

Maintenance of Perm Count Stations Training Strategy and Outline

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1 Introduction

This document presents the training strategy and outline for the *Maintenance of Maintenance of Perm Count Stations Familiarization Seminar* for Electrical Maintenance Service (EMS) contractors.

The purpose of this document is to identify the training requirements of the *Maintenance of Perm Count Stations Familiarization Seminar* and to determine the outline, materials, resources and timelines for delivery.

This document:

- indicates the Ministry and non Ministry resources required to produce and revise the materials, activities, and supporting documentation
- indicates the type of training and the training documentation to be developed
- identifies the timelines for development of all materials
- provides a detailed course outline identifying the topics to be covered in the seminar, including the time requirements for each component
- presents the learning objectives for each topic and the process used to achieve this objective
- lists the supporting documentation to be delivered to the EMS contractors

2 Background

2.1 Maintenance of Perm Count Stations

MoT owns and maintains technology to sense the number, length and speed of vehicles passing over a point in the road. The Ministry is implementing a new service delivery model in which the maintenance of the infrastructure will be performed by Electrical Maintenance Service (EMS) contractors. EMS staff are required to have the knowledge and procedures to complete the assessment, maintenance and replacement of the infrastructure along with all appropriate documentation and communication requirements.

2.2 Audience

Four EMS contractors (Vancouver Island; Lower Mainland; Kamloops/Nelson, Prince George) will require training with 3-4 people per area.

2.3 Instructor

The Ministry has assigned a technical/electrical staff person, Andrew Widmar, to facilitate the *Maintenance of Perm Count Stations Familiarization Seminar* sessions.

3 Training Objectives and Scope

3.1 Training Objectives

The objective of the *Maintenance of Perm Count Stations Familiarization Seminar* training is to provide EMS contractors with the knowledge and procedures to complete the assessment, maintenance and replacement of the Perm Count infrastructure along with all appropriate documentation and communication requirements.

At the end of the familiarization session, the EMS contractor will be able to:

- understand the general specifications of a Perm Count site including:
 - ministry infrastructure
 - Perm site design
 - Role and responsibility of all organizations involved in the Perm Count program, including:
 - Ministry role
 - Data Management Contractor
 - Utility services
 - Hydro
 - Telus – landline
 - Telus – cellular
 - EMS contractor role
- identify the value of the Perm Count data to the Ministry
- maintain or replace, according to defined standards, all components of the Perm Count Site including:
 - all of the components in the Perm Count Cabinet
 - the Loops
 - the junction boxes
 - poles and other supporting infrastructure
- configure an off-site workstation to connect to the M660 Perm Count counter

- establish local and remote communication with the counter
- program the counter using the configuration information contained on the Site Field Report form
- assess and correct (Troubleshooting) a Perm Count site that is not operating to standards including problems with;
 - delivering a 'correct' stream of data
 - remote communication to the site
- assess all components of the Perm Count site for acceptable performance during an annual scheduled maintenance visit
- understand the procedures and responsibilities for communication and documentation to various stakeholders associated with the Perm Count Sites.

3.2 In Scope

The *Maintenance of Perm Count Stations Familiarization Seminar* will cover all topics relating to the maintenance, assessment and repair of Perm Count Stations and all communication and/or documentation procedures required to support these functions.

The ministry will provide a 'binder' of information for each EMS contract area detailing:

- Maps of sites to be maintained
- Site layout/design
- Field report for each site
- Contact information
 - MoT contacts
 - GeoPlan contacts
 - Telus problems contacts
 - Hydro problem contacts
 - Infrastructure contacts
 - Cabinet mfg.
 - Component contacts

- Modem contacts
- Counter contacts
- Poles/antenna, etc contacts
- Junction box contacts
- Loop contacts

3.3 Out of Scope

EMS contractors are trained electricians and as such, general electrical topics will not be covered in the *Perm Count Stations Familiarization Seminar*. In addition, basic computer skills that EMS contractors may require will not be covered.

