

State of Vermont
Agency Of Transportation Operations Division



Employee Safety Manual

Safety Begins Here

Revised 2/1/2014

Introduction

An effective safety program requires a team effort, and the Vermont Agency of Transportation Operations section has a deep interest in the safety and well-being of its employees.

An effective safety program prevents accidents and reduces the severity of otherwise disabling or fatal injuries.

Safety is everyone's responsibility: managers, supervisors, employees. This manual will assist us all in performing our jobs safely.

If you have any questions or suggestions about safety, talk to your supervisors or contact the Agency of Transportation health and safety manager. It is our goal to make your career with the Agency Of Transportation gratifying and accident free.

A handwritten signature in black ink, appearing to read "B. Searles", is written over a horizontal line.

Brian R. Searles

Secretary, Vermont Agency of Transportation

February, 2014

Safety Manual Receipt

I, _____, acknowledge receipt of this copy of the
(Print Name)

Vermont Agency of Transportation Operations Division Safety Manual. I understand that it is my duty to read, study and abide by these safety rules and work procedures and other employer policies and procedures as they apply to the duties that I shall perform for VTrans.

Signature of Employee

Date

District or Region

Supervisor

1.0 GENERAL INFORMATION

1.1 Purpose

- a. The purpose of this manual is to assist in creating a work environment that will reduce accidents, injuries, illnesses, and human suffering of employees and financial losses to the State of Vermont.
- b. Some sections of this Operations safety manual can be applied to other sections/divisions of the Vermont Agency of Transportation. Please contact the AOT safety and health manager with any questions at 802-595-1636

1.2 Scope

- a. The responsibility for prevention of accidents rests with managers, supervisors, and all employees.
- b. Compliance with this manual is the responsibility of each Operations employee of the Vermont Agency of Transportation. This manual is not intended as a complete manual on safety and health, but as a guide. Failure to include some safety and health standards does not give license to ignore such standards. For specific standards applicable to your division, section or operation, contact the Agency Safety Manager.
- c. It is the intent of the Vermont Agency of Transportation to make reasonable efforts to comply with Occupational Safety and Health laws and other statutory requirements as found in agreements between the State of Vermont and the Vermont State Employees Association.

1.3 Distribution

- a. All Operations employees shall be provided a copy of this manual. All employees subsequently employed shall be given a copy of the manual as part of “New Employee Training” and shall be required to read it. Copies can be obtained of the Vt. Agency of Transportation’s Operations safety SharePoint site.

1.4 Responsibility of Supervisory Personnel

- a. The term “supervisor” refers to all employees who have supervisory authority over other employees.
- b. The supervisor is the key person in the safety and health program and must incorporate accident prevention in all daily activities and in all contacts with employees. The supervisor is as responsible for the safety of the employees working under his/her direction as for the production of work accomplished by them.
- c. Each supervisor is responsible for ensuring that each current and new employee has been trained, instructed and or judged competent to properly and safely perform the work tasks and operate the tools, equipment, machines and vehicles used in their job.
- d. Supervisors must see that all applicable safety and health measures are complied with.
- e. No job is so important, and no service so urgent, that time cannot be taken to perform the work in a safe manner.

1.5 Responsibilities of All Employees

a. It is the duty of all employees to report immediately to their supervisor all unsafe conditions, practices, or operations caused by the following:

1. Any condition of a motor vehicle, equipment, facility or property owned, leased, or operated by the Agency or others, which condition may jeopardize the safety or health of employees or the public.
2. Any practice or operation which may jeopardize the safety or health of employees or the public.
3. All employees shall act with courtesy at all times, and shall conduct themselves as representatives of the Vermont Agency of Transportation.
4. All employees are expected to report to work wearing clothing and footwear suitable for the season, weather, and type of work performed. Employees shall wear appropriate attire above the waist. Nothing less than a manufactured sleeveless design. Long sleeves may be required by the workers task.
5. Field personnel shall wear ankle-length trousers or coveralls at all times. Footwear should be worn that provides protection and support. Laced work boots are recommended. Sneakers are not recommended, and may not be allowed. Employees in certain classes or performing or exposed to certain activities are required to wear protective footwear. Temporary employees hired for positions that require protective footwear must provide their own protective footwear as a condition of employment.
6. It is expected that maintenance employees will wear clothing, such as High Visibility t-shirts, sweat shirts, hats, and caps for flaggers or winter toques. High visibility vests will be required when necessary.
7. Clothing and footwear should provide the comfort, protection, and appearance necessary to perform a job safely and effectively.

1.6 Communications:

- a. Effective communicating and listening both begin with language.
- b. Are you proactive or reactive in your language? Between stimulus and response, you have the freedom to choose. This is your greatest power. One of the most important things you choose is what you say.
- c. Your language is a good indicator of how you see yourself. A proactive person uses proactive language—I can, I will, I prefer, etc. A reactive person uses reactive language— I can't, I must, if only.
- d. Reactive people believe they are not responsible for what they say—they have no choice. Think of a situation in your life during the last week when you responded in a reactive way. Write down and describe what you said.
- e. Now think of a proactive response you might have used in the same situation. Write it down, just for practice.

- f. Make it a point to really listen to your language during the next week. Is your language more proactive or reactive? Is your language different between work and home life?

2.0 GENERAL ACCIDENT PROVISIONS

- Notify the Transportation Occupational Health and Safety Manager **immediately** who can be reached by telephone at 802-595-1636.
- **NOTE:** The Agency of Transportation Occupational Health and Safety Manager should be notified immediately of **all** serious injuries requiring medical attention or hospitalization.
- After the initial contact with the Safety Manager, the supervisor must complete a Department of Labor and Industry Workers Compensation Form 4 and submit it along with the First Report of Injury.

2.1 Reporting Accidents – General

a. Notify your supervisor **immediately** when:

1. You suffer an injury or illness arising from your employment.
2. You are involved in a vehicle or equipment accident while on State business.
3. You are involved in an accident resulting in damage to any Agency or public property or resulting in any personal injury.
4. You are involved in an accident while operating a privately owned motor vehicle or piece of equipment on official State business.
5. **Whenever there is an accident or injury that involves Agency personnel directly – or could in any way indicate involvement of Agency personnel - such as Operations (Maintenance, Traffic or Sign) or Program Development personnel (Construction or Survey), an oral report needs to be made to the Agency’s Occupational Health and Safety Manager (802-595-1636) ASAP so that he/she can make a determination of what level investigation is appropriate and should take place immediately. If the Safety Manager is unavailable, please contact either Ops safety technicians at 802-498-4979(South) or 802-279-9120 (North). All field personnel should have the applicable contact information available. With proper notification, prompt action can be taken to prevent reoccurrence, and where applicable, limit liability.**

2.2 Reporting a Personal Injury or Illness

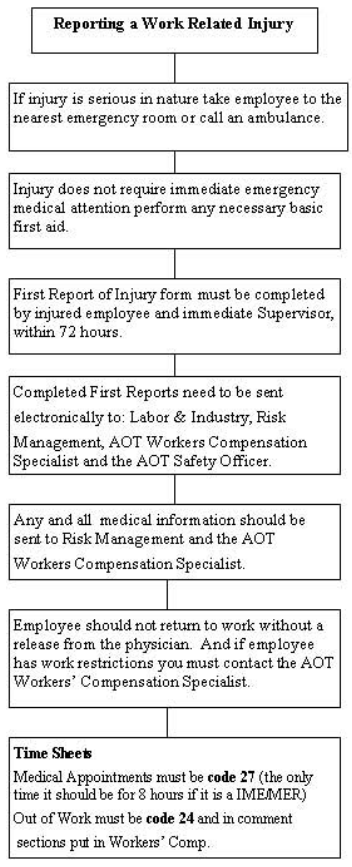
- a. Any injury, illness, or loss of consciousness associated with work, regardless of whether or not any time was lost or medical attention was required, must be reported.
- b. The Employer’s First Report of Injury (F.R.I.) Form must be completed by the injured employee’s supervisor. The Employer’s First Report of Injury form must be submitted through the District or

Division Office to the Agency of Transportation’s Human Resources Office Claims Section within 72 hours of the accident.

c. Any and all resulting bills must be sent to the Agency of Transportation’s Human Resources office Claims Section for processing.

d. Workers' Compensation Guidelines for Supervisors and Managers

First Step in Reporting An Injury/Illness



This explains what to do if someone has an Injury/Illness associated with work, regardless of whether or not any time was lost or medical attention was required.

If the injury requires immediate attention please take appropriate action. If the injury is **serious in nature**, take the employee to the nearest emergency room or call an ambulance.

If the injury does not require immediate emergency medical attention, perform any necessary basic first aid.

Ensure that the immediate supervisor has been informed of the injury/illness. Then the claimant should complete intake with medical case manager by calling 828-2899 to report the incident.

