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### GLOSSARY

CGTACumberland Gap Tunnel AuthorityCMMSComputerized Maintenance Management SystemCO2Carbon DioxideCOVID-19Coronavirus Disease 2019
CO2 Carbon Dioxide
COV/ID-19 Coronavirus Disease 2019
CPR Cardio-Pulmonary Resuscitation
DM Demand Maintenance
DMS Dynamic Message Sign
EMS Emergency Medical Services
EMT Emergency Medical Technician
EMT-B Emergency Medical Technician-Basic
EVOC Emergency Vehicle Operations Course
Haz-Mat Hazardous Materials
HIV/AIDS Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
JMT Johnson, Mirmiran, & Thompson
KBEMS Kentucky Board of Emergency Medical Services
K-StARS KY State Ambulance Reporting System
KV Kilovolt
KY Kentucky
LE Law Enforcement
LED Light-Emitting Diode
LLE Limited Licensed Electrician
MVC Motor Vehicle Collision
NB Northbound
NFPA National Fire Protection Association
NPS National Park Service
OSHA Occupational Safety and Health Administration
PM Preventative Maintenance
SB Southbound
SCADA Supervisory Control and Data Acquisition
SKCTC Southeast Kentucky Community and Technical College
TARS Tennessee Association of Rescue Squads
TDOT Tennessee Department of Transportation
TSCS Traffic Surveillance Control System
TN Tennessee
VA Virginia



The Cumberland Gap Tunnel Authority is pleased to submit this Summary of Management and Operation of the Cumberland Gap Tunnels for the fiscal year 2021-2022. For the twenty-sixth year, the Cumberland Gap Tunnel Authority has efficiently operated and maintained the tunnels and portal buildings, safely escorted Hazardous Material Vehicles, and provided vital emergency services to the traveling public. CGTA partnered with the Cumberland Gap National Historical Park, the Commonwealth of Kentucky Transportation Cabinet and the State of Tennessee Department of Transportation to provide safe passage to and from the region.

Due to continued COVID-19 protocols, the administrative staff of CGTA used mostly online seminars and classes to improve tunnel maintenance, safety, and incident management and to keep abreast of the latest issues in Transportation. The administration, in turn, trained employees to apply this information in day-to-day operations.

The cross-trained operators provided traffic management, escorted Haz-Mat vehicles, and immaculately maintained the tunnels, portal buildings and the grounds, while dealing courteously with the traveling public. Operators, employing their extensive EMS training, promptly responded to medical and vehicular emergencies.

The maintenance employees, also cross-trained, played a crucial role in operation by addressing the mounting demands of the aging mechanical and electrical systems. Preventative and Response Maintenance programs coupled with detailed inspections kept the tunnels operating at peak performance.

The Cumberland Gap Tunnels have always generated considerable interest from various groups across the states. This report contains a list of the groups that observed the routine operations of CGTA and toured the Kentucky Portal Building.

Additionally, CGTA had an important economic impact in the region. The authority provided thirty-eight jobs, which generated significant local and regional economic activity. Most significantly, while CGTA maintained the tunnels, only a limited number of motor vehicle collisions occurred. Although promotion and prioritization of safety cannot be monetarily assessed, CGTA's focus on safety has resulted in a reduction in the number of lives lost or altered due to serious crashes and has made "Massacre Mountain" a thing of the past. CGTA respectfully submits the following report for your review.







# **CUMBERLAND GAP TUNNEL AUTHORITY**

## MANAGEMENT AND OPERATIONS REPORT JULY 1, 2021 THROUGH JUNE 30, 2022

The Commonwealth of Kentucky and the State of Tennessee are responsible for the Management and Operation of the Cumberland Gap Tunnel. Through the Interstate Agreement, Kentucky is designated as the Lead State. The Interstate Agreement also designates an Advisory Committee to oversee the management and operation of the tunnel. The committee is composed of two representatives from each state and an ex officio from the National Park Service.