EMS Contractors are expected to have sufficient skills to enable them to:

- Understand the basics of the computer operating system
- Understand basic hardware specifications and terminology
- Operate basic programs to allow ease of learning the applications covered in the seminar such as:
 - HyperTerminal
 - GVR
 - Front-End

4 Established Information and Requirements

4.1 Training Dates

Each *Maintenance of Perm Count Stations Familiarization Seminar* will be scheduled in conjunction with the EMS contract commencement date by region. It is anticipated that the Vancouver Island region seminar will take place during the first week of July 2004.

4.2 Training Package Development

The Training Package will be designed to allow for transfer of all course material to the EMS contractors. These contractors will be responsible to ensure contractor's staff working on the Perm Counters is familiar with the content of this seminar package.

The Training Package will consist of:

- A PowerPoint presentation to be used by the instructor to explain key concepts. The presentation used by the instructor must contain enough detail to be relatively self supporting for use by the EMS vendor after the course has been delivered by the Ministry.
- A print out of the PowerPoint slides for participant reference
- Print outs of all group demonstrations and individual practice activities organized by seminar topic. Group demonstrations led by the instructor are done by the participants as well and must be documented in a step by step manner in order for future training requirements of EMS contractor staff
- Print outs of handout materials used to explain business and system procedures. All handout materials will also be available on CD ROM in either MS Word format or PDF format
- All other reference materials not covered during the seminar that can be used by EMS contractors as needed. All reference materials will be supplied on CD ROM
- An evaluation form that participants complete at the end of the seminar

Ministry business and technical experts will work in conjunction with a non Ministry Training Consultant to produce the completed Training Package. Ministry resources will be responsible for providing the core content that will form the basis of the PowerPoint presentation, training materials and activities, hand outs, and reference materials. The Training Consultant will be responsible for organizing and formatting the presentation and creating and/or formatting other training and handout materials in a presentable manner. It is expected that materials provided to the Training Consultant will be in enough detail provided in order for handouts and activities to be accurately created. The Training Consultant will not be responsible for formatting or modifying reference materials that are not part of the core seminar materials. Refer to page 15 for a detailed break down of materials and resource responsibilities.

4.3 Training Package Resources

Andrew Widmar and Roberto DeCastro have been identified as the primary Ministry resources to provide the core content for this Training Package. John Coombs and Gerry Gerrard will provide expertise and content in specified areas outlined on page 15. All materials developed by Ministry resources will be forwarded to Gerry Gerrard for review. The Training Consultant will receive all core materials from Gerry Gerrard as soon as they become available. It is recommended that Gerry Gerrard also be assigned to

assist Roberto and Andrew in developing certain materials to ensure timelines can be met.

4.4 Development Timelines

Ministry resources will finalize materials between May 26, 2004 and June 16th, 2004. As materials are completed, they will be sent to Gerry Gerrard for review. Reviewed materials will then be forwarded to the Training Consultant as soon as they are available for development, formatting and packaging. All materials provided by the Ministry resources must be completed and reviewed no later than Wed, June 16th to allow for a minimum of 2 weeks for the Training Consultant to finalize the Training Package. It is recommended that Andrew Widmar review the Training Package pieces as they become available prior to the final version being completed. The Ministry must receive the Training Package from the Training Consultant no later than Wed, June 30th in order to reproduce the materials for the first seminar. All resources will be informed by the Ministry of any date change for the Vancouver Island seminar that will allow for further development time.

4.5 Printing Requirements

The Ministry will be responsible for reproducing and binding all materials provided in the Training Package.

4.6 Training Venue Requirements

Each seminar will take place in a training venue that has between 2 and 4 telephone jacks to enable the instructor and the participants to access Perm Count Sites remotely. Access to the internet is not required but could be an asset.

4.7 Equipment Requirements

4.7.1 Computer Equipment and Software

The instructor will require a Ministry laptop and projector for the seminar. A minimum of 2 (preferably 3) other Ministry laptops will be required for seminar participants. Each laptop must contain an internal modem and must be loaded with Microtel, Hyper Terminal, GVR, and Front-End.