A First Report of Injury form must be completed by the injured employee if available and the immediate Supervisor, **within 72 hours**. These reports must be submitted through the District/Division Office.

The Division Offices must submit the first ROI form electronically to Labor & Industry, Risk Management, AOT Workers Compensation Specialist and the AOT Safety Officer. If you do not have the electronic form please go to the following website: www.state.vt.us/labind/wcomp/wcforms.htm.

Any and all medical documentation must be faxed to Risk Management and the AOT Workers Compensation Specialist. All medical bills must be sent to Risk Management.

Employee is able to return to work with Work Restrictions

If an employee is able to return to work with work restrictions you should receive a medical note from the employee’s physician. This note should have a list of work restrictions. You should review this documentation and fax a copy to the Workers Compensation Specialist within AOT Human Resources so that you may discuss whether or not you can accommodate the employee. If you are able to accommodate the employee within your Division you will need to do a Modified Duty Agreement with the employee. If you are not sure how to do a Modified Duty Agreement you may contact the Workers Compensation Specialist.

Reporting Leave on Time Reports

If an employee is unable to work due to a work related injury you must code their **time sheet 24** and put in the hours missed.

This will enable the employee to receive a paycheck for two-thirds of their pay. If the employee wants to collect their full pay they have the option of using their leave accruals. You will need to code their time sheet as **code 24** and then note in the comment section supplement with leave accruals.

If an employee is attending a doctor’s appointment due to a work related injury you will need to code their **time under code 27** and put in the hours missed, then note in the comment section Workers’ Comp Medical Appointment. The employee can charge the appointment time and the travel time to and from the appointment to

work or home. Most appointments will not take a full 8 hour day. The exception might be an Independent Medical Exam (IME) or a Fitness for Duty Exam (FFD).

All time sheets with these codes must be faxed to Risk Management by Monday before noon and to the Workers Compensation Specialist in AOT-Human Resources

Employee Out Due to Injury/Illness

If an employee is unable to return to work due to a work related injury/illness the employee must supply you and the Workers Compensation Specialist with a medical note that explains the employee can not return to work. This note must have an expected return date on it. If it does not you may ask the employee to contact his/her physician and ask them to supply you with an expected return date.

Other Supervisors Responsibilities

The Supervisor has the right to contact the employee to keep the employee informed of current operations at the worksite. The supervisor cannot discuss the medical status of the employee with other employees. Any questions regarding the medical status of an employee should be addressed to the AOT Human Resources, Workers' Compensation Specialist.

The Supervisor may call the employee to attend meetings, trainings, and any work related activities provided it does not interfere with the employees work restrictions.

While participating in such work-related activity the employee's time will be reported as "01".

If the Supervisor or the employee has questions regarding Workers' Compensation they should call the Workers' Compensation Specialist in AOT-Human Resources.

Workers' Compensation



AOT Workers Compensation Specialist

Penny Brown 828-4602

AOT Safety Officer

Rob Gentle 828-2585

Risk Management Division

828-2899

Penny Brown, Human Resource Specialist

AOT- Office of Human Resources

One National Life Drive, Drawer 33

Montpelier, VT 05633-5001

phone (802) 828-4602, fax (802) 828-2894, or

penny.brown@state.vt.us

Guidelines for Supervisors and Managers

**Vermont Agency of
Transportation
Human Resource Office**

(802) 828-2625

2.3 Reporting a Fatality or Catastrophe

- a. In addition to section 2.2, fatalities or incidents resulting in the hospitalization of any employees arising out of a single incident must be reported to the VTrans Occupational Health and Safety Program Manager immediately.
- b. After the initial contact with the Safety Program Manager, the supervisor must complete a Department of Labor & Industry Workers Compensation Form & submit it along with the First Report of Injury.

2.4 Reporting Motor Vehicle Accidents

- a. All accidents involving Agency of Transportation vehicles or equipment must be reported to your immediate supervisor.
- b. All accidents involving privately owned vehicles and equipment operating on official State business must be reported.
- c. **Note:** The reporting requirements for privately-owned vehicles and equipment are in addition to any reporting required, such as by an individual's insurance carrier.

- d. In all cases other than the one exception noted below, accidents must be reported on the standard Department of Motor Vehicles accident report form (TA-VA-04) and the Risk Management Division Automobile Accident or Loss Notice form.
- e. The Department of Motor Vehicles accident report and the Risk Management Automobile Accident or Loss Notice form (five copies) are to be sent as soon as possible to the Central Garage. Additionally, if the total damage to all property involved is \$1,000.00 or more, or there are any injuries involved, the original copy must be sent to the Department of Motor Vehicles within 72 hours of the accident.

Exception: The only time the Department of Motor Vehicles accident report and the Risk Management Division Automobile Accident or Loss Notice form are not required is when only a State vehicle is involved and only Agency of Transportation property is damaged; i.e., no other property, vehicles and no personal injuries are involved and the damage is less than \$1000.00. In these cases only an internal accident notification memo for Central Garage owned equipment completed by the operator sent to Central Garage Fleet Manager within 72 hours.

2.5 Emergency Phone Numbers

a. The Emergency Phone Numbers shall be posted in every District building.

EMERGENCY PHONE NUMBERS

PHYSICIAN 911 or
HOSPITAL 911 or _____
AMBULANCE 911 or
FIRE 911 or _____
POLICE 911 or
DIG SAFE 1-888-344-7233 POWER CO. _____ LOC. CODE _____
HAZ.MAT. COORD. 229-8740 (cell phone) 802-461-4666(pager)
SAFETY PROG. MAN. 595-1636 (cell phone)
ALL HIGHWAY SPILLS 1-800-641-5005

IN THE EVENT OF A SPILL OF HAZARDOUS SUBSTANCES

In the case of a spill of two (2) gallons or more of any hazardous substance, or if any hazardous substance reaches a waterway, you must follow these instructions:

CONFIRMED RELEASE: Within two hours of the release, report it to:

Andy Shively, Operations Div. 802- 250-4666 (pager), 229-8740 (cell phone)

Mike McAllister, Operations Div. 802-250-4666 (pager), 802-498-7095 (cell phone)

If neither is available, call the Agency of Natural Resources at one of these numbers:

Working Hours (802) 828-1138 (ANR)

Other Times: 800-641-5005 or 244-8721 (PUBLIC SAFETY)

SUSPECTED RELEASE: Within 24 hours of any suspected release, report it to Andy Shively, Mike or ANR at the numbers above.

SPILL CONTRACTOR 24/7, ENVIRONMENTAL PRODUCTS AND SERVICES, 1-(800) 977-4559

3.0 OFFICE SAFETY

3.1 Office Furniture and Equipment

- a. Office furniture, desks, file cabinets, and electrical equipment should be placed in a manner so as to make safe and efficient use of a room's overhead lighting, electrical outlets, telephones, and passageways. The furniture and equipment shall only be rearranged under the direction of a supervisor.
- b. The weight of filed material in file cabinets must be distributed evenly. Load file cabinet from the bottom to the top. Open only one drawer at a time to avoid tipping the cabinet. All doors and drawers must be closed when not in use.

3.2 Office Ergonomics and Cumulative Trauma Disorders (CTD's)

- a. Ergonomics is the science that seeks to adapt tasks and tools to fit the person. The results of poor ergonomics can lead to cumulative trauma disorders (CTD's). Cumulative trauma disorders are a group of disorders characterized by wear and tear on the tendons, muscles and sensitive nerve tissue which are caused by repetitive motions and overexertion. Work station design and adjustability is the key to a safe, healthy and productive work environment. To prevent CTD's contact the Safety Manager (802-595-1636) for a work station review.

3.3 Aisles, Floors, Stairs

- a. Adequate aisle width (28") must be provided for unobstructed, two-way traffic to all parts of the office. Objects must not be left in aisles or places where they could be tripped over.
- b. Any electrical or telephone cords that could be a tripping hazard should be made aware of and reported to a supervisor for corrective action.
- c. Entryways may become slippery when wet and caution should be used when walking and the condition reported to a supervisor.

d) Handrails must be used when going up or down stairs. All handrails must comply with OSHA standard [1910.23\(e\)\(2\)](#)

“A stair railing shall be of construction similar to a standard railing but the vertical height shall be not more than 34 inches or less than 30 inches from upper surface of top rail to surface of tread in line with face of riser at forward edge of tread. Guarding of floor openings or sides of a platform are 42 in to prevent falling. Stair railings are lower for ease of travel.”

4.0 PERSONAL SAFETY

4.1 Alcohol and Other Drugs

- a. Alcoholic beverages and non-prescribed regulated drugs of any nature are prohibited on property owned, leased, or under the control of the State of Vermont. It is prohibited to transport alcoholic beverages and non-prescribed regulated drugs in any Agency vehicle.

