Aon Risk Services

Wisconsin Department of Transportation

SAFETY AND HEALTH PROGRAM

USH 41
NORTH/SOUTH CORRIDOR PROJECT

SAFETY MANUAL

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DEFINITIONS

Aon Risk Services (ARS) Responsible for brokering and administering the Wrap-up Insurance Program including the development and compliance monitoring with the Construction Safety Standards.

Contractor. The entity awarded a particular construction contract.

Certified Industrial Hygienist (CIH). An individual who is currently certified by the American Board of Industrial Hygiene.

Department. Wisconsin Department of Transportation (WisDOT).

Engineer. The WisDOT Employee or Consultant delegated by WisDOT responsible for engineering supervision of the construction.

Insurance Carrier. Principle companies that provide the insurance coverage for the USH 41 North/South Corridor Project.

Loss Control Consultant (LCC). Aon, Ace or Integrated Risk Solutions representative providing consulting services for the overall safety programs on the project, providing technical construction safety expertise, conducting loss control safety audits.

Wisconsin Department of Transportation (WisDOT). Owner.

Project Manager – Contractor. The Contractor's representative who is responsible for administering construction contracts, and who is responsible for the Contractor's safety compliance on each construction site.

Project Safety Team (PST). The project safety team is composed of OCIP Safety Director and Contractor Safety Representative, loss control consultants, WisDOT's Safety Manager and WisDOT OCIP Program Manager.

Safety Representative – Contractor. The Contractor's employee designated as responsible for implementing employee safety programs, identifying project safety concerns and taking corrective action.

Safety Representative – Subcontractor. The Subcontractor's employee designated as responsible for implementing employee safety programs, identifying project safety concerns and taking corrective action.

Wrap-up Insurance Program. A program by which the Owner secures specific insurance coverage for owner's representatives, consultants, sub consultants, contractors and subcontractors of any tier working on the construction project.

OCIP Safety Director (OCIP SHD). Loss Control Consultant who is responsible for monitoring evaluating, and coordinating Contractor's and all Subcontractors' safety, health and environmental compliance effort.

North/South Corridor Project Safety Engineer. The WisDOT employee who oversees the safety of the WisDOT employees and their consultants (CEC's)

Visitor. A person who on **rare occasions** visits the OCIP work zone. All visitors are required to register at the (OCIP SHD's) office, have the proper PPE, and be escorted around the job-site by a competent person who has been through the full orientation, passed the pre-employment drug test and is allowed full site access.

State employee visitor. State employees coming into the OCIP work zone for business purposes on a reoccurring basis shall be fully enrolled in the program. State employee visitors who occasionally visit the site are treated as any other visitor to the site

Project emergency response team. The contractor's safety representative, and the OCIP SHD or his staff.

STATEMENT OF SAFETY AND HEALTH POLICY

To: All Employees and Contractors

Safety and health in the construction of USH 41 NORTH/SOUTH CORRIDOR PROJECT must be a part of every operation. Safety and health is the responsibility of each contractor and every employee on the job site, regardless of level.

It is the intent of WisDOT to comply with all applicable federal, state and local safety regulations. To do this, we must constantly be aware of conditions in all work areas that can produce injury. No contractor shall require an employee to perform job duties or specific job tasks that have been determined to be unsafe. Cooperation by the contractors and their employees in detecting hazards, and in turn controlling them, is a condition of your continued presence on the job site. Supervisors should be immediately informed of any unsafe condition. Where correction of any unsafe situation is beyond their ability or authority to correct, it shall be reported to the project superintendent of the Contractor.

The personal safety and health of each employee working on USH 41 NORTH/SOUTH CORRIDOR PROJECT is of primary importance. The prevention of occupational-induced injuries and illnesses is of such consequence that it shall be given precedence over operating productivity whenever necessary. To the greatest degree possible, the contractors shall provide all mechanical and physical facilities required for the personal safety and health of their workers.

Each contractor will maintain a safety and health program conforming to the best practices of the USH 41 NORTH/SOUTH CORRIDOR PROJECT safety and health program. To be successful, such a program must embody the proper attitudes toward injury and illness prevention on the part of both supervisors and employees. It must also address a cooperative spirit in all safety and health matters between supervisor and employee, employee and his fellow workers, WisDOT and the contractors. Only through such a cooperative effort can we achieve a safety record that is in the best interests of everyone. OCIP SHD shall make the final determination on “best practice”.

The objective of WisDOT is a safety and health program that will minimize the number of disabling injuries or property damage to workers or the public. Our goal is **ZERO** accidents and injuries.

Each contractor’s safety and health programs must include:

1. Enforcement and compliance with all applicable federal, state and local safety regulations.

2. Provisions for the necessary mechanical and physical safeguards to assure the maximum protection to employees working on the project.

3. A plan with specific provisions to conduct a program of safety and health inspections to locate and correct unsafe working conditions on practices; to control health hazards, and to comply fully with the safety and health standards for the project.

4. A plan that addresses good safety and healthy training of all employees.

5. Provisions for the necessary personal protective equipment and instruction for its use and care.

6. The plan must include the development and enforcement of safety and health rules, and the requirement for all employees to comply with the rules as a condition of employment.

7. The Contractor must investigate promptly and thoroughly, every accident to find out the cause and implement action to correct the problem so that it will not recur.

8. The Contractor must investigate, promptly and thoroughly all incidents including those that do not produce an injury but have the potential to produce an injury.

Contractors and employees share the responsibilities for safety and health.

1. WisDOT and its Contractor's accept their role in the responsibility for leadership of the safety and health program for the WisDOT Owner Controlled Insurance Program (OCIP). WisDOT will assist the contractors in the identification of problem areas and in the implementation of changes in providing a safe working environment for all employees and for the public.

2. Each contractor is responsible for the implementation of a safety and health program that instills a positive attitude by supervisors and employees in their safety and to ensure that all operations will be performed with the utmost regard for the safety and health of all personnel involved as well as the public.

3. Employees must be held accountable for a genuine cooperation with all aspects of the safety and health program, including compliance with all rules and regulations, and for continuously practicing safety while performing their duties.

PURPOSE

The purpose of the USH 41 NORTH/SOUTH CORRIDOR PROJECT safety and health program, developed for the Wisconsin Department of Transportation, is to assist in the development and implementation of appropriate safety standards that will safeguard employees and the public from harm. This manual is prepared to establish minimum requirements for safety during all aspect of the construction.

This program is based on applicable government regulations, insurance-related safety/risk management requirements, accepted Best safety practices within the construction industry, and common sense. The maintenance of safe premises, operations and equipment, protection of the construction employees, state employees and the public, and the avoidance of unsafe conditions and practices (during all construction phases) are the responsibility of the Contractor and Subcontractors, regardless of tier, performing the construction work.

This manual is intended to provide a working, uniform, and minimal level of program rules and guidelines to assist and provide direction to the Contractor. This manual is not intended to replace the responsibility for each contractor to establish and maintain a site-specific safety and health program as required by the Department of Labor, Occupational Safety and Health Act (29 CFR 1926 and 29CFR 1910). However, such a program must, at a minimum, meet all the standards set forth in this Manual.

PHILOSOPHY

The Wisconsin Department of Transportation is dedicated to providing a safe work place for its Contractors, all Subcontractors and other third-party employees engaged in work activities on the USH 41 NORTH/SOUTH CORRIDOR PROJECT and are equally dedicated to the protection of the general public.

As such, the Contractor and all Subcontractors and other third-party employees must be committed to zero accidents for all operations. Safety is to be the number one priority of the Contractor and all Subcontractors engaged in work on the USH 41 NORTH/SOUTH CORRIDOR PROJECT. **Safety shall not be sacrificed in lieu of schedule, cost, production or any other component of the work process**.

To achieve the goals of this program, WisDOT, the Contractor and all Subcontractors will:

1. All employees of WisDOT and the contractor/consultant who have a supervisory role (defined as any foreman, lead worker, supervisor, owner or any person authorized to direct/oversee the work of another) must complete an OSHA 4 hour training program.

2. Thoroughly plan their work operations and activities so that they are performed safely as well as efficiently.

3. Effectively communicate the safety requirements of the project and the safety requirements of each operation to their employees at all levels of the project (JSA's).

4. Coordinate work operations and activities to minimize or eliminate situations, which compromise the employees' safety due to conflicting or simultaneous, work operations or activities.

5. Safety is the responsibility of all employees on this project, and each employee shall be responsible and held accountable for their own safety and the safety of other employees.

