AGENDA

1. Approval of October 25, 2019 Meeting Summary – Alonzo Liñán, RSAC Chair

2. Regional 911 Safety Grant – Tom Bamonte, NCTCOG

3. Congestion Management Process (CMP) Update – Clifton Hall, NCTCOG

4. UAS Safety and Integration Task Force – Ernest Huffman, NCTCOG

5. Solutions for Traffic/Vehicle Pedestrian, Traffic Assessment, etc. – Harold Gibbs, Chariiot Solutions

6. NCTCOG Regional Safety Program Inventory and Upcoming Safety Plan – Kevin Kroll, NCTCOG

7. Update Items
   a) CVE Equipment and Training Program RFP – Kevin Kroll, NCTCOG
   b) Safety Performance Measures – Kevin Kroll, NCTCOG
   c) TIM Call for Projects – Camille Fountain, NCTCOG
   d) Photogrammetry Contract Completion – Camille Fountain, NCTCOG
   e) Abandoned Vehicle Working Group – Natalie Bettger, NCTCOG
   f) Wrong Way Driving Request for Information (RFI) – Natalie Bettger, NCTCOG
   g) MUTCD Compliance Deadlines Discussion – Alonzo Liñán

8. Upcoming Safety-Related Events and Training Announcements
   a) **Traffic Incident Management First Responder and Manager Course:**
      o February 27 – 28, 2020 NCTCOG
      o May 28 – 29, 2020 NTTA
      o August 6 – 7, 2020 NCTCOG
      o September 24 – 25, 2020 NCTCOG
      o October 22 – 23, 2020 NCTCOG
   b) **Texas Statewide Impaired Driving Forum:** February 12, 2020, San Marcos, TX
   c) **Lifesavers National Conference on Highway Safety Priorities:** March 15-17, 2020, Tampa, FL

9. Other Business (Old or New): This item provides an opportunity for members to bring items of interest before the group

10. Next Special RSAC Meeting: March 27, 2020 at 10 am
Regional 911 Safety Grant: USDOT Safety Data Data Initiative

Clint Hail, Transportation Planner

Automated Vehicles Program
North Central Texas Council of Governments
USDOT Safety Data Initiative (SDI)

• SDI:
  • Driving turn to predictive analytics
  • Focus on scalable tools
  • Safety Data Initiative Beta Tools
  • Solving for Safety: Visualization Challenge
  • Awards announced in April-May

• NCTCOG:
  • Joint proposal: Transportation and NCT9-1-1
  • Improving handoffs of dynamic incidents across jurisdiction
  • Bridging the gap between transportation and emergency management
What is the CMP?

One of 5 federally-mandated planning documents (MTP, TIP, UPWP, Public Participation Plan, CMP)

Required for urbanized areas with populations exceeding 200,000 (also known as Transportation Management Areas “TMA”)

“A regionally-accepted approach for managing congestion that provides up-to-date information on multimodal transportation performance and assesses alternative strategies that meet state and local needs.”

*FHWA CMP Guidebook*
What is Required in the CMP?

Regulations are not prescriptive towards the methods, approaches, and strategies in the CMP.

Congestion Management Strategies *should* include:
- Demand management strategies
- Traffic operational improvements
- Public transportation improvements;
- ITS technologies; and
- "Where necessary, additional system capacity“

*For nonattainment areas*, projects adding Single Occupant Vehicle (SOV) capacity *must* be evaluated and comply with the CMP by integrating congestion management strategies.

The CMP *shall* be developed, established, and implemented as part of the Metropolitan Transportation Planning Process.
CMP Processes and Related Documents

**PROCESSES**

1. Regional Goals and Objectives
2. System Identification
3. Develop Performance Measures
4. System Performance Monitoring & Evaluation
5. Strategy Identification
6. Strategy Selection
7. Project & Program Implementation and Monitoring
8. Project Performance Evaluation

**DOCUMENTS**

- MTP
- Progress North Texas
- Federal Performance Measures & Reporting
- NEPA, Corridor & Other Studies
- TIP
- Routes of Significance
- NHS
- FFCS
- Program Areas
Regional Goals and Objectives

Mobility
Increase available options, reduce congestion, increase efficiency, provide access

Quality of Life
Preserve environment, improve air quality, promote active lifestyles, livable communities

System Sustainability
Encourage and enhance maintenance, increase safety and reliability, invest long-term in existing system

Implementation
Timely project planning; cost-effective solutions for construction, operations, and maintenance; leverage existing assets
Corridor Performance Criteria

Construction Programmed in TIP?