- b. Employees shall not consume alcoholic beverages or use non-prescribed drugs during working hours, and nor shall they report to work under the influence of these substances. Any employee taking a prescribed drug shall notify his or her supervisor as to whether the medication may affect the ability of the employee to drive or perform other duties safely.
- c. An employee will not be permitted to work if impaired or in a condition which the employee(s) supervisor believes would jeopardize the safety of that employee or the safety of any other person(s) or cause possible damage to any property or equipment.

4.2 Drug-Free Workplace Policy

a. Employees of the State of Vermont must comply with the current State of Vermont Drug-Free Workplace Policy. The following is a summary of that policy.

1. It is the policy of the State of Vermont to provide a drug-free workplace for its employees. State employees shall not engage in the unlawful manufacture, distribution, dispensation, possession, or use of controlled substances (drugs) on the job or on any State work site.
2. Employees of the State of Vermont are required, as a condition of their employment, to abide by the terms and conditions of this policy.
3. Any employee convicted of a violation of any criminal drug statute, occurring in the workplace, will be required to notify his or her appointing authority within five (5) days after conviction.
4. Appropriate disciplinary and/or corrective action should be taken by the employer within thirty (30) days after receiving notice of the conviction, but this must not be construed to limit the authority to take such action thereafter.
5. Employees are hereby notified that appropriate disciplinary action, up to and including dismissal, will be imposed for: (1) the unlawful manufacture, distribution, dispensation, possession, or use of controlled substances in any State workplace, or while on the job; (2) conviction of a violation of any criminal drug statute occurring in the workplace, or the failure to report any such conviction as required; or (3) other violation of this policy. This policy does not preclude the State from taking appropriate disciplinary action, up to and including dismissal, for drug-related offenses that may occur off the job.
6. Each employee of the State of Vermont must make every effort to maintain a drug-free workplace and uphold and promote this policy.

4.3 Controlled Substances and Alcohol Use and Testing

- a. Agency of Transportation employees required to possess a Commercial Drivers License are subject to all the requirements of 49 CFR, Parts 382, et. al., Controlled Substances and Alcohol Use and Testing. Each employee shall receive training, educational materials and the State of Vermont Alcohol and Controlled Substance Testing Policy.

4.4 Behavior:

a. Employees must not engage in actions which could endanger others or themselves and must not be negligent in duties which could result in injury to themselves or others. Roughhousing, horseplay, or fighting on the job is not permitted.

5.0 VEHICLE AND EQUIPMENT SAFETY

5.1 Authorized Use of State-Owned Vehicles

a. It is the policy of the Vermont Agency of Transportation that State-owned vehicles are for official use only and will not be operated for personal business. Only State employees and State officials who hold valid driver licenses and have successfully completed such safe driving course as recommended by the Risk Management Division of the Department of Buildings and General Services are authorized to operate State-owned vehicles. State, Federal and Town officials/employees, private citizens on official State business and officials/employees of other states visiting Vermont on official business may be transported in State-owned vehicles at the discretion of the operating Agency/Department. In connection with speaking engagements in Vermont before civic and other local groups where an individual other than an Agency/Department official has been invited to attend, the official may transport this individual in a State-owned vehicle. Except under this circumstance, transportation of other than State employees/officials requires authorization in writing from the Secretary of the Agency of Administration.

5.2 Vehicle and Equipment Operation

a. **Note: Defensive Driving Course (DDC-4)**

b. Vehicles and equipment must be operated in accordance with the motor vehicle laws of Vermont and Agency of Transportation policies. Operators are responsible for the vehicle, passengers, cargo, and their actions. With the exception of sworn law enforcement officers, no special privileges are extended to any employee of the Agency of Transportation. Careless and/or negligent operation of State-owned vehicles or equipment will not be tolerated and any violations are the employee's personal responsibility. All personnel must ride in approved seating and use seat belts. Riding on running boards, tailgates, steps, loader buckets, or other unapproved locations is prohibited. Smoking and/or Tobacco use inside state vehicles is strictly prohibited.

c. In accordance with the Governor's Fleet Safety Executive Order No. 04-93, the National Safety Council, Defensive Driving Course (DDC-4) is required for:

1. All employees who operate State-owned vehicles.
2. All employees who operate their private vehicles for greater than 2000 reimbursable miles annually.

d. Important Note: Specifically exempt from the DDC-4 requirement are employees who have taken a National Safety Council Defensive Driving Course within the past ten (10) years.

e. The National Safety Council's Defensive Driving Course is an internationally accepted accident prevention program for improved driving performance.

5.3 Vehicle and Equipment Inspection

- a. All operators of State-owned vehicles/equipment will perform a daily pre-trip and post-trip inspection of the vehicle/equipment which they are operating. All operators must review the previous post-trip inspection report, in addition to performing a pre-trip inspection and be satisfied that the vehicle is safe to operate.
- b. The “Daily and Weekly Equipment Operator Inspection Report”, TA-160, will be used to record the results of the post-trip inspection. A copy of the current TA- 160 as well as a copy of the previous week’s TA-160 will be kept in the vehicle/equipment at all times.
- c. At the end of each work week, the TA-160 will be turned in to your supervisor who will forward it to the District Office. The TA-160 will be reviewed by the Transportation Regional Maintenance Supervisor to establish any repair schedules for the week. The original TA-160 shall be forwarded to the Central Garage.
- d. **Note: The Department of Motor Vehicles, some Divisions and Sections may have alternate approved procedures for reporting deficiencies to the Central Garage for vehicles that do not require a CDL.**

5.4 Notification of Equipment Problems

- a. Whenever an operator becomes aware of a vehicle/equipment problem, it must be noted by the operator on the current “Daily and Weekly Equipment Operator Inspection Report”, TA-160. If the operator thinks it is unsafe or will lead to a major problem if not immediately corrected, the operator must immediately notify his or her supervisor. The supervisor shall consult with a mechanic before continued operation.
- b. All vehicles and equipment will be deadline when they fail to comply with Federal and State safety regulations. A vehicle or piece of equipment may be dead lined by either a mechanic or a supervisor. In unusual circumstances when the supervisor or mechanic cannot be reached, the operator may deadline the unit, but must report it to his or her supervisor at the first opportunity.
- c. When deadline, the unit will be tagged in a very visible location (normally on the steering wheel) with a red **DANGER DO NOT OPERATE** tag which will be dated and signed by the individual dead-lining the unit. The keys must be removed from the equipment. The tag will only be removed by the mechanic who has either repaired the problem(s) or otherwise determined the unit is safe to operate.

5.5 EXCEPTIONS DURING EMERGENCY SITUATIONS (PRIMARILY SNOW STORMS)

- a. If there is a minor infraction of regulations which will not affect the safe operation of the vehicle and if the repair cannot be made quickly, priority will be given to our mission of providing safe roads and the vehicle may be operated. For example, if the truck has a headlight out but the plow lights are working and the plow is on the vehicle, it is safe to operate. If the marker lights are out, but the strobes are working, the vehicle is highly visible and safe.
- b. Directional lights out, brakes out of adjustment, etc., would still deadline the vehicle. The exception only addresses minor infractions which should have no effect on the operation of the

vehicle and the safety of the traveling public. Repairs to those defects should be made right after the storm.

5.6 Vehicle and Equipment Maintenance

- a. Most operators, as part of their job, are required to perform operator-maintenance servicing of the vehicle or equipment as part of the preventative-maintenance program to keep the vehicle equipment in a safe and reliable operating condition. Information on the service intervals and lubricants used is contained in the “Equipment Service Record”; better known as the “Green Book” for the vehicle or equipment.
- b. Operators not required to perform operator maintenance will notify the Central Garage Motor Shop Supervisor or the local Garage Area Mechanic when the vehicle or equipment is due for servicing. Not being required to perform operator maintenance does NOT exempt the operator from being responsible for the operator inspection and ensuring that the engine oil and coolant are maintained at the proper levels.

5.7 Vehicle and Equipment Safety Features

Operators and passengers on State business are required by law to use their seat belts at all times. Vehicles shall not move until the operator and all occupants have their seat belts fastened.