6. **The Contractor will be responsible for holding each Subcontractor, regardless of tier, accountable for the implementation and enforcement of the USH 41 NORTH/SOUTH CORRIDOR PROJECT safety and health program.**

SCOPE OF OBJECTIVES

INTRODUCTION

The provisions of the safety and health program will apply to all aspects of the Wisconsin Department of Transportation Wrap-up Insurance Program as they relate to contractor compliance with:

1. The regulations and requirements of the Federal Code of Regulations, 29 CFR 1926 and applicable 29 CFR 1910.

2. The construction contract documents and agreements.

3. Best practices of the construction industry.

OBJECTIVES

The USH 41 NORTH/SOUTH CORRIDOR safety and health program and the safety standards contained in this document were developed as minimum guidelines to assist in the elimination or reduction of hazards and risks associated with the construction project, and to prevent accidents, reduce employee injuries, prevent damage to property. WisDOT is committed to partnering with the contractors to assure these standards are effective. The following goals are established:

WisDOT, its authorized representatives, and its Contractors and Subcontractors must actively

1. Provide a safe work environment for employees.

2. Use safety planning as a tool to eliminate workplace injuries and property damage.

3. Provide safety audits/inspections to identify, prioritize, and correct non-compliance conditions.

4. Protect public and private property adjacent to all construction site work zones.

5. Educate and train employees by implementing the following:

    a. New hire safety orientations

    b. Pre-task planning/tailgate safety meetings.

    c. Safety training, i.e., hazard communication, trenching, shoring, confined space entry, etc.

    d. Mandatory personal protective equipment (PPE) programs.

e. Injury reporting and record keeping maintaining up-to-date accident experience and trend analysis.

f. Using accident investigation information to correct deficiencies and eliminate additional losses.

g. Daily and weekly surveys of the projects to isolate conditions responsible for accidents and injuries, and devise corrective action before they produce an injury.

6. The primary objectives of the safety and health program are to:

a. Minimize personal injuries.

b. Maximize property conservation.

c. Achieve greater efficiency.

d. Reduce both direct and indirect costs.

e. Protect the public.

7. The USH 41 NORTH/SOUTH CORRIDOR PROJECT safety and health program is intended to provide minimum standards and guidance in support of the contractors' individual safety and health programs. **All Contractors and subcontractors shall submit a Safety Program to the OCIP SHD for review, prior to mobilization on the project.**

8. Require the Contractor's and/or Subcontractor's superintendents and job foremen to be familiar with the provision of OSHA, MSHA and WisDOT.

SAFETY GOALS

In keeping with the philosophy of this project, WisDOT, the Contractor and all Subcontractors, regardless of tier, shall put forth their best efforts to achieve the following goals:

1. A lost time incident rate, as defined by OSHA, of 0.00 for the total project.

2. A recordable incident rate of zero.

3. Zero property damage – this includes WisDOT's property, equipment, buildings, vehicles, etc., as well as contractor-furnished equipment, vehicles, tools, materials, etc.

4. Contractors are encouraged to enter a formal partnership with OSHA.

RESPONSIBILITIES

A. RESPONSIBILITIES OF THE CONTRACTOR

1. In addition to these Special Provisions, the Contractor and all sub-contractors are responsible for accident prevention and job site safety for all work as defined by the Contract's "Standard Specifications for Highway and Structure Construction".

2. The Contractor shall ensure that every Subcontractor, regardless of tier, is in compliance with all local, State and Federal safety regulations; that they are provided a copy of the USH 41 NORTH/SOUTH CORRIDOR PROJECT Safety and Health Program Manual; and they are informed of their obligations with regards to safety on the USH 41 NORTH/SOUTH CORRIDOR PROJECT.

3. The Contractor shall review the following information (submitted by each Subcontractor, regardless of tier) to ensure complete compliance with the USH 41 NORTH/SOUTH CORRIDOR PROJECT safety and health program, and all Federal, State and local regulations. The Contractor shall work with the Subcontractor to correct any deficiencies in the following information to ensure total compliance prior to commencement of work and provide the OCIP SHD final copies of all information required:

   a. The Subcontractor's site-specific safety and health program, outlining safety policy, responsibilities and procedures.

   b. Subcontractor's written Right-to-Know Program.

   c. Material Safety Data Sheets (MSDS's) on every chemical that each Subcontractor, regardless of tier, will use the project in their specific scope of work. They shall be conveniently located where ever the chemicals are in use for easier access

   d. **Resumes** of the designated site Safety representative, and alternates.

      The Contractors and subcontractors are required to have a **non-working** site safety coordinator of management level if they have **(30) thirty people or more** on the USH 41 North/South Corridor Project**, two** if they have more than **100.** The contractor shall identify alternate Safety representative(s) they must meet the same requirements as the primary safety coordinator. In the absence of any full time safety representative, the contractor shall submit in writing the names of the alternate safety representative two weeks prior to their use; all alternates must be approved in advance. The alternate safety representative shall be on the job two weeks prior to the primary safety representative being absent from the job-site while acting as an alternate Safety representative, this individual cannot be assigned any other collateral duties. The contractor shall have an

alternate any time a full time Safety Representative is absent from the job for ½ **day or longer.**

***Note: "Thirty people or more" means an aggregate number including subcontractors of all tiers.**

e. The minimum requirements for the Safety Representative are at least an OSHA 30-hr Construction Safety and Health Course or equivalent, within the past five years and three years experience. *Subcontractors with less than thirty employees on the USH 41 NORTH/SOUTH CORRIDOR PROJECT payroll are required to have a Safety Designee with at least an* ***OSHA 30-hr card current within five years*** *that will interface with the OCIP SHD and attend the weekly and monthly safety meetings. The Safety Representative and approved alternate(s)* ***shall be present on site during all work activities.*** *The Safety Representative shall have no other collateral duties.*

4. The Contractor will inform all Subcontractors, the Engineer, and the OCIP SHD of any Federal or State inspection prior to the site tour. The Contractor will receive copies of all Federal and State inspection reports, citations, penalties, abatement dates, etc., and forward copies to the Engineer and the OCIP SHD within 48 hours of receipt.

5. The Contractor will ensure that Subcontractors supply, maintain, and monthly inspect all fire extinguishers throughout the project in their respective offices, storage, and refueling areas. In the event a fire extinguisher is discharged or damaged, it shall be removed from service and replaced with a charged unit immediately. Contractors will supply, maintain, and inspect fire extinguishers in their respective areas, offices, storage, and refueling areas.

6. The Contractor has a general duty to furnish each employee with a place of employment free from recognized hazards causing or likely to cause death or serious physical harm.

7. The Contractor shall have standard emergency procedures to direct the immediate removal and treatment, if necessary, of any employee who may be injured or become ill. The Contractor shall keep on the job a first-aid kit supplied according to current regulations, and shall have at least one person trained in first aid for each crew. A copy of their first-aid and CPR certificates must be submitted to the OCIP SHD prior to commencement of work.

8. The Contractor will collect, maintain, and provide to the OCIP SHD written records for their employees and of every Subcontractor:

Document	**When Needed**
a. Mobile Equipment Safety Inspection Report	Before use of equipment
b. Written Fall Protection Program	Before start of work
c. OSHA 300 Log (this jobsite)	Yearly
d. Daily Pre-Task planning Meetings	Weekly
e. Weekly Self Safety Inspections	Weekly
f. Federal, State, and Local Inspection Reports	48 Hours
g. Other Information as Requested by Engineer or OCIP SHD	Promptly

9. The Contractor shall observe Federal, State, and local laws and regulations pertaining to pollution control, water supply, fire protection, sanitation facilities, waste disposal, hazardous waste disposal, and other related items.

10. Construction Supervisor Orientation Program. All persons having supervisory roles (including lead workers, project managers, senior managers, executive managers and any person in the chain of direct control over work, workers, subcontractors vendors) must attend and successfully complete the Construction Supervisor Orientation Program. This 4 hr supervisor orientation program was prepared in partnership with the Wisconsin Transportation Builders Association and contractors. Attendance is mandatory and must be completed prior to the start of any work on the project.

11. The Contractor shall comply with OSHA Regulation 1926.21 (b) (2), which states that the employer shall instruct each employee in the recognition and avoidance of unsafe conditions, and the regulations applicable to the work environment.

12. The Contractor is responsible and will be held accountable for their Subcontractors safety practice and safety management. It is the Contractors responsibility to assure that the subcontractor is in full compliance with the provisions of this Manual and must take action appropriate to assure such compliance.

13. As in paragraph # 11 above, the Contractor is responsible and will be held accountable to assure that their subcontractors are in full compliance with the Return to Work program (alternate duty within restrictions) for their own employees as well as their subcontractors' employees. Contractors are encouraged to work closely with their subcontractors in developing alternate duty tasks in advance of any injury to enhance the transition when the injury occurs.

B. RESPONSIBILITIES OF THE SUBCONTRACTOR

1. Each Subcontractor, regardless of tier, will be responsible for the safety and loss control of employees, return to work and areas of work under their control.

2. Each Subcontractor, regardless of tier, shall submit the following information to the Contractor for review prior to commencement of work:

   a. The Subcontractor's site-specific safety and health program, outlining safety policy, responsibilities and procedures.

   b. Subcontractor's written Right-to-Know Program.

   c. Material Safety Data Sheets (MSDS's) on every chemical that each Subcontractor, regardless of tier, will use on the project in their specific scope of work.

   d. Resumes of the field supervision, site Safety representative, and alternates. *(*The Safety Representative must be a competent person with an OSHA ten hour Construction Health and Safety Training card (current within 5 years) who is capable of identifying existing and predictable hazards in surroundings that are unsanitary, hazardous or dangerous to employees, and has the authority to take prompt corrective measures or stop work to eliminate them.)* ***The designated Safety Rep must have a 10-hour OSHA Construction Health and Safety Training card current within five years.***

3. Each Subcontractor, regardless of tier, will maintain and provide to the Contractor written records of the following as stipulated:

Document	**When Needed**
a. Mobile Equipment Safety Inspection Report	Before Use of equipment
b. Written Fall Protection Program	Before start of work
c. OSHA 300 Log	Annually
d. Toolbox Safety Meetings	Weekly
e. Self Safety Inspections	Weekly
f. Federal, State and Local Inspection Reports	48 Hours
g. Other Information as requested by Engineer or OCIP SHD	Promptly

4. All Subcontractors, regardless of tier, shall cooperate fully with the Contractor in the implementation of the Contractor and WisDOT's site-specific safety program.

