SunGuide®
Report Information

1. Report Name: Annual Incident Duration Performance Report

2. Purpose of the Report:

To provide FDOT Management with information on incident duration time and its components (notification time, verification time, response time and clearance time) for lane blocking incidents on limited access roadways managed by FDOT.

3. Report Sections:

The sections in the report contain tables and charts of simple summations and averages based on different groupings and filters derived directly from database fields (below).

1. Performance Measures Summary

   Summary information of the performance measures durations of all performance measured events

2. Performance Measures Summary with Road Ranger Response

   Summary information of the performance measures durations of all performance measured events while only including events that contain a Road Ranger Vehicle response. The calculations of the durations on the events do include any type of responder; however, the distinction of having a road ranger is only used to determine whether the event is included or not in the set of events included in this section.

3. Performance Measures Summary without Road Ranger Response

   Summary information of the performance measures durations of all performance measured events while only including events that do not contain a Road Ranger Vehicle response.

4. Event Types

   A summary of the number of events handled, regardless if the event was performance measured or not, grouped by event type.

4. Report Field definition:

Below are definitions of the primary report fields used and displayed in the report sections.

Number of Events = number of events within the time period.

Notification Duration (min) = average number of minutes between (FDOT or FHP Notified Time) and (TMC Notified Time). = [2] - [1]

Verification Duration (min) = average number of minutes between (TMC Notified Time) and (Verification By TMC Time). = [3] - [2]

Response Duration (min) = average number of minutes between (Verification By TMC Time) and (First Responder Arrival Time). = [4] - [3]

RR Dispatch Duration (min) = average number of minutes between the (First Responder Dispatch Time) and (Event Creation Time)

RR Response Duration (min) = average number of minutes between the (First Responder Dispatch Time) and (First Responder Arrival Time)

Open Roads Duration (min.) = average number of minutes between (First Responder Arrival Time) and (Travel Lanes Cleared Time). = [5] - [4]

FDOT Roadway Clearance Duration (min.) = average number of minutes between (FDOT or FHP Notified Time) and (Travel Lanes Cleared Time). = [5] - [1]

Incident Clearance Duration (min.) = average number of minutes between (Last Responder Departure Time) and (FDOT or FHP Notified Time). = [6] - [1]

# of Events with RR/SIRV = number of events with dispatched responders

RR/SIRV Responses = number of Arrived Responders within the event

RR/SIRV Activities = number of performed activities by responders within the event

Incident Severity Levels:

Level 3:	If an event had full blockage at any time or has a roadway clearance time of greater than 120 minutes, it is a level 3 severity event.
Level 2:	If it does not have full blockage and has a roadway clearance time between 30 and 120 minutes, it is a level 2 severity.
Level 1:	If it does not have full blockage and has a roadway clearance time between 0 and 30 minutes, it is a level 1 severity.
Other:	If any of the above conditions are not met, it is an "Other" severity.

5. Report Data definitions:

Below are definitions of the data fields used to calculate the report fields above.

[1] FDOT/FHP Notified Time: first Knowledge time, earliest of either the Event Record Creation or the Notification time of all agencies.

[2] TMC Notified Time: record creation time.

[3] Verification by TMC Time: first time when the Event Status is set to Active.

[4] First Responder Arrival Time: earliest arrival of any responder to the event.

[5] Travel Lanes Cleared Time: time when all travel lanes are cleared.

[6]   Last Responder Departure Time: time when last responder departed from the event

[DT]   Responder Dispatch Time: time when first responder was dispatched to the event

6. Inclusion Criteria

Events are included as performance measures events based on several criteria below:

1. **Valid Event Type:** Crash, Debris on Roadway, Disabled Vehicle, Emergency Vehicles, Flooding, Other, Pedestrian, Police Activity, Vehicle Fire
2. **Valid Event Status:** Active, Closed, or Unresolved
3. **Valid Travel Lane Closure:** (including mainline, ramps, HOV, and Express lane types)
4. **Valid Responder Arrival:** (any type of responder)
5. **Valid Timeline Order Compliance:** Events are included if all durations between the timestamps (see [1] – [6] from Report Data Definitions above) are positive or are within a -15 minute threshold. For example, an event with an Open Roads (or any) duration of -20 minutes would be excluded, while an Open Roads (or any) duration of -5 minutes would be adjusted according to the Adjustment Formulas below.

7. Adjustment Formulas

Events with negative durations are adjusted using the following formula in order to obtain non-zero values:

IF [5] > [6] THEN set [5] = [6]

IF [4] > [5] THEN set [4] = [5]

IF [3] = null OR [3] > [4] THEN set [3] = [4]

IF [2] = null OR [2] > [3] THEN set [2] = [3]

IF [1] = null OR [1] > [2] THEN set [1] = [2]

IF [DT] = null OR [DT] > [4] THEN set [DT] = [4]

IF [DT] < [1] THEN set [DT] = [1]

8. Database tables and fields:

The report data primarily comes from the EM_EVENT_PERFMEASD table which returns summary performance measures information for all events. Other supporting data comes from a few other tables. Details are listed below and grouped by table:

EM_EVENT_PERFMEASD:

- **event_id:** unique identifier of an event
- **severity_id:** severity of the event (see formula above)
- **wrs_fullclosure:** whether the event had full travel lane closure
- **knowledge_date:** when the event was opened
- **detected_date:** when the event was reported to the TMC (and opened)

- **initial_confirmed_date:** when the event was verified (set to active)
- **first_dsphveh_dispatched_date:** first road ranger dispatched time – used if first_responder_notified_date is larger or is null
- **first_responder_notified_date:** first responder dispatched time– used if first_dsphveh_dispatched _date is larger or is null
- **first_dsphveh_arrival_date:** first road ranger arrival time – used if first_responder_arrival_date is larger or is null
- **first_responder_arrival_date:** first responder arrival time – used if first_ dsphveh_arrival_date is larger or is null
- **lanes_reopened_date:** when all travel lanes were last reopened
- **last_responder_departure_date:** when last responder left the scene – used if last_dsphveh_departure_date is smaller or is null
- **last_dsphveh_departure_date:** when last road ranger left the scene – used if last_responder_departure_date is smaller or is null
- **closed_date:** when the event was closed. Note: this value is used in place of either departure dates (above) if the corresponding arrival date is present but the departure date is null.

EM_EVENT table:

- **event_id:** unique identifier for each event
- **eventtype_id:** unique identifier for the event's type
- **eventstatus_id:** unique identifier for the event's status

EM_EVENT_TYPE:

- **eventtype_id:** unique identifier for the event's type
- **short_name:** the name identifying the event type
- **is_perfmeasd:** whether or not the event type is a performance measured type

EM_EVENT_STATUS:

- **eventstatus_id:** unique identifier for the event's status
- **is_valid:** whether or not the status is a valid status
- **is_perfmeasd:** whether or not the event status is a performance measured status

EM_EVENT_LOCATION:

- **event_id:** unique identifier for each event
- **roadway_number:** unique identifier for the roadway

ROADWAY:

- **roadway_number:** unique identifier for the roadway
- **is_perfmeasd:** whether or not the roadway is configured as a performance measured roadway