4.7.2 Other Hardware

A minimum of 3-4 counters and associated wiring will be required for connection to the laptops for training purposes. A minimum of 3-4 external modems will be required to demonstrate how to configure them. A LCR and Megometer will be required to demonstrate trouble-shooting procedures.

4.8 Scheduling and Booking Requirements

The Ministry will schedule the seminar dates and book the venue for each session as the dates are confirmed.

5 Seminar Topics and Objectives

This section lists the *Maintenance of Perm Count Stations Familiarization Seminar* topics and provides the detailed objectives for each component. The objectives should be included at the beginning of each component in the Training Package to ensure that the seminar participants understand the purpose of the training.

1. Site Configuration

- To ensure that the EMS contractor is familiar with the general specifications of a Perm count site ministry infrastructure including the:
 - a. perm site design
 - b. role and responsibility of all organizations involved in the Perm Count program, including:
 - i. Ministry role
 - ii. Data Management Contractor
 - iii. Utility services
 1. Hydro
 2. Telus – landline
 3. Telus – cellular
 - iv. EMS contractor role
- To identify the value of the Perm Count data to the Ministry

2. Site Installation

- To ensure that the EMS contractor is familiar with the general specifications for site installation including:
 - a. Loops
 - b. Utility Services
 - c. Infrastructure

3. Cabinet Configuration

- To be able to maintain or replace the Perm Count Cabinet infrastructure

4. Cabinet Modem Configuration

- To be able to place a new modem into the Perm Count Site cabinet

using the correct configuration

5. PC Modem Configuration

- To be able to configure a workstation to connect to the M660 Perm Count counter

6. Establishing Remote Communication to the M660 counter

- To be able to establish remote communication with the counter

7. Establishing a Local Connection to the M660 counter

- To be able to establish local communication with the counter

8. Programming the M660 for Replacement

- To be able to program the counter using the configuration information contained on the Site Field Report form

9. Trouble-Shooting Assessment

- To assess and correct a Perm Count site that is not delivering data
- To assess and correct a Perm count site not communicating

10. Communication and Documentation Procedures

- To understand assessment and communication procedures

11. Annual Maintenance Check List Objectives

- To be able to assess all components of the Perm Count site for acceptable performance during an annual scheduled maintenance visit

12. Electrical Contacts Objectives

- To ensure that the EMS contractor is aware of the Ministry and non Ministry contacts that pertain to the Perm Count sites

6 Course Outline

This section provides a detailed course outline for the *Maintenance of Perm Count Stations Familiarization Seminar* including the topics, activities, and time breakdowns. Refer to the next page for the detailed outline.

Maintenance of Perm Count Stations Familiarization Seminar Course Outline

This one day seminar is designed to provide EMS contractors with the knowledge and procedures to complete the assessment, maintenance and replacement of the Perm Count infrastructure along with all appropriate documentation and communication requirements.

10 **Introductions and Agenda**

15 **Site Configuration**

- Explanation of the value of the Perm Count data to the Ministry
- Overview of a typical site configuration
 - ◆ Review images of a typical site configuration
 - ◆ Examine an M660 counter
 - ◆ Review screen prints of the distribution of the TIG application
- Overview of the roles and responsibility of all organizations involved in the Perm Count Program

15 **Site Installation**

- Overview of site installation including loops, utility services, and infrastructure
- Refer to handout material showing location of Perm Count sites in the EMS area with detailed loop configurations

20 **Cabinet Configuration**

- Overview of a generic cabinet layout
 - ◆ Review images of the inside of the cabinet
 - ◆ Review block diagram of electrical connectivity, telephone, charger, terminal board, AC power outlet
 - ◆ Identify the documentation stored in the cabinet
- Overview of how to install a loop when it has been recut
- Overview of Analog modem and digital modem hookup
- Refer to supply parts list and contacts
- Refer to handout material for specification drawings and the Perm Traffic Count Station Specifications on how to build a cabinet

15 **Cabinet Modem Configuration**

- Discuss the types of cabinet modems
- Overview of modem installation
- Overview of how to configure a remote modem using GVR
 - ◆ Instructor demonstration of remote modem configuration
 - ◆ Review wiring diagram and instruction handout
- Refer to handout material on how to configure a cellular modem

