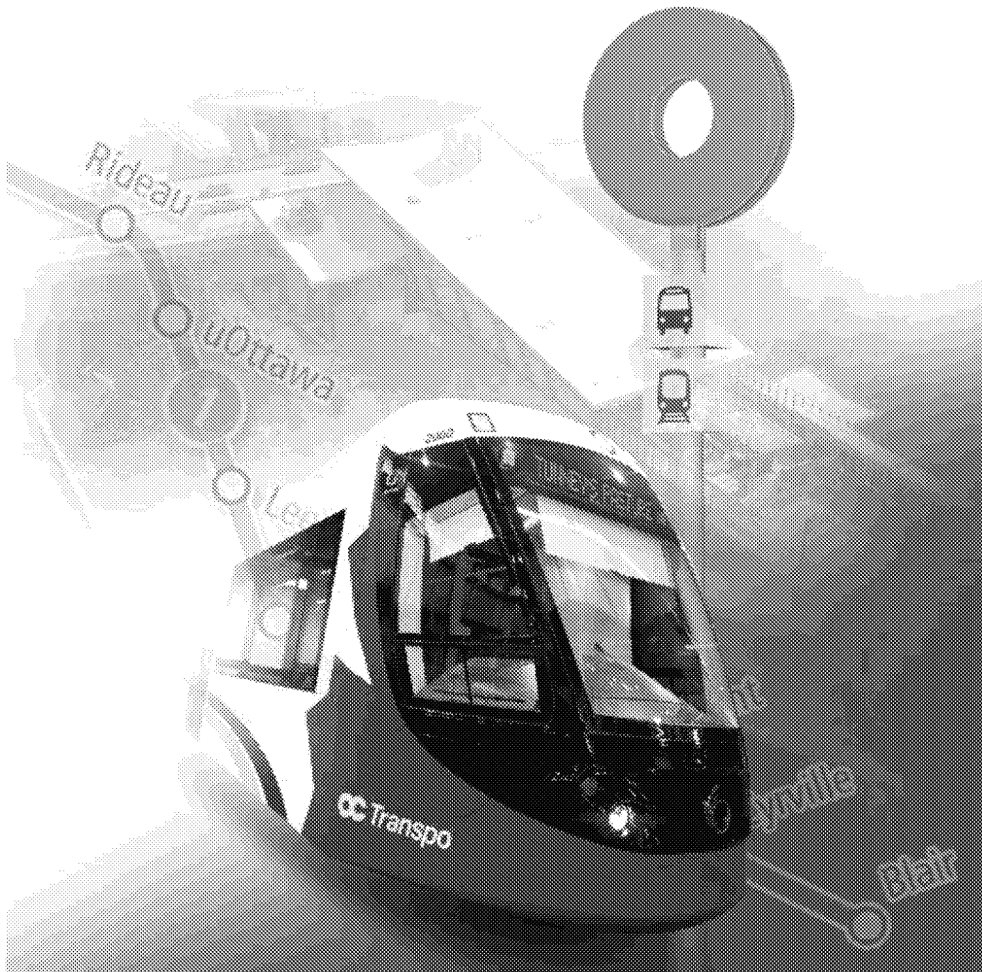




Line 1 Oversight Plan 2022





Line 1 Oversight Plan 2022	
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Line 1 Oversight Plan

APPROVALS		DATE
Troy Charter	Director, Transit Operations	
Brandon Richards	Chief Safety Officer	

REVISION HISTORY			
Revision	Description of Change	Author	Effective Date
1.0	Initial Release – Line 1 Oversight Plan (2022)	Matt Pieters & Erin Tait	2022-01-01

RACI Table	
R esponsible	Program Manager – Trains & Systems Program Manager – Regulatory Compliance, Quality Control & Assurance
A ccountable	Director, Transit Operations Chief Safety Officer
To C onsult	Trains & Systems Team Regulatory Compliance, Quality Control & Assurance Team
To I nform	Trains & Systems Team Rail Contracts Team Regulatory Compliance, Quality Control & Assurance Team

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TABLE OF CONTENTS

[TOC \o "1-1" \h \z \u]

