To: A11

All HQ Directors:

Professional Services, Planning & Major Projects

All Regional Managers:

Professional Services, Planning & Major Projects

All District Highways Managers

SUBJECT:

Research and Development Definition and Standards for Technical Reports

PURPOSE:

All Research and Development activity in the Ministry will generally follow this definition and all Technical Reports will follow a consistent, well documented format.

DEFINITION:

Research and Development is defined as investigative work conducted to acquire knowledge to develop or implement new products or procedures, or to make significant improvements to existing products or procedures. Applied transportation research is generally intended to produce economic, environmental, social or safety related benefits.

STANDARDS FOR TECHNICAL REPORTS:

These standards apply to fully identified research projects. However, for less formal investigative projects carried out by individual field crews, the formal report process may be unnecessary. The main points should still be organized into a one to two page document.

The parts of the Report, in the order they appear:

Title Page
Documentation Page
Table of Contents
List of Figures and Tables
Introduction
Methodology
Results of Methodology
Discussion
Conclusion and Recommendations

TITLE PAGE:

Provide the title of the Research paper. This page should also identify the author(s), the Ministry and Branch, the date, and also a file number. A standard filing number should identify the Ministry, the Branch, Region and/or District (if appropriate), the year, and the report number.

An example would be MOTH-HSAF93-01 or MOTH-RG03-93-01.

Bridge Engineering	BENG	Maintenance	MAIN
Construction Engineering	CENG	Highway Safety	HSAF
Marine	MRNE	Properties	PROP
Highway Engineering	HENG	Geotechnical & Materials	GEOM
Highway Environment	HENV		
Region 1-6	RG01,02,03,04,05,06		
Districts 1-28	DT01-28		

DOCUMENTATION PAGE:

The Documentation Page must identify the Author(s), Date Published (if applicable), Published By (Branch & Ministry), Contact Person (include area code and telephone number), Abstract, Comments, Keywords, and Copyright status.

The Documentation Page must be a well-written technical document and be able to exist independent of the report. The audience must be able to understand the Abstract without having to read the entire report. All of the information in the Abstract must appear in greater detail in the report.

A common approach for developing an Abstract is to provide a brief synopsis of the main parts of the report. Abstracts should identify the purpose of the report, the problem that is being addressed, relevant background information, discussion of the methodology applied, the results of the research, and the main recommendations. Typically an Abstract is not to be longer than 500 words.

INTRODUCTION:

Generally explains the focus of the research. It should state the hypothesis, and the most important points from the body of the report. Provide background, such as, the most current circumstances leading up to the situation, event or problem being analyzed. Finally, identify the goals which the research is to attain.

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METHODOLOGY

Identify how to attain the goal. Outline a specific method of testing versus the use of other experimental methods.

RESULTS OF METHODOLOGY:

Identify the number and different types of experimental trials. This part should also include information concerning the accuracy, and the significant results of each trial.

DISCUSSION:

Provide an explanation of the results. Generally what do the results reveal. Provide clarification for what the data signifies.

CONCLUSION AND RECOMMENDATIONS:

The conclusion section should contain your opinions (interpretations) based on the facts contained in the previous sections. The recommendations are to solve the initial problem identified. The recommendations can include the steps you feel necessary to solve the problem.

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cc: ADM, Highways Operations ADM, Planning & Major Projects All Regional Directors

Author(s): Date Published: Published by: **Contact Person:** Abstract: Comments: **Key Words:** Copyright Status:

Documentation Page