If so, hold for evaluation after completion.

2013
Recurring Congestion (V/C):
Level of Service DEF

OR

2013
Safety: Crash Rate Above 75th Percentile

OR

New
Non-Recurring Congestion:
Travel Time Reliability/Peak-Hour Delay: 75th Percentile

OR

New
Pavement and Bridge Conditions: First Quartile Ratings

Further Evaluation
Corridor Performance Criteria

- **Recurring Congestion (V/C):** Level of Service DEF
- **Safety:** Crash Rate Above 75th Percentile
- **Non-Recurring Congestion:** Travel Time Reliability/Peak-Hour Delay: 75th Percentile
- **Pavement and Bridge Conditions:** First Quartile Ratings

**Construction Programmed in TIP?**
- **Yes:** If so, hold for evaluation after completion.
- **No:** Further Evaluation

**2013**
- Recurring Congestion (V/C): Level of Service DEF

**New**
- Construction Programmed in TIP?
- Pavement and Bridge Conditions: First Quartile Ratings

2013
- Safety: Crash Rate Above 75th Percentile
- Non-Recurring Congestion: Travel Time Reliability/Peak-Hour Delay: 75th Percentile

Further Evaluation
Roadway Corridors in 2013 CMP Update
## Corridor Asset Inventory

### Critical Corridors
- Meets Initial Criteria
  - Fact Sheet/Database Entry
  - Determine CMP Strategies

### Asset Availability Data

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Alternative Modes</th>
<th>Operational Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel Arterials</td>
<td>Sidewalks</td>
<td>NHS</td>
</tr>
<tr>
<td>Managed Lane ROW</td>
<td>Veloweb/Multi-Use Paths</td>
<td>Managed/HOV/Express Lanes</td>
</tr>
<tr>
<td>Frontage Roads</td>
<td>Light Rail</td>
<td>ITS</td>
</tr>
<tr>
<td>Parallel Freeways</td>
<td>Dedicated Bus Lanes</td>
<td>Routes of Significance</td>
</tr>
<tr>
<td>Shoulders</td>
<td>Commuter Rail</td>
<td>Hazmat Routes</td>
</tr>
<tr>
<td>At-Grade Intersections</td>
<td>Bus Routes</td>
<td>Truck Lane Restrictions</td>
</tr>
<tr>
<td>At-Grade R/R Crossings</td>
<td>Safe Routes to School</td>
<td>Signalized Intersections</td>
</tr>
<tr>
<td>Grade Separations (Arterials)</td>
<td>Demand Response Coverage (GP)</td>
<td>Regional Freight Routes</td>
</tr>
<tr>
<td>Park-and-Ride Facilities</td>
<td>TIM Attendance &amp; Coverage</td>
<td></td>
</tr>
</tbody>
</table>

### Performing Corridors
- Does Not Meet Criteria/Construction programmed
  - Fact Sheet/Database Entry
  - Continue to Monitor Performance

### Determination
- CMP Strategies

### Corridor Performance
- Critical Corridors
- Performing Corridors
Strategy Identification

- Developed with Program Areas
- Consistent with MTP for Addition to the TIP
- Consistent with Safety Programs and Policies in MTP
- Projects will be Referred to Program Areas for CMP Strategy Possibilities on a Case-by-Case Basis
- TxDOT and Local Partners will be Given a “Menu” of Standard CMP Strategies
- Strategies will Eventually be Evaluated for Effectiveness, Giving Prioritization to More Impactful or Cost-Effective Strategies, including projects that leverage safety improvements
# Strategy Identification