15 Break

30 **PC Modem Configuration**

- Overview of the different types of PC modems
- Discussion on the PC setup and modem requirements
- Group demonstration on how to configure an internal modem using Hyper Terminal
- Group demonstration on how to configure an external modem using GVR
- Complete activity to configure an internal and external modem
- Refer to handout material outlining configuration steps

15 **Establishing Remote Communication to the M660 counter**

- Discuss reasons for requiring a remote connection vs. a local connection
- Overview of the types of software that can be used to establish a remote connect
- Group demonstration on how to remotely connect to the counter using Microtel
- Refer to handout material including the contact phone list

15 **Establishing a Local Connection to the M660 counter**

- Overview of the types of software that can be used to establish a local connect
- Group demonstration on how to directly connect to a counter using Front-End terminal mode
- Complete activity to reinforce the connection procedures
- Refer to handout material outlining steps

60 **Programming the M660 for Replacement**

- Review the Traffic Counter Field Report
- Group demonstration on how to use the terminal mode of Front-End to enter in command sets
 - ◆ Demonstration of a 2 lane survey using China Bar Traffic Counter Field Report
 - ◆ Confirm survey settings in terminal mode
- Complete 2 activities to program the counter from the Traffic Counter Field Reports
 - ◆ Scenario one will involve a straight forward example
 - ◆ Scenario two will involve a more complex survey
- Refer to handout material outlining steps

60 Lunch

90 **Trouble-Shooting Assessment**

- Define common communication problems
 - ◆ No communication
 - ◆ Modem communication but no data streaming
 - ◆ Loop problems such as over/under counting or no counting
- Review detailed procedures for assessment for each problem
 - ◆ Identify contact and time response procedures
 - ◆ Identify trouble-shooting steps to assess the problem
 - ◆ Group demonstration on using Microtel command sets and Front-End terminal mode to assess and correct the problem
- Complete activity to trouble-shoot and fix a failed loop
- Refer to handout materials outlining the sequence of steps to follow

15 Break

30 **Communication and Documentation Procedures**

- Discussion on field reports and communication requirements once the problem has been fixed
- Refer to handout materials outlining the sequence of steps to follow

15 **Annual Maintenance Check List**

- Review check list
- Refer to handout material outlining annual maintenance requirements

15 **Electrical Contacts**

- Review Electrical Contact handout
 - ◆ MoT contacts
 - ◆ GeoPlan contacts
 - ◆ Telus problems contacts
 - ◆ Hydro problem contacts
 - ◆ Infrastructure contacts
 - Cabinet mfg.
 - Component contacts
 - Modem contacts
 - Counter contacts
 - Poles/antenna, etc contacts
 - Junction box contacts
 - Loop contacts

15 **Wrap up and Evaluations**

7 Resource Responsibilities and Timelines

7.1 Summary of Resource Responsibilities

7.1.1 Ministry Resources

All materials developed by Ministry resources must be delivered to Gerry Gerrard for review prior later than Wed, June 16th for review. Ministry resources are expected to deliver materials in sufficient detail for the Training Consultant to create handouts and activities and to produce a PowerPoint presentation for use by the instructor.

7.1.1.1 PowerPoint Presentation

Information to be incorporated in the PowerPoint presentation should include main and sub topic headings as well as the information to be discussed by the instructor so that the Training Package is self supporting to enable the EMS vendor to train other EMS staff as required after the Ministry delivered seminar. Any references to other handout and/or materials should be listed for inclusion in the presentation.

7.1.1.2 Other Materials

Other materials developed by Ministry resources such as handouts and activities should be of sufficient detail to ensure that the EMS Contractor has the information they require to maintain, install, configure, and assess problems at these sites and to take corrective action to repair and/or to contact other technical support stakeholders to get the corrective action initiated. Once the EMS Contractors assume responsibility for a site, the Ministry is no longer responsible for providing technical support to these sites.