The Lead State has contracted the Cumberland Gap Tunnel Authority to provide Management and Operation of the tunnel. The general responsibilities of CGTA are Management, Operation, Response Maintenance, Preventative Maintenance, Predictive Maintenance and Design Modifications. Additionally, CGTA provides Emergency Response, Motorist Assistance, and Traffic and Incident Management.

The primary systems for which CGTA is responsible are:

- Closed circuit television
- Supervisory control and data acquisition (SCADA)
- Dynamic message signs
- Over-height detection
- Security intrusion detection
- Environmental monitoring
- Tunnel fan ventilation
- Fire protection
- Water drainage
- Lighting
- Telephone
- Traffic control
- Power supply
- Traffic Surveillance Control System (TSCS)

## MANAGEMENT

### Personnel

Administrative Team – There have been no changes in the Administrative Team. The administrators have maintained all the applicable training, certification, and licensing.

Mechanical Maintenance Team – There have been no changes in the Mechanical Maintenance Team. The team has maintained all the applicable training, certifications, and licensing.

Electrical/Electronics Team – One electrician resigned, and his position was filled by a licensed electrician trainee. The team has maintained all the applicable training, certifications, and licensing.

Operations Teams – Two operators were terminated and one retired. Three operator trainees were hired to replace them. All operators have maintained all the applicable training, certifications, and licensing.

#### Equipment

In this reporting period, there were no changes in the CGTA vehicles and the state-owned equipment.

#### **Conferences / Webinars**

Due to COVID-19, CGTA personnel participated in mostly webinars and other

online training to fulfill their commitment to state of the art education and training that increases response and management capabilities.

## **OPERATIONS**

### **Traffic Control**

Lane Closures / Bore Closures - All bore closures were scheduled to accommodate tunnel washing, maintenance, and contractors' work. Operators launched and set up twenty-one bore closures this year. CGTA initiated 1,191 lane closures during the year. Lane closures were launched to accommodate traffic control during vehicle incidents, tunnel maintenance, contractors' work, roadway debris removal, animal control, slow moving vehicles, and inclement weather.

In addition, the control room operators monitored twenty-five digital cameras located within the tunnel, on top of the portal buildings, in both parking lots, on US25E south of the US58 interchange, the TN pedestrian tunnel and on the Cumberland Avenue/US25E intersection. These strategically placed cameras were instrumental in expediting the flow of hazardous material carriers while minimizing the disruption of related traffic.

#### Hazardous Materials Escorts

Operators escorted hazardous material vehicles through the Cumberland Gap Tunnels without an accident for the twenty-fourth year. Operators escorted 22,900 Haz-Mat vehicles through the tunnels and averaged 1.21 vehicles per escort. By utilizing the outboard digital cameras and identifying oncoming Haz-Mat vehicles, the control room operators could efficiently plan escorts. 13,584 escorts involved local Haz-Mat vehicles (within a 50-mile radius), or 59.3% of the total; and 9,316 escorts, or 40.7% of the total, involved non-local vehicles.

#### **Emergency Services**

The Cumberland Gap Tunnel Authority operated a Basic Life Support Ambulance service 24 hours per day, seven days per week. This ambulance service is owned by the Kentucky Transportation Cabinet and is currently licensed by the Commonwealth of Kentucky. Dr. Robert Bond, M.D., provided medical oversight for the Cumberland Gap Tunnel Authority EMS. The Mutual Aid Agreements with Bell County EMS, Bell County Rescue Squad, Middlesboro Fire Department and EMS, Claiborne County EMS, Cumberland Gap Volunteer Fire Department, and Harrogate Fire Department remained in effect through this reporting period.

Memorandum of Understanding Agreements pertaining to the radio frequency use remain in effect between the Cumberland Gap Tunnel Authority and the Tennessee Department of Safety, Claiborne County EMS, Kentucky State Police, Bell County EMS, Middlesboro Fire Department and EMS, Bell County Sheriff's Department and Bell County Central Dispatch. These agreements allow the Cumberland Gap Tunnel Authority, along with the participating emergency service agencies, to communicate across state and county boundaries in the event of an emergency.