5. All Subcontractors, regardless of tier, shall provide and enforce the wearing of all pertinent personal protective equipment designated for the task to protect the employees from the predetermined hazard.

6. All Subcontractors, regardless of tier, have a general duty to furnish each employee with a place of employment free from recognized hazards causing or likely to cause death or serious physical harm.

7. All Subcontractors, regardless of tier, shall comply with OSHA Regulation 1926.21(b)(2), which states that the employer shall instruct each employee in the recognition and avoidance of unsafe conditions, and the regulations applicable to the work environment.

8. Each Subcontractor, regardless of tier, shall observe Federal, State and local laws and regulations pertaining to pollution control, water supply, fire protection, sanitation facilities, waste disposal, hazardous waste disposal, and other related items.

9. All Subcontractors, regardless of tier, will supply, maintain, and inspect all fire extinguishers throughout their areas of work, in their respective offices, storage, and refueling areas.

C. SAFETY MEETINGS

1. The Contractor, at its weekly progress meetings, shall allow adequate time at the beginning of the meeting for the Contractor's Safety Representative and the OCIP SHD to articulate to all of the contractors the safety and health concerns observed during the previous construction activities. Dialog should be exchanged with consideration for corrective action and abatement.

2. The Contractor and all Subcontractors, regardless of tier, shall conduct weekly toolbox meetings involving all personnel working on the site. Toolbox meetings should address the safety and health concerns noted during each supervisor's and Safety Representative's work activities. Consideration should be given to corrective action and abatement. All Contractors are required to do daily pre-task planning and to document attendance and content.

3. The OCIP Safety Staff will conduct a weekly safety meeting with all safety and health representatives on the project. The meeting will be to discuss overall project safety and health concerns with consideration for corrective action and abatement. **Attendance is mandatory**.

D. ORIENTATION

1. The OCIP SHD will conduct new employee orientation for every employee, supervisor, manager and visitor, whose assignment requires him or her to be on the project. All persons on the project will be required to complete this orientation. **No exceptions.** All personnel who complete the orientation will be given a hardhat sticker reflecting an enrollment number indicating that they have been through the required orientation program and have not had a positive result on the drug test.

2. The Contractor and all Subcontractors, regardless of tier, shall be required to conduct site-specific orientation for all employees after they have finished project orientation and prior to commencement of any work on the USH 41 NORTH/SOUTH CORRIDOR PROJECT. All personnel must attend the site-specific orientation by their immediate employer prior to accessing the site.

3. Project-wide new employee orientation will be made available at the project as necessary. The frequency and time of the orientation will be determined by the OCIP SHD, contractor and WisDOT.

GENERAL PROJECT SAFETY RULES

1. Access to the USH 41 NORTH/SOUTH CORRIDOR PROJECT is restricted to contractor employees and those authorized by WisDOT. The Contractor and all Subcontractors will be authorized to work within a designated area of this project. Any Contractor's or its Subcontractor's employees who are in an unauthorized area of the project who are not performing work required by contract and or are not being escorted by an authorized agent of the Company, will be removed from the site.

2. No radios, tape decks or earphones are allowed on site except in employer designated rest areas and only when approved by the OCIP SHD.

3. No glass containers are allowed on site.

4. Unless otherwise posted, the speed limit is 25 mph on the project site. 10 MPH if the vehicle is within 200 feet of workers.

5. Only authorized and trained persons are permitted to operate equipment.

6. No riders on machinery or equipment. All persons in/on machinery, equipment or trucks are to be seated in a seat and wearing a seat belt if so equipped, while such machinery, equipment or vehicle is moving.

7. All mobile machinery must have operable backup alarms, running lights, flashing/strobe lights and must be activated at **ALL** times while machinery is running.

8. No one shall enter a trench or excavation unless it is inspected by a competent person and properly shored or sloped and documented.

9. Only trained, qualified operators will use powder-actuated tools, and only when proof of training is readily maintained.

10. The Contractor and all Subcontractors will be responsible for maintaining a first aid kit in their field office and/or "gang box (es)," and have a qualified person to use it. The Contractor and all Subcontractors must have employees certified in CPR and first aid. All first aid injured or treated persons must REPORT THE INCIDENT immediately TO THEIR designated SITE Safety Manager/Representative and the OCIP Administrator.

11. Report all accidents, unsafe conditions or practices immediately to your supervisor and the OCIP SHD.

12. Private autos are only allowed at designated locations within the site. All company vehicles shall be identified by the contractor's name, be authorized by OCIP SHD to operate on the site and shall have their Hazard Lights, Headlights and Strobe lights on while driving on the site.

13. The Contractor and all Subcontractors will utilize ground fault circuit interrupters (GFCI's) on all electrical outlets. Generators must be the GFCI-type, or the GFCI receptacles must be plugged in at the generator and all tools plugged into it.

14. All electrical cords and power tools are to be regularly inspected with a written record submitted to the project safety director on a monthly basis. Defective tools and equipment are to be tagged "DEFECTIVE" and removed from service immediately.

15. The Contractor and all Subcontractors will be responsible for providing and distributing clean drinking water for its employees.

16. The Contractor and all Subcontractors will be responsible for providing adequate and clean sanitary facilities for its employees.

17. Adequate temporary lighting is to be installed in accordance with all federal, state, and local governmental regulations.

18. Extension cords, air hoses, welding leads, and burning leads are to be distributed in an orderly manner, so as not to create a tripping hazard. Periodic "roll ups" will be conducted at the direction of the OCIP SHD.

UNSAFE AND IMPROPER BEHAVIOR

The Contractor and Subcontractors' employees performing, involved in, or participating in any of the following are in violation of the OCIP Safety and Health Program, subject to fines and removal from the job site:

1. Under the Influence: Entering or being found on the USH 41 NORTH/SOUTH CORRIDOR PROJECT while under the influence of, or in the possession of, intoxicating liquor or controlled substances.(see drug and alcohol program)

2. Stealing. Unauthorized removal, attempted removal, or possession of property belonging to someone else or to the owner.

3. Fighting: On the USH 41 NORTH/SOUTH CORRIDOR PROJECT property.

4. Dangerous Weapons: In possession of guns or dangerous weapons while on USH 41 NORTH/SOUTH CORRIDOR PROJECT property.

5. Property Damage: Willful damage to equipment, buildings, or other WisDOT property.

6. Horseplay: Scuffling, pranks, wrestling, or throwing material at others.

7. Insubordination: Refusal to perform a safe work assignment given by a supervisor.

8. Visiting Other Operations: Visiting other operations if work does not require you to do so.

9. Housekeeping: Willful littering, writing, defacing, or other poor housekeeping actions to equipment, buildings, locker room/toilet facilities, or other WisDOT property.

10. Unsafe Acts Actions, which place yourself or coworkers in an unsafe, working environment or situation.

11. Threatening other employees by profane and abusive language.

RESPONSIBILITY

The safety and health program mandates that all supervisory employees accept their responsibility for the prevention of accidents and be responsible for the safety training and instructions of employees under their supervision. Supervisory employees are responsible for and expected to administer discipline when safety violations occur. While consistency and fairness are important in all disciplinary structures, it is especially important within the context of an OCIP where many different contractors are operating under the same set of contractual conditions. Therefore, we have provided the following minimum guidelines that we expect are followed by all contractors registered in the OCIP.

A violation of the safety program rules may result in penalties assessed to the contractor up to and including barring specific contractor employees from work on the project. While such penalty may be a consideration in the degree of discipline, it should not be the sole determinant.

PROCEDURE

Project managers/superintendents and/safety professionals or foremen are directly responsible for discipline that is administered in a fair and consistent manner.

Except in cases involving major violations or significant project safety rules and regulations are violated, the progressive constructive discipline model is encouraged. Constructive discipline is discipline that is administered for the purpose of producing a corrective change in the employee's behavior. However, if the change does not occur, then a more progressive and serious form of discipline will be administered. Examples of major safety violations would be falsely reporting of an injury to claim workmen's compensation benefits, fighting, use of drugs or alcohol on project property, etc.

Rules of conduct have been established for project safety. All employees must follow these rules. The safety rules listed in this manual are to be considered a baseline and not all-inclusive.

Safety rules are "rules of conduct" based primarily upon the safety standards established for the project. The communication of the safety rules to employees is critical, but of equal importance is the enforcement of these safety rules in a fair and consistent manner. To maintain fairness and consistency, the supervisor must administer the proper discipline in accordance with the severity of the safety violation. Considerations in determining appropriate discipline may include the follows:

1. Has the safety violation been verified?

2. Is this the first offense? If no, what discipline was administered?

The typical disciplinary action pattern is as follows; however, the severity of a violation will determine the level of disciplinary action administered:

1. Verbal Reprimand: The supervisor will inform the employee that he/she has committed a safety violation, which, if repeated, could result in further disciplinary action.

2. Written Reprimand: A formal written notice will be issued by the supervisor informing the employee of the safety violation and notifying the employee that future violations may result in suspension or discharge from work.

