Purpose:

The purpose of this guidance document is to define the Road Safety Audit (RSA) process and identify projects in MDOT’s highway program where an RSA is performed. The guidance document covers projects that have a design start date beginning October 1, 2016.

Definitions:

Project Owner
- Project Manager (PM) (from MAP database)
- System Manager
- Region Traffic & Safety Engineer (Safety Projects), or their delegates

MDOT RSA Project Manager
- MDOT Safety Programs RSA PM as per the As Needed Contract.

Design Service RSA
- RSA performed at a location that has an active EPE, design or construction phase.

In-Service RSA
- RSA performed at a location that does not have an active EPE, design or construction phase.

Full RSA
- Formal safety performance examination as described in this guidance.

Mini-RSA
- An informal review of location with an MDOT facilitator and team. This type of RSA produces a risk assessment (PowerPoint presentation) but not a formal report and is generally utilized for more basic operations and maintenance type fixes (signage, striping, etc.) or a precursor to a larger project and full RSA.
Information

An RSA is a formal safety performance examination of an existing or future road or bridge project by an independent, multi-disciplinary RSA team. RSAs can be conducted at any stage of a project but are highly recommended prior to the Scope Verification meeting and include consideration for all users of the roadway to help achieve strategic safety goals. RSAs contribute to road safety by providing a fresh, unbiased assessment of the area or intersection in an effort to identify potential safety issues and solutions. Within the Michigan Department of Transportation (MDOT), there are many different project types with various funding mechanisms, at different levels of completion. This document provides guidance regarding the types of projects where RSAs are required and/or optional. RSAs are divided into two categories: in-service and design-service. Candidates for in-service RSAs include: high-crash locations, and high-profile sites and locations with changed traffic characteristics. Design-service RSAs are always required on Safety Projects per the Annual Call for Projects memorandum, but should also be conducted on projects based on the Warranting Conditions section of this guidance.

Full RSAs will be conducted under the ‘As Needed Facilitation of Road Safety Audits (RSA)’ contract, as described in the ‘RSA Program Management’ section of this guidance. Consultants will be selected (typically 5 or more consultants per contract) based on the RFP distributed through MDOT contracts. The MDOT RSA PM will choose from a trained group of typically MDOT employees to serve on the RSA team as independent reviewers and will choose one of the contracted consultants to facilitate the RSA. The use of a contracted consultant facilitator may be waived upon agreement between the Region Engineer and the Engineer of Design.

Each RSA team will focus their review on four principle areas: geometry, operations, road users and environment. There are eight steps in the RSA process:

1. Identify project
2. Select RSA team
3. Conduct a start-up meeting
4. Perform field reviews
5. Conduct RSA analysis
6. Present RSA findings to project owner
7. Prepare formal response
8. Incorporate findings
The owner of the project will be responsible for providing project information to the team and consultant (if present) including, but not necessarily limited to:

- Crash history
- Traffic volumes
- First Responders experiences
- Aerial photographs
- Design drawings
- Background reports and studies
- Design criteria
- Safety analysis

This pre-RSA work should be included in the scoping of all jobs as per the MDOT Scoping Manual. Utilizing these job specific details allows for a comprehensive review of the location being audited. For example, the RSA does not perform crash analysis, but instead incorporates these data in order to understand past and current trends and to add depth of understanding to what is observed in the field. Conducting an RSA is a proactive tool for a project or location – the goal being to independently identify safety concerns that may have been overlooked and to provide recommendations and countermeasures.

The formal report includes a qualitative RSA analysis prioritizing safety issues based on estimated risk with respect to potential crash frequency and severity. The report also suggests possible mitigation, both short and long-term, for the identified safety issues. The final report is presented to the project owner and a formal response from the owner to the RSA PM, stating how the recommendations will be addressed, is required.

Implementation of the recommendations of the RSA team is left to the owner’s discretion. Reasons for not incorporating recommendations should be documented in the formal response. The cost of changes to the project based on the RSA findings will be borne by the project. RSA’s should be scheduled during the scoping portion, which will minimize the costs for significant changes and re-design.
Warranting Conditions:

The conditions where a Full RSA is warranted for projects in MDOT’s highway program are described in this section (and in the attached decision-tree). RSAs for projects and locations that do not have an associated project that do not fall under the required types are typically optional (full or mini assessments), depending on requests. A full RSA involves utilizing a contracted consultant and an RSA team. A mini-RSA can be requested for an informal review of a location with an MDOT facilitator and team. This type of RSA produces a risk assessment but not a formal report, and is generally utilized for more basic operations and maintenance type fixes (signage, striping, etc.) or a precursor to a larger project and full RSA.

The types of projects where Full RSAs are required are described below:

- **Planning Studies:**
  - Planning and Environmental Linkage
  - Environmental Impact Statements
  - Environmental Assessments
  - Value Engineering

- **Specific Funding Category Projects:**
  - Interchange Freeway Lighting
  - Safety Projects (follow the Safety Call for Projects Instructions or Guidance on Safety Lighting)
  - Congestion Mitigation Air Quality (CMAQ) Projects that have
    - Thru lane additions
    - Auxiliary lane additions

- **Road and Bridge Projects:**
  - 4R: Urban and Rural Freeway
  - 4R: Rural Non-Freeway
    - Projects that appear on the 5% transparency list or high crash list
  - 3R:
    - Urban Non-Freeway projects that may include (but are not limited to):
      - Noted safety issues per a safety analysis
      - Identified crash patterns per a crash analysis
      - Appearance on the 5% transparency list/high crash list
    - Urban Freeway Interchange projects
    - Rural Freeway Interchange projects
    - Rural Non-Freeway Lane Conversions (Footprint Changes)
RESPONSIBLE ORGANIZATION: Bureau of Highway Development – Design Division