All Cumberland Gap Tunnel Authority operators and maintenance personnel maintained their Emergency Medical Technician licenses (EMT-B). The CGTA EMS continued to operate under National Park jurisdiction per a General Agreement made in December 2003 between the Cumberland Gap National Historical Park and the Kentucky Transportation Cabinet.

#### Fire / Rescue & Haz-Mat

Firefighting apparatus was inspected, maintained, and replaced as needed to allow CGTA operators to respond to fire and/or rescue situations in a safe and appropriate manner. Annual inspections were completed on both on-site Fire / Rescue trucks.

CGTA did not respond to any fire related incidents within the tunnels or on the approach roadways.

Four Hazardous Material Spill / Incidents required response by CGTA. One was assisting NPS with a spill at the entrance to Cumberland Gap, TN on August 23, 2021.



Two vehicles carrying class 1 explosives were denied passage through the NB-SB tunnels and were turned around in the crossover or apron.

We had 11 SB and 22 NB Haz-Mat vehicles bypass the inspection lanes. The incidents were reported to the NPS LE when available to respond.



#### **Emergency Medical Services**

The Kentucky Board of Emergency Services ambulance annual inspections have not been scheduled for 2022 at the time of this report. EMS Protocols. including the continued COVID-19 pandemic. were reviewed and updated to the State required level of response (BLS). The Medical Director and the Kentucky Board of Emergency

Services approved the updates to the scope of service provided by the CGTA. Annual tuberculosis screening and required annual background checks on all EMT certified personnel was completed. COVID-19 restrictions were lifted in 2022 and annual group training was resumed in house and through Southeast Community College.

There were fifteen emergency incidents that required ambulance response. Of those, twelve were resulting from motor vehicle collisions and three were due to medical problems. There were three patients transported to Middlesboro Appalachian Regional Hospital Emergency Room by the CGTA. A total of twenty-one refusal of treatment forms were obtained from individuals that were involved in the incidents.

Quality Assurance Checklists were completed on all emergency responses and are on file along with patient contact run sheets. The run sheet data for each patient was entered and uploaded to Kentucky State Ambulance Reporting System (K-StARS) website, as required by the Kentucky Board of EMS.

CGTA EMTs were on standby for NPS personnel while they performed physical testing.

#### Mutual Aid

The CGTA provided assistance on several occasions to local Law Enforcement. During these assists, the Dynamic Message Signs and portable message signs were used to advise motorists of the incidents in the area.

- July 26 and 27, 2021 Provided mutual aid with NPS for a missing teen from the VA campground.
- August 23, 2021 Assisted NPS with HazMat spill at Cumberland Gap, TN.
- January 28, 2022 Provided traffic control for NPS LE for a multiple vehicle collision (MVC) near the US58 Interchange Bridge.
- May 9, 2022 Provided traffic control for NPS LE for a MVC on TN Ramp A.

#### Miscellaneous

The CGTA assisted numerous pedestrians, bicyclists, and claustrophobic drivers through the tunnels. Operators completed 75 Fire/Ems/Safety PM's generated through the computerized maintenance management system.

#### **Continuing Education**

CGTA participated as a member in the following associations: Tennessee Association of Rescue Squads and the Southeast Kentucky Firefighters Association. Membership in these associations allowed CGTA to enhance mutual aid capabilities through professional networking, participate in educational opportunities at reduced cost, and obtain information concerning legislative changes.

The Emergency Services Director maintained certification as a CPR instructor through the American Heart Association, Fire Instructor through the KY Fire Commission and his certification as a Paramedic in Kentucky and Tennessee. The Director was responsible for EMS training and certification as well as maintaining the training records of operators and maintenance personnel.

CGTA participated in two Mass Casualty Incident exercises. Smithfield conducted an on-site training exercise on chemical spills. Priorities were response time, wind, temperature, and what the community would face during an incident. Several different county, city, and state emergency services attended.