3. Suspension. The employee's supervisor will inform the employee that he/she is suspended from work without pay for a specified period of time for a violation of project safety rules or regulations, and that future violations may result in discharge.

4. Discharge: Employment will be terminated as a result of a major safety violation or a pattern of safety violations.

Whenever discipline of a safety violation is administered, proper documentation of the action must be recorded and a copy forwarded to the OCIP SHD. The documentation should state what safety rules were violated, the level of disciplinary action administered, and any other comments the supervisor wishes to note relative to the incident.

PROJECT SAFETY RULES

1. Safety head protection, i.e. hard hats (ANSI Z89), safety glasses (ANSI Z87), and Class II (2004) safety apparel must be worn at all times while on the work site.

   In addition, Class III apparel shall be worn during nighttime and/or low visibility. For all work on the USH 41 NORTH/SOUTH CORRIDOR PROJECT, when Class III apparel is required, it shall include Class E, full length, reflective pants. Any exceptions regarding the use of Personal Protective Equipment will need to have prior written approval of the OCIP Safety Manager. **Flaggers are required to have class III including type E pant at all times**

2. Long pants, 4 inch sleeved T-shirts, and safety-toe (ANSI Z41.1) leather, work shoes or boots shall be worn at all times by all personnel on the work site, including visitors.

3. All injuries, accidents, and incidents will be reported immediately to a supervisor.

4. False claims of injury will result in discharge.

5. Personal protective equipment (respirators, earmuffs or plugs, gloves, boots, safety harness, etc.) will be provided by the contractor as required by the hazard involved in work assignments. This equipment must be worn when conditions warrant their use.

6. Report defective machines, tools, etc., and have them taken out of service.

7. Reporting to work under the influence of intoxicants, tranquilizers, narcotics, or other dangerous drugs; or possession of such is prohibited and will result in discharge.

8. No employee shall remove, displace, damage, destroy, or alter any safety device or safeguard furnished or provided for use in any place of employment, not shall anyone interfere in any way with the use thereof.

9. Any employee who observes unsafe acts of unsafe conditions in a work area, which might result in an accident or injury, shall report such acts or conditions to supervision immediately.

10. Familiarize yourself with signs and posters bearing pertinent information, warnings, directions, and instructions. Know the locations of fire extinguishers in your work areas.

11. Fighting, creating a disturbance or horseplay will not be tolerated.

12. Stealing: Unauthorized removal, attempted removal, or possession of property belonging to someone else or to the owner will result in termination.

13. Dangerous Weapons: Possession of guns or dangerous weapons while on WisDOT property will result in termination.

14. Property Damage: Willful damage to equipment, buildings, or other plant property will result in termination.

15. Insubordination: Refusal to perform a safe work assignment given by a supervisor will result in termination.

16. Visiting Other Operations: Do not visit other operations if work does not require you to do so.

17. Housekeeping: Housekeeping, safety, and productivity go hand in hand. You are responsible for keeping your work area clean. Willful littering, defacing, or other poor housekeeping actions to equipment, buildings, locker room/toilet facilities, or other WisD0T property will not be tolerated.

18. Unsafe Acts: Actions, which place yourself or coworkers in an unsafe working environment or situation, will not be tolerated.

19. Threatening other employees by profane and abusive language will not be tolerated and is subject to disciplinary action up to and including termination.

NOTE: VIOLATIONS OF SAFETY RULES OR SAFETY STANDARDS MAY RESULT FINES, AND MAY INCLUDE REMOVAL FROM THE PROJECT.

NOTICE OF SAFETY VIOLATION

EMPLOYER: _____

PROJECT: _____

EMPLOYEE: _____

CLASSIFICATION: _____

SUPERVISOR: _____

DESCRIPTION OF VIOLATION:

_____
_____
_____
_____
_____

DISCIPLINARY ACTION TAKEN:

_____
_____
_____
_____
_____
_____

DATE: _____

SIGNATURE: _____

PRINT NAME: _____

NON-COMPLIANCE TO SAFETY POLICIES

In an effort to ensure compliance to this program and all other established OSHA standards, WisDOT hereby implements this procedure of non-compliance to all Contractors and Subcontractors working on this project. This procedure will be followed by the OCIP Safety Staff and is fully supported by WisDOT.

LIFE THREATENING VIOLATIONS

1. If life-threatening activities are observed, immediate instruction to halt the unsafe practice will be issued and fines will be issued to the prime contractor without previous written warning.

   Life threatening situations are interpreted by the OCIP Safety Staff and are non-negotiable.

NON-LIFE THREATENING VIOLATIONS

1. 1st offense, worker and contractor is given a verbal warning - written record kept.

2. 2nd offense, worker is given a written warning and his supervisor is brought into the office for a "discussion" with the Prime Contractor and the OCIP Safety Staff. A copy of the written warning is sent to the offending worker's company's office requiring an owner representative to meet with the OCIP Safety Director and the Project Team and discuss the recurring issue.

3. 3rd offense, worker is permanently removed from the project and contractor is fined.

GENERAL CONDITIONS

1. If repeated safety violations are noted within the same crew, the supervisor of said offenders will be subject to fines and if correction is not made, is subject to removal from the project.

2. To assist in our efforts to provide a safe work place, the violations and penalties described in this manual are included in this General Safety Program. Signs enumerating this policy will be posted at the job site.

3. Fines and penalties established in this manual will be imposed at the sole discretion of the OCIP Safety Staff. Second offenses by the same employee within 6 months of the previous violation will result in a "2nd Offense "assessment to the contractor. Appeals of any fines will be made in writing to the OCIP SHD. The appeal shall discuss in detail the reasons supporting the appeal. The OCIP SHD will schedule a conference with the WisDOT Risk Manager who will make the final decision.

4. Contractors or their employees or agents involved in unsafe acts or conditions may be directed to cease the activity until the condition is brought into compliance with the site safety procedures. Any delay costs will be borne by the Contractor. In addition, if a contractor or its sub-contractor refuses to correct unsafe conditions, WisDOT may correct the

situation by using other employees and back charge the contractor or its subcontractor for expenses incurred.

5. The prime contractor will be billed for fines assessed and are required to pay directly as follows:

   Payable to the:

   USH 41 NORTH/SOUTH CORRIDOR PROJECT Safety Violations Fund
   USH 41 NORTH/SOUTH CORRIDOR PROJECT Safety Office

   330 East Kilbourn Ave.
   Suite 450
   Milwaukee, WI 53202

   Fines collected will be distributed as determined by a Safety Incentive Committee (SIC) comprised of representatives of WisDOT, representatives of the Aon, a representative of each prime contractor. The SIC will create the criteria for use of these funds. The WisDOT OCIP Administrator must authorize any withdrawals or disbursements from the Fund.

PROJECT FINES

Violation	Fine	
	1st Violation	2nd Violation
SPEEDING IN WORK AREA	$ 200	$ 400
SAFETY TOE FOOT WEAR	$ 200	$ 400
HARDHAT	$ 200	$ 400
SAFETY GLASSES	$ 200	$ 400
DRESS CODE	$ 200	$ 400
GFCI	$ 200	$ 400
DAMAGED CORDS	$ 200	$ 400
RIDING IN BED OF TRUCK	$ 200	$ 400
MACHINE GUARDING	$ 200	$ 400
SEATBELTS	$ 200	$ 400
Multiple	$ 500	$1,000
IMPROPER USE OF LADDER	$1000	$2,000
VISITOR PROCEDURE	$2000	$4,000
IMPROPER CONFINED SPACE ENTRY	$2000	$4,000
NOT TIEING OFF	$2000	$4,000
PERSONAL FALL PROTECTION	$2000	$4,000
REMOVING GUARDRAIL without replacing	$2000	$4,000
IMPROPER HOLE COVERING removing hole cover	$2000	$4,000
HOUSEKEEPING	$1000	$2,000

IMPROPER TRENCH PROTECTION	$2000	$4,000
IMPROPER SCAFFOLDING and procedure	$3000	$6,000
IMPROPER FLAGGING/BARRICADING	$3000	$6,000
ENTERING DEMOLITION AREAS	$3000	$6,000
OTHER SAFETY VIOLATIONS NOT LISTED HERE	$200 - $3000	$6,000

EMERGENCY RESPONSE PROCEDURES

Emergencies may arise at any time with the potential to cause loss to people and property. Advanced planning for emergencies is the only way to minimize this potential loss. The following procedures will be established and adhered to in the event of an emergency. Job site-specific procedures will be developed and updated during the course of the project as conditions warrant.

PERSONAL INJURY

If it requires life-threatening emergency medical treatment call 911. All work related injuries must be reported to the OCIP Staff immediately thereafter. .

The following procedures are to be followed:

1. Secure the accident scene.

2. Try not to disturb any of the accident scene unless it is in the best interests of the injured party that certain things be moved. However, it is extremely important that nothing be moved if possible.

3. Take pictures to document the accident scene. Be sensitive. Do not take pictures of the injured person, but try to take pictures of the accident scene, date, and time as best as possible.

4. The employee's immediate supervisor will contact the OCIP SHD or his designee to inform them of the accident, seriousness of the injury, location, and the need for immediate emergency medical attention.

5. Get the name and address of all witnesses.

6. Take statements for each individual who was an actual eyewitness to the incident. (Statements from individual who heard certain things but did not see them are considered third party and should not be utilized as a statement.)

