DRAFT Scope of Work – Priority Corridors from Statewide Network Screening Field Reviews, Countermeasure Identification/Evaluation, and Implementation Plan

Task 1: Safety Field Review Preparation

The purpose of this task is to prepare for the safety field reviews discussed in Task 2.

Task 1.1: Corridor Specific Data Collection

The DISTRICT CONSULTANT will obtain the following data for their assigned corridors:

- Review relevant information from the Central Office provided Safety Needs List Dashboard to determine if other priority safety initiatives exist (e.g., nearby priority intersections or priority segments within the corridor's vicinity, at the District's discretion).
- Obtain pedestrian and bicycle crash data, including crash reports, for the candidate corridors. This will include pedestrian and bicycle crashes from 2016-2020 CAR System and Signal Four Analytics databases (all crash severities).
- If other priority safety initiatives from the Safety Needs List Dashboard exist with a half-mile of an assigned corridor, obtain supplemental crash data as needed (e.g., vehicular crash data for District safety priorities or a Safe Strides to Zero (SS2Z) priority intersection).
- Review relevant Work Program data since 2016, including permit or other local agency projects.
- Review relevant Work Program for next 5 years.
- Obtain existing Context Classification information.
- Obtain the following volume data:
    - Historical AADT volumes on the focus areas from 2015 through 2019 (study period), or in close proximity, as available from FDOT Traffic Online.
    - Historical peak hour turning movement counts at intersections within the study corridor, if available.
    - Pedestrian and bicycle volume data, if available.
- Obtain existing land use data, as well as recently approved development orders, including nearby schools and other active transportation generators/attractors for pedestrians and bicyclists (e.g., parks, community centers, shopping centers, etc.).
- Utilize existing aerial photography to obtain additional geometric information not obtained from FDOT.
- Coordinate with local agencies on obtaining timing plans for signalized intersections.
- Obtain details for existing signalized intersections – including mast arm cut sheets, year of construction, and standards that were implemented – from as-built plans or other information available from the District Traffic Ops and Maintenance offices. Central Office will provide a dataset detailing the year of installation and structure number for mast arms. Also include if the intersection is equipped with Vantage Live, Miovision, or other

technology/capability to assist with ped/bike data collection. This information may be requested from the District TSM&O Engineer.

- Obtain available transit service data along the study corridor, including bus routes, location of bus stops, and boarding/alighting data (where available).

Task 1.2: Historical Crash Analysis

The DISTRICT CONSULTANT will conduct a historical crash analysis for the assigned corridor to prepare for the field review and to develop materials for the field review team.

- Review each pedestrian and bicycle crash report and crash statistics to summarize the crash data for the entire study corridor based on the following metrics:
    - Location;
    - Time of day/day of week;
    - Injury severity;
    - Contributing causes;
    - Surface conditions – wet/dry
    - Lighting conditions – day/night
    - Segment/intersection characteristics (i.e. number of lanes, speed limit, etc.)
    - Pedestrian/motorist behavioral factors, as available;
    - Pedestrian/bicycle direction of travel (i.e. crossing the road at an intersection, mid-block, etc.)
    - Relation to transit stops and school zones (if applicable)
    - Specific crash type
- Prepare and provide a detailed collision diagram of the pedestrian and bicycle crashes for each corridor (refer to the sample template provided by Central Office). The collision diagram should note the pedestrian or bicyclist direction of travel, the vehicle's direction of travel, and the location of collision.
- Should other relevant locations from the Central Office provided Safety Needs List Dashboard be identified (e.g., nearby priority intersections or priority segments within the corridor's vicinity, at the District's discretion), a vehicular collision diagram of crashes within a 350-ft radius of the priority intersection or along the priority segment will also be prepared.
- Develop a historical crash background summary for distribution to the field review team (refer to the sample template provided by Central Office).

Task 1.3: Field Review Preparation

The DISTRICT CONSULTANT will complete the following tasks in preparation for the safety field review:

- Assemble a field review team consisting of local FDOT staff representing multiple disciplines and 2 CONSULTANT engineers (at least 1 PE). The team may also include staff from local government, MPO, and law enforcement partners.
- Participate in the training provided for Central Office resources to ensure a consistent approach to the field reviews across Districts.

    - The training will discuss the resources provided by Central Office, including the field review checklist, the countermeasure toolbox, and the field data collector application.
    - The training will also provide guidance regarding the conduct of the field review, countermeasure identification, countermeasure evaluation, and the report template.
- Gain access to the Field Data Collector Application for use in the field reviews. The Field Data Collector Application is a web-based GIS application developed by Central Office as a readily accessible field resource for the DISTRICT CONSULTANT teams, allowing the teams to input geolocated data collection while in the field, and upload the geolocated data to FDOT servers for further reference. The medium used could be a cell phone, tablet, or other mobile device. To support the Department's investments in achieving our data governance goals, use of the Field Data Collector Application is strongly encouraged.
- Develop a summary packet for the field review team, including relevant information from Task 1.1 and 1.2.
    - Detail collision diagram and crash summary developed in Task 1.2.
    - Tables with the existing pedestrian crossing times (obtained from signal timing plans) for each signalized intersection (note Leading Pedestrian Interval (LPI) if applicable).
    - Relevant information from the Safety Needs List Dashboard
    - Identified ped/bike generators and attractors along corridor
- Coordinate with FDOT staff to set the field review's date and time. It is anticipated all field reviews will occur on a Tuesday, Wednesday, or Thursday.