<table>
<thead>
<tr>
<th>Critical Factors</th>
<th>Recurring Congestion</th>
<th>Non-Recurring Congestion/Reliability</th>
<th>Safety</th>
<th>Asset Condition (Pavement and Bridge)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Factor</td>
<td>Alternative Modes; Demand Management</td>
<td>Operational Improvements</td>
<td>Safety-Related Projects</td>
<td>Rehabilitation/Asset Management Planning</td>
</tr>
<tr>
<td>Two Factors</td>
<td>Asset Optimization (maximize available capacity + no added Right-of-Way) or M&amp;O</td>
<td>+ Operational Strategies</td>
<td>+ Safety Strategies</td>
<td>+ Pavement Rehabilitation</td>
</tr>
<tr>
<td>Three Factors</td>
<td>*Added Capacity and ROW as Necessary w/ Complimentary Alternative Modes</td>
<td>+ Major Operations Studies and Commitments</td>
<td>+ Major Safety Studies and Commitments</td>
<td>*Complete Pavement/Bridge Replacement</td>
</tr>
<tr>
<td>Four Factors</td>
<td>Major Capital Investments in Transit, Active, and Highway Infrastructure in Corridor</td>
<td>Multimodal Operational Studies and Investments</td>
<td>Comprehensive Corridor Safety Action Plan</td>
<td>Long Life Pavement and Bridge Design w/ Complimentary Risk-Based</td>
</tr>
</tbody>
</table>

Program Area Strategies
Project Implementation and Monitoring

SOV Capacity Projections (MTP or Counts)

Selected CMP Strategies per Corridor

Commitments Tracked in TIP

Monitor Corridor Performance Measures

Asset Information Planning Tool

SOV Analysis

Program Area Strategies

Strategies Evaluated for Effectiveness

Strategy Evaluation
Project Performance Evaluation

• Develop a set of Baseline Performance Measures to Evaluate Strategies for Effectiveness

• Look to Existing Before/After Studies for Relevant Measures

• Focus on “Initial Criteria” Performance Measures (LOS, Reliability, etc.)

• Use Process to Track Federal Performance Measures as Necessary
Example Project Performance Measures

- Before/After Speeds
- Before/After Volumes
- Before/After Crash Rate
- Transit Ridership/Mode Split
- Changes in Asset Inventory
- Changes in Asset Condition
- Changes in Criteria Performance Measures, Peak Hour LOS, Crash Rate, Travel Time Reliability
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2019</td>
<td>Internal Peer Reviews – Small Groups</td>
</tr>
<tr>
<td>Mid-December 2019</td>
<td><em>Data from Internal Groups</em></td>
</tr>
<tr>
<td>December 9, 2019</td>
<td>Internal Peer Review(s) – Large Group</td>
</tr>
<tr>
<td>January 24, 2020</td>
<td>RSAC (Info) – Draft Safety Criteria and Overview</td>
</tr>
<tr>
<td>February 2020</td>
<td>Peer Review(s) – TxDOT/Regional Partners</td>
</tr>
<tr>
<td>February 28, 2020</td>
<td>STTC/RTC Workshop – Draft Corridor Analysis and</td>
</tr>
<tr>
<td></td>
<td>Implementation Strategies</td>
</tr>
<tr>
<td>March 27, 2020</td>
<td>STTC Info – Critical Corridors and Process Updates</td>
</tr>
<tr>
<td>April 9, 2020</td>
<td>RTC Info – Critical Corridors and Process Updates</td>
</tr>
<tr>
<td>April 2020</td>
<td>30-Day Public Comment Period and Public Meeting**</td>
</tr>
<tr>
<td>April 24, 2020</td>
<td>STTC (Action) – Final CMP</td>
</tr>
<tr>
<td>May 14, 2020</td>
<td>RTC (Action) – Final CMP</td>
</tr>
</tbody>
</table>

**Subject to Change**
Questions?

Contact:

Clifton Hall
Transportation Planner
(817) 608-2384
chall@nctcog.org

Natalie Bettger
Senior Program Manager
(817) 695-9280
nbettger@nctcog.org
Unmanned Aircraft Systems (UAS) Safety and Integration Initiative Update

Regional Safety Advisory Committee
January 24, 2020

Presenter: Ernest Huffman
Key Issues with UAS Integration in a Metro Area

- Safety
- Industry Collaboration
- Public Engagement and Perception
- Education and Training
- Workforce Development
- Regulations
- Technology
UAS Safety and Integration Initiative