7. Investigate the incident thoroughly, identifying specifically what happened, how it happened, who was involved, and what equipment or tools if any were involved.

8. Assemble all of the parties' together, witnesses and those who were involved in the incident, along with their immediate supervisors and devise corrective action to prevent a recurrence.

9. Copies of the data collected from any investigation shall be supplied to the SHD and the WisDOT Safety Engineer in a timely manner to review and verify that the corrective actions seem appropriate and are documented and to share the findings at the next weekly Contractor Safety Meeting for others to improve project safety.

SEVERE WEATHER

Should weather conditions, such as severe electrical storms, tornadoes, etc., develop around or near the project site that could cause work conditions to become unsafe or hazardous, the following procedures will be followed:

1. The OCIP SHD or his designee and the contactor will monitor the area weather by the use of a weather alert radio

2. If lightning is present / visible, evacuate to a rubber-tired vehicle or other lightning safe refuge.

3. Should conditions warrant a cessation of work activities, the OCIP SHD, Engineer or his designee will notify all affected Contractor personnel and all Subcontractors. The contractor and all subcontractors shall immediately secure their work site and evacuate to a designated safe area.

4. Should the project or certain work activities be shut down due to severe weather conditions, the contractor or his designee will determine when it is safe to resume the operations.

5. Tornado: In the event of a tornado, all personnel employed at the project will evacuate to the designated tornado safe evacuation area. The Contractor's and all Subcontractor's project managers and/or superintendents will be responsible for obtaining a "head count" of the employees.

6. High winds can be hazardous. Contractors shall monitor wind speeds and take appropriate action to secure property and persons.

EMERGENGY EVACUATION PROCEDURES

In the event of an emergency, such as a bomb threat, fire, explosion, etc., that requires the evacuation of the job site, the following procedures shall be followed:

1. Once the evacuation signal is given, the Contractor and all Subcontractors shall immediately cease work. All equipment is to be shut down and secured as quickly as possible. All personnel will then exit the site in an orderly manner, leaving nonessential personal belongings behind and proceed to the designated evacuation area-gathering site.

2. The Contractor's and its Subcontractor's project managers and superintendents will be responsible for obtaining a head count of their employees. Any missing individual(s) will be reported to the Engineer/OCIP SHD or his designee immediately.

FIRE

Should a fire occur on the project site, the following procedures shall be followed:

If a worker discovers a fire on the project, and it is small enough to grab a nearby fire extinguisher and put it out without putting themselves in harms way or other workers in danger then (Put it out!!) if this will not work, by all means call 911.

1. The individual(s) discovering the fire will notify the Contractor's project manager or superintendent.

2. The Contractor's project manager or superintendent will notify the Engineer/OCIP SHD or his designee immediately and advise of the exact location of the fire.

3. The project team will then assist the fire department in extinguishing the fire.

4. The Contractor's and all Subcontractor's personnel shall immediately evacuate to a designated safe area and account for their employees. This result shall be reported to the Engineer/ OCIP SHD or his designee.

TRAINING

The Contractor and all Subcontractors will be formally advised of all site emergency procedures, and it will be their responsibility to advise and train its employees in these procedures.

MEDIA

One representative, as determined by the Engineer, will be responsible for all media communication. No other persons are authorized or are to discuss matters relating to the project with any media representative. Please refer to the contingency/crisis management plan.

FIRST AID MEDICAL

The purpose of this section is to provide competent and responsible medical and first aid care for all employees.

RESPONSIBILTY

Responsibility for medical personnel and facility maintenance on USH 41 NORTH/SOUTH CORRIDOR PROJECT will be delegated to each safety representative and/or superintendent of each Contractor and Subcontractors.

Training of employees in the area of first aid and emergency care shall be the responsibility of the contractor.

The responsibility for providing proper transportation of the sick or injured lies with the safety representative of each contractor.

Employee medical and safety records are the responsibility of each contractor's safety representative. All safety and medical records must be filed separately from employee personnel records.

GENERAL

Provisions will be made prior to the commencement of the project for prompt medical attention in case of serious injury.

Telephone numbers of physicians, hospitals, and ambulance services shall be posted next to each phone.

All employees will be instructed in the proper reporting of injuries.

The initial visit by an employee to a physician or clinic for medical treatment and evaluation shall be to an Aurora facility. The Medical Authorization form shall be completed by the OCIP SHD or the Project Safety Representative and sent to the treatment facility with the injured employee.

Employees who obtain medical treatment for alleged work-related injury or illness without being referred by project medical personnel or the OCIP SHD must advise project management or the OCIP SHD immediately following treatment.

EMPLOYEE ACCESS TO MEDICAL RECORDS

Beginning December 1, 1980, the Occupational Safety and Health Administration set forth rules which allow for the access of an employee to their exposure and/or medical records relating to

any toxic or harmful physical agents with which they may have come into contact while in your employ.
Posters stating this are to be posted at points of assembly throughout the job site.

All project personnel concerned should read this standard. Specifically, persons on the project that should be knowledgeable are superintendents, safety representative, and office personnel involved in project record keeping.

In the event you are approached by any of the individuals identified in OSHA 1910.20 requesting access to the exposure and/or medical records, the following procedure shall be implemented:

1. Acknowledge the request of the employee and state the fact that by law you have 15 working days in which to present these records to them. Assure them that we will comply with their rights to access within that specified period in as full and complete a manner as we can.

2. Notify the administration of the request by the individual or his representative for access to these records.

INDUSTRIAL HYGIENE

Employees shall be protected from environmental hazards that arise out of or during the course of employment. Hazardous exposures that may adversely affect health, both immediate and long term shall be controlled.

A program that deals with the recognition, evaluation, and control of environmental health hazards shall be developed in consultation with a Certified Industrial Hygienist.

Areas in which lasers are used shall be posted with standard laser warning cards.

SECURITY

The Contractor's and all Subcontractor's personnel will comply with the following security procedures for the USH 41 NORTH/SOUTH CORRIDOR PROJECT:

1. Alcohol, drugs, firearms, and dangerous weapons are not permitted on WisDOT property. If such items are identified or if there is a reasonable suspicion on the property, authorities will be notified, you will be escorted off WisDOT project site and may be refused future admittance.

2. Park only in authorized areas.

3. Obey all safety and traffic controls, signs, and devices.

4. Contractors are required to post speed limit signs in accordance with the job site rules.

5. You are permitted to go only to your destination or assigned work area.

6. Be alert and stay clear of all moving equipment.

7. You are responsible for securing and safekeeping of your property. WisDOT/Insurance carrier assumes no risk of liability.

8. Report unusual or suspicious activity to law enforcement and OCIP SHD:

Failure to comply with any WisDOT project site security or safety policies, rules, or regulations may result in refusal for future admittance.

COMMUNICATION SYSTEM

Communications are essential for the success of any program. The same holds true for a successful safety and health program. The Contractor and all Subcontractors working on this project must implement the following programs and follow the project specific communication guidelines.

CONTRACTOR ORIENTATION

The Contractor will be required to attend and orientation meeting conducted by OCIP SHD prior to commencing work on the USH 41 NORTH/SOUTH CORRIDOR PROJECT. The agenda for this meeting will include safety requirements, security, emergency procedures, and work rules. The Contractor's and all Subcontractors' project manager, superintendents, and site safety representative shall attend this meeting.

NEW EMPLOYEE ORIENTATION

A. The OCIP SHD will conduct new employee orientation for every employee, supervisor, manager and visitor with a reason to be on the project. All persons on the project will be required to attend this orientation. **No Exceptions.** All personnel are subject to drug and alcohol testing and must successfully pass such testing before accessing the site. All employees who complete these requirements will be given a hardhat sticker authorizing their access to the site.

B. The Contractor and all Subcontractors, regardless of tier, shall be required to conduct site-specific orientation to all employees after they have finished the project orientation and prior to commencement of any work on USH 41 NORTH/SOUTH CORRIDOR PROJECT. All personnel must attend both the project orientation and site-specific orientation by their immediate employer prior to accessing the site. Attendance roster must be submitted within 48 hrs to the OCIP SHD.

C. Project-wide new employee orientation will be made available at the project site as necessary.

SAFETY MEETINGS

A. The Contractor, at its weekly progress meetings, shall allow adequate time at the beginning of the meeting for the Contractor's Safety Representative and the OCIP SHD to articulate to all of the contractors the safety and health concerns observed during the previous construction activities. Dialog should be exchanged with consideration for corrective action and abatement.

B. The Contractor and all Subcontractors, regardless of tier, shall conduct weekly toolbox meetings involving all personnel working on the site. Toolbox meetings should address the safety and health concerns noted during each supervisor's and Safety Representative's work activities. Consideration should be given to corrective action and abatement.

C. The OCIP SHD will conduct a **weekly** safety meeting and must be attended by all safety and health representatives on the project. The meeting will discuss overall project safety and health concerns with consideration for corrective action and abatement.

JOB SITE POSTING REQUIREMENTS

The Contractor and all Subcontractors, regardless of tier, will ensure compliance with any and all of the Wisconsin workers' compensation statutes, the regulations of the Occupational Safety and Health Administration, the regulations of all other Federal, State, and local governmental agencies, including but not limited to the WisDOT Standard Specifications for construction, that certain notices, signs, or posters be put up in a conspicuous place where employees can readily see them or where notices to employees are customarily posted. Minimum posting requirements include the following:

1. OSHA Job Site Safety and Health Poster

2. Emergency Telephone Number Listing

3. MSDS Notice to Employees: This notice advises employees that MSDS's for a particular job site are located in the job trailer along with the written HAZCOM program.

