AGENDA
INTERCITY TRANSIT AUTHORITY
WORK SESSION
April 20, 2011
5:30 P.M.

CALL TO ORDER

1.	**APPROVAL OF AGENDA**	**1 min.**

2.   PUBLIC COMMENT   **10 min.**
*Public Comment Note: This is the place on the agenda where the public is
invited to address the Authority on any issue. The person speaking is
requested to sign-in on the General Public Comment Form for submittal
to the Clerk of the Board. When your name is called, step up to the
podium and give your name and address for the audio record. If you are
unable to utilize the podium, you will be provided a microphone at
your seat. Citizens testifying are asked to limit testimony to three minutes.*

3.   PRESENTATION – OLYMPIA TRANSIT CENTER *(Ann Freeman-*   **45 min.**
Manzanares)

4.   THURSTON REGIONAL PLANNING COUNCIL'S SMART   **30 min.**
CORRIDOR PROJECT *(Dennis Bloom/Jailyn Brown/Randy Knapick)*

5.   IMPLEMENTING AN ENVIRONMENTAL AND   **20 min.**
SUSTAINABILITY MANAGEMENT SYSTEM (ESMS) AT
INTERCITY TRANSIT *(Mike Harbour/Bob Holman)*

6.   OLYMPIA EXPRESS SERVICE - PIERCE TRANSIT   **20 min.**
DISCUSSION OF PUBLIC HEARING *(Dennis Bloom) Refer to*
Public Hearing Sheet.

7.   CITIZEN ADVISORY COMMITTEE REPORT *(Seema Gupta)*   **3 min.**

8.   AUTHORITY ISSUES

9.   MEETING EVALUATION

ADJOURNMENT

INTERCITY TRANSIT AUTHORITY
WORK SESSION
AGENDA ITEM NO. 3
MEETING DATE: April 20, 2011

FOR: Intercity Transit Authority

FROM: Ann Freeman-Manzanares, 705-5838

SUBJECT: Presentation – Olympia Transit Center Expansion

1) **The Issue:** As we near completion of preliminary design for the expansion of the Olympia Transit Center, staff from SRG Partnership will present on the status of the project.

2) **Recommended Action:** For information and discussion purposes.

3) **Policy Analysis:** This presentation is to provide an update on the status of the Olympia Transit Center Expansion project.

4) **Background:** Intercity Transit is under contract with SRG partnership for preliminary design for expansion of the Olympia Transit Center site. This is an opportunity to review preliminary exterior and interior design for the new building. Staff anticipates approaching the Authority in June with a Phase II design contract, which will take us through final design.

5) **Alternatives:** N/A

6) **Budget Notes:** N/A

7) **Goal Reference:** Goal #3: *"Maintain a safe and secure operating system."* Goal #4: *"Provide responsive transportation options."*

8) **Reference:** Drawings will be presented at the meeting.

FOR: **Intercity Transit Authority**

FROM: **Dennis Bloom, 705-5832**
                     TRPC Staff – Jailyn Brown
                     Consultant – Randy Knapick, IBI

SUBJECT: **Thurston Regional Planning Council's Smart Corridor Project**

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1)   **The Issue:** Thurston Regional Planning Council staff and consultant will present an overview of the Regional Smart Corridors project.

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2)   **Recommended Action:** Presentation and discussion only. This TRPC project involves Olympia, Lacey, Tumwater and Thurston County efforts to update and improve signal timing, signal coordination and incorporate 'transit signal priority' (TSP) technology along two major demonstration corridors:
a) Capital Way/Capital Boulevard (Olympia – Tumwater), and, b) 4th Ave/State St/Martin Way (Olympia/Lacey/County).

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3)   **Policy Analysis:** Consideration of implementing a technology project that integrates and requires interagency partnership agreements and procurements requiring the Authority's approval.

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4)   **Background:**   In the 1980s, the Thurston Region had a PM10 air quality problem, primarily related to wood smoke. The regional clean air agency successfully implemented a program to address sources of wood smoke. As a result, the region was reclassified from a federal air quality non-attainment area to a maintenance area. When this occurred in 2000, special transportation requirements were invoked applying to regional transportation planning.