North Central Texas UAS Task Force

Safety

Integration

PRE-EXISTING COMMITTEES

Regional Coordination Committee
Regional Transportation Committee
Surface Transportation Technical Committee
Air Transportation Advisory Committee
PSURT Committee and Team
Workforce Development
Lone Star UAS Center of Excellence
UAS Werx
Cumulus Technologies
Hillwood Group
AUVSI Lone Star Chapter
Regional Freight Committee

Education
• Know Before You Fly Workshops
• Airport/Military Facility Risks

Legislation
• Regional Ordinance
• Statewide Legislation
• National Legislation
• Notice for Proposed Rule Making
• Permitting

Training
• Training Standards
• PSURT/Enforcement
• Promote UAS Training

Testing
• Metropolitan Testing Corridors
• Package Delivery
• Air Taxi
• Regional UAM Charter

Public Awareness
• UAS Applications
• UAS Careers
• Public Outreach Strategy
• Bring Your Drone to the Park Day
Task Force Objectives

- Promote UAS safety and standardization
- Mitigate reckless UAS operations
- Promote the integration of UAS into the DFW regional airspace
- Collaborate with regional partners for a coordinated comprehensive approach
222 Members, 130+ Organizations

- Airports
- Cities, Counties, TxDOT and FAA
- Military
- Public Safety
- UAS Industry Representatives (training, manufacturers, etc.)
- Universities
- NCTCOG Staff (Transportation, 911, and Emergency Preparedness)
Notable Accomplishments

• 130+ organizations collaborating
• Know Before You Fly “Your Drone” Workshops
• Public Safety UAS Response Team (PSURT)
• Mineral Wells, TX establishment of the 8th UAS testing site
• First registered UAS Apprenticeship Program
• Partnering with Lonestar UAS Center of Excellence to attract NASA Grand Design Challenge
The Working Groups

Education and Public Awareness

Legislative

Training

Integration
Prioritized Initiatives

Know Before You Fly Your Drone Workshops

Public Outreach Strategy

Outreach Events

Bring Your Drone to the Park Day
Prioritized initiatives

Provide Comments for Pending UAS Legislation

Provide Comments on Notice for Rule Changes from Government

Hold General Informational Sessions for Legislature/Policy Makers

Strategic Legislative Plan

Regional UAS Charter
Training

Prioritized Initiatives

- Educate Superintendents and CTE Directors
- Externships/Internships
- Survey Regional Stakeholders for Employee Demand
- University Research and Training
- Federal Research Partnerships
- UAS Workforce Pipeline Development
Prioritized Initiatives

Urban Air Mobility Integration

UAS Weather Detection and CASA Avoidance

Regional UAS Charter

Designate Viable Test Sites

Work with Airports on UAM Infrastructure Needs
Why should you be involved?

• Technology Pilot Opportunities

• Be a Part of the Solution
  Safer skies
  Participate in workshops

• Economic Development
  Let the world know that the DFW region is supportive of the UAS industry

• Grant Opportunities
  • NCTCOG Incident Management 2020 Equipment Purchase
  • Letters of Support
Next Meeting

January 28, 2020, 10am – 12pm
Hosted by Hillwood

Tarrant County College, Northwest
Erma C. Johnson Hadley Northwest Center of Excellence for Aviation, Transportation and Logistics
2301 Horizon Dr., Fort Worth, TX 76177
Contacts

Dan Kessler
Assistant Director of Transportation
North Central Texas Council of Governments
DKessler@nctcog.org
(817)695-9248

Ernest Huffman
Principal Transportation Planner
North Central Texas Council of Governments
ehuffman@nctcog.org
(817)704-5612

Task Force Website - https://www.northtexasuas.com/
Solutions for Traffic Incident Management

Harold Gibbs
469-332-8711
Harold.gibbs@chariiot.com

Chariiot Solutions
Simple IoT solutions for traffic incident management
Simple IoT solutions for traffic incident management

**OMNILED 07**
- LED lighting system
- Wind | Solar | 500Wh Storage
- 4 x IP cameras, full field of view
- Wi-Fi | LTE | 5G Small Cell

**Air Quality Sensors**
- CO, NO2, O3, PM, SO2, Noise level

**Interactive Display**
- TFT 21.5” 1500cd/m²
- Capacitive Touch Screen
- Audio system

**Call Button**
- High quality video and audio
- Facial recognition and other analytics possible

**EV Charger**
- Mast integrated EV Charger
The SmartCone™ is a modular IoT platform that can be configured for a variety of solutions surrounding safety, security, logistics and more. Our solutions improve efficiency, reduce costs and increase awareness.