4. OSHA Annual Summary: The summary is actually the last page of the OSHA 300 form with totals listed for all OSHA recordable cases. It is required to be posted from January through March.

5. Workers' Compensation Notices

6. Equal Employment Opportunity Poster

7. Right to Medical Records

The Contractor and all Subcontractors will be responsible for the posting of all applicable safety danger/warning signs pertaining to the hazards associated with its work.

ACCIDENT INVESTIGATION

Accident investigation has one primary goal: to prevent the recurrence of similar accidents. The objective of investigating accidents is to make the workplace safer for everyone.

1. An accident investigation report will be completed on all accidents and near-hits incidents. (Near-HITS: any incident that does not result in personal injury or property damage, but has the potential.)

2. The investigation report will be completed and turned into the OCIP SHD within 24 hours of the incident.

3. The OCIP SHD will review the investigation report with the Contractor and all Subcontractors to discuss recommended corrective action and its implementation. It is the Contractor's and all Subcontractor's responsibility to discuss the incident's cause and recommended corrective action to prevent recurrence with its employees and implement it.

4. The accident investigation report is to include additional information not included on the "First Report of Injury" but necessary for isolating the conditions responsible for the injury or accident, and to devise corrective actions.

OSHA INSPECTION

PRE-INSPECTION

1. Normally, OSHA will come on the job without advance notice during regular business hours for an inspection because of:

    a. Complaints filed by employees, Contractors, Subcontractors, unions or even outside third parties. (Ask for a copy of the complaint.)

    b. A fatality or serious accident involving two or more being hospitalized.

    c. Random selection or program inspection.

2. The OSHA compliance officer or inspector will present his/her credentials, explain the nature and the purpose of his visit, and usually will ask for an opening conference at which he may want the Contractor's safety personnel, Subcontractors' representatives, and union representatives or employee representatives present.

3. **Notify the OCIP SHD immediately**.

4. While getting all necessary personnel together:

    1. Call the Engineer immediately and advise of imminent inspection.

    2. Review this section.

    3. Advise the Contractor and all Subcontractors of the inspection.

    4. Have at least one individual, knowledgeable in potential OSHA hazards, begin inspection/correction ahead of the OSHA Inspector to give him some advance help and make his job easier by eliminating possible violations. If the inspection lasts several days, keep working on this.

OPENING CONFERENCE

(Superintendent must attend, or safety rep)

1. Begin filing out an OSHA Safety Inspection Report.

2. Record names of all present.

3. Identify and record names of all persons assigned to go with OSHA compliance officer on walk-around inspection.

4. During opening conference, walk-around inspection and closing conference, it is extremely important that the Contractor's and all Subcontractors positive safety attitude by communicated to the OSHA inspector. However, NEVER volunteer information. Maintain a good attitude during the entire inspection. Be cooperative and polite. Outline the Contractor's and Subcontractors' safety efforts where appropriate. A good safety attitude when OSHA is not around will help when it is.

THE INSPECTION ("Take pictures of everything the inspector photographs.")

1. It is strongly recommended that the project manager and the OCIP SHD accompany the OSHA inspector on the entire walk-around inspection. The project safety representative or some other responsible and knowledgeable supervisor must accompany the inspector.

2. The OSHA inspector will take pictures during his/her inspection where he/she things there may be a violation, and should notify the Contractor's and/or the Subcontractor's representatives when he/she does so. If he/she does not, ask him/her to do so. Take picture-for-picture with the inspector in as close to his/her position as possible. Take additional photographs as necessary for better perspective or additional detail and information. When the Contractor's or a Subcontractor's representative makes the inspection walk, he/she shall maintain a photograph log. This log shall list each photograph by number, with pertinent data, for easy reference to subsequent citations, if any.

3. Take notes of each location visited, i.e., equipment checked names of personnel talked to, gist of conversations, etc. Try not to get involved in conversations between questions but remain with them all the time. The inspector does have the right to interview various employees privately. Answer questions but do not volunteer any information, particularly about operations of particular machines. NEVER perform a demonstration. If the machine is not being operated, NEVER state that it was or when in its present condition.

4. "Unsafe Acts". It is important to distinguish between "unsafe acts" and "unsafe conditions". Most serious violations (as well as injuries) are the result of "unsafe acts" on the part of the workman and not "unsafe conditions." "Unsafe acts" include such things as failure to wear Contractor/Subcontractor-furnished goggles or failure to wear Contractor/Subcontractor-furnished safety harnesses and lines. Threats of discharge or actual discharge for repeated, "Unsafe acts" "sometimes is the Contractor or all Subcontractors'' only remedy. However, when the Contractor's representatives accompanying OSHA inspectors observe an "unsafe act," the representative should immediately contact the employee's supervisor. If he is not immediately available, he should contact the employee directly and instruct him to cease the "unsafe act." This action may not avoid a citation, but it will certainly mitigate the circumstances and show good-faith efforts.

5. "Unsafe Conditions": This includes such things as guard rails down, missing toe-boards, defective ladders, guards off of saws, poor housekeeping, improper storage or caps off oxygen and acetylene cylinders, underground electrical equipment and defective tools and equipment. Most OSHA citations are for "unsafe conditions" which the Contractor and all Subcontractors can do something about. However, during walk-around inspections, "unsafe conditions" may be found that can be corrected immediately. This should be done, as the compliance officer generally records such correction, which will demonstrate the employer's good-faith efforts. If he/she fails to note immediate abatement, corrections should be called to his/her attention, especially at the closing conference. However, even though corrected, apparent violations may still be the basis for a citation and/or proposed penalty. Defective equipment being operated should be stopped immediately and removed or red-tagged out of service. Work in areas of violations that cannot be corrected immediately should be stopped and workers reassigned until corrections can be made.

CLOSING CONFERENCE (Superintendent must attend.)

At the closing conference with the employer, the compliance officer will discuss what has been found on the inspection and state the apparent violations for which a citation may be issued or recommended.

1. Record the names of all present and take notes of what was said.

2. List all alleged violations discussed by the inspector and indicate whether serious or non-serious. Record the OSHA regulation number given for each alleged violation by the inspector. If he/she does not give the number, ask him/her for it.

3. If you don't believe an item was a violation, give him/her your reason.

4. Again, be cooperative and polite, and display a positive safety attitude. Don't be antagonistic. NEVER admit that something is a violation.

POST INSPECTION

1. Immediately complete the OSHA Safety Inspection Report and send to the OCIP SHD as soon as possible, along with the photographs, photograph log and job comments regarding each alleged violation including abatement action taken. This will considerably help establish the Contractor's and all Subcontractors' position in contesting any citations.

2. Any citations received by the job should be sent immediately to your corporate office with a copy to the project safety director.

3. Under no circumstances should an employee who has filed a complaint with OSHA be discharged or laid off because of the complaint filed, as such action is a serious violation of the OSHA law.

PERSONAL PROTECTIVE EQUIPMENT

PURPOSE AND SCOPE

This section specifies the minimum criteria for personal protective equipment to be established and applies to all Contractor's and all Subcontractors' employees.

Approved personal protective equipment shall be equipment that meets federal and state specifications and standards.

The standard code of dress for the Contractor's and all Subcontractors' personnel on the USH 41 NORTH/SOUTH CORRIDOR PROJECT shall be: hardhat, safety glasses, work boots, Class II safety vests, shirts with four-inch sleeves, and long work pants. In addition, Class III high visibility apparel shall be worn for night work including type E pants. (No exceptions!)

All PPE will be worn in its entirety while operating construction equipment.

Project Manager and superintendents/supervisors shall be responsible to ensure compliance with the personal protection standards by the Contractor's and all Subcontractors personnel. The Contractor's designated safety representative and the OCIP SHD shall be responsible for regular field surveys to audit compliance.

HEAD PROTECTION

1. All areas of the project will be mandatory hardhat and safety glasses areas. All personnel, including Subcontractors and visitors on site shall wear approved hard hats and safety glasses. Hats shall meet specifications contained in American National Standards Institute Z89.1 Class A or B, 1969, Safety Requirements for Industrial Head Protection. Class B is required for electrical contractors or workers. Hard hats shall identify the contractors by company and employee.

2. A 'bump cap' is not an approved hard hat and is not acceptable at the USH 41 NORTH/SOUTH CORRIDOR PROJECT.

3. Non-typical hardhats (cowboy hats, etc), even if conforming to ANSI Z89, shall not be worn on the USH 41 NORTH/SOUTH CORRIDOR PROJECT

EYE PROTECTION

1. All of the Contractor's and all Subcontractors' employees are required to wear safety glasses with fixed side shields in accordance with ANSI Z87.1 standards **At all times,** this applies to prescription eyeglasses as well.

2. Employees shall be provided with and be required to wear eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical or radiation agents.

3. Eye and face protection required herein shall meet the requirements specified in American National Standards Institute Z87.19 1968. Employees whose vision requires the use of corrective lenses or contact lenses and who are required by this standard to wear eye protection shall wear goggles or prescription safety glasses with side shields.