7.1.2 Training Consultant

The Training Consultant will be responsible for organizing and formatting the presentation and creating and/or formatting other training and handout materials in a presentable manner. It is expected that materials provided to the Training Consultant will be in enough detail provided in order for handouts and activities to be accurately created. The Training Consultant will not be responsible for formatting or modifying reference materials that are not part of the core seminar materials.

7.2 Responsibilities and Timelines

The table shown in this section provides a breakdown of the materials to be developed by resource responsibilities.

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
Introductions and Agenda	<ul style="list-style-type: none"> • None for creating this 	<ul style="list-style-type: none"> • Incorporate into PPT presentation
Site Configuration		
<ul style="list-style-type: none"> ➤ Explanation of the value of the Perm Count data to the Ministry 	<ul style="list-style-type: none"> • John Coombs 	<ul style="list-style-type: none"> • Incorporate in PPT
<ul style="list-style-type: none"> ➤ Overview of a typical site configuration <ul style="list-style-type: none"> ◆ Review images of a typical site configuration 	<ul style="list-style-type: none"> • Roberto to scan pictures from Deb's books. Provide electronic files plus print outs labeled by hand 	<ul style="list-style-type: none"> • Incorporate pictures into PPT and label parts
<ul style="list-style-type: none"> ◆ Review screen prints of the distribution of the TIG application 	<ul style="list-style-type: none"> • Gerry to provide maps (Jamie Duncan at MSRM) 	<ul style="list-style-type: none"> • Incorporate into PPT and label if required
<ul style="list-style-type: none"> ➤ Overview of the parties responsible for interacting with a site 	<ul style="list-style-type: none"> • Roberto to provide points for discussion plus the textual information for each point 	<ul style="list-style-type: none"> • Incorporate into PPT
<ul style="list-style-type: none"> ➤ Refer to handout material showing location of Perm Count sites in the EMS area with detailed loop configurations 	<ul style="list-style-type: none"> • Gerry to provide Field Reports and Sketches 	<ul style="list-style-type: none"> • Format and layout
Site Installation		
<ul style="list-style-type: none"> ➤ Overview of site installation including loops, utility services, and infrastructure ➤ Refer to handout material showing location of 	<ul style="list-style-type: none"> • Roberto to provide points for discussion plus the textual information for each point 	<ul style="list-style-type: none"> • Incorporate into PPT and format and layout

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
Perm Count sites in the EMS area with detailed loop configurations		
Cabinet Configuration <ul style="list-style-type: none"> ➤ Overview of a generic cabinet layout 	<ul style="list-style-type: none"> • Roberto and Andrew to provide points for discussion plus the textual information for each point 	<ul style="list-style-type: none"> • Incorporate into PPT
<ul style="list-style-type: none"> ◆ Review images of the inside of the cabinet ➤ Overview of how to install a loop when it has been recut ➤ Overview of Analog modem and digital modem hookup 	<ul style="list-style-type: none"> • Roberto to scan pictures of the cabinet from Deb's book. Provide electronic files plus print outs labeled by hand • Roberto to provide block diagram. Provide electronic files plus print outs labeled by hand • Roberto to provide list of documentation stored in the cabinet • Roberto to provide diagram of loop and counter. Provide electronic files plus print outs labeled by hand 	<ul style="list-style-type: none"> • Incorporate into PPT • Incorporate into PPT and Format handout • Incorporate into PPT and format handout • Incorporate into PPT and format handout
<ul style="list-style-type: none"> ➤ Refer to supply parts list and contacts 	<ul style="list-style-type: none"> • Roberto to provide supply and parts list and contacts 	<ul style="list-style-type: none"> • Format and layout