- a. **Grab handles** are provided on all vehicles and equipment which a person has to climb to get into. Only the “Three Point” entry/exit method will be used.
- b. **Ladders** are provided on dump truck bodies to permit climbing up on or into the body. **Do Not climb up on the dual tires.**
- c. **Wing safety chains** are provided to secure the wing in the carry position. Wings shall be chained when the truck is parked or whenever use is not anticipated. When raising the wing and while fastening the safety chain, make sure you and other personnel are clear of the area.
- d. Whenever working under a raised dump body, make sure the dump body support brace or other approved engineered support equipment is in place.
- e. Safety screens should be provided on all vehicles which normally carry loose equipment or material which could fly in the event of a sudden stop or accident and hit the operator or passenger. Loose objects that could be deadly projectiles will not be carried in the passenger compartment of a vehicle unless secured or restricted in some manner such as by a screen or net.
- f. Avoid backing accidents by avoiding backing whenever you can. Reverse alarms are provided on all vehicles and equipment with limited visibility to the rear, however, do not rely solely on the back up alarm. Make sure the backup alarm is working and/or have a helper guide you whenever backing.
- g. If the back-up alarm is not working the vehicle is “dead lined” Only in extreme emergencies shall the equipment be used and a ground guide is required for all backing operations.

h. Vehicle and Equipment Exhaust Ventilation

1. Other than for moving vehicles and equipment in and out, vehicles and equipment will not be run in garages unless proper ventilation is provided. The exhaust fans should also be used when starting the vehicles to move them out of a garage.

k. Divided Highway Crossovers

1. The making of a “U” turn at any point on limited access highways is prohibited except when posted otherwise by authority of the Traffic Committee. Excepted from these provisions are:
 - a. Police vehicles;
 - b. Ambulance, fire engines and other vehicles performing official emergency or authorized functions;
 - c. Authorized construction, maintenance, and survey vehicles;
 - d. Repair and towing vehicles when responding to a request made by either a law enforcement officer or member of the public;
 - e. The foregoing exceptions shall be for the sole purpose of crossing the median to a roadway carrying traffic bound in the opposite direction, and no excepted vehicles shall make crossing in such a manner as to create a hazard to other vehicles.
2. “Authorized construction, maintenance and survey vehicles” are those which are:
 - a. State-owned or leased and operated by employees of the Operations and Program Development Divisions in the course of construction, repair and maintenance of the highways and appurtenances and includes those vehicles providing assistance to law enforcement activity such as management of emergencies and the containment and recovery of hazardous waste.
 - b. State-owned or leased which are engaged in survey or engineering in support of construction and/or maintenance activities which would include planning activity.
 - c. Privately-owned and operated by employees of firms or businesses under contract (contractors) to the Agency of Transportation for the purposes of construction, repair or maintenance of the highways or engaged in survey or engineering in support of construction and maintenance activities and registered and operated in accordance with all applicable laws and regulations. In accordance with a decision of the Traffic Committee, vehicles owned and operated by commercial trash haulers servicing rest areas are not included as engaged in maintenance of the highway.
 - d. Privately-owned and operated by employees of the Agency of Transportation in the course of their duties in the construction, repair and maintenance of highways.

5.8 Identification of Vehicles

- a. State-owned or leased vehicles will bear permanent seals or logos and will have installed amber warning lights.

- b. Vehicles owned or leased by contractors will be identified by permanent or temporary signs and/or logos in easily visible locations and will have installed amber warning lights.
- c. Privately-owned vehicles operated by employees of contractors or employees of the Vermont Agency of Transportation will have permanently or temporarily installed, roof mounted, amber warning lights.
 - 1. Contractor's employees will have a permanent sign or logo in an easily visible location or will have displayed in the left or right side window a metal window placard with the company name or logo.
 - 2. AOT employees will have displayed in the left/right side window a metal window placard.
- d. **NOTE:** There are presently two window placard designs in use by Agency employees. One is approximately six to nine inches wide and five to eight inches tall. It has reflectorized white sheeting and has green letters AOT four to six inches tall. The other is of the same size but has a green field above the AOT letters with the word VERMONT within the field.
 - 1. Employees of consultant inspection firms working with AOT construction resident engineers and/or inspectors may have insignia as in **3a.** or **3b.** above.

5.9 PROCEDURE FOR USE BY AUTHORIZED VEHICLES:

- a. **Law Enforcement Vehicles** will follow the procedures set forth by the head of the Agency or Force by which they are employed.
- b. **Other Emergency Service Vehicles** will follow the procedures set forth by the Head of the Agency or Force by which they are employed.
- c. **Repair and Towing Vehicles** will activate their installed amber warning lights and when proceeding to repair or recover a damaged or inoperative vehicle will, unless directed otherwise by a law enforcement officer, pull to the right shoulder and stop, allowing any on-coming traffic to clear before entering the U-Turn. When in the U-Turn, repair or towing vehicle will then yield the right of way and enter the other lane only when the way is clear. When proceeding with a vehicle in tow, the amber warning lights shall be operating and the use of the U-Turn shall be made with due care so as not to endanger other users of the highway.
- d. **Authorized Construction, Maintenance and Survey Vehicles** will comply with the following procedures:
 - 1. The operator shall turn on the vehicle's right turn directional signal well in advance of the crossover, reduce speed, and gradually drive to the extreme right onto the so-called breakdown lane (*shoulder*).
 - 2. The operator shall stop the vehicle opposite the crossover, turn on the vehicle's left turn directional signal, wait until he/she is absolutely positive there is no traffic approaching from the rear that would interfere with a safe crossing; only then shall the operator attempt to drive over into the crossover.

3. The operator shall stop the vehicle on the crossover without any projection of the vehicle or equipment into either lane of the highway.
4. The operator shall wait until he/she is absolutely positive there is no approaching traffic that would interfere with the safe crossing.
5. The operator shall then cross over onto the so-called breakdown lane, turning on the vehicle's right turn directional signal. After completing this operation, the operator shall turn on the vehicle's left turn directional signal, increase the vehicle's speed, and safely join the flow of traffic.

Exception

6. Vehicles operating in the passing lane (left) to plow, salt, or sand the passing (left) lane shall turn on left-turn directional signal, allowing adequate notice to motorists that may be following, slow down slowly, and make the turn into the crossover. From that point the procedure shall be the same as a vehicle operating in the right (traveling) lane except that he/she shall proceed from the crossover directly to the left (passing) lane without crossing breakdown (shoulder) lane.
7. **NOTE:** No authorized vehicle should use a U-Turn when, within 3 miles, an interchange is available except:
 - A. Construction and maintenance equipment during the performance of construction and maintenance activity; and
 - B. Plow trucks.

5.10 Daytime Use of Headlights

- a. Daytime use of headlights has been conclusively proven to be an effective means of reducing vehicle accidents by increasing the conspicuousness of a vehicle; making it more visible to other drivers and pedestrians.
- b. Many of our newer Agency of Transportation vehicles are now equipped with automatic daytime running lights as a safety feature.
- c. All Agency of Transportation vehicles and equipment shall be operated with the headlights on low beam under the following daytime conditions:
 1. Inclement weather; rain, snow, etc.;
 2. Poor visibility; fog, haze, heavy overcast;
 3. Until one hour after sunrise;
 4. From one hour before sunset;
 5. Any other time the operator or supervisor feels it is advisable.

Headlights enable you to see and to be seen.

5.11 Loss of Driver's License

- a. If an employee whose duties, as a condition of employment, require driving a state-owned or privately-owned motor vehicle or equipment on official state business receives notice that his/her license, permit, or privilege to operate a motor vehicle has been revoked, suspended, or withdrawn, he/she shall notify his/her immediate supervisor of the contents of the notice before the end of the business day following the day the notice was received. Failure to notify the supervisor as stated above shall be considered a violation of employment requirements and establish grounds for disciplinary action up to and including dismissal.
- b. An employee, as described above, who receives a notice that his/her license, permit, or privilege to operate a motor vehicle has been revoked, suspended, or withdrawn may be retained providing a reasonable accommodation can be made for a temporary duty assignment which will not require driving and for which the employee meets the eligibility requirements. During this period, the employee will be temporarily reallocated accordingly. Repeat offenders will be treated according to the circumstances.
- d. Failure to provide proof of reinstatement of driving privilege (to legally operate a motor vehicle) by the end of the period may be considered grounds for dismissal due to inability to perform required duties and responsibilities which are a condition of employment as stated in the employee's class specification and/or individual position description.

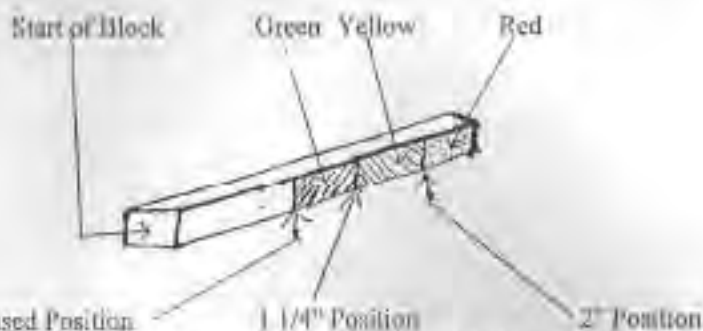
Brake Adjustment Information



- Measure Adjusted Chamber Stroke

Front (or 24") chambers maximum applied stroke is 1 3/4"

Rear (or 30") chambers maximum applied stroke is 2"



Brake in released Position

Place in released position make mark. measure out from that point 1 1/4 make next mark at 2". Then fill in the colors as indicated.

TEST AIR LEAKAGE RATE. With a full-charged air system (typically 125 psi), turn off the engine, release the service brake, and time the air pressure drop. The loss rate should be less than 2 psi in one minute for single vehicles, less than 3 psi in one minute for combination vehicles. Then apply 90 psi or more with the brake pedal. After the initial drop, if the air pressure falls more than 3 psi in one minute for single vehicles (more than 4 psi for combination vehicles) the air loss rate is too much. Check for air leaks and fix before driving the vehicle.