In becoming an air quality maintenance area, the Region qualified for federal Congestion Mitigation and Air Quality (CMAQ) grant funding to address transportation sources of PM10 (particulate matter 10 microns or less in size) in the 'maintenance area' (roughly, the city limits of Lacey, Olympia and Tumwater). In 2006, TRPC received CMAQ grant funding.

TRPC policy makers established a subcommittee to investigate program options for reducing PM10 in the maintenance area. They considered a wide range of

options, such as diesel retrofit, shore power and others. They concluded their best option for reducing PM10 in the maintenance area was to focus on coordinated signal timing and optimization, and transit signal priority technology. These options also support the regional Intelligent Transportation System (ITS) architecture and Intercity Transit's technology plan. TRPC chose to focus on two strategy corridors from the Regional Transportation Plan (RTP) that are also problematic for Intercity Transit's on-time performance for fixed route service.

This multi-jurisdictional project now lays the foundation for proving transit signal priority technology can work in our community. TSP is also part of the larger Intercity Transit vision and investment using transportation technology applications including: computer aided dispatching, automated vehicle location, stop announcements, automated passenger counting, on-board cameras and real time bus information. These efforts also helped to improve the efficiency and safety of the transit system.

The federal Congestion Mitigation and Air Quality (CMAQ) program will provide partial funding for this project. Intercity Transit, as part of TRPC's continuing transportation technology investments, will need to provide additional funding to implement TSP components. Staff and consultants are evaluating the technology and operational needs to provide a project estimate expected to be completed in late spring of 2011.

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5) **Alternatives:** N/A

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6) **Budget Notes:** This is currently an unfunded project. Regional CMAQ grant funding will cover some, but not all of the expense associated with this project. It is anticipated there will be a request for Intercity Transit project funds beginning in 2012.

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7) **Goal Reference:** This discussion provides background for increasing interagency coordination and efficiency through advancements in traffic signal technology. In particular, it reflects Goal#4: "*Provide responsive transportation options*." Strategy #3: Coordination with regional transportation providers.

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8) **References:** N/A

FOR: Intercity Transit Authority

FROM: Mike Harbour (705-5855); Bob Holman (705-5885)

SUBJECT: Implementing an Environmental and Sustainability Management System (ESMS) at Intercity Transit

1)   **The Issue:** To review the draft Environmental Policy and the requirements of an ISO 14001 certified Environmental and Sustainability Management System.

2)   **Recommended Action:** This is an information item. The Authority will be asked to adopt the Environmental Policy at the May 4 Authority meeting.

3)   **Policy Analysis:** The action proposed for May 4 establishes agency policy and must be adopted by the Authority.

4)   **Background:** We began the task of developing and implementing an Environmental and Sustainability Management System (ESMS) at Intercity Transit.   Our goal is to develop and implement an ISO 14001 certified ESMS.

      Our core ESMS team members are:
      Jim Merrill, Operations Director
      Karl Shenkel, Maintenance Director
      Mark Kallas, Facilities Manager
      Bob Holman, Grants Program Administrator
      Mike Harbour, General Manager

      This team will attend four training sessions at Virginia Tech University. These sessions are designed to carry us through the ISO 14001 requirements in manageable pieces rather than overwhelming us with the requirements of the standard. Bob Holman is in charge of the overall effort and designated as our "Top Management Representative" for the effort. Pat Messmer, Executive Assistant, provides invaluable administrative support and technical assistance in document control and management. Our Sustainability Committee will be very involved in the ongoing effort as will many other employees.

      The International Organization for Standardization, widely known as ISO, is an international standard setting body composed of representatives from various national

standard organizations. It sets standards that often become law. In practice, ISO acts as a consortium with strong links to governments.

The ISO 14001 ESMS exists to help organizations (a) minimize how their operations (processes etc.) negatively affect the environment (i.e. cause adverse changes to air, water, or land); (b) comply with applicable laws, regulations, and other environmentally oriented requirements, and (c) continually improve in the above.