ACRONYMS AND ABBREVIATIONS

CSO	Chief Safety Officer
DTO	Director Transit Operations
GEC	General Engineering Consultant
ISO	International Standards Organization
IRIS	International Railway Industry Standard
IMIRS	Integrated Management and Information Reporting System
KPI	Key Performance Indicator
LOP	Line 1 Oversight Plan
LRT	Light Rail Transit
LRV	Light Rail Vehicle
MSF	Maintenance and Storage Facility
OCT	OC Transpo
PA	Project Agreement
PMRC	Program Manager Regulatory Compliance
PMTS	Program Manager Trains & Systems
RCQA	Regulatory Compliance, Quality Control & Assurance Team
RMCO	Regulatory Monitor and Compliance Officer
ROW	Right of Way
RTG	Rideau Transit Group
RTM	Rideau Transit Maintenance
T&S	Trains & Systems Team

DEFINITIONS

Audit	A planned and documented activity performed to determine by investigation, examination, or evaluation of audit evidence, the adequacy and conformance of processes and procedures, that may cover several OC Transpo service areas, Contractors and activities, to Project requirements and Contractor's project plans.
Audit Evidence	Records, statements of fact, or other information, which are relevant to the audit criteria and are verifiable
Findings	Results of an oversight activity, including inspections, reviews, monitoring and/or audits, that document a non-compliance to a regulatory, PA, procedural, or established plan requirement. Findings may be documented as Remedial Actions.
Contractor	RTG, RTM and all their subcontractors responsible for the maintenance of the Line 1 system.
Inspection	Observation of activities and/or processes to verify compliance with project and/or regulatory requirements.
Monitoring	Monitoring is an ongoing oversight activity that includes the review of information from the IMIRS system detailing defects, failures and incidents, as well as previous results of Inspections, Document Reviews or Remedial Actions.
Non-compliance	A non-compliance with the regulations, PA or procedural requirements. Non-compliances generate Remedial Action requests.
Objective Evidence	Factual evidence supporting the existence or verity of something, which may be obtained through observation, measurement, test, or other means.
Oversight	Oversight is the action of inspections, document reviews, monitoring, auditing or related activities to verify whether an item or activity conforms to the project agreement, plans, policies, procedures and/or regulatory requirements.
Preventative Action	Action to eliminate the cause of a potential nonconformity or other undesirable potential situation.
Quality Assurance	The planned and systematic activities implemented in the quality system so that the project or contract's quality requirements are satisfied.
Remedial Action	Measures taken to rectify a detected non-compliance or unsatisfactory condition and to prevent repetition.
Document Review	The process of examining, commenting on and evaluating records, procedures, processes, reports, and related data to determine that they clearly demonstrate compliance with project and/or regulatory

requirements. Typically, reviews are done on a periodic basis, dependent on the need, and are not documented as Audit Reports but are logged as an event. Findings can be in the form of Work Orders and/or Remedial Action requests.

Verification

Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled; reviewing, inspecting, testing, checking, auditing, or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements.

1.0 INTRODUCTION

OC Transpo (OCT) manages the City of Ottawa's public transit system delivering a comprehensive service within the City of Ottawa and with interprovincial service to Gatineau, Quebec. The public transit service provides approximately 340,000 passenger trips per day through bus, the O-Train Lines and Para Transit services. The O-Train Line 1, the Confederation Line was launched in September 2019, to enable increased service capacity and consistency via a 12.5-kilometre electric light rail line travelling across the city.

The O-Train Line 1, Confederation Line, known as Line 1 began service on September 14, 2019 accompanied by parallel bus transit service, with a full-service transition to rail occurring on October 6, 2019. The 12.5-kilometer rail line travels east-west across the city consisting of nine above-ground stations, four underground stations and a 2.5-kilometre tunnel through the downtown core. Line 1 operates between Blair station in the east and Tunney's Pasture Station in the west with future extensions in both directions.

Vehicles and rail traffic for Line 1 is operated and controlled by OCT staff. Maintenance of the entire system is performed by a long-term service contractor Rideau Transit Maintenance (RTM), under contract by Rideau Transit Group (RTG).

This Oversight Plan was developed using industry best practices and standards, and with input from industry expertise in transit management, oversight, safety, quality and operations. The scope of the Oversight Plan was determined by referencing the Line 1 Regulatory requirements, the Project Agreement as guiding principles and OCT's own plans and procedures. After the first year of service, the implementation of this Oversight Plan is appropriate to support the City's self-regulatory model. The LOP, detailed below, shall be reviewed and revised on a periodic basis to incorporate observations and experiences as well as any potential findings presented by the Regulatory Monitoring Compliance Officer (RMCO).