**WorkZone™ Safety**
Pair with our multisensor wearable to individually monitor safety on site.
*Exelon, IBM

**Bike Lane/Cyclist Visibility**
Detect cyclists approaching high traffic areas and alert vehicles via TheSmartTorch™.
*Detroit, Ottawa

**C/AV Intelligent Infrastructure**
Create intelligent lanes with TheSmartTorch™ to alert VRUs to traffic.
*Whitby, Montreal

**Asset Tracking**
High accuracy indoor positioning and tracking within 10 centimeters.
*DHL

**Fleet Management**
Cameras, LiDAR and license plate recognition to track and secure your fleet.
*Enterprise

**Data Collection**
Deploy anywhere to collect and push data to any custom software.
*IBM, Nokia

*selected customers and/or partners*
• Work Zone Safety

• Heat and Cold Stress
• Slip and Falls
• Fatigue
• Man-down
• Overexertion
• Fit to Drive
• Weather Conditions
• Expedite Response/Alerts

• Location Tracking
• Proximity Alerts
• Danger / Drop Zones
• Equipment On/Off
• Vibration Exposure
• Dust Exposure
• Chemical Exposure
• Gas Exposure

*Intended to increase awareness and provide advanced warning.
**Not intended to save lives. *** Multiple modules needed to achieve all work zone tracking initiatives.
First Responders - DOT

IoT Sensors
TheSmartCone™ with Click-IoT™

TheSmartCone™ is designed with the future in mind… Click-IoT™ design allows for module to be added in as needed to build up the solution.

- Cameras – 360 degree or directional (can be placed on the top or bottom of the unit)
- LED light strip with customizable colors
- Speaker with customizable audio alerts
- Eight port halo for PIR, LiDAR (internal for trip wire scenarios), connection jacks, etc.
- LiDAR (externally mounted on the tower for traffic scenarios)
- RADAR
- License plate recognition
- Tower Module – Computing and Communications
- Environmental – temperature, humidity, air quality, etc.
TheSmartCone™ Base Station

Video Technology System
- 360/Directional Camera Feed
- Web Enabled Software
- Object Cataloging

Database Architecture
- Integrated SQL Database Server
- Custom Query Functions
- Intuitive User Interfaces

Software
- Records Videos
- Captures Still Images
- Analyzes For Objects

Network Architecture
- Stand Alone or Multi-Device
- 10/100Mbps / Wi-Fi / 4G/5G / LTE
- Systems Redundancy

Security
- AES-256 TLS Encryption
- 2048-bit RSA Keys
- Cone/sensors protected by a Firewall

IT Requirements
- User Level Access Permissions
- Administrator Level Functions
Edge Computing/Wireless Sensor (WSN) Architecture

- Cloud Computing
- Edge Computing (Insight Analytics Platform)
- Middleware Infrastructure (Data Collection & Aggregation)
- Edge Device (Detect & Respond)

Partners
- Backhaul (LTE, 5G)
- WLAN “DATA MESH” (Wi-Fi; Sub-1G)
- LPWAN (BT, LoRaWan, MIOTY, Sub-1G)
- Highly Available, Highly Adaptive, Highly Accurate

Wearables
- Smart Labels
- Sensors
- Peripherals
• Smart City Solutions

Protecting Vulnerable Road Users and making your city smarter through AutoGuardian by SmartCone, our subsidiary for safer roads.

Bike Lane Safety
- Cameras detect cyclists through machine learning and A.I., sending that information to computers stored in protected casings on nearby utility poles and activate LED lights which will begin flashing to alert approaching motorists.