This standard is applicable to any organization that wishes to:

- implement, maintain and improve an environmental management system
- assure itself of its conformance with its own stated environmental policy
- demonstrate conformance
- ensure compliance with environmental laws and regulations
- seek certification of its environmental management system by an external third party organization
- make a self-determination of conformance

Successfully implementing the ESMS will involve a great deal of effort but will have benefits for all areas of the organization. Achieving ISO certification requires a number of specific steps that will impose discipline on us to thoroughly document requirements, policies and procedures. We will also be required to ensure all employees are aware of policies and trained to fulfill their role in the event of a spill of hazardous materials or other events that could negatively affect the environment.

One of the first steps is to adopt an agency Environmental Policy. The policy must contain certain elements included in the ISO 14001 standard. The attached policy has been developed by the ESMS team and the Sustainability Committee. The Authority will be asked to adopt the policy at the May Authority meeting.

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5) Alternatives: N/A

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6) Budget Notes: The training is provided through the Federal Transit Administration at no cost. Intercity Transit travel costs are included in the 2011 budget.

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7) **Goal Reference:** This project meets Goal 3: "*Maintain a safe and secure operating system.*" Goal 5: "*Align best practices and support agency sustainable technologies and activities.*"

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8) **References:**   Draft Environmental Policy ISO 14001 Standard; ISO 14001 Environmental management system requirements; ESMS Team 2011 Organizational Chart; Outline of the EMS Institute

INTERCITY TRANSIT
RESOLUTION NO. 02-2011
ADOPTING THE ENVIRONMENTAL AND SUSTAINABILITY POLICY

A RESOLUTION adopting the Intercity Transit Environmental and Sustainability Policy.

WHEREAS, Intercity Transit is committed to protecting the environment for present and future generations; and

WHEREAS, Intercity Transit recognizes the importance of reducing Green House Gas (GHG) emission and the threat posed by climate change; and

WHEREAS, Intercity Transit is a charter signatory to the American Public Transportation Association (APTA) Sustainability Commitment; and

WHEREAS, Intercity Transit developed a Sustainability Plan with a commitment to annually review this plan and update as needed; and

WHEREAS, the Intercity Transit Authority is committed to establishing an Environmental and Sustainability Management System (ESMS) with environmental objectives and targets that are measurable, meaningful, and understandable subject to annual review;

NOW, THEREFORE, BE IT RESOLVED BY THE INTERCITY TRANSIT AUTHORITY, AS FOLLOWS:

Section 1.   Intercity Transit will act to protect the environment through compliance with environmental regulations and practices, and use of materials that do not adversely impact the natural environment. The Intercity Transit Authority adopts as agency policy:
   o Intercity Transit will fully comply with all applicable federal, state and local environmental laws and regulations and industry standards.
   o Intercity Transit will take corrective action or mitigation when actions causing a negative environmental impact occur or are unavoidable.
   o Intercity Transit will reduce waste, use recyclable materials, and buy materials with recycled content to the maximum extent possible.
   o Intercity Transit will strive to exceed compliance with environmental regulations by continual improvement of our environmental performance through cost-effective innovation and self-assessment.
   o Intercity Transit will increase the awareness of environmental issues among employees and the community, and will communicate progress and actions to Intercity Transit Authority members, elected officials, agency employees and the general public.
   o Intercity Transit will develop and document practices to prevent pollution.

Section 2.   The Intercity Transit Authority commits to incorporating Sustainability in all areas of its operations. The Intercity Transit Authority hereby adopts as agency policy:
   o The use of biodiesel or other renewable fuels to minimize the use of fossil fuels and reduce harmful emissions.
   o The purchase of vehicles with low emissions and maximum fuel efficiency.
   o The incorporation of "green" building practices into future capital projects and/or renovation of existing facilities.

- o The consideration of environmental impacts and protection and the reduction of energy usage in the design, construction and operation of all facilities and services.
- o The training of employees on environmental protection and sustainability practices.
- o The implementation of a program to minimize waste, to reuse and recycle products, and to preferentially purchase materials with recycled content.
- o The conservation of water at agency buildings and facilities
- o The formation of partnerships with our jurisdictions and other area agencies to reduce our community's reliance on single-occupancy automobiles and to take actions to reduce carbon emissions.