2.0 ORGANIZATIONAL OVERVIEW

OCT is accountable through the General Manager of the Transit Services Department, to the City Manager, to City Council and Transit Commission.

For O-Train Line 1, OCT has a delegated agreement with Transport Canada. As a result, the City Manager as the accountable executive is designated as the regulator and OCT as the operator.

OCT is accountable for the activities of their respective staff and contractors working within their branch. They are assigned the responsibility of ensuring that the activities carried out within their branch or work unit are carried out in a safe manner and are in compliance with all required legislation.

3.0 PURPOSE

The City, as the Line 1 owner, operator and regulator, has adopted a self-regulatory model for oversight and compliance monitoring. Part of that self-regulatory model includes the oversight and monitoring of OCT and their Contractors, primarily the Maintenance Contractor (RTG/RTM). OCT primarily provides oversight and monitoring of the LRT through two groups; the Trains and

Systems (T&S) team and the Regulatory Compliance and Quality Assurance team (RCQA). The roles and responsibilities of each of these groups are described further in Section 5.0.

As part of the oversight of the Contractor's performance of their contractual obligations for the safe operation and maintenance of the Line 1's various systems and assets, and oversight of OCT's compliance with regulations and their own internal policies, procedures and plans, OCT has developed a comprehensive Line 1 Oversight Plan (LOP). This plan describes the responsibilities and process for conducting regular inspections, document reviews, monitoring and audits. This includes the requirements for planning, scheduling, conducting, documenting and reporting the results of these inspections, document reviews, monitoring and audits.

Both the T&S and RCQA teams will provide the results of all the inspections, document reviews, monitoring and audits to be summarized in an annual report to be presented to the Director, Transit Operations (DTO) and Chief Safety Officer (CSO). This report will provide a summary of the key trends, major issues, remedial action plans, preventative actions, and opportunities for improvement.

4.0 SCOPE

There are two focuses of oversight being conducted to assure compliance with regulatory requirements, the requirements specified in the Project Agreement, and OCT requirements. The T&S and RCQA teams provide oversight of the Contractor, as well as internal oversight of OCT, where applicable.

The oversight plan includes the inspection, document review, monitoring and auditing of the Contractor performing the services, operation and maintenance of Line 1, as well as OCT's own compliance. The scope of their oversight plan includes safety and security, all infrastructure, systems, vehicles, and services included in the Project Agreement and regulatory framework.

Some of the documentation used to conduct the oversight and monitoring include, but are not limited to the following:

- a) * Maintenance and Rehabilitation Plan
- b) Quality Management Plan
- c) Asset Management Plan
- d) * Light Rail Vehicles – Maintenance Plan
- e) * Standard Operating Procedures
- f) Inspection and Maintenance Procedures
- g) Seasonal Cleaning and Maintenance Procedures
- h) * Safety Management System Plan (SMS)
- i) * Security Management System Plan (SeMS)
- j) * Threat and Vulnerability Assessment System (TVA)
- k) * LRT Operating Rules and Procedures

- l) * Rates and Terms of Service
- m) * Accident and Safety Incidents
- n) * Mobility Matters

*Note: * including regulatory requirements.*

The plan includes the many sub-systems and infrastructure that make up the Line 1 system. Some of these include:

- a) Train Control & Signaling Systems
- b) Traction Power System
- c) Track and Switches
- d) Overhead Catenary System
- e) Light Rail Vehicles and onboard systems
- f) Wayside Communication Systems
- g) Stations
- h) Tunnels
- i) Maintenance & Storage Facilities (MSF)
- j) Structures

Also included in the Plan are seasonal inspections, for example in preparation for and during winter conditions, and as-needed inspections.

In addition, the staff are responsible for follow up and verification of the implementation of the RMCO's Remedial Actions to ensure appropriate and timely implementation.

The oversight can take the form of daily or periodic inspections, periodic reviews of records and documentation, ongoing monitoring or a comprehensive audit.