4. Full-face shields, in addition to safety glasses, are required for all grinding and chipping and cutting with partner saw or other activities deemed necessary by the OCIP SHD.

5. Burning goggles are required for all burning operations such as oxygen, acetylene, propane and natural gas.

6. Face and eye protection equipment shall be kept clean and in good repair. The use of defective equipment (with structural or optical defects) is prohibited.

7. Welding hoods and flash glasses are required for all welding operations. Adequate screening and shielding for employees outside the work area shall be provided.

RESPIRATORY PROTECTION

1. Respiratory protection devices approved by the United States Bureau of Mines, NIOSH, or MSHA for specific contaminants to which the employee is exposed shall be available and worn by personnel in emergencies or when exposed to hazardous concentrations of toxic or noxious dust, fumes, or mists as established by enforcing standards.

2. Only respirators, which are applicable and suitable for the purpose intended and approved by MSHA and NIOSH, will be used. They should be selected by a competent person on the basis of the hazards to which the employee is exposed.

3. Employees required to use respiratory protective equipment approved for use in atmosphere immediately dangerous to life shall be thoroughly trained in the use and limitations of such equipment.

4. Respiratory protective equipment will be inspected regularly and maintained in good condition by the Contractor. Chemical cartridges will be replaced as necessary to provide complete protection. Dust respirators are to be replaced as necessary so as to avoid undue resistance to breathing.

5. Respiratory protective equipment (except dust respirators), which has been previously used, shall be cleaned and disinfected before it is issued to another employee.

6. All employees required to use this personal protective equipment shall be given individual instruction regarding the PPE prior to its use. This training shall be documented.

7. All employees must be clean-shaven to ensure the proper fitting of the respirator. The Contractor and all Subcontractors must perform fit testing on each employee to ensure the proper fit of the respirator.

8. The Contractor and all Subcontractors must have a written respirator program, and this program is to be submitted to the OCIP SHD prior to working on this project.

HEARING PROTECTION

1. Approved ear protection shall be available and worn by personnel exposed to sound levels above permissible noise exposures as established in the Federal safety and health standards. Cotton is not to be used as hearing protection.

2. Employees shall be protected from noise levels that can cause hearing impairment. Permissible noise exposures shall not exceed those listed in 29 CFR 1926.52, Table D-2. Any noise monitoring will be the responsibility of the contractor.

SAFETY HARNESSES

1. Safety harnesses meeting the Federal and State safety and health standards shall be available and worn employees exposed to falls from unprotected heights of six feet or more. Safety lanyards shall be of minimum one-half inch nylon or equivalent, with a maximum length to provide for falls of no greater than six feet.

2. Fall arrest equipment shall comply with the most current ANSI standard.

3. Safety harness shall be worn as the outer-most PPE worn except for PFD's when both are necessary

FOOT PROTECTION

1. Sturdy leather **ANSI Z41 safety-toe work boots** shall be worn for general construction work. Sneakers, street shoes, low-cut shoes, dress shoes, sandals, or canvas shoes are not acceptable or permitted as work shoes on the USH 41 NORTH/SOUTH CORRIDOR PROJECT.

WORK VESTS

1. Coast Guard approved PFD's shall be worn when working over or adjacent (with in six feet) to water where danger of drowning exists.

2. ANSI Class II vests are required at all times and Class III high visibility apparel including Class E pants shall be worn during night work.

3. Personal protective equipment shall be kept reasonable clean. Any grease, oil or dirt that significantly compromises the function of the PPE shall be cleaned from the device or the device shall be replaced in a timely fashion.

CLOTHING

1. As a minimum, all personnel working on the USH 41 NORTH/SOUTH CORRIDOR PROJECT shall wear long pants and shirts with four-inch sleeves.
2. Proper work attire is to be worn at all times. Shorts and tank tops are not permitted.
3. Fire retardant clothing including Class II vests are required for all burning and welding operations.

HAND PROTECTION

1. When cuts, burns or hazardous substances present a hand hazard, gloves shall be worn to protect the hands from injury.

OTHER PERSONAL PROTECTIVE EQUIPMENT

1. Unusual circumstances such as inclement weather, high temperature work, handling corrosive liquids, molten metal, etc., not specifically mentioned above may require specialized personal protective equipment. The project superintendent and/or safety representative for each contractor will review the potential hazards and protective equipment standards will be established for personnel.
2. Supplemental protective equipment may be required depending on the work operations involved. All Contractor and Subcontractor employees will be required to wear the appropriate personal protective equipment in accordance with the task involved.

CARE AND MAINTENANCE OF PERSONAL PROTETIVE EQUIPMENT

1. Personal protective equipment shall be used and maintained as per the manufacturer's specifications. Personal protective equipment shall be kept reasonable clean. Any grease, oil or dirt that significantly compromises the function of the PPE shall be cleaned from the device or the device shall be replaced in a timely fashion.

2. Personal protective equipment, which has been altered in any manner that reduces its effectiveness, shall be repossessed, repaired or destroyed.

3. Personal protective equipment, which has been worn-out or damaged, shall not be reissued to another employee.

4. In those instances where employees are required to provide their own personal protective equipment, the Contractor and all Subcontractors shall be responsible to ensure the adequacy, maintenance and sanitation of such equipment in accordance with Federal OSHA.

RESPIRATORY PROTECTION PROGRAM

GENERAL REQUIREMENTS AND SCOPE

This program is designed to provide protection for our workers from any 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. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosures or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to the following requirements:

1. Contractors will provide respirators when such equipment is necessary to protect the health of our employees:

    a. Respirators will be applicable and suitable for the purpose intended.

    b. Contractors will establish a "Respiratory Protective Program."

    c. The wearing of the appropriate respirator, as determined by a "competent person", in the areas designated for protection is "mandatory."

    d. All employees shall use the provided respirator protection in accordance with instructions and training received.

2. Employees will be required to follow the rules regarding the selection and use of the respirators. (No exceptions.)

3. Respirators will be selected on the basis of hazards to which each employee will be exposed.

4. Each employee will be instructed and trained in the proper use of respirators and their limitations.

5. Respirators shall be cleaned and disinfected regularly.

6. Respirators used by more than one worker shall be thoroughly cleaned and disinfected after each use.

7. Respirators shall be stored in a convenient, clean, dust-free and sanitary location.

8. Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced.

9. Designated areas requiring respirators will be surveyed periodically to determine if environmental conditions have changed by measuring their exposure and observing the areas to ascertain the degree of stress caused by the area conditions and the constant wearing of respirators.

10. These periodic surveys will also be utilized as opportunities to measure the continued effectiveness of the program.

11. All personnel working in designated areas requiring respirators must have an employer provided physical by a licensed physician to determine if they are physically able to wear a respirator and do their jobs with no adverse respiratory problems. Medical surveillance will be conducted annually on each employee working in the designated areas to ensure their continued physical capabilities.

12. All respirators used on this project will be designed to provide adequate respiratory protection against a particular hazard and approved by the U.S. Department of the Interior, Bureau of Mines, and the National Institute for Occupational Safety and Health.

SELECTION OF RESPIRATORS

1. Respirators will be selected according to the guidelines listed in the American National Standard Practices for Respiratory Protection Z88.2-1969.

USE OF RESPIRATORS

1. Respirators will be selected based on the hazard present.

2. Contractors shall have every respirator needed to protect their employees from the hazards associated with their respective construction task. All employees must wear the designated respirator for the designated hazard. (No exceptions) The box container provides the instruction on the proper way to wear, fit and care for the respirator the employee will be wearing. Additionally, contractors may use the throwaway mask when possible.

    a. The proper respirator should be selected according to the hazard the employee will be exposed to:

        (1) Follow the instructions on the package or the box on the proper way to put it on.

        (2) All employees required to wear respirators will not be allowed to wear facial hair in the proximity of the area that the respirator touches the face, i.e.:

            (a) Mustaches

            (b) Beards

(c) Large sideburns

(d) Eye glasses

(e) Dentures

b. Contractors will allow employees to select the respirator that is comfortable and that is designed to preclude the recognized hazard from the breathing zone.

c. Conduct the fit test.

d. During the course of the shift, the respirator should not be worn on the neck or on the forehead.

e. Once the respirator is removed from the face, it should be discarded not worn in other areas of the body (throw-away type)>

f. Respirator should be replaced several times during the shift or when it begins to show evidence of being soiled or cause restriction in the employee's breathing.

3. The supervisor will designate which respirator will be worn for a particular construction task or for a specific process.

4. The supervisor will be responsible for the distribution of the proper respirator.

5. The supervisor will also be responsible for training and instruction.

6. The supervisor will also be responsible for periodically checking all personnel in their departments to ensure that the respirators are being selected, used and cared for properly and according to the manufacturer's recommendations.

MAINTENANCE AND CARE OF RESPIRATORS

Most of the respirators that will be used on this project will be the throwaway type; however, some tasks may require the canister type.

If an employee is issued a canister type, the following rules regarding maintenance and care apply:

1. All respirators shall be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use shall be inspected after each use and at least monthly to ensure that it is in satisfactory working condition.

2. Respirator inspections shall include a check of the tightness of the connections and the condition of the face piece, headbands, valves, connecting tube, and canisters. Rubber or elastomer parts shall be inspected for pliability and signs of deterioration.

3. Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible and prevent them from taking a set during storage.