Section 3.   Intercity Transit will implement and maintain an ISO 14001-certified Environmental and Sustainability Management System. Intercity Transit will periodically review its environmental protection procedures and practices to ensure they are the most effective means of protecting the environment and implementing sustainable practices.

Section 4.   Intercity Transit will continue to expand its implementation of sustainable practices and be a model and leader in this area and will continue to strive to improve and expand excellent multi-modal public transit services.

ADOPTED this _____ day of _____, 2011

INTERCITY TRANSIT AUTHORITY   **ATTEST**

_____   _____
Sandra Romero, Chair   **Rhodetta Seward, Executive Services
Director/Clerk to the Authority**

APPROVED AS TO FORM

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Thomas R. Bjorgen
Legal Counsel

ISO 14001 Environmental management system requirements

4.1 General requirements

The organization shall establish, document, implement, maintain and continually improve an environmental management system in accordance with the requirements of this International Standard and determine how it will fulfill these requirements.

The organization shall define and document the scope of its environmental management system.

4.2 Environmental policy

Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it

    a) Is appropriate to the nature, scale and environmental impacts of its activities, products and services,

    b) Includes a commitment to continual improvement and prevention of pollution,

    c) Includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects,

    d) Provides the framework for setting and reviewing environmental objectives and targets,

    e) Is documented, implemented and maintained,

    f) Is communicated to all persons working for or on behalf of the organization, and

    g) Is available to the public.

4.3 Planning

4.3.1 Environmental aspects

The organization shall establish, implement and maintain a procedure(s)

    a) to identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services, and

b) To determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects).

The organization shall document this information and keep it up to date.

The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.

4.3.2 Legal and other requirements
The organization shall establish, implement and maintain a procedure(s)

a) To identify and have access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects, and

b) To determine how these requirements apply to its environmental aspects.

The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its environmental management system.

4.3.3 Objectives, targets and programme(s)

The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization.

The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement.

When establishing and reviewing its objectives and targets, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties.

The organization shall establish, implement and maintain a programme(s) for achieving its objectives and targets. Programme(s) shall include

a) Designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization, an

b) The means and time-frame by which they are to be achieved.

4.4 Implementation and operation

4.4.1 Resources, roles, responsibility and authority

Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

The organization's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for

a) Ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this International Standard,

b) Reporting to top management on the performance of the environmental management system for review, including recommendations for improvement.

4.4.2 Competence, training and awareness

The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organization is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.

The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.

The organization shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of

a) The importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system,

b) The significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,

c) Their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and

d) The potential consequences of departure from specified procedures.

4.4.3 Communication
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With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for

a) Internal communication among the various levels and functions of the organization,

b) Receiving, documenting and responding to relevant communication from external interested parties.

The organization shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication.

4.4.4 Documentation

The environmental management system documentation shall include

a) The environmental policy, objectives and targets,

b) Description of the scope of the environmental management system,

c) Description of the main elements of the environmental management system and their interaction, and reference to related documents,

d) Documents, including records, required by this International Standard, and

e) Documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.

4.4.5 Control of documents

Documents required by the environmental management system and by this International Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements given in 4.5.4.

The organization shall establish, implement and maintain a procedure(s) to

a) Approve documents for adequacy prior to issue,

b) Review and update as necessary and re-approve documents,

c) Ensure that changes and the current revision status of documents are identified,

d) Ensure that relevant versions of applicable documents are available at points of use,

e) ensure that documents remain legible and readily identifiable,

f) Ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled, and

g) Prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

4.4.6 Operational control

The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by

a) Establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets, and

b) Stipulating the operating criteria in the procedure(s), and

c) Establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the

organization and communicating applicable procedures and requirements to suppliers, including contractors.

4.4.7 Emergency preparedness and response

The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them.

The organization shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.

The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.