Task 1 Deliverables

- *Electronic (i.e., excel) files for the crash summary table (to be uploaded to eTraffic).*
- *Field review package which includes the elements listed in Task 1.3.*

Task 2: Safety Field Reviews – Diagnosis and Countermeasure Identification

The purpose of this task is to perform safety field reviews on the identified corridors and identify systemic countermeasures.

Task 2.1: Safety Field Review

The DISTRICT CONSULTANT will lead the field review (morning coordination meeting, afternoon and PM peak hour field review, night/dark field review, next morning peak hour). It is anticipated each review will include:

- Morning coordination meeting on the corridor *(option: conduct as a virtual meeting prior to the field review)*
- Afternoon and PM peak hour field review
- Night-time field review (after dark)
- AM peak hour review the following morning
- Special periods (e.g., school arrival and dismissal periods) should also be included based on the corridor's context

- Debrief meeting on the corridor to discuss the field observations and potential countermeasures *(option: conduct as a virtual meeting within 48 hours after the field review)*

Task 2.2: Countermeasure Identification

Based on the field review, the DISTRICT CONSULTANT will identify potential countermeasures for evaluation. The countermeasures will be categorized as:

- Immediate/maintenance: could be addressed through maintenance
- Near-term improvement: could be included in an upcoming project or conducted as a RRR project, such as District active pushbutton contracts
- Long-term improvements: could be added to the work program as a separate capital project

Central Office will provide a countermeasure toolbox for assistance in the countermeasure identification. The DISTRICT CONSULTANT will analyze the suggested improvements identified for each corridor from a systemic perspective to identify potential systemic countermeasures for coordination with Central Office.

Task 2.3: Countermeasure Evaluation

The DISTRICT CONSULTANT will evaluate the proposed countermeasures for expected effectiveness using countermeasure evaluation guidance provided by Central Office. The following methodology is anticipated for each proposed countermeasure:

- Review available crash modification factor (CMF) information from the FHWA CMF Clearinghouse
    - CMF value
    - CMF ID
    - Star rating
- Crash history affected by the countermeasure to determine crash reduction
- Planning level construction cost estimate
- Lifecycle of countermeasure.

The information above will be utilized to evaluate the benefit-cost (B/C) ratio and net present value (NPV) of each proposed countermeasure.

Task 2.4: Brief Back Meeting

Following Tasks 2.2 and 2.3, the DISTRICT CONSULTANT will prepare for and conduct a virtual meeting with Central Office representatives to discuss the findings of the corridor field review, including countermeasure identification and evaluation. These are anticipated to be individual meetings for each assigned corridor.

Task 2.5: Documentation

The DISTRICT CONSULTANT will document the field review observations, countermeasure identification, and countermeasure evaluation in a final report utilizing the sample report template provided by Central Office. Background information from Task 1 will be included, and the field review observations and countermeasure identification and evaluation will be presented and visually supported by photos taken in the field. A separate spreadsheet will be provided to summarize the proposed countermeasures, countermeasure evaluation and the B/C and NPV analysis.

Task 2 Deliverables

Draft Report and Final Report from Task 2.5.

Task 3: Implementation Plan

The DISTRICT CONSULTANT will develop an Implementation Plan for each corridor. In developing the Implementation Plan, the team will coordinate with other FDOT district functional units (e.g., Traffic Operations, Design, Work Program) to clearly identify the next steps to advance the recommendations through the project development process. This will include preliminary construction cost estimates and identification of any ROW requirements (if applicable).

It is anticipated that some recommendations may require additional engineering study and/or other documentation to obtain necessary approvals before advancing to Design or Design Build Push-Button contract implementation. The next steps for these recommendations should be clearly identified and scheduled as part of the Implementation Plan.

The DISTRICT CONSULTANT will present the final Implementation Plan, including study recommendations and other field data obtained from the Field Data Collector Application, in a Geographic Information System (GIS) geodatabase format for use in FDOT's GIS data repository (Enterprise database). While these recommendations may include medium and long-term strategies; all recommendations will be included in a single geodatabase and subsequent feature classes. These feature classes will include a column for each of the following attributes of each recommendation:

- Recommendation Type (e.g. "Bicycle Facility Modification," "Mid-Block Crossing," "Driveway Modification"; see "Recommendation Naming Conventions" document for list of types of recommendations).
- Description (e.g. "Where the prevailing speeds are 50 mph or greater, consider restriping the right-turn lane widths to be 11-feet and provide a 5-foot keyhole bike lane.")
- Location Summary (e.g. "From Gatlin Avenue to Curry Ford Road," "Intersection of US 92 and US 1," "Shopping Center Driveway")
- Roadway ID (e.g. "79010000")
- Begin Milepost, if applicable (e.g. "2.821")
- End Milepost, if applicable (e.g. "3.800")
- Countermeasure Cost (e.g., "$15,000")
- Countermeasure B/C Ratio (e.g., 2.4) and NPV (e.g., "$21,000")
- Implementation Timeframe
    - Short-Term (2-5 years)
    - Long-Term (>5 years)
- Implementation Mechanism (e.g., "D/B Pushbutton")
- FM number: (if known)
- Project Manager Name
- Anticipated construction start date: (if known)
- Anticipated construction end date: (if known)

This GIS geodatabase is a foundational piece of the overall business plan for this effort – it will be a critical piece in the implementation of the safety projects on these corridors and the eventual before/after evaluation of the constructed projects.

Task 3 Deliverables

Draft Implementation Plan
Final Implementation Plan
GIS Shapefile/Geodatabase

**__NOTE__: Additional Meetings may be required between the District and the DISTRICT CONSULTANT and may be added at the District's discretion here.*