5.0 RESPONSIBILITY

Director Transit Operations (DTO) – The DTO is responsible for the Transit Operations portfolio, which includes Rail Operations and the Transit Operations Control Centre, to ensure the safe operation of Line 1. Together with the CSO, the DTO is responsible for the effective implementation and management of the LOP.

Chief Safety Officer (CSO) – The CSO is responsible for ensuring OCT is operating safely and for overseeing all aspects of the OCT Safety Program, and the effective implementation of the OCT Line 1 SMS, SeMS, TVA and all other safety related plans and procedures. Together with the DTO, the CSO is responsible for the effective implementation and management of the LOP.

Regulatory Monitor and Compliance Officer (RMCO) – The RMCO is independent of OCT and reports directly to the City Manager. The RMCO is responsible for monitoring compliance with LRT Regulations by those to whom the regulations apply on Line 1.

Program Manager – Trains & Systems (PMTS) – responsible for the oversight of the maintenance on Line 1 and issues management. The PMTS approves monitoring procedures, processes and ensures qualified individuals perform inspections, reviews and audits in accordance with the oversight plan. The PMTS manages the monitoring activities of the T&S team, for the purposes of this Plan, the inspections, reviews and audits of the Contractor.

Program Manager - Regulatory Compliance Quality Control & Assurance (PMRC) – responsible for the oversight and monitoring of policies, procedures and plans relating to the regulatory framework. The PMRC manages the monitoring activities of the RCQA team, for the purposes of this Plan, the inspections, reviews and audits of OCT and the Contractor.

Trains & Systems team – responsible for performing the on-site or remote inspections, reviews and audits of the operations and maintenance activities of the Contractor.

Regulatory Compliance Quality Control & Assurance team – responsible for performing the on-site or remote inspections, reviews and audits of the operations and maintenance activities of OCT and the Contractor.

Auditor – responsible for the planning, scheduling, conducting, reporting, filing, distribution and close out of the audit or inspection. Auditors are to have no direct responsibility in the activities to be audited. Audits and inspections can be performed by T&S or RCQA teams or General Engineering Consultants (GEC).

6.0 PROCEDURE

6.1 General

As part of the Oversight Plan, the PMTS and the PMRC maintain annual oversight schedules. These schedules include Inspections, Document Reviews, Monitoring and Audits.

Oversight schedules will be developed annually using the following objectives and principles:

- Assess compliance to City Regulations, Programs and other City requirements;
- Progressive assessment of key program elements, critical operational and contractor activities etc.
- Use risk-based selection of areas to be assessed;
- Consider emergent information such as leading and lagging indicators, operational experience, findings from previous oversight activities, RMCO findings etc.

These activities are scheduled and performed on a selected basis with a frequency commensurate with the activities on the project, risk impacts, as requested or in response to known areas of concern. Follow-up inspections, document reviews and audits, to verify completion and the effectiveness of any Remedial Actions and/or work orders, are to be scheduled as required, or verified during subsequent inspection/reviews or audits. Document reviews, monitoring and audits are performed by both the T&S and RCQA teams, whereas inspections are primarily performed by the T&S team.

Oversight schedules identify the approximate planned timing and frequency of the inspection, document reviews, monitoring and audits, the organization, system, policy, procedure or plan and applicable PA or regulatory requirements. The majority of the oversight is performed concentrating on inspections, document reviews and monitoring activities. These oversight activities can be performed more frequently (daily, weekly or monthly). Audits are scheduled typically on an annual or bi-annual basis, and/or scheduled to ensure adherence to maintenance responsibilities and to verify previous Remedial Actions generated by OCT or the RMCO.

The PMTS and PMRC will maintain separate oversight schedules but will coordinate when their oversight activities overlap. A sample of the T&S schedule is shown in **Exhibit B – T&S Oversight Schedule Sample**. Both the PMTS and PMRC oversight schedules can be altered throughout the year based on changing priorities or direction provided by the DTO and/or CSO.

6.2 Inspections

Inspections are performed in the field as site visits or on-board vehicles. Some Inspections are performed seasonally or when specific issues are reported to OCT, such as adherence to maintenance work or a new inspection that is incident driven, station cleanliness, customer injuries, unpleasant odors, recurring warnings or alarms.