The organization shall also periodically test such procedures where practicable.

4.5 Checking

4.5.1 Monitoring and measurement
The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets.

The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.

4.5.2 Evaluation of compliance

4.5.2.1 Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements.

The organization shall keep records of the results of the periodic evaluations.

4.5.2.2 The organization shall evaluate compliance with other requirements to which it subscribes. The organization may wish to combine this evaluation with the evaluation of legal compliance referred to in 4.5.2.1 or to establish a separate procedure(s).

The organization shall keep records of the results of the periodic evaluations.

4.5.3 Nonconformity, corrective action and preventive action

The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity (ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for

a) Identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts,

b) Investigating nonconformity(ies), determining their cause(s) and taking actions in order to avoid their recurrence,

c) Evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence,

d) Recording the results of corrective action(s) and preventive action(s) taken, and

e) Reviewing the effectiveness of corrective action(s) and preventive action(s) taken.

Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered.

The organization shall ensure that any necessary changes are made to environmental management system documentation.

4.5.4 Control of records

The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved.

The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.

Records shall be and remain legible, identifiable and traceable.

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4.5.5 Internal audit

The organization shall ensure that internal audits of the environmental management system are conducted at planned intervals to

  a) determine whether the environmental management system

    1) Conforms to planned arrangements for environmental management including the requirements of this International Standard, and

    2) Has been properly implemented and is maintained, and

  b) Provide information on the results of audits to management.

Audit programme(s) shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits.

Audit procedure(s) shall be established, implemented and maintained that address

  — The responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records,

  — The determination of audit criteria, scope, frequency and methods.

Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.

4.6 Management review

Top management shall review the organization's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained.
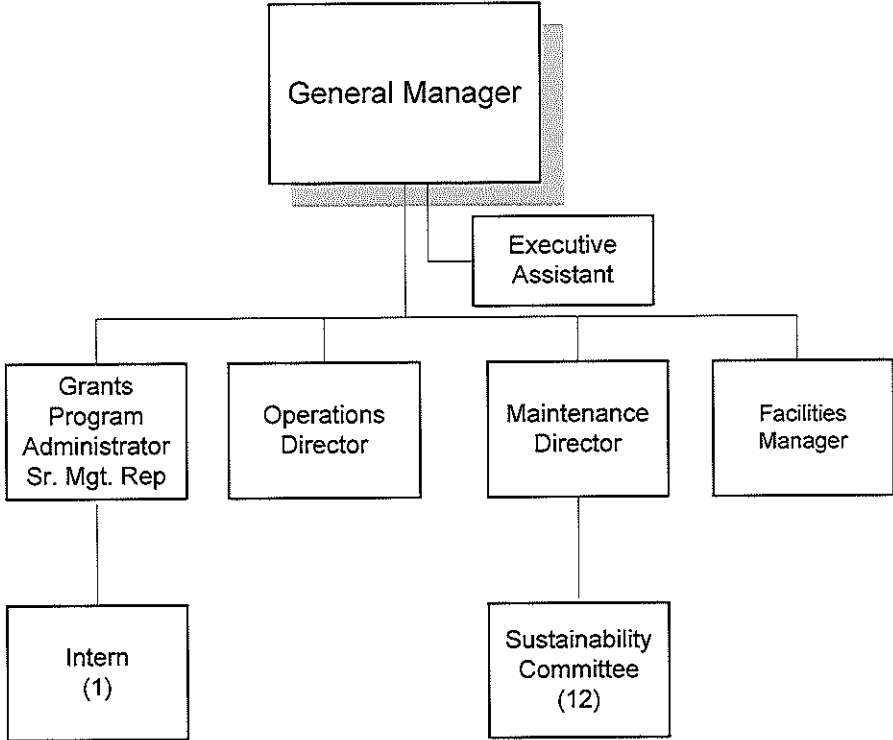
Input to management reviews shall include:

  a) Results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes,

b) Communication from external interested parties, including complaints,

c) The environmental performance of the organization,

d) The extent to which objectives and targets have been met,

e) Status of corrective and preventive actions,

f) Follow-up actions from previous management reviews,

g) Changing circumstances, including developments in legal and other

h) Recommendations for improvement.