Another Mass Casualty Incident exercise was conducted by the NPS LE, at SKCTC in Middlesboro. The training scenario was an incident inside one



tunnel with a bus catching fire and several vehicles involved in a crash. The magnitude of the incident required a bore closure and mass casualties were a result. Air Evac Helicopter service, several of the surrounding mutual aid EMS and Law Enforcement Services, as well as our three local hospital personnel participated in the event.

The following training programs were provided to shift supervisors, operators, and maintenance personnel, in accordance with KBEMS

ambulance service licensing and the Kentucky State Fire Commission requirements. A schedule of programs, examinations and attendance rosters are on file for the courses that are listed. CGTA provided most of the training utilizing its own highly qualified personnel. The following courses were provided to CGTA personnel by in-house instructors under the direction of the Tennessee Association of Rescue Squads, the Kentucky Fire Commission, and the KY Community & Technical College System:

- Emergency Vehicle Operations with the Vanessa K. Free Act
- Emergency Medical Technician Basic Recertification
- National Registry of EMT Recertification
- Blood borne Pathogens HIV and AIDS Awareness
- CPR & AED Re-certification taught by the CGTA EMS Director
- Vehicle Extrication Re-certification
- Traffic Incident Management TDOT Curriculum
- Hazardous Communications
- Permit Required Confined Space Entry
- Pediatric Immobilization and Abusive Head Trauma
- Disaster / Mass Casualty Incident
- Exposure Control Plan
- Automated External Defibrillator
- Emergency Response Plan
- EMS Protocol
- EMS Standard Operating Procedure
- Fire / Rescue Operations
- Fall Protection
- Fire Extinguisher Annual Training
- Personal Protective Equipment and Self Contained Breathing Apparatus
- Finger Pulse Oximeter
- Blood Glucose Meter
- Special Tunnel Authority Response Team
- Infection Control -Tuberculosis
- Patient Immobilization and Splinting



- Fuel Tank Emergencies
- Vanguard Software custom controls
- Lockout/Tagout
- Emergency Response Plan

In addition, personnel received the following training:

- Hazardous Response Operations Level (New Hires)
- Active Shooter Training
- Landing Zone Set-up and Safety

All personnel performed on-the-job training in emergency service areas, industrial safety, and tunnel operations. Personnel utilized online training as well as attending classes in other cities as warranted, to maintain certification in their field.

Corporate Emergency Response Training has been resumed after the COVID-19 restrictions were lifted.

Two CGTA shift supervisors, two operators and the EMS / Safety Director maintained their certifications as instructors for the Emergency Vehicle Operations Course (EVOC). Two Supervisors and three Operators maintained their certifications as Extrication instructors for the Tennessee Association of Rescue Squads (TARS) Extrication class.

#### Safety

Operations and Maintenance teams were trained throughout the year, and they routinely reviewed Workplace Safety, Lockout / Tag out, Confined Space Entry, Material Safety Data Sheets, Fall Protection, Personal Protective Equipment, Personal Safety, Seasonal Weather Safety, Hazard Communication, and Emergency Action Plans. Other training included, but was not limited to: Digital Radio System, Fire Suppression Systems, Traffic Safety, and equipment specific training. The CGTA Safety Committee, which is comprised of members from each operations team, maintenance, and administration, met monthly to discuss safety concerns. The members of the committee are rotated every six months to allow all employees the opportunity for input. In addition, each team held a toolbox safety meeting each week. Records of topics and attendance rosters are on file.

The Safety Manual was revised to meet all current NFPA and OSHA requirements. The requirements for fire brigade personnel, including annual physicals and fit test continue to be adhered to. Other updates in the manual included the Emergency Action Plan, the Electrical Safety Plan, the Compressed Gas Plan, the Hazard Communication Program, and the Lockout / Tagout Plan. The Emergency Response Plan was updated along with the Confined Space Entry Plan. These safety plans are scheduled to be reviewed and updated annually.