Intelligent Crosswalks
Signage notifying vulnerable road users of oncoming vehicles, cyclists and more. Automatic detection of VRU at a crosswalk to set the crosswalk signal off.

AI Traffic Management
Video streams from cameras to see traffic intersections in real time and provide traffic counting – vehicles, pedestrians, cyclists, etc.

Autonomous Vehicle Solutions
Enhance your autonomous shuttle solution by deploying TheSmartCone™ along the proposed routes interacting with the shuttle, pedestrians and cyclists with a primary focus on safety. AG monitors the route and offers advanced analytics.

Object Classification and Intent
We are developing the latest software with AI analytics to detect and classify objects such as pedestrians, cyclists, and vehicle and detect the route in which they plan to take.

Street Level Air Quality Monitoring
TheSmartCone™ is able to provide detailed space-time information on CO₂ emissions, wind speed, temperature at the intersection and/or street level as well as counting all vehicles, pedestrians, cyclists, etc. in real time.
TheSmartCone™ is a modular IoT platform that easily integrates the latest sensors and software with edge computing and cloudless architecture for real-time alerts. It is portable and easily deployable to improve efficiency, reduce costs and increase awareness on any site.

RedZone Proximity Alerts
Set a dynamic safety perimeter around large moving assets.

Lane Closure Tracking
Video capture with GPS coordinates and time stamping.

Asset Tracking
Drive by/fly by automatic tracking of assets on site/truck/worker, etc.

License Plate Recognition
Track and secure who comes on site. Proximity breach capture and alerts.

Wearables
Worn on the body or a helmet to send proximity alerts, man down, & more.

Data Collection and Reports
Collect and push data to our dashboard or any custom software.
The city of Hampstead was looking for a solution to bring awareness to pedestrians crossing a busy intersection. One requirement was to do so without the pedestrian having to interact with technology to respect its religious residents. This included no push button or automatic pedestrian detection. SmartCone delivered an innovative solution to meet all requirements.

Long range vehicle microwave sensors detect oncoming motorists up to 200 feet away and set off highly visible rapid flashing LED lights to notify pedestrians and cyclists looking to cross of approaching motorists. The flashing lights also bring awareness to the motorist that they are approaching a crosswalk and need to proceed with caution.

Our Role

*According to US DOT, rectangular rapid flashing beacons have been found to provide vehicle yielding rates between 72 and 96 percent for crosswalk applications, including 4 lane roadways with average daily traffic (ADT) exceeding 12,000*. 
In cooperation with North Dakota DoT and Salander Technology Services, SmartCone Technologies successfully alerted pedestrians to the presence of an autonomous bus. TheSmartCone™ detect an incoming autonomous bus and pedestrians at the same time using cameras, LiDAR and Infrared sensors.

Our Role

- TheSmartCone™ was deployed to alert Vulnerable Road Users (VRUs) of the presence of an oncoming autonomous bus.

The Solution

- Once the vehicle was detected, the lights on TheSmartCone™ flashed, an audio message was played, and a message was posted on a traffic sign letting the pedestrians know the bus was coming. This was a significant step forward in providing safety for pedestrians around autonomous vehicles.
AutoGuardian by SmartCone Solution

- **Sensor Arrays:** Count people, cars, trucks, cyclists.
- **Alerts:** Warn C/AV of cyclists and pedestrians.
- **Manage traffic:** Warn cars and trucks of events.
- **Control timing:** Prompt advanced greens, position sensing.
- **Reduce wait times:** Save fuel, increase safety.

TheSmartCone™ Juice Box

*Purpose:* Solar Powered Roadside Portable Power Unit
PRELIMINARY ROADWAY SAFETY PERFORMANCE MEASURES: 2018 TARGETS VS. PERFORMANCE

Regional Safety Advisory Committee   |   January 24, 2020
Kevin Kroll
Roadway Safety Performance Targets

- Target: Number of Fatalities
- Target: Rate of Fatalities
- Target: Number of Serious Injuries
- Target: Rate of Serious Injuries
- Target: Number of Non-motorized Fatalities plus Serious Injuries

(Targets based on a five-year rolling average)
### TxDOT Safety Performance Targets and Projections