6.2.1 Inspection Scheduling

For Inspections, the PMTS oversight schedule identifies the area, system and location to be inspected. Inspection schedules will be part of the oversight plan and will be developed annually using the objectives and principles identified in Section 6.1.

Inspections can be performed daily, weekly or periodically as deemed necessary. Inspections are documented typically using the CleverCAD system or tracking spreadsheets. Notification to inspect is only required for areas such as areas in the MSF or in the guideway. For access to inspect some ROW locations, the inspection may need to be scheduled during Engineering Hours in advance of the inspection. Proper notification will be provided to the organization being inspected, when required.

6.2.2 Performing and Reporting the Inspection

Inspections are documented using the CleverCAD system. During the inspection the applicable items on the prepared checklist are verified through observation. A sample checklist is included as **Exhibit A INF4 Winter Weather**. Some inspections may be performed on specific activities and may not require a checklist.

Inspection forms or in some cases tracking spreadsheets developed by the T&S team will be used for each inspection. If non-compliances are observed, they will be documented, and Work Orders will be generated in IMIRS.

Non-compliances where a work order wouldn't apply (failure to follow a process or documentation requirement for example), will be provided to the Rail Contracts team in Rail Operations to issue a non-compliance or quality failure.

Verification of closure of the work orders, specific to an inspection would not typically be done as part of the inspection process, however the verification could be performed as part of the daily maintenance meeting or through an audit process.

6.3 Document Reviews

Document Reviews can include a review of plans and procedures for compliance, reviews of records and maintenance activities. Document reviews will be performed to achieve key objectives such as the following:

- Assess whether documents are consistent with City requirements (e.g. PA, SMS etc.);
- Verify consistency between contractor documents; and,
- Verify whether direction in documents is consistent with execution observed during field observations.

As an example, reviews of records could be confirmation that the Contractor has an established a SMS Plan, or it could be verification that elements of the plan are being performed as described.

Document reviews are planned and performed as outlined in the oversight schedule, or when required. Records can be reviewed on-site or remotely, and all document reviews will be completed in CleverCAD. Non-compliance during document reviews can be documented either through Work Orders or provided to the Rail Contracts team in Rail Operations to issue a non-compliance or quality failure.

During subsequent document reviews of the same process, the Reviewer should verify the successful implementation of any previously documented non-compliance or Remedial Actions, from previous reviews or by the RMCO.

6.4 Monitoring

Monitoring is an ongoing oversight activity that includes the review of information from the IMIRS system detailing defects, failures, incidents, general tracking and observations.

Monitoring activities will be part of the oversight plan and will be developed annually using the same objectives and principles identified in Section 6.1.

Monitoring also includes the review of the previous findings of Inspections, Document Reviews or Remedial Actions. Monitoring activities include follow-ups with the relevant stakeholders and evaluates the completion and method used to address them.

For example, work orders are monitored daily and those identified with insufficient methods or completion comments are raised at the daily maintenance meeting with the Contractor for further information and follow-up action.

Monitoring activities are conducted on a regular basis by both the T&S and RCQA teams, and should trends be identified, those issues shall be escalated to the appropriate stakeholder.

6.5 Audit Process

Audits are performed for more comprehensive oversight of OCT and Contractor activities and requirements. Audits require greater effort in planning and execution and are more comprehensive than inspections and document reviews. As such, they are performed on a less frequent basis, typically on an annual or Bi-annual basis. Audits include an audit plan, a checklist, and a final audit report. It should be noted, for the purposes of this Oversight Plan, "Audits" refer to those performed by OCT, and do not include audits performed by outside organizations as part of regulatory requirements or RMCO activities.

6.5.1 Audit Planning

For an Audit, a plan is prepared based on the particular elements to be verified. The appropriate stakeholder is contacted prior to the scheduled activity in order to allow them to prepare their records for verification. Monitoring and Audits are typically conducted at the location where the majority of work or particular project work is being performed but can also be performed remotely.

6.5.2 Performing an Audit

The Auditor performs the audit using a checklist, verifying each item objectively according to the audit procedure. If deficiencies outside the stated scope of the checklist are observed during the audit, appropriate action will be initiated as determined by the Auditor. The Auditor will use checklists, in part or in their entirety, to identify the PA requirements, regulatory requirements or industry best practices to be audited or reviewed. The applicable reference documents, and the method of verification (records, photos, interviews, etc.) will be identified in the checklist. In preparing the checklist, the Auditor considers the information obtained in previous inspections, document reviews and audits, including any non-compliance or Remedial Actions.