A program to encourage all personnel to voice their concerns regarding safety in the workplace or inappropriate issues remains in place. This program provides anonymity should the employee be concerned about privacy issues.

The Confined Space Log was updated throughout the year, and the Safety Data Sheet records were also reviewed and updated. The annual fire extinguisher inspection was completed on June 1, 2022, and the CGTA replaced all aging and worn fire extinguishers. Halotron extinguishers are located in the Control Room and in the Electrical Rooms in KY and TN. A CO2 extinguisher is stationed in the KY Computer Room. The fire

extinguishers are on a semi-annual preventative maintenance schedule and the monthly inspections are still in effect.

There were no lost time employee accidents during the year.

## **RESPONSE MAINTENANCE**

#### Mechanical

The mechanical team performed a total of 635 mechanical maintenance PM/DM's. There were 1930 man-hours documented for the requests. 135 were response maintenance requests that were tracked through the computerized maintenance management system. An increase in labor and parts was necessary to maintain CGTA's twenty-five year-old vehicles. Average mileage on the State vehicles is as follows: Utility Wreckers – 25,991 miles, Fire/Rescue Vehicles – 38,503 miles, and Ambulances – 36,047 miles. The Isuzu sweeper truck chassis has 46,737 miles and the wash truck has 12,980 miles.

The maintenance team repaired various equipment, vehicles and structures within the Cumberland Gap Tunnels ensuring continuous and efficient tunnel operation. Personnel also painted structures within the portal buildings.

The mechanical team also assisted contractors when they came to perform work on the chillers, boilers, repair garage doors and test the main backflow preventers.

Mechanical personnel performed regular daily and weekly equipment checks, mowing, and cleaning. The team maintained the fleet of fourteen (14) state owned vehicles and seven (6) CGTA vehicles. Other projects included:

• Troubleshot and repaired numerous problems with many of the vehicles, particularly the sweeper truck ST-1



and tow truck C-11. This included wiper motors, alternators, batteries, air bags, brushes, brake pads, rotors, power steering pumps, cables, thermostats, water pumps and ignition systems.

- Repaired a washout in the median in TN
- Replaced a bad thermostat on variable air volume box 5A in the KY portal building

- Replaced the faulty ventilation fan in the KY stairway C
- Replaced a faulty reheat coil actuator on air handling unit 3 in the KY mechanical room
- Replaced faulty motor and fan assembly on the fan coil unit in the TN inspection booth
- Replaced a damaged flow meter in the TN fire pump room
- Replaced faulty bearings on the fan of air handling unit 2C in the KY control room

### **Electrical / Electronics**

Essential response maintenance was performed throughout the year. The electricians performed Ground Fault and Megger testing of all feed circuits and ground cables throughout the facility. Response maintenance to the DMS network has increased significantly, as the system is now over nineteen years old. Without new parts availability, all DMS pixel boards have repeatedly been "bench repaired" by hand and are no longer repairable due to damage to the substrate. We have worked closely with the manufacturer Daktronics, to provide an update that will allow continued sustainable service and combine separate device functions to fewer and less expensive parts. The fiber optic and other field communication devices damaged by rodents and other wildlife constitute a majority of the demand maintenance requests within the tunnel facility and approaches. Loss of communication has been the primary cause for unscheduled response to the remote DMS and camera locations in TN.

- Wired a new Cavern Valve Drain Actuator to function from a different control voltage and adapted SCADA to control the actuator
- Completed control integration with the new lighting system
- Recovered the legacy telephone system with repurposed hardware
- Repaired the legacy over-height detectors
- Repaired and replaced parts in the legacy radio system
- Replaced fiber modems with new ones in Variable Message Sign Loops B and D
- Replaced thirty batteries in the KY Alcad system with new ones and wired the system to run on the upgraded batteries with higher capacity
- Installed conduit and wiring for NPS LE's License Plate Reader Cameras

# PREVENTATIVE MAINTENANCE

## Mechanical

Mechanical maintenance personnel completed 500 preventative maintenance requests as traced through the computerized maintenance management system. These requests included detailed equipment inspections on a monthly, quarterly, semi-annual, and annual schedule.