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Fatalities</td>
<td>3,703.08</td>
<td>665.2</td>
<td>3,791.0</td>
<td>599.2</td>
<td>4,068</td>
<td>589.3*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fatality Rate</td>
<td>1.432</td>
<td>0.960</td>
<td>1.414</td>
<td>0.838</td>
<td>1.48</td>
<td>0.803*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>No. of Serious Injuries</td>
<td>17,565.4</td>
<td>3,647.8</td>
<td>17,751.0</td>
<td>3,999.6</td>
<td>18,602</td>
<td>3,499.7*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Serious Injury Rate</td>
<td>6.740</td>
<td>5.180</td>
<td>6.550</td>
<td>5.568</td>
<td>6.56</td>
<td>4.768*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>No. of Non-motorized Fatalities and Serious Injuries</td>
<td>2,150.6</td>
<td>560.0</td>
<td>2,237.6</td>
<td>582.4</td>
<td>2,477</td>
<td>595.0*</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* Indicates preliminary estimate.

Targets are based on a five-year rolling average (ex. 2016 – 2020) for 2020. Proposed reduction from original trend line projections.
NCTCOG Performance Measures – Fatalities 2018

2018 Target approved by RTC in Dec. 2017
PY2018 Actual Performance calculated as 2014-2018 rolling five-year average
NCTCOG Performance Measures – Rate of Fatalities 2018

2018 Target approved by RTC in Dec. 2017
PY2018 Actual Performance calculated as 2014-2018 rolling five-year average
NCTCOG Performance Measures – Serious Injuries 2018

2018 Target approved by RTC in Dec. 2017
PY2018 Actual Performance calculated as 2014-2018 rolling five-year average
NCTCOG Performance Measures – Rate of Serious Injuries 2018

PY2012-2016 Baseline Performance, 5.399
2018 Target, 5.180
PY2018 Actual Performance, 4.768

2018 Target approved by RTC in Dec. 2017
PY2018 Actual Performance calculated as 2014-2018 rolling five-year average
Number of Non-motorized Fatalities plus Serious Injuries 2018

2018 Target approved by RTC in Dec. 2017
PY2018 Actual Performance calculated as 2014-2018 rolling five-year average
### NCTCOG Actual Safety Performance 2018 - Preliminary

<table>
<thead>
<tr>
<th>Safety Performance Targets</th>
<th>NCTCOG 2018 Targets</th>
<th>NCTCOG PY2018 Actual Performance*</th>
<th>NCTCOG PY2012-2016 Baseline Performance</th>
<th>Met Target?</th>
<th>Better than the Baseline?</th>
<th>Made or Significant Progress?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Fatalities</td>
<td>665.2</td>
<td>541.6</td>
<td>496.2</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Rate of Fatalities</td>
<td>0.960</td>
<td>0.783</td>
<td>0.768</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Number of Serious Injuries</td>
<td>3,647.8</td>
<td>3,717.6</td>
<td>3,754.0</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Rate of Serious Injuries</td>
<td>5.180</td>
<td>4.768</td>
<td>5.399</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Number of Non-motorized Fatalities and Serious Injuries</td>
<td>560.0</td>
<td>543.2</td>
<td>497.2</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

*PY Actual Performance calculated as PY2014-2018 five-year rolling average.
Final 2018 Safety Performance for NCTCOG region will be presented in late spring 2020.
FHWA Notification Process and Responsibilities

Target Achievement Assessment
- Data available approximately December 2019 to begin assessing State target achievement
- Notifications made no later than March 31, 2020

FHWA
- Notify State DOT of official State determination of target achievement by March 2020
- Provide table summarizing State safety performance targets, target assessment, and FY2017 HSIP apportionment amounts

State DOTs
- States that do not meet or make significant progress submit FY2021 HSIP Implementation Plan by June 30, 2020
- Use FY2017 HSIP apportionment in FY2021 only for HSIP projects
Contacts

Kevin Kroll
Senior Transportation Planner
817-695-9258
kkroll@nctcog.org

Camille Fountain
Transportation Planner
817-704-2521
cfountain@nctcog.org

Sonya J. Landrum
Program Manager
817-695-9273
slandrum@nctcog.org