Verification of objective evidence may include the following:

- Review of records of the activity, either electronically or hard copy.
- Interviews conducted with individuals who perform specific activities relating to the discipline to ascertain that they have a proper understanding of the required process, policy or procedures.
- Review of operations associated with the audit item to determine adherence to written process, policy or procedures for consistent application.

6.5.3 Audit Reporting

Audit reports shall include:

- Date, time, and location of the audit
- Auditor and all participants
- The areas/processes that were audited
- The documents requested, including title, document number and revision
- A summary of the findings, including a list of any Opportunities for Improvement, non-compliance and Remedial Actions

- Attached to the report, is the audit plan, a list of all attendees throughout the Audit, and any relevant documentation pertaining to the audit.

The final Audit Report will be officially transmitted to the Contractor or OCT management.

6.6 Remedial Actions

The Contractor or OCT management have a requirement to respond to the Remedial Actions outlined in the report including the corrective actions taken to address the findings. Remedial Actions can be the result of any activities identified in Section 6 of this document, as well as findings generated by the RMCO and/or external reviews.

Follow-up of all Remedial Actions will be undertaken by T&S and RCQA teams through additional Monitoring or documentation reviews to ensure the Remedial Actions have been implemented appropriately.

Remedial Actions are considered closed when verifiable evidence, have demonstrated the effective implementation of the Remedial Action to the satisfaction of the Auditor.

6.7 Documentation and Communication of Findings

Following the completion of an oversight activity as detailed in the previous sections, it is essential that the findings and observations be properly documented, communicated and escalated, as necessary.

If repeat findings are identified from previous oversight activities or Remedial Actions have not been properly implemented, the PMTS and/or the PMRC shall escalate these matters to the DTO and/or the CSO.

Any identified oversight findings that pose a safety risk to the public or employees shall be immediately escalated to both the DTO and the CSO.

The results of the activities detailed in this LOP shall be summarized in a consolidated quarterly report and shall be communicated to the DTO and the CSO.

7.0 Oversight Resources

Inspections, Documents Reviews and Monitoring will be performed by T&S and RCQA staff with sufficient overall knowledge of the process and procedures being reviewed.

Audits will be performed by T&S and RCQA staff with sufficient overall knowledge of the process and procedures being audited or by General Engineering Consultants (GEC).

8.0 RECORDS

The following are retained as records:

- IMIRS Work Orders
- Audit Reports and appendices
- CleverCAD reports

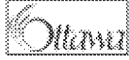
- Oversight Schedules

9.0 ATTACHMENTS

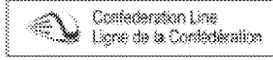
Exhibit A – Inspection Checklist (sample)

Exhibit B – Sample Oversight Schedule (sample)

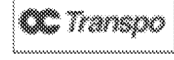
Exhibit A – Inspection Checklist (sample)



Infrastructure Structures



Rail: Technical Team



Summary

Department: RTT- Infrastructure	Structure:	
Incident Type: L1 INF4 Winter Weather Infrastructure Report	Location:	
Incident Created: 11/20/2020 8:54:51		
Created By: André Droste		
Status: Open		
Safety Concerns1:	Service Concerns2:	Temperature:
Safety Notes:	Service Notes:	Weather:

Structural Components

INF3001- Structure walls and ceiling free from cracks? (Excluding hairline cracks)	INF3001:
INF3001 Notes:	Helpdesk# INF3001:
INF3002- The cracks are free from mineral deposits?	INF3002:
INF3002 Notes:	Helpdesk# INF3002:

Fencing Standard

INF3010- Is the fence above the structure in good condition?	INF3010:
INF3010 Notes:	Helpdesk# INF3010:

Vandalism and Graffiti Repair

INF3020- Zone free of vandalism and/or graffiti?	INF3020:
INF3020 Notes:	Helpdesk# INF3020:
INF3021- Zone free of vulgar, hate, racist, and/or gang related vandalism or graffiti?	INF3021:
INF3021 Notes:	Helpdesk# INF3021:

Exhibit B – T & S Oversight Schedule (sample)