#### **Electrical / Electronics**

Preventative maintenance was performed on equipment that included: motor control centers, motor and lighting circuit contactors, station batteries, mini power centers, lighting fixtures, traffic cabinets, remote terminal units, dynamic message sign cabinets, telephone, radio, closed circuit television equipment, and 480v, 15kv, and 25kv switchgear and associated transformers. The intense preventative and predictive maintenance kept the high-tech system functioning on a daily basis and also kept the response maintenance to a minimum.

Semi-annual preventative maintenance was performed on the TN I-81 DMS in Jefferson and Hamblen Counties. The site cellular modems were upgraded to operate on the 4G network after 3G network was discontinued by the service provider.



# PREDICTIVE MAINTENANCE

#### Mechanical

Mechanical maintenance predictive technologies consisted primarily of motor testing, vibration analysis, and ultrasonic, including impact echo testing and tribology. Vibration testing was performed semi-annually on all rotary equipment in the KY and TN portal buildings. Vibration testing has indicated potential problems with some of the system pumps and a couple of the air handlers, primarily with bearings and misalignment. This will require periodic monitoring and repair.

### **Electrical / Electronics**

Electrical personnel performed predictive maintenance by testing equipment regularly. A total of 225 PM / 98 DM tasks were performed through the CMMS system. These tasks included ohm voltage testing of all main field circuits and branch circuits. Voltage testing was performed on all mini power centers. The tunnel ventilation fan motors were tested on a routine basis as



Personnel performed well. semi-annual extensive fire alarm testing and infrared scanning of transformers. supplies, power automatic switchgear, and both low and medium voltage breakers. The Tunnel lighting project was completed by CMTA, and the lighting levels updated through our SCADA system.

# **DESIGN MODIFICATIONS**

#### Mechanical

- Relocated the Cooling Tower sump return actuator
- Relocated the Diesel Fire Pump seal drain line
- Installed an air conditioner in the mechanical shop

### **Electrical / Electronics**

- Continued converting both portal buildings' lighting from fluorescent to LED
- Completed making repairs and modifications to the hand boxes along the fiber optic route to the Cumberland Avenue/25E intersection camera

## MAINTENANCE TRAINING

#### Mechanical

Due to COVID-19, the mechanical maintenance team, including the engineer and supervisor, received mostly in-house and online training on facility maintenance. The Mechanical team also provided training to operators on the Mack wrecker, utility wrecker, man lift, and bucket truck. The Mechanical Engineer maintained his Professional Engineer licenses that he holds in KY and TN.

#### **Electrical / Electronics**

One electrician maintained his Kentucky Master Electrician license. The electrician in training maintained his Kentucky Electrician License. The Electrical Supervisor has maintained Level II Infrared Thermography certification.

# VISITORS

The Cumberland Gap Tunnel Authority resumed tours in 2022 following the CDC's lifting of COVID-19 restrictions. Some of the distinguished visitors included the following:

- Cumberland Gap National Park Staff and Volunteers
- JMT staff and Engineers
- Members of Leadership Group of Claiborne County, TN
- Office Leaders with Kentucky Utilities
- Staff and students from H. Y. Livesay Middle School