LOW PRESSURE WARNING The warning light and buzzer should come on before the air pressure drops below 60 psi in either system. If this happens while driving you should stop right away and safely park the vehicle.

PARKING BRAKE BUTTON Tractor and straight truck spring brakes will come fully on when air pressure drops to a range of 20 to 45 psi (typically 20 to 30 psi). Do not wait for the brakes to come on automatically. When the low air pressure warning light and buzzer first come on, bring the vehicle to a safe stop right away, while you can still control the brakes. Do not move the vehicle until air leak is fixed.

6.0 HAND AND PORTABLE POWERED TOOLS

6.1 Hand Tools – General

- a. Many tools and devices are furnished by the Agency. Take care of them. If any Agency-owned tool or device wears out, breaks, or otherwise becomes dangerous to use, do not use it. Report such conditions to your supervisor.
- b. Keep your assigned tools in good conditions at all times.
- c. Keep impact tools free from “mushroomed heads”. Cracked hammer handles must be replaced at once. Keep wrenches in good condition so that they will not slip.
- e. Do not use tools for purposes other than those for which they were designed.
- f. Jacks and vehicle safety stands shall be clearly marked with the load rating. Jacks and vehicle stands of sufficient rated capacity must be used whenever vehicles or equipment are elevated.
- g. Obtain and understand instructions from your supervisor before using tools with which you are not familiar.

6.2 Electric Power Tools

- a. Keep tools in good condition; keep them cleaned, oiled, and repaired.
- b. Use only grounded or double-insulated tools.
- c. Use only approved heavy-duty, grounded extension cords.
- d. Do not patch any serious damage to a cord; shorten the cord or obtain a new one.
- e. Do not abuse cords. Never carry a tool by the cord; never yank a cord to disconnect it from a receptacle, and never leave a cord where a vehicle may drive over it.
- f. Wear appropriate personal protective equipment (PPE) while using electric hand tools.
- g. Do not use electric tools in the presence of flammable vapors or gases.

6.3 Gasoline Powered Tools: General

- a. All gasoline power tools shall be maintained, fueled and operated in accordance with the manufacturer’s recommendations.
- b. Appropriate personnel protective equipment must always be worn.
- c. Only trained, instructed and or employees judged competent maybe authorized to operate gasoline powered tools.

6.4 Gasoline Powered Chain Saws

a. When operating a chain saw, appropriate clothing and personal protective equipment **must be worn**:

1. Hard Hat
2. Eye Protection-Face Shield or Goggles
3. Hearing Protection-Ear Muffs and/or Ear Plugs
4. Non-Slip Protective Footwear
5. Chain Saw Chaps
6. Work Gloves
7. Clothing-Trim Fitting Shirt Sleeves and Pant Cuffs

b. Chain saws **must be properly maintained**:

1. Keep saw chain sharpened.
2. Reverse cutter bar occasionally.
3. Keep chain under proper tension.
4. Chain brake should be properly adjusted.
5. Turn off saw to make adjustments.
6. Constantly check to see if chain is properly oiled.
7. Keep the saw clean of dirt, sawdust, oil and grease.
8. Keep tank vent and air cleaner clean.

c. Fueling Saw

1. Shut off engine.
2. Always use a safety can for fuel.
3. Wipe spilled fuel from saw.

d. Starting Saw

1. Move away from fueling spot - at least 10 feet.
2. The saw **shall** be started on the ground.
3. The chain brake **shall** be engaged.
4. Make sure chain is clear of all obstructions.
5. Hold the balance bar firmly with foot on handle.

e. Holding Saw - Good Control

1. Grip saw properly: grasp the forward handle with palm down, fingers gripping the front and thumb tucked under the rear - grasp the rear handle firmly.

f. Sawing Position

1. **Never start cutting until you have a clear place to work.**
2. be sure of footing.
3. Select a clear path of safe retreat (back 45E).
4. Don't reach way out so as to lose your balance.
5. Don't make any cut above shoulder height.
6. Always stand on uphill side.

7. Keep bystanders at a safe distance.
8. Stand to the side of the cut.
9. Keep your feet out from under the material being cut.
10. Be aware of the path of the saw before, during and after the cut.

g. Felling a Tree:

1. Check for dead limbs overhead.
2. Consider natural lean of tree, wind, notching, back cut, hinge, wedging and other trees.

h. Moving With Saw:

1. Always stop the engine or set the chain brake when moving with chain saw.
2. Carry the saw with chain pointing to the rear.
3. Watch out for hot exhaust.

i. **Kickback - Beware!**

1. Chain hits a solid object or knot.
2. Reaction is upward arc toward the operator.
3. Most dangerous point is when tip of bar hits a solid object.

6.5 Brush and Tree Chippers

a. Protection for Chipper Operators and Feeders:

1. Employees operating, feeding or working around the chipper shall wear a hard hat, eye protection (face shield or goggles), hearing protection, gloves and protective footwear.
2. They shall wear snug clothing and should avoid wearing wrist watches, rings and other jewelry which could be snagged by brush, limbs or logs as they are pulled into the chipper. Operators of chippers will be equipped with either a safety vest that has a 5 point break-away system or a AOT approved high visibility t-shirt.

b. Feeding the Chipper:

1. All brush, trees, limbs and logs shall be fed butt end first into the chipper.

c. Safety Controls and Brakes:

1. All chippers must be equipped with an emergency shut-down system that will immediately shut down the engine and chipper drum upon activation of the emergency control.
2. The emergency control device must be accessible from both sides of the machine and in front of the feed table.
3. Chipper Operation and Maintenance Must Comply With the Manufacturers' Recommendations.

7.0 HOUSEKEEPING

- a. Good housekeeping in the shop, office or in the field is essential to efficient, safe, healthy working conditions. Everyone must do their part by keeping work areas clean, material properly stored, and working and walking surfaces free from slip, trip and fall hazards. Waste materials and refuse should be properly disposed of.
 - 1. Aisles and exits must be kept clear at all times. A minimum of 28” needs to be established at all times.
 - 2. Oily rags must be stored in a covered metal receptacle. All containers must be properly labeled.
 - 3. Clean up all oil and grease spillage. Never use gasoline for cleaning.
 - 4. Clean up all liquid spills and notify your supervisor of leaking pipes and equipment.
 - 5. Access passageways to electrical panels, switches, firefighting equipment and emergency equipment shall not be obstructed.
 - 6. Washrooms, locker rooms and lunch areas are for your benefit. Keep them clean. Discard refuse and debris in appropriate receptacles.

8.0 FIRE SAFETY

8.1 General

- a. Fires not only destroy buildings and equipment, they can injure or kill. All employees have a personal responsibility to prevent fire.
- b. Familiarize yourself with the fire equipment in the area where you work, including the location and operation of the available portable extinguishers, the methods of turning in a fire alarm and the evacuation routes.

8.2 Properties Affecting Fire Prevention

- a. Fire is the result of a combination of three elements: fuel, oxygen, and heat for ignition.
- b. Flammable liquids, such as gasoline and alcohol do not burn; only their vapors burn. The lowest temperature at which vapors ignite in air when exposed to a source of ignition is called the flash point.
- c. The characteristics of gasoline vapor are that it is colorless, has a slight odor, and is heavier than air. Escaped vapors will remain close to the ground and collect in low points unless dispersed by air movement.
- d. Release of flammable liquids or vapors through leaks or spills creates a serious hazard. Since there are many possible sources of ignition in garages, any release of flammable liquids or vapors through leaks or spills creates an explosion hazard.

- e. Sources of ignition include open flames, electric sparks, static sparks, and hot surfaces such as hot motors, mufflers, and smoking.

8.3 Fire Prevention

- a. All employees must obey all fire safety rules, regulations, and signs. Restrictions on smoking, open flames and other sources of ignition and controlling the storage, handling, and use of flammable liquids or other hazardous materials are for your protection.
- b. To keep fuel from combining with oxygen and heat, keep covers closed on flammable liquid containers, especially those containing gasoline and alcohol.
- c. Only approved safety cans are to be used for the storage, transport or delivery of flammable liquids.
- d. Oily rags shall be stored in covered metal containers.
- e. Good housekeeping will prevent accumulation of materials which constitute a fire hazard. Keep your buildings and work areas neat and clean.
- f. Annual fire extinguisher training and refreshers shall be provided to all new and current AOT Operations employee

8.4 Fire Fighting Equipment

- a. Fire extinguishers should only be used in the initial or early stages of a fire. You should never attempt to fight a fire if:
 - 1. The fire could block your exit.
 - 2. The fire has spread beyond its immediate area.
 - 3. You are not familiar with the use of a fire extinguisher.

Remember: P A S S:

P - Pull the pin.