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
<ul style="list-style-type: none"> ➤ Refer to handout material for specification drawings and the Perm Traffic Count Station Specifications manual on how to build a cabinet 	<ul style="list-style-type: none"> • Roberto to provide file for Perm Traffic Count Station Specifications. Gerry to provide specification drawings. 	<ul style="list-style-type: none"> • Put Specifications manual on cd • Include specification drawings in PPT if required and include in handout materials
<p>Cabinet Modem Configuration</p> <ul style="list-style-type: none"> ➤ Discuss the types of cabinet modems ➤ Overview of modem installation 	<ul style="list-style-type: none"> • Roberto to provide points for discussion plus the textual information for each point 	<ul style="list-style-type: none"> • Incorporate into PPT
<ul style="list-style-type: none"> ➤ Overview of how to configure a remote modem using GVR <ul style="list-style-type: none"> ◆ Instructor demonstration of remote modem configuration ◆ Review wiring diagram and instruction handout ➤ Refer to handout material on how to configure a cellular modem 	<ul style="list-style-type: none"> • Roberto to provide wiring diagram with GVR steps at the bottom for both remote and local configurations 	<ul style="list-style-type: none"> • Incorporate into PPT and format layout for handout

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
<p>PC Modem Configuration</p> <ul style="list-style-type: none"> ➤ Overview of the different types of PC modems ➤ Discussion on the PC setup and modem requirements 	<ul style="list-style-type: none"> • Roberto to provide points for discussion plus the textual information for each point and a how to steps handout 	<ul style="list-style-type: none"> • Incorporate into PPT and format layout of handout
<ul style="list-style-type: none"> ➤ Group demonstration on how to configure an internal modem using Hyper Terminal 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this demonstration (enough detail must be provided in order to create the group activity) 	<ul style="list-style-type: none"> • Create step by step handout for group activity
<ul style="list-style-type: none"> ➤ Group demonstration on how to configure an external modem using GVR 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this demonstration (enough detail must be provided in order to create the group activity) 	<ul style="list-style-type: none"> • Create step by step handout for group activity
<ul style="list-style-type: none"> ➤ Complete activity to configure an internal and external modem 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this activity (enough detail must be provided in order to create the individual activity) 	<ul style="list-style-type: none"> • Create handout for individual activity

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
<p>Establishing Remote Communication to the M660 counter</p> <ul style="list-style-type: none"> ➤ Discuss reasons for requiring a remote connection vs. a local connection ➤ Overview of the types of software that can be used to establish a remote connect 	<ul style="list-style-type: none"> • Roberto and Andrew to provide points for discussion plus the textual information for each point and a how to steps handout 	<ul style="list-style-type: none"> • Incorporate into PPT and format layout of handout
<ul style="list-style-type: none"> ➤ Group demonstration on how to remotely connect to the counter using Microtel 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this demonstration (enough detail must be provided in order to create the group activity) 	<ul style="list-style-type: none"> • Create step by step handout for group activity
<ul style="list-style-type: none"> ➤ Refer to handout material including the contact phone list 	<ul style="list-style-type: none"> • Roberto to provide phone list 	<ul style="list-style-type: none"> • Format and layout of handout
<p>Establishing a Local Connection to the M660 counter</p> <ul style="list-style-type: none"> ➤ Overview of the types of software that can be used to establish a local connect 	<ul style="list-style-type: none"> • Roberto and Andrew to provide points for discussion plus the textual information for each point and a how to steps handout 	<ul style="list-style-type: none"> • Incorporate into PPT
<ul style="list-style-type: none"> ➤ Group demonstration on how to directly connect to a counter using Front-End terminal 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for 	<ul style="list-style-type: none"> • Create step by step handout for group activity

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
mode	this demonstration (enough detail must be provided in order to create the group activity)	
<ul style="list-style-type: none"> ➤ Complete activity to reinforce the connection procedures 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this activity (enough detail must be provided in order to create the individual activity) 	<ul style="list-style-type: none"> • Create handout for individual activity
<ul style="list-style-type: none"> ➤ Refer to handout material outlining steps 	<ul style="list-style-type: none"> • Roberto to provide how to steps handout 	<ul style="list-style-type: none"> • Format and layout of handout
<p>Programming the M660 for Replacement</p> <ul style="list-style-type: none"> ➤ Review the Traffic Counter Field Report 	<ul style="list-style-type: none"> • Andrew to scan and provide Traffic Counter Field Report file for inclusion in the activity handout 	<ul style="list-style-type: none"> • Include in package as part of group activity
<ul style="list-style-type: none"> ➤ Group demonstration on how to use the terminal mode of Front-End to enter in command sets <ul style="list-style-type: none"> ◆ Demonstration of a 2 lane survey using China Bar Traffic Counter Field Report ◆ Confirm survey settings in terminal mode 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this demonstration (enough detail must be provided in order to create the group activity) 	<ul style="list-style-type: none"> • Create step by step handout for group activity