The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.

Intercity Transit ESMS Team 2011

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As of April 2011

emsINSTITUTE

environmental & sustainability management system

ISO 14001
INTERNATIONAL STANDARD

In support of Presidential Executive Order # 13422, Virginia Tech is pleased to offer Round 3 of Environmental & Sustainability Management System transit training using the ISO 14001 standard. Previous transit agencies have reported:
- significant progress towards sustainability efforts
- dramatic cost reductions in operations
- enhanced level of confidence that operations are in compliance with federal and state environmental standards.

ISO 14001
INTERNATIONAL STANDARD

WHAT IS AN ems?

An environmental management system is a set of management processes and procedures that allows an organization to analyze, control and reduce the environmental impact of its activities, products and services and operate with greater efficiency and control. An EMS is appropriate for all kinds of organizations of varying sizes in public and private sectors.

The basic elements of an EMS include:
* Reviewing the organization's environmental goals
* Analyzing its environmental impacts and legal requirements
* Setting environmental objectives and targets to reduce environmental impacts and comply with legal requirements
* Establishing programs to meet these objectives and targets
* Monitoring and measuring progress in achieving the objectives
* Ensuring employees' environmental awareness and competence
* Reviewing progress of the EMS and making improvements

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environmental & sustainability management system

ISO 14001 · INTERNATIONAL STANDARD
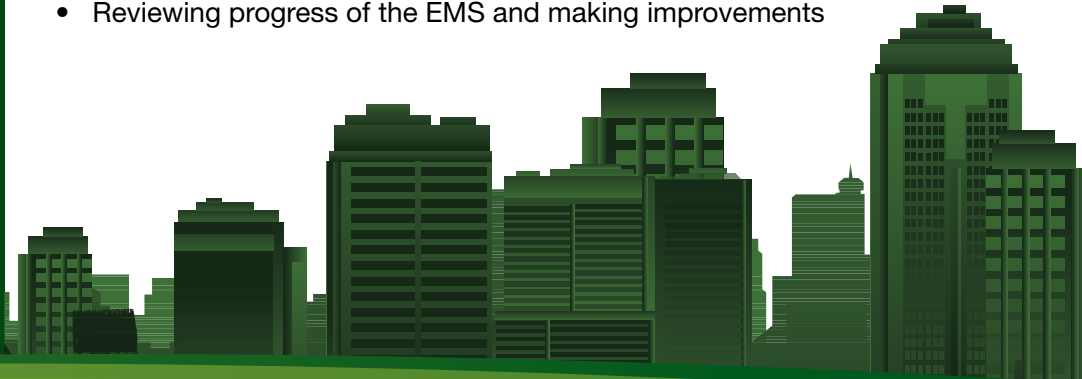
Green solutions for sustainable communities!

BASELINE ENVIRONMENTAL REVIEW
Virginia Tech EMS faculty travels to your facility for one day to observe environmental practices at your chosen facility. During the site visit, Virginia Tech will meet with your EMS team to prepare them for the upcoming EMS workshops. Virginia Tech provides environmental debrief at the completion of the day and provides a written assessment of our environmental observations within two weeks of our site visit.

TEAM CONFERENCE CALL
Mid-way between each workshop, Virginia Tech schedules a one hour conference call with your team to review progress and to offer coaching on homework assignments.

SENIOR MANAGEMENT CONFERENCE CALL
EMS Institute involves your senior manager in a conference call prior to Workshops 2, 3 and 4 to gauge team's progress. Involved senior management is critical to the sustainability of EMS implementation.

HOMEWORK REVIEW
Prior to the start of Workshops 2, 3 and 4, your team is scheduled for an individual one-hour session with one of the EMS classroom faculty to review the completion of the homework assignment. Faculty rotates the EMS teams they review each workshop.

WHAT ARE THE BENEFITS?