A - Aim extinguisher nozzle at the base of the flames.

S - Squeeze trigger while holding the extinguisher upright.

S - Sweep the extinguisher from side to side covering the area of the fire with extinguishing agent.

b. REMEMBER:

- 1. Should your path of escape be threatened;
- 2. Should the extinguisher run out of agent;
- 3. Should the extinguisher prove to be ineffective;
- 4. Should you no longer be able to safely fight the fire;

Leave the Area Immediately!

- c. Portable fire extinguishers must be properly maintained, accessible, and unobstructed at all times. Report any deficiencies to your supervisor.

- d. If you use a fire extinguisher or any other fire equipment, notify your supervisor at once so that it can be immediately replaced or restored to workable emergency service.
- e. Fire extinguishers must be inspected monthly and maintained annually.

8.5 Fire Alarm

- a. All employees should become familiar with fire alarm signals and the details for evacuating the building or work area in the event of a fire.

b. EVACUATION RULES TO KEEP IN MIND ARE:

1. Area evacuation shall occur immediately when a fire alarm sounds.
2. Excessive haste may cause serious injury or death. You should calmly and quickly walk to the nearest safe exit; do not run.
3. Evacuate as quietly as possible.
4. Do not use elevators during an evacuation.
5. Do not block access routes to the building and fire hydrants.
6. Move away from glassed areas.
7. Avoid interference with the work of fire, police, maintenance, security, or ambulance crews.
8. Once you are safely outside the building, report immediately to a predetermined area so others will know you are not trapped inside.

9.0 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- a. Flammable and combustible liquids may present physical hazards (fire and explosion) and health hazards. Health hazards may include:

1. Eye irritation
2. Nausea
3. Skin rashes/irritations
4. Headache
5. May aggravate existing medical conditions

- b. When fueling equipment and vehicles the following rules shall be followed:

1. Shut off engine.
2. No smoking within 50'.
3. An approved fire extinguisher must be available within 25' - 75' of the fueling areas.

- c. Flammable and combustible liquids must be stored, transported and dispensed from approved safety cans or manufacturers' original containers.

- d. In case of contact, thoroughly wash the exposed skin area with soap and water. **Always wash your hands before eating.**

10.0 PARKING LOT SAFETY

- a. Parking lot safety is very basic and consists of a few easily-remembered, extremely important rules. Parking areas are often crowded with vehicles and people, requiring extra care as operators and pedestrians.

10.1 Always Follow These Rules

- a. Observe all posted speed limits and signs, and remember: the recommended maximum speed in any parking lot is 10 M.P.H., conditions permitting.
- b. Be aware of pedestrians and other moving vehicles -- keep a close watch for:
 - 1. People emerging from between vehicles
 - 2. Vehicles moving between parking lanes
 - 3. Vehicles backing out of parking spaces
- c. Never park in restricted areas, even momentarily. Be sure that your vehicle is not blocking fire or access for emergency services to the building. Only park in marked spaces.
- d. Extra attention is necessary when rain or snow creates slippery conditions in parking lots. Facility lots shall be maintained using de-icing materials to reduce accidents.
- e. Always lock your vehicle, even if you do not have valuables in your vehicle.
- f. Do not park in handicapped parking spaces unless your car displays the handicap identification plate.
- g. Take care when walking to and from your vehicle. Watch for moving vehicles and equipment.

11.0 FIRST AID, CARDIOPULMONARY RESUSCITATION (CPR) AND BLOOD BORNE PATHOGENS

11.1 First Aid, CPR and Blood borne Pathogens

- a. First aid is the immediate and temporary care given the victim of an accident or sudden illness until the services of a physician can be obtained.
- b. The Agency of Transportation encourages first aid training and cardiopulmonary resuscitation (CPR) training for its employees. Many Construction, Operations and Department of Motor Vehicles field personnel are trained in first aid and CPR.

- c. AOT employees that are trained in first aid and render first aid and CPR as a collateral duty must be trained in blood borne pathogens and must comply with an AOT/DMV Blood borne Pathogens Exposure Control Plan.
- d. First Aid and Blood borne Pathogen Biohazard Kits should be kept fully stocked and located to be readily accessible.
- e. The names of personnel trained in first aid and CPR shall be posted and made known to all employees.
- f. Emergency telephone numbers of the nearest physician, hospital, ambulance, fire and police departments shall be conspicuously posted. When calling for emergency services, do not get excited. Do not hang up the receiver until the person answering your call has all the necessary information and you are told that you can hang up the receiver.

11.2 Rabies Prevention and Removal of Dead Animals from Roadways

- a. The Agency of Transportation has a written guideline regarding rabies prevention and the handling, disinfection and disposal of dead animals and possible contact with domestic and wild animals. The guideline is reviewed annually and updated as necessary.
- b. It is the responsibility of all affected employees to be familiar with this guideline and prudent in their practices. When calling for emergency services, do not get excited. Do not hang up the receiver until the person answering your call has all the necessary information and you are told that you can hang up the receiver.

12.0 LIFTING AND MATERIALS HANDLING

- a. Lifting and material handling are the most common causes of occupational injuries. When you bend your back and lift, there is almost five times more force acting on your lower back than is exerted when you lift the same object by bending your knees and lifting with your legs.

12.1 Safe Lifting

- a. Get the center of the weight as high above the ground as possible. Stand it up; stand it on a corner if possible.
- b. Get the object as close as possible to the supporting column (your backbone).
- c. Position your legs and feet firmly, with your back as nearly vertical as possible. Bend your knees.
- d. Lift with your arms first and roll the object over your knees. Pull the object as close to you as possible.
- e. Stand up with the load using your legs, thus place little or no strain on your back.
- f. Shift your feet, don't twist your body.

- g. Setting the load down is just as important as picking it up. Using your leg and back muscles, comfortably lower the load by bending your knees. When the load is securely positioned, release your grip.
- h. If you place the load on a bench or table, place it on the edge so as to have the table take part of the load. Then push it forward with your arms, or if necessary, with a body motion.
- i. When lifting and carrying any object, always have a clear field of vision over the load and good footing.
- j. DON'T LIFT A LOAD THAT IS TOO HEAVY OR TOO LARGE. GET HELP OR USE MECHANICAL HANDLING OR LIFTING DEVICES.**

12.2 Chain Safety

- a. The importance of knowing how to select, inspect and use chains and hooks is often overlooked. Take the time to inspect hooks and chains and use them properly. Nobody wants to be injured, to injure someone, or drop or damage a load due the unsafe use of chains.
- b. Chains used to lift or hoist are slings covered by OSHA Standard 1910.184 Slings.
- c. Alloy steel chain (minimum grade 80) is the only chain approved for lifting and hoisting.
- d. Hooks, rings, attachments and fittings used with any chain must be of the same grade or have a rated capacity at least equal to the chain.
- e. Each alloy steel chain assembly must have a permanently affixed durable identification stating size, grade, rated capacity and reach.
- f. Each day before being used, the chain and all fastenings and attachments shall be inspected for damage or defects by a "competent person".
- g. A thorough periodic inspection of all alloy steel chains shall be made by a "competent person" based on: (a) frequency of use, (b) severity of service, (c) nature of lifts made, and (d) experience gained on the service life of slings. Inspections shall include wear, defective welds, deformation, and increase in length. Where such defects or deterioration are present, the sling shall be immediately removed from service. Such inspections shall in no event be at intervals greater than once every 12 months. Inspection records shall be maintained of the most recent month in which each alloy steel chain was thoroughly inspected.
- h. Slings shall be padded or protected from sharp edges.
- i. Employees shall keep clear of loads about to be lifted and of suspended loads. Never position yourself or others directly under any suspended load for any reason.
- j. CHAINS MUST NOT BE LOADED IN EXCESS OF THE RATED CAPACITY.**

13.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

- a. Personal protective equipment or PPE is designed to protect you from health and safety hazards that cannot practically be removed from your work environment. Personal protective equipment includes protective equipment to protect your eyes, face, head and extremities, protective clothing, respiratory devices and protective shields and barriers.
- b. Personal protective equipment shall be issued or available to use whenever hazards are present that necessitate its use. **Use of Personal Protective Equipment is required.**
- c. Employees shall be trained to know the following:
 1. When PPE is necessary
 2. Type of necessary PPE
 3. How to properly don, doff, adjust and wear PPE
 4. The limitations of the PPE
 5. The proper care, maintenance, useful life and disposal of PPE
- d. It is imperative that affected employees demonstrate an understanding of the required training and are retrained as changes, inadequacies or circumstances indicate retraining is necessary.
- e. Training records must be maintained.