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
<ul style="list-style-type: none"> ➤ Complete 2 activities to program the counter from the Traffic Counter Field Reports <ul style="list-style-type: none"> ◆ Scenario one will involve a straight forward example ◆ Scenario two will involve a more complex survey 	<ul style="list-style-type: none"> • Andrew to provide textual information, Field Reports, and screen shot files for these activities if required (enough detail must be provided in order to create the individual activity) 	<ul style="list-style-type: none"> • Create handout for individual activity
<ul style="list-style-type: none"> ➤ Refer to handout material outlining steps 	<ul style="list-style-type: none"> • Roberto to provide how to steps handout 	<ul style="list-style-type: none"> • Format and layout of handout
<p>Trouble-Shooting Assessment and Communication Procedures</p> <ul style="list-style-type: none"> ➤ Define common communication problems <ul style="list-style-type: none"> ◆ No communication ◆ Modem communication but no data streaming ◆ Loop problems such as over/under counting or no counting 	<ul style="list-style-type: none"> • Roberto and Andrew to provide points for discussion plus the textual information for each point and a how to steps handout 	<ul style="list-style-type: none"> • Incorporate into PPT

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
<ul style="list-style-type: none"> ➤ Review detailed procedures for assessment and communication procedures for each communication problem <ul style="list-style-type: none"> ◆ Identify contact and time response procedures ◆ Identify trouble-shooting steps to assess the problem ◆ Group demonstration on using Microtel command sets and Front-End terminal mode to assess and correct the problem 	<ul style="list-style-type: none"> • Roberto to provide sequence of steps to follow in each scenario including communication procedures, diagnostic steps, Front-End and Microtel commands, and any Field Report requirements. • Andrew to provide textual information and screen shot files for this demonstration (enough detail must be provided in order to create the group activity) 	<ul style="list-style-type: none"> • Format and layout of handouts • Include in package • Create step by step handout for group activity
<ul style="list-style-type: none"> ➤ Complete activity to trouble-shoot and fix a failed loop 	<ul style="list-style-type: none"> • Andrew to provide textual information and screen shot files for this activity (enough detail must be provided in order to create the individual activity) 	<ul style="list-style-type: none"> • Create handout for individual activity
<p>Communication and Documentation Procedures</p> <ul style="list-style-type: none"> ➤ Discussion on field reports and communication requirements once the problem has been fixed * Note: the above two topics have been divided in order to emphasize the documentation and communication steps – the information may be included in one 	<ul style="list-style-type: none"> • Roberto and Andrew to provide information on which reports are required and how to complete them. Information on communicating such as confirming that the site works with Geoplan to be outlined also (see above handout). 	<ul style="list-style-type: none"> • Incorporate in PPT and ensure in handout as above

Materials and Activities by Topic	Ministry Resource Responsibilities	Training Consultant Responsibilities
<p>handout (or flow diagram) but should be dealt with as a separate topic</p>	<ul style="list-style-type: none"> • Gerry to obtain forms 	
<p>Annual Maintenance Check List</p> <ul style="list-style-type: none"> ➤ Review check list ➤ Refer to handout material outlining annual maintenance requirements 	<ul style="list-style-type: none"> • Gerry to obtain check list 	<ul style="list-style-type: none"> • Include in package
<p>Electrical Contacts</p> <ul style="list-style-type: none"> ➤ Review Electrical Contact handout 	<ul style="list-style-type: none"> • Gerry to assist Roberto and Andrew in gathering contact numbers 	<ul style="list-style-type: none"> • Format and layout
<p>Wrap up and Evaluations</p>	<ul style="list-style-type: none"> • None for creating 	<ul style="list-style-type: none"> • Create evaluation