An EMS provides tools to help manage your organization's environmental impacts efficiently and to improve environmental stewardship across the entire organization. Organizations who have implemented an EMS have realized the following benefits:

• Cost savings
• Reduced risk
• Increased operational efficiency
• Positive external relations and public image
• Improved communication
• Greater employee stewardship
• Shared environmental solutions
• Improved public relations

"The benefits have been considerable. We realized direct savings of over $1.3 million in our first full year of implementation. Employees at every level work cleaner, more efficiently, and less wastefully."

– Jerry Benson
Chief Operating Officer
Utah Transit Authority

WORKSHOP 1 | February 7–10, 2011

Your four-member EMS team is taught the EMS development process, compliance management issues, and ISO 14001 EMS requirements. Virginia Tech simplifies the steps of EMS implementation; the work practices of prior successful teams and the role that employees back home play in EMS implementation.

The team defines the facility's fenceline and analyses the baseline environmental review conducted by Virginia Tech on its earlier visit. The ISO 14001 elements taught and practiced include:

• Environmental Policy
• Environmental Aspects
• Legal and Other Requirements
• Resources, Roles, Responsibility and Authority
• Control of Documents

EMS team is provided multiple opportunities during workshop to begin an "action plan" for implementation of the homework assignment to be completed prior to Workshop 2.

WORKSHOP 2 | May 23–26, 2011

All EMS teams share completed homework assignments from Workshop 1 with other teams. Additionally, each team has access to Virginia Tech EMS library archives to maximize information sharing. During the second workshop, your team receives intensive training on the following ISO 14001 elements:

• Objectives, Targets and Programs
• EMS Documentation
• Operational Control
• Emergency Preparedness and Response

EMS team is provided multiple opportunities during this workshop to begin an "action plan" for implementation of the homework assignment to be completed prior to Workshop 3.

workshop 3 | August 22–25, 2011

As a result of completing homework from Workshop 2, your team identifies actual and potential activities associated with their significant environmental aspects and develops operational controls, or SOPs. EMS team sets objectives and targets to improve environmental performance; then develops environmental management programs to accomplish each objective and target. During Workshop 3 your team works on the following ISO 14001 elements:

• Competence, Training and Awareness
• Communication
• Monitoring and Measurement
• Management Review

Homework prior to Workshop 4 is to review and update emergency response plans, develop training schedules to identify specific job related competency gaps, prepare a communication strategy, and begin formalizing the management review process.

workshop 4 | November 1–4, 2011

The team determines appropriate monitoring and measurement strategies to gauge the performance of the EMS, learns skills for conducting required internal audits, begins to develop procedures for handling EMS non-conformances and control of records, and initiates management review procedures. Workshop 4 addresses the following ISO 14001 elements:

• Evaluation of Compliance
• Nonconformity, Corrective and Preventive Action
• Control of Records
• Internal Audit

You will then develop a schedule for achieving full implementation of the EMS, and select tentative dates for the EMS follow-up audit.

ONE DAY TECHNICAL SITE VISITS
Virginia Tech offers a one-day technical site visit to be used at the discretion of your locality. One Virginia Tech lead EMS instructor is available to train employees, review documentation, or the day may be used for an EMS Audit Gap Assessment.

ISO 14001 EMS AUDIT
After completion of Workshop 4 and full implementation of the EMS, Virginia Tech conducts an on-site ISO 14001 EMS audit at the facility. During this two day audit, each EMS element is evaluated to determine if it is compliant with the ISO 14001 requirements.

PEER center

Virginia Tech is an EMS Local Resource Center endorsed by US EPA to assist public and private entities in using EMS to implement green initiatives and sustainable practices such as:

• Sustained environmental compliance
• Sustainable purchasing
• Green buildings
• Energy efficiencies
• Pollution prevention and toxics reduction.

VirginiaTech
Invent the Future

For More Information about the institute and these workshops, contact **Bob Herbert**.
EMAIL: **bherbert@vt.edu**
PHONE: **(540) 853-8275**
URL: **www.cota.vt.edu/ems/fta/**

Participants attend the EMS Institute, comprised of four workshops, at the Hotel Roanoke & Conference Center (shown left) in Roanoke, Virginia.