Respectfully submitted, CUMBERLAND GAP TUNNEL AUTHORITY

Robert Morrison Tunnel Manager APPENDIX A

# **STATISTICS**

## TRUCK ESCORT INFORMATION JULY 1, 2021 THROUGH JUNE 30, 2022

							TOTAL	TOTAL	TOTAL
	QTY	NUMBER	TRUCKS	QTY	NUMBER	TRUCKS	NUMBER	NUMBER	TRUCKS
	TRUCKS	OF	PER	TRUCKS	OF	PER	OF	OF	PER
DATE	NORTH	ESCORTS	ESCORT	SOUTH	ESCORTS	ESCORT	TRUCKS	ESCORTS	ESCORT
JUL	831	704	1.18	862	703	1.23	1693	1407	1.2033
AUG	932	775	1.20	1092	881	1.24	2024	1656	1.2222
SEP	886	737	1.20	1047	839	1.25	1933	1576	1.2265
ОСТ	937	790	1.19	1048	874	1.20	1985	1664	1.1929
NOV	974	795	1.23	1116	928	1.20	2090	1723	1.2130
DEC	980	816	1.20	1225	985	1.24	2205	1801	1.2243
JAN	793	638	1.24	883	746	1.18	1676	1384	1.2110
FEB	830	676	1.23	914	782	1.17	1744	1458	1.1962
MAR	904	724	1.25	1117	926	1.21	2021	1650	1.2248
APR	909	746	1.22	1006	822	1.22	1915	1568	1.2213
MAY	844	722	1.17	1000	837	1.19	1844	1559	1.1828
JUN	885	751	1.18	1006	864	1.16	1891	1615	1.1709
TOTAL	10705	8874	1.21	12316	10187	1.21	23021	19061	1.2078

#### NUMBER OF TRUCKS PER ESCORT

These totals include HazMat Vehicles and Oversize Loads

#### HAZMAT TRUCKS BY CLASS

			NORTH			SOUTH			TOTAL	
2	CLASS	NORTH LOCAL	NON- LOCAL	TOTAL NORTH	SOUTH LOCAL	NON- LOCAL	TOTAL SOUTH	TOTAL LOCAL	NON- LOCAL	TOTAL CLASS
0	2	769	564	1333	804	593	1397	1573	1157	2730
2	3	5333	1805	7138	6455	2591	9046	11788	4396	16184
2	4	5	11	16	4	20	24	9	31	40
1	5	4	388	392	13	121	134	17	509	526
	6	0	17	17	0	24	24	0	41	41
-	7	0	2	2	0	1	1	0	3	3
2	8	82	1150	1232	55	1064	1119	137	2214	2351
2	9	3	310	313	5	338	343	8	648	656
2	MULTI	32	178	210	20	139	159	52	317	369
	TOTALS	6228	4425	10653	7356	4891	12247	13584	9316	22900

HAZMAT VEHICLES BYPASSED				
DATE	NB	SB		
JUL	1	3		
AUG	0	0		
SEP	1	2		
OCT	1	2		
NOV	3	4		
DEC	0	2		
JAN	1	1		
FEB	1	1		
MAR	3	1		
APR	0	3		
MAY	0	2		
JUN	0	1		
TOTAL	11	22		

CLASS 1 TURNED AROUND				
	NB	SB		
JUL	0	0		
AUG	0	0		
SEP	0	0		
OCT	0	0		
NOV	0	0		
DEC	0	0		
JAN	0	0		
FEB	0	0		
MAR	1	1		
APR	0	0		
MAY	0	0		
JUN	0	0		
TOTAL	1	1		

# JULY 1, 2021 THROUGH JUNE 30, 2022

RESPONSES				
DATE	ASSISTS MOTORISTS	EMERGENCY RESPONSES	DEER	
JUL	113	1	1	
AUG	110	6	1	
SEP	105	2	0	
OCT	117	2	1	
NOV	90	5	2	
DEC	73	1	0	
JAN	78	3	0	
FEB	59	1	0	
MAR	75	0	0	
APR	64	3	0	
MAY	95	4	0	
JUN	71	1	0	
TOTAL	1050	29	5	

MECH PROBS / DEBRIS				
DATE	MECH PROBLEMS	REMOVE DEBRIS		
JUL	12	5		
AUG	14	11		
SEP	23	2		
OCT	8	7		
NOV	12	9		
DEC	6	6		
JAN	10	6		
FEB	8	2		
MAR	18	4		
APR	9	6		
MAY	13	3		
JUN	12	4		
TOTAL	145	65		