13.1 Eye and Face Protection

- a. Eye or face protection (including welding helmets) shall be worn when exposed to hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.
- b. Examples:
 1. When exposed to flying particles such as dust, chips, grit, metal or wood from chipping, drilling, grinding, scraping, brushing or sawing.
 2. When exposed to possible splashing of acid, alkalis, caustics or other hazardous chemicals or products.
 3. When exposed to high light or radiation levels. Goggles with filtered or shaded lenses shall be worn when engaged in or observing metal cutting or brazing operations. Welding helmets with filtered or shaded lenses shall be worn when engaged in heavy gas welding or arc welding or cutting.
 4. Goggles shall be worn when potential of any flying particles can enter around safety glasses.

c. Appropriate eye and/or face protection (safety glasses, goggles, face shields, helmets, etc.) shall always be selected in accordance with OSHA Standard 1910.33 for protection from the specific hazard.

13.2 Head Protection

- a. Hard hats will be worn whenever there is a danger of head injury from falling or flying objects.

b. Examples:

1. Cutting brush and trees/chipping
2. Working under objects that could fall
3. Working around equipment that can swing or elevate itself or materials
4. Working in trenches or excavations
5. Whenever you or your supervisor feel it necessary for your protection

13.3 Hearing Protection

a. Hearing protection (ear muffs and/or plugs) shall be worn whenever an employee is exposed to intense or high sound levels or high level impact or concussion noise. Noise levels exceeding 85db require hearing protection under OSHA 1910.95 standard.

b. Examples:

1. Chain saw/power tools
2. Pneumatic tools (jack hammer, impact wrench, pavement breaker)
3. Chipping/grinding
4. Tractor mowers

13.4 Hand and Arm Protection

a. Appropriate hand and arm protection shall be selected and worn when employees are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.

b. Examples:

1. Gloves (work) shall be used when handling or working with materials such as: wire, rope, lumber, galvanized metal, steel, and bituminous products.
2. Gloves (impervious) shall be selected and worn that are appropriate for protection from products such as acids, caustics, corrosives and toxic chemicals.
3. Gloves, sleeves and aprons (flame resistant) shall be worn while welding, brazing, and cutting.

13.5 Foot Protection

a. Employees shall wear protective footwear which meets the ANSI - Z41 – 1991 Standard for impact and compression protection where there is a danger of foot injuries due to falling and rolling objects.

b. Examples:

1. Carrying, handling or working around materials, objects, parts, or tools which could be dropped or fall onto the feet.
2. Working around hand trucks, material carts or pipes that could roll over on employees' feet.

13.6 Body Protection – Visibility

a. All VTRANS employees working on or near a traveled roadway, including the back of a ditch at cut sections and the point of shoulder at fill sections, shall wear VTRANS approved articles of clothing which include, ANSI class 3 vests, sweatshirts or t-shirts. These articles are high visibility

safety yellow or another agency approved high visibility color and are available through State contract. Each employee required to wear the approved clothing articles shall be responsible for maintaining his/her clothing in a clean, serviceable condition. The VTRANS high-visibility vests have been designed to display the required retro-reflective material on a background of bright fluorescent fabric and shall not be altered or modified in any way. Employees shall notify his/her immediate supervisor if the vest has been misplaced, damaged or is no longer in good condition.

- b. High-visibility apparel shall be worn while operating a chain saw in travelled roadways/work zones or when the vest interferes with any other personal protective equipment, such as fall protection harnesses. Examples would be working near machinery with a loose fitting vest, which poses a hazard; and a mechanic performing roadside under a vehicle or over the engine compartment, which poses a hardship. Reasonableness and good judgment must dictate any and all exceptions. For example, simply walking to a destination on a sidewalk may not require the VTRANS high-visibility apparel. However, work activity in the same setting will necessitate the appropriate PPE.
- c. Whenever the VTRANS high-visibility vest is not being worn, other Lime green (jacket, sweatshirt or t-shirt) must be worn. Employees working near heavy construction equipment shall always wear one of the approved high-visibility items.
- d. Employees engaged in traffic control shall always wear the VTRANS high visibility vest with "Traffic Control" visible as well as the approved orange or lime green ball cap.

13.7 Respiratory Protection

- a. Respirators shall not be used without the approval of the AOT Safety Manager and compliance with a written Respirator Program. This includes any portable ventilation system used for welding activities.
- b. In the control of occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays or vapors, the primary objective is to prevent atmospheric contamination as far as feasible by accepted engineering control measures. When this is not possible or in addition, administrative controls may be implemented. The last resort is the use of respirators.
- c. All employees that are required for annual testing under the Agency of Transportations respiratory program shall meet all criteria for "facial hair" while testing as well as for regular use in the field.

14.0 BUILDINGS AND SYSTEMS

14.1 Posting of Notice, Signs and Posters

- a. The VOSHA Safety and Health Protection On-The-Job poster shall be displayed where all employees can see it.
 - b. The OSHA Form 300 - Log and Summary of Occupational Injuries and Illnesses shall be maintained and posted from February 1 to March 1 each year.

- c. The AOT Emergency Telephone Numbers poster shall be posted near each facility phone where all employees can see it.
- d. All facilities shall have a posted “Emergency Action plan” that includes a map of the facility including all exits and designated meeting locations.

14.2 Housekeeping and Storage

- a. Practice good housekeeping by properly organizing and storing materials and equipment and discarding all junk.
- a. Heavier objects should be stored on lower shelves or racks. Store lightweight cartons and packages on higher shelves.
- b. Boiler and furnace rooms should not be used for storage.
- c. Oil and grease rooms shall not be used for general storage.
- d. Doors equipped with self-closers shall not be chocked, blocked, or in any way held open.
- e. All doors, doorways and halls must be kept clear and unobstructed. A minimum 28” walkway shall be kept established at all times.
- f. All egress doors must be kept unlocked.
- g. Floors shall be kept clean, dry and in good repair and free of hoses, cords, and materials that create tripping and fire hazards.
- h. Waste materials shall be disposed of in proper receptacles. Oily rags shall be placed in covered metal waste receptacles and disposed of properly.
- i. The rest rooms shall be maintained in clean and sanitary condition.

14.3 Ladders

- a. Inspect all ladders before using them. Do not use ladders with broken, cracked or missing rungs or broken, cracked or split side rails. Report any defects to your superior.
- b. Always place a ladder so that its base is placed out from the top support one quarter of the vertical distance from its base to the top support.
- c. Use a ladder of sufficient length. The side rails must extend 36 inches above the landing.
- d. Always place the ladder on a firm, secure footing.
- e. Portable metal ladders shall not be used for electrical work or where they may contact electrical conductors.

- f. Fixed ladders of more than 20 feet to a maximum unbroken length of 30 feet must be provided with cages and landing platforms or equipped with ladder climbing safety devices.

14.4 Electrical Systems and Equipment

- a. The wiring, rewiring, deletion, or addition of electrical components or equipment shall be performed by a qualified electrician holding a current State of Vermont license.
- b. Extension cords shall be 3-wire type designed for hard or extra hard usage equipped with 3-prong grounded dead front plugs. Extension cords nor power strips shall be connected in a series "piggy backed"
- c. Extension and equipment cords shall be free from damage or poor splices.
- d. Electrical tools shall be in good condition, equipped with 3-wire cords and 3-prong grounded dead front plugs or double insulated.
- e. Fixed electrical equipment and outlets shall be grounded.
- b. All electrical boxes, switches, etc., shall be equipped with covers to protect against accidental electrical contact.
- c. "Lockout /Tagout" systems shall be used when electrical work is done.
- d. Electrical panel and switch areas shall be kept clean, unobstructed, and readily accessible at all times. Electrical panel circuit breakers shall be labeled.
- e. All electrical equipment, tools and appliances must be in good condition and used properly. Defective equipment must not be used. Report any deficiencies to your supervisor immediately.

14.5 Working near Electrical Power Lines

- a. Before working around or near lines all power levels must be identified by the proper utility company.
- b. A minimum clearance of 10 feet must be maintained between equipment or machinery and power lines 50 kV or less.
- c. For power lines greater than 50 kV, minimum clearance is 10 feet, plus 0.4 inches for each 1 kV over 50 kV or twice the length of the line insulator, but never less than 10 feet.
- d. **Exceptions:** Where electrical distribution and transmission lines have been de-energized and visibly grounded at point of work, or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines.

15.0 MACHINERY AND EQUIPMENT

15.1 General

- a. Machine guarding shall be provided to protect the operator and other employees from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips, and sparks.

15.2 Use, Maintenance and Repair - Lockout/Tag out

- a. Before any adjustments, maintenance, servicing, or repair is made to any machinery or equipment, it must be shut down, shut off, stored energy released, and locked out or key removed.
- b. The employees involved must be trained and the procedure followed must be in compliance with OSHA Standard 1910.147, The Control of Hazardous Energy (Lockout / Tagout).
- c. Only the person that installed the lock shall remove it.
- d. Tags shall be used to determine defect, date of tag out and employee reporting the defect.
 - 1. Flywheels, belts and pulleys, shafts, couplings, gears, and chain drivers must always be guarded against contact.
 - 2. Whenever guards are removed for maintenance or repair, the guard must be installed before the machine or equipment is returned to service.
 - 3. Equipment or machinery must not be operated with missing or damaged guards. Report any deficiencies to your supervisor immediately.
 - 4. Bench grinder tool rests (1/8") and tongue guards (1/4") must be properly adjusted.
 - 5. Compressed air used for cleaning must be reduced to less than 30 psi.
 - 6. Compressed air tanks must be drained weekly.