SUBJECT: Road Safety Audit Guidance

- Rural Non-Freeway Horizontal and/or Alignment Changes that do not meet 3R guidelines
RESPONSIBLE ORGANIZATION: Bureau of Highway Development – Design Division

SUBJECT: Road Safety Audit Guidance

Projects where RSAs are optional include:

- **4R: Rural Non-Freeway**
  - Replace ‘in kind’ (projects with no alignment changes)
  - Note: Consider on all Rural 4R projects even without geometric deficiencies

- **Planning Studies**:
  - Historical Bridges
  - Access Management

- **Specific Funding Category Projects**:
  - CSM or CPM
  - Passenger Transportation – Carpool, Roadside or Multi-modal
  - Mainline Freeway Lighting
  - Safety Projects (follow Safety Call for Projects Instructions or Guidance on Safety Lighting)
  - Non-motorized designs crossing trunkline/major roadways
  - Congestion Mitigation Air Quality (CMAQ) Projects that have:
    - Only signal work
    - Turn lane extensions

- **Road and Bridge Projects that are:**
  - 3R:
    - Urban Freeway Non-Interchange projects
    - Rural Freeway Non-Interchange projects
    - Rural Non-Freeway (that do not change the roadway footprint). Examples include, but are not limited to:
      - Multiple course HMA cold milling and resurfacing
      - Concrete joint repairs
      - Bridge rehabilitation work

**RSA as Optional per Funding Thresholds and Work Duplication:**

In the case of projects where the total cost of the Full RSA is 25% or more of the C phase, an RSA can be considered optional. However, an RSA should still be considered when possible and when a crash issue is identified. In this case, the ‘RSA Exemption’ portion of the Road Safety Audit Request form (Form #3767) will need to be completed and approved by the Region Engineer and Engineer of Design.
In all other cases when a Full RSA is required, the requirement may be exempted if a risk based analysis indicates there are no safety concerns. An example of a case where this exemption may apply include 3R projects with horizontal or vertical curves that do not meet design standards; however review of the Design Exception shows no correctable crash pattern exists and appropriate mitigation is implemented. In these cases, the ‘RSA Exemption’ portion of the Road Safety Audit Request form (Form #3767) will need to be completed and approved by the Region Engineer and Engineer of Design.

RSA Funding:

RSAs determined to be necessary on Safety Projects will be funded by Safety Programs through Fiscal Year 2018 (but reimbursed by the project). All other RSAs (outside of Safety Programs) will be paid by the project.

Starting in Fiscal Year 2019, the project will pay for the RSA completely. Other job types (non-Safety jobs) will also be required to cover the cost of the RSA. RSA cost can be estimated based on a typical two-day evaluation and will vary based on the complexity and scope of the project. Typical costs include staff time, travel, meals and lodging, consultant fees and any material or production costs.

Safety Programs Unit of the Design Division will hold an as-needed contract with qualified consultants capable of facilitating RSAs to meet the statewide project needs.

The pre-RSA data gathering effort is not included in the total RSA cost and should be collected during the scoping portion of the project.

RSA Program Management:

RSAs will be managed through the Safety Programs Unit of the Design Division (in Traffic & Safety) by the MDOT RSA PM, with assistance from the designated project owner. RSAs will be coordinated by the Safety Programs staff when the need is determined based on the ‘Warranting Conditions’ section of this guidance document.

Trained staff throughout MDOT will be tasked with forming the RSA team on a project and team members will be assigned by the MDOT RSA PM per time availability and supervisor approval.
To assign and schedule a timely RSA team, requests need to be submitted via the Road Safety Audit Request form (Form #3767) six weeks in advance of the desired start of an RSA. The typical process schedule is as follows:

- Two (2) day RSA field review
- Two (2) weeks from review to draft report
- Two (2) weeks from draft report to final
- Four (4) to six (6) weeks for the formal response from the owner

Exact time for each stage will be dictated in the RSA as-needed contract and per individual RSAs.

**Exemption:**

Exemptions for projects that require a Full RSA (any project type required under the ‘Warranting Conditions’ section) as defined in this guidance document will only be allowed with the mutual agreement between the Region Engineer and the Engineer of Design. Clear documentation of the need for the exemption will be required on the bottom of the attached Road Safety Audit Request form (Form #3767) with signatures from the Region Engineer and the Engineer of Design.

Approved: ___________________________________________ Date: __________________

Chief Operations Officer-Bureau of Highways
§409. Discovery and admission as evidence of certain reports and surveys

Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.


AMENDMENTS


1995—Pub. L. 104–59 inserted “or collected” after “data compiled”.

1991—Pub. L. 102–240 substituted “Discovery and admission” for “Admission” in section catchline and “subject to discovery or admitted into evidence in a Federal or State court proceeding” for “admitted into evidence in Federal or State court” in text.

EFFECTIVE DATE OF 1991 AMENDMENT

Amendment by Pub. L. 102–240 effective Dec. 18, 1991, and applicable to funds authorized to be appropriated or made available after Sept. 30, 1991, and, with certain exceptions, not applicable to funds appropriated or made available on or before Sept. 30, 1991, see section 1100 of Pub. L. 102–240, set out as a note under section 104 of this title.