Includes: EMS, F/R, HazMat & Mutual Aid

FUEL	FUEL ASSISTS				
JUL	1				
AUG	6				
SEP	5				
OCT	5				
NOV	4				
DEC	5				
JAN	4				
FEB	4				
MAR	6				
APR	5				
MAY	3				
JUN	2				
TOTAL	50				

FLAT TIRE				
JUL	5			
AUG	4			
SEP	0			
OCT	2			
NOV	3			
DEC	6			
JAN	1			
FEB	5			
MAR	3			
APR	2			
MAY	3			
JUN	5			
TOTAL	39			

CLAUSTR	CLAUSTROPHOBIC DRIVER				
MONTH	NB	SB			
JUL	13	13			
AUG	13	11			
SEP	12	12			
OCT	11	11			
NOV	13	13			
DEC	0	0			
JAN	0	0			
FEB	0	0			
MAR	0	0			
APR	0	0			
MAY	0	0			
JUN	0	0			
TOTAL	62	60			

PEDESTRIANS								
MONTH	NB	SB						
JUL	1	0						
AUG	2	3						
SEP	1	2						
OCT	2	1						
NOV	5	3						
DEC	3	4						
JAN	5	2						
FEB	3	3						
MAR	3	4						
APR	4	1						
MAY	4	2						
JUN	1	6						
TOTAL	34	31	65					

BICYCLISTS								
MONTH	NB	SB						
JUL	2	1						
AUG	4	5						
SEP	3	9						
OCT	9	8						
NOV	3	4						
DEC	3	3						
JAN	5	4						
FEB	4	4						
MAR	2	2						
APR	6	2						
MAY	6	3						
JUN	10	6						
TOTAL	57	51	108					

# LANE CLOSURES JULY 1, 2021 THROUGH JUNE 30, 2022

INSPECTION LANE CLOSURES DUE TO FOG							
DATE	NB	SB					
JUL	1	3					
AUG	2	5					
SEP	1	7					
OCT	2	14					
NOV	1	0					
DEC	2	2					
JAN	0	0					
FEB	0	0					
MAR	0	0					
APR	1	0					
MAY	0	0					
JUN	1	1					
TOTAL	11	32					

LANE CLOSURES FOR INCIDENTS / MOTORIST ASSISTS					
INCIDENT	QTY				
ANIMALS	1				
DIRECTIONS	3				
FLAT TIRE	19				
FUEL	14				
HAZMAT RELATED	4				
LAW ENFORCEMENT	25				
MECH PROBLEMS	60				
MEDICAL EMERGENCY	2				
MISC	21				
MVC	42				
REMOVE DEBRIS/LOST MAT'L	33				
SLOW MOVING VEHICLE	8				
STOP THEN PROCEED - ?	16				
WEATHER	180				
TOTAL	428				

#### **CLOSURES FOR MAINTENANCE 2020-2021**

LANE	JUL	AUG	SEP	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
NBB	9	2	1	1	0	0	0	1	0	2	1	2	19
NBI	18	20	9	11	13	8	7	11	19	16	21	20	173
NBL	7	15	7	7	11	5	8	9	12	5	13	12	111
NBR	4	10	2	4	8	2	4	4	7	3	8	7	63
SBB	3	1	0	2	0	0	0	0	0	2	0	2	10
SBI	19	21	9	11	13	6	8	10	17	17	21	20	172
SBL	7	16	7	7	9	5	7	8	12	6	14	8	106
SBR	4	10	3	5	8	2	4	4	8	3	8	7	66
												TOTAL	720

- **NBB** Northbound Both Lanes
- NBI Northbound Inspection Lane
- NBL Northbound Left Lane
- **NBR** Northbound Right Lane
- **SBB** Southbound Both Lanes
- SBI Southbound Inspection Lane
- **SBL** Southbound Left Lane
- **SBR** Southbound Right Lane