION

- Can be in varying forms:
 - Clearing of tree/shrubs
 - Replacement of missing signs
 - Pavement resurfacing
 - Drainage improvements

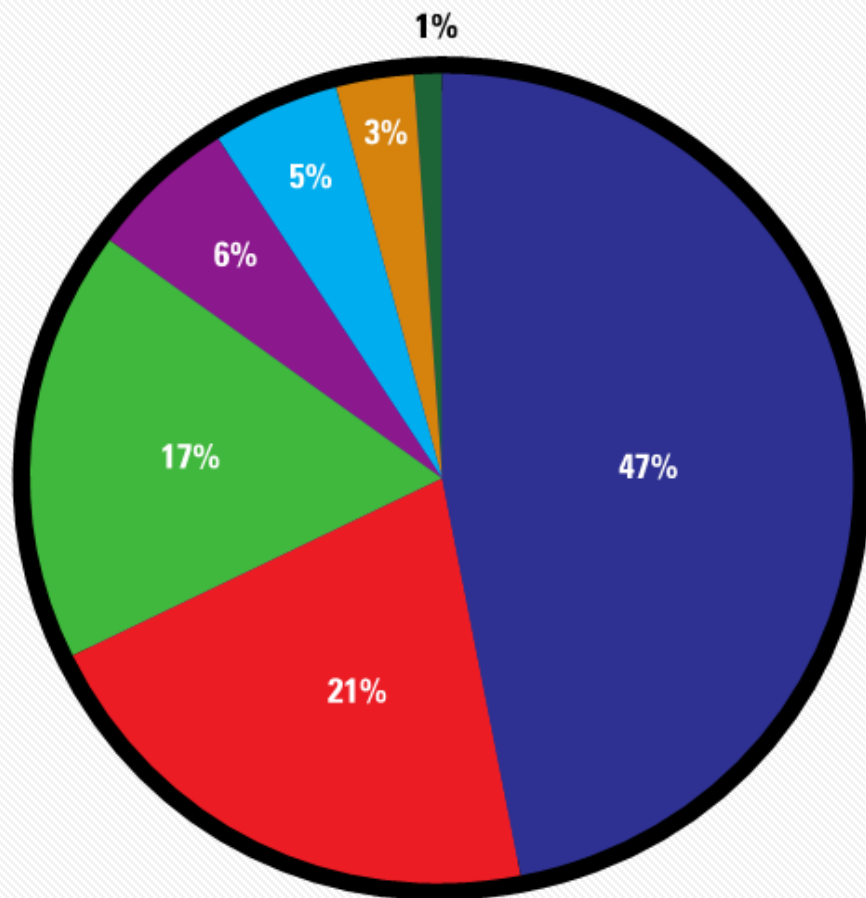
ANNUAL METRICS REPORT SAFETY DATA

- Fatality Rating: “Good” (compared to PA Statewide Average)
- Fatal Crash Rate: Lower than the Statewide Average
- Total Crash Rate: Higher than Statewide Average*
- Work Zone Crash Rate: Higher than Statewide Average*

*Trend is declining compared to the 3-year average rates on PTC roadways.



REPORTABLE CRASH TYPE DATA (FY14)



- Hit Fixed Object (47%)
- Rear End (21%)
- Object/Unknown (17%)
- Sideswipe (Same Direction) (6%)
- Non-Collision (5%)
- Angle (3%)
- Head ON (1%)
- Sideswipe (Opposite Direction) (0%)
- Rear to Rear (Backing) (0%)
- Hit Pedestrian (0%)
- Not Reported (0%)

CONDUCTING AN INVESTIGATION



Examples of Success

WET ROAD CRASHES

- Mill and pave contract



TREE CANOPY INTERFERES WITH SIGHT LINE

- Clearing contract

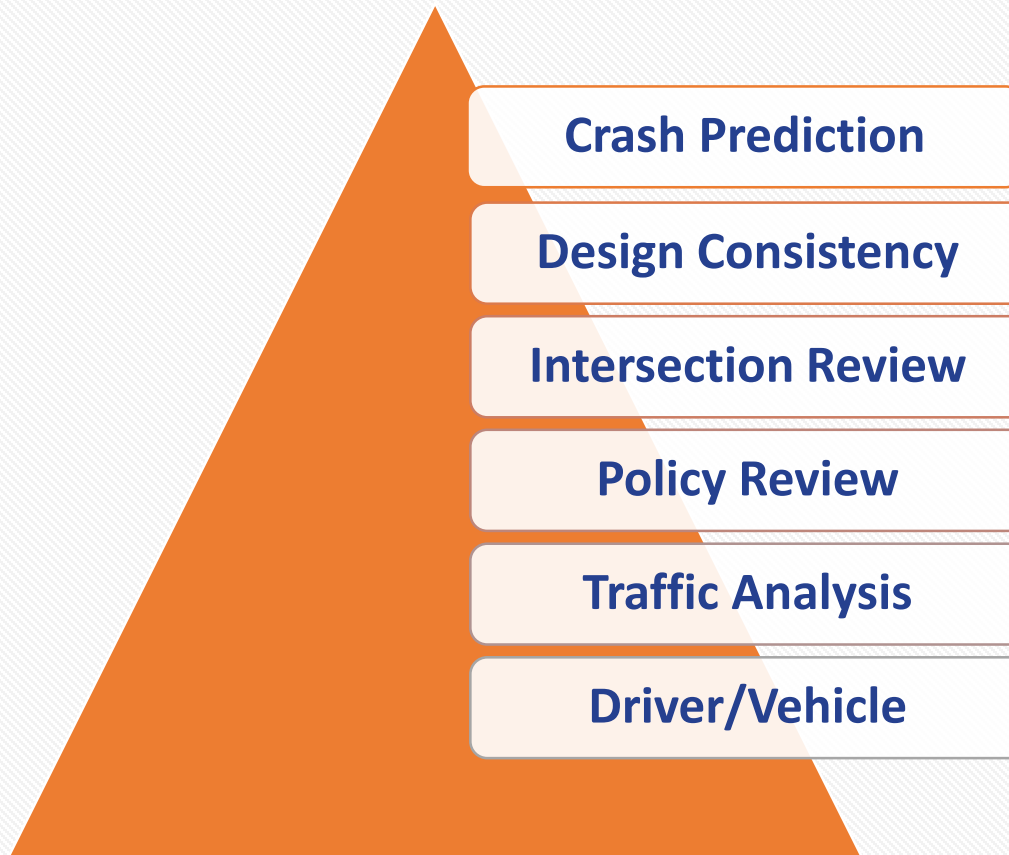


CURVE CRASHES

- Installed chevrons

MOVING FORWARD

The Interactive Highway Safety Design Model (IHSDM)





QUESTIONS?

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