16.0 WORK ZONE TRAFFIC CONTROL

16.1 General

- a. The primary function of work zone traffic control is to move vehicles and pedestrians safely and expeditiously through or around temporary traffic control zones while protecting on-site workers and equipment.
- b. Work zone traffic control shall be consistent with the U.S. Department of Transportation, Federal Highway Administration, *Manual on Uniform Traffic Control Devices* (MUTCD), Part VI Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations.

16.2 Flagger Qualifications

- a. Traffic control personnel (flaggers) shall have satisfactorily completed a course in traffic control. An up-to-date list of personnel trained in traffic control (flagging) should be maintained by the district or division.

b. Training to train traffic control personnel may be obtained by completing one of the following courses:

1. Associated General Contractors (AGC) of Vermont, Work Zone Traffic Control Course;
2. Associated General Contractors (AGC) of New Hampshire, Flagger Certification Course;
3. Obtaining certification from the American Traffic Safety Services Association (ATSSA) as a work site traffic supervisor;
4. Vermont Local Roads Program, Work Zone Traffic Control Course; or
5. AOT Traffic Operations, Work Zone Traffic Control Course (Instructed by ATSSA Certified Instructor).
6. Flagger training course (Agency of Transportation VTTC. Training facility)

16.3 Flagger High Visibility Clothing

- a. Flaggers shall wear high visibility lime green vests equipped with retro- reflective material with the words "Traffic Control" in prominent black letters on the front and back retro- reflective panels and approved headgear (orange or lime soft cap, winter toque or hard hat).

16.4 Flagging Procedures and Equipment

- a. Flagging procedures and the use of hand signaling equipment such as STOP / SLOW paddles shall be consistent with the *Manual on Uniform Traffic Control Devices* (MUTCD) Part VI Section 6E.

16.5 Flagger Breaks and Relief

- a. Flaggers must be relieved periodically during the course of work to provide ample rest breaks and diversions. This is very important to maintain proficient flagging operations.
- b. The safety of the flagger, the work crew and the safety of motorists and pedestrians may depend on the effectiveness of the flagger(s). Supervisors must recognize that in order to maintain that effectiveness, the best qualified flagger cannot be expected to flag without relief.
- c. In addition to breaks for coffee and lunch, periodic relief must be provided. The frequency of periodic relief should be based on weather, traffic and personal needs of the flagger.
- d. Supervisors must provide relief for flaggers in addition to coffee and lunch breaks.

17.0 STRUCTURES AND BRIDGES

17.1 Fall Protection

- a. Employees on walking / working surfaces with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems or personal fall arrest systems.

- b. The system selected, and training for employees exposed to fall hazards must comply with VOSHA Safety and Health Standards for Construction, Subpart M, and Fall Protection as well as the Vermont Agency of transportation's fall protection program.

17.2 Working Over or Near Water

- a. Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard approved life jackets or buoyant vests.
- b. Ring buoys with at least 90 feet of marine floating line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.
- c. At least one life saving skiff shall be immediately available at locations where employees are working over or adjacent to water that requires its possible use.
- d. Copies of Working over Water plans, Job safety analysis forms and Tailgate talks will be readily available to all employees working on specific projects. A safety tailgate talk shall be given before each start of the project and to new employees/contractors coming onto each project. Copies should be with the competent person during the duration of the project.

17.3 Permit-Required confined spaces

The Vermont Agency of Transportation has a written program its employees from the hazards of entry into permit-required confined spaces and to comply with OSHA standard 1910.146

The Safety Coordinators from all Agency of Transportation sections are responsible for complete compliance with the written program.

Permit-required confined space mean a space that is: Large enough and so configured that a person can bodily enter and perform assigned work; and 2 as limited or restricted means for entry or exit; and 3 is not designated for continuous employee occupancy **and** has one of the following characteristics:

1. Contains or has potential to contain hazardous atmosphere.
2. Contains a material that has the potential for engulfing an entrant
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section.
4. Contains any other recognized serious safety or health hazard.

Entry into permit-required confined spaces requiring "entry permits" (Confined spaces that do not fully comply with 1910.146 standard Will not be allowed by AOT Employees.

18.0 TRENCHING, EXCAVATING and POUNDING

18.1 Call Before You Dig or Pound

- a. As required by Vermont Public Service Board, Rule 3.800; at least 48 hours prior to any excavating, or the erecting of signs, guardrails, or other installation requiring digging or insertion into the ground within the right-of-way, **you must call Dig Safe at 1-888-DIG-SAFE or 811.**

- b. **NOTE:** Not all utility companies are members of Dig Safe. You should also call the appropriate local utility companies for clearance before you dig or pound.

18.2 Trenching and Excavating

- a. A “competent person” shall be assigned to each trenching and/or excavating project that is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and has authorization to take prompt corrective measures to eliminate them.
- b. Trenches and excavations more than 5 feet in depth or height or whenever employees are exposed to danger of moving ground; trenches and excavations shall be laid back 1 ½ to 1’ stable slope, trench box, or some other means of approved compliant protection provided. Trenches or excavations with water present shall follow all above requirements at a depth of 4 feet.
- c. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) or lateral travel for employees.
- d. No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded.
- e. Excavated or other materials or equipment shall be effectively stored or retained at least 2 feet or more from the edge of the trench or excavation.
- f. Frequent inspections of excavations, the adjacent areas, and protective systems shall be made by a “competent person” for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the “competent person” prior to the start of work and as needed throughout the shift. Inspections shall be made after every rainstorm or other hazard increasing occurrence.
- g. Walkways shall be provided where employees or equipment are required or permitted to cross over trenches or excavations. Guardrails (minimum 42”) shall be provided where walkways are 6 feet or more above lower levels.
- h. Trenching and excavation safety, including employee training, shall comply with OSHA Safety and Health Standards for Construction, Subpart P, Excavations and the Agency Of Transportation Trenching and Shoring policies.

19.0 HAZARDOUS MATERIALS AND HAZARDOUS WASTE

19.1 Hazardous Materials – General

- a. All employees who work with or are exposed to hazardous materials shall be familiar with their district, division, or section, Hazard Communication Program and Global Harmonization System (GHS) concerning training, labeling, and safety and health precautions for using and handling hazardous materials.

- b. All hazardous materials shall be used, stored, transported, and handled in compliance with applicable codes, regulations, laws, and Agency of Transportation Policies and Procedures.
- c. It is the policy of the Agency of Transportation that all hazardous materials managed by the Agency be treated in such a manner as to promote the highest degree of safety for Agency personnel and the general public, and to do the least amount of harm to the environment.
- d. Any questions related to hazardous materials should be referred to the Hazardous Materials & Waste Coordinators at (802)229-8740(cell) or (802) 498-7095(cell) or 250-4666 (pager)

19.2 Explosives

- a. The storage, use, handling, and transportation of explosives by Agency of Transportation personnel are prohibited.
- b. Whenever the use of explosives is required, a qualified blaster shall be utilized. Prior to contracting for blasting, verified proof of adequate insurance and a valid Vermont explosives license must be provided.

19.3 Hazardous Waste

- a. The policy of the Agency of Transportation is to have minimum quantities of hazardous materials involved in its activities and to continually strive to reduce hazardous waste generated. Hazardous waste managed by the Agency shall be treated in such a manner as to promote the highest degree of safety for Agency personnel and the general public. The storage, handling, and disposal of any hazardous waste will be done in accordance with Agency of Natural Resources Hazardous Waste Management Regulations, Agency of Transportation Policies and Procedures, and any other applicable regulations or laws.
- b. All spills of over 2 gallons and all substances suspected to be hazardous found on Agency of Transportation property or right of way should be reported immediately to the Hazardous Materials & Waste Coordinator (802)229-8740 or (802)498-7095 or 24 hour pager (802) 250-4666.

20.0 OFF-THE-JOB SAFETY

- a. Accidents occur more frequently off the job than on. The Agency of Transportation is vitally concerned with your safety and health off the job as well as on. Accidents on and off the job result in pain and suffering and sometimes death, as well as lost time from work.
- b. To prevent accidents on the highway and in the home requires only a little courtesy and common sense and obeying the rules and regulations that are established for our safety.
- c. While we cannot mandate the requirements of this manual in regard to employee activities during off duty hours, we strongly encourage our employees to apply this manual when working at home or on other sites that are not Agency of Transportation-work related.

MAKE IT A PRACTICE TO PRACTICE SAFETY AROUND THE CLOCK!