4. A record shall be kept of inspection dates and findings for respirators.

5. Routinely used respirators shall be collected, cleaned and disinfected (not with alcohol based cleaners) as frequently as necessary to ensure that proper protection is provided for the wearer.

6. Only experienced persons shall do replacement or repairs with parts designed for the respirator. No attempt shall be made to replace components or to make adjustment or repairs beyond the manufacturer's recommendations.

7. Respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals (not openly in gang boxes).

8. The compartments where the respirators are stored should be clearly marked.

9. Dust respirators, i.e., 3M-8710, may be stored in zip-lock-type bags.

10. Respirators should not be stored in such places as lockers or tool (gang) boxes unless they are in carrying cases, sealed containers or cartons.

TRAFFIC AND PEDESTRIAN PROTECTION

INTRODUCTION

OSHA regulations do not address the protection of the general public on a job site. However, the activities of most construction projects can present serious and significant exposure to pedestrians and vehicles, therefore protection of the general public must be addressed on this project and especially in areas where work will be done near or overhead.

Besides protecting employees, the Contractor and all Subcontractors also have a responsibility to provide a job site that is free of recognizable hazards, which have caused or are likely to cause possible exposure or loss to the general public. The following work rules are to be followed:

- All traffic signs devised or used for protection of the public shall conform to the American National Standards Institute, D6.1, Manual of Uniform Traffic Control Devices for Streets and Highways.

- Barricades, cones, and/or similar protective devices shall be used whenever employees or the public are exposed to traffic or similar hazards.

- When traffic patterns are closed or altered due to work activity, instructional or warning signs shall be used.

- When used, flagmen and signalmen shall be properly trained in the proper procedures for safely moving and processing vehicle traffic around construction activities.

- All flagging operations require the use of advanced warning devices and stop/slow paddles and used in conformance with the MUTCD.

- At a minimum, employees working adjacent to traffic shall wear a class II reflectorized vest.

- Whenever and wherever possible or necessary, low voltage (12 volt) protected lights, Type A or C, shall be used to mark fences and barricades and other such encroachments onto public streets or sidewalks. These lights shall be kept operational.

- When provided, covered sidewalks shall be equipped with permanent lights to provide sufficient illumination for use by the public day or night. All bulbs will be cage protected and kept operational.

- Public walkways and roadways shall be kept clean and free of construction-related hazards and/or materials at all times.

- Public walkways will have abrasive non-slip surfaces.

- All nighttime flagging requires illumination of the flagging station.

- When steel plates, wood planking, or similar covers are used on public ways to cover excavations, they will be substantially secured to prevent movement from traffic.

- When such covers are located where there is pedestrian traffic or exposure, they shall be tapered on all sides with cutback, cold mix, or similar material to eliminate tripping hazards. Covers will be non-slip in nature or have a non-slip surface.

11. OCIP practice is to prohibit the pedestrian crossing of live traffic lanes. In those situations in which a particular set of events creates greater hazards (determined by the OCIP Safety Director) by vehicular movements than would be caused by pedestrian crossing, the contractor/consultant/WisDOT employee may file a written pre-task safety plan with details on the means and methods that will be used for such crossings to the OCIPSHD. The OCIPSHD must approve the plan before such practice is allowed.

The following elements must be incorporated in an approved plan:

- All persons who will be crossing will be attired in Class III High Visibility Clothing which includes pants.
- All persons must have completed a safety awareness training focused specifically on the hazards of working in live traffic.
- All approvals will be task specific and limited duration. No blanket approvals will be permitted.

12. Whenever sidewalks or other normal pathways for pedestrians are blocked off due to construction activities, protected pedestrian pathways shall be provided around the blocked zone to protect pedestrians from traffic of other hazards.

13. When work is to be performed over or very near to roadways, walkways, or other areas used by the public, adequate protection shall be taken to prevent material from falling on persons or vehicles. Employees will be instructed as to the proper methods to be used for discarded rubbish and debris.

14. Construction material, which might be blown or swept off roads or floors, shall be properly secured and shall not be staged or stored near roof or floor perimeters.

15. All trash hauls must be tarped before leaving the site.

16. All rolling closures require Law Enforcement assistance and OCIP SHD approval.

EMPLOYEE TRAINING

The rules and regulations associated with this section will be covered in a weekly toolbox safety meeting to ensure that all Contractor and Subcontractor personnel are familiar with these rules. Training shall be documented.

SIGNS AND BARRICADES

Signs, barricades, barrier tapes, and other warning or entry restriction devices shall be provided whenever required by the work or any act or ordinance. Such placement shall include, but not be limited to, the following instances and circumstances (see most recent version of the Wisconsin Department of Transportation Standard Specifications for Construction):

1. Around work areas where pinch point hazards exist, as determined by competent person.

2. Around storage and fabrication areas.

3. Around any crane or excavator swing area. Post overhead work signs.

4. To define areas of overhead work. Post overhead work signs.

5. Around excavations.

6. For road closures. Provide Type A lights if barricades are left overnight. Coordinate any road closure with WisDOT.

7. Protective barricades shall MUTCD standards

8. The Contractor and all Subcontractors, regardless of tier, shall coordinate the placement of such devices with the Engineer where the devices are outside of the actual work area or intended to control the approach to, or divert movement around, the actual work area.

FIRE PREVENTION AND PROTECTION

The superintendent for the Contractor and all Subcontractors shall be responsible for the proper implementation and administration of the program, giving due consideration to the availability of the public or private fire department and the type of work to be performed on the project.

FIRE PROTECTION

1. Only approved fire protection equipment shall be purchased and issued. Fire equipment shall be used only for fire extinguishment and fire protection.

2. Only authorized personnel shall maintain fire equipment.

3. Fire equipment subject to freezing shall be kept out of the weather during freezing periods, unless protected with an approved antifreeze solution.

4. Local fire fighting personnel shall be brought in to visit the site to acquaint them with project conditions and special hazards.

5. **Fire extinguishers shall be inspected monthly and tagged**.

6. Fire hoses shall be provided when directed or required.

7. Access shall be maintained at all times to existing or newly activated fire hydrants and/or fire department connections.

8. Access to excavation and structures for fire department entry shall be maintained at all times.

9. Emergency fire department phone numbers shall be conspicuously posted at all times.

TYPES OF FIRE EXTINGUISHERS (SEE EXHIBIT "A")

1. Water: May be stored pressure; pump tank; or cartridge operated. May be used on Class A fires only.

2. Carbon dioxide (CO2): Used on class A, B, and C fires.

3. Dry Chemical: Used on Class A, B, and C fires.

CLASSES OF FIRES

1. **Class A:** Wood, paper, cloth, and many plastics.

2. **Class B:** Flammable or combustible liquids.

3. **Class C:** Energized electrical equipment.

4. **Class D:** Combustible metals.

FIRE EXTINGUISHERS

1. A fire extinguisher rated B/C shall be available within 50 feet of work areas, within 10 feet of heat producing operations, and adjacent to hazardous areas.

2. A fire extinguisher rated at 5A shall be provided for each 3,000 square feet of area, in multistory buildings, and as needed on other types of structures or projects to provide adequate protection.

3. Fire extinguishers shall be inspected monthly and maintained in accordance with manufacturer's specifications.

4. All fire extinguishers shall be inspected and re-tagged by an independent fire extinguisher servicing company annually.

5. A 20 B/C fire extinguisher shall be available within 50 feet of work areas.

6. A 20 B/C fire extinguisher shall be available within 50 feet of whenever gasoline-operated equipment is being used.

7. A 20 ABC fire extinguisher shall be available within 10 feet of welding/cutting operations or where flammable liquids are used.

FIRE PREVENTION

1. **Housekeeping:** All areas of the project shall be kept free of accumulations of wood scraps, paper, and other combustible debris.

    a. General cleanup is to be performed as needed to ensure good housekeeping.

    b. Project manager, superintendent, or designated safety representatives of each contractor shall conduct daily safety/housekeeping inspections.

2. Smoking: Smoking shall be prohibited in the vicinity of operations, which constitute fire hazards, such as fuel dispensing locations and rubbish dumps. "NO SMOKING' I or "OPEN FLAME" signs shall be conspicuously posted in these areas.

3. Welding and Burning: Welding and burning operations shall be authorized and controlled by project supervision. Combustibles in close proximity of burning or welding operations shall be protected or removed.

4. Flammable and combustible Liquids: Flammable combustible liquids shall be stored in approved containers or in approve portable tanks.

5. Electrical: Electrical work; installations and wire capacities both temporary and permanent shall be in accordance with the National Electrical Code.

6. Combustible Refuse: Combustible refuse from construction operations shall not be burned or dumped on the construction site. Such refuse shall be removed at frequent intervals as needed.

7. Construction Debris: the storage of large quantities of construction debris will be in heavy metal dumpster-like containers on the project site.

HOUSEKEEPING

1. During the course of construction, form and scrap lumber and all other debris will be kept cleared from work areas, passageways and stairs, in and around buildings, and other structures.

2. Scrap materials and rubbish are fire and accident hazards, and shall be removed from the construction site at regular intervals during the course of construction.

3. Containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse. Containers for oily, flammable or hazardous waste such as canisters, acids or harmful dusts shall be covered.

4. Trash barrels shall be located throughout the job site for rubbish disposal.

5. Tools and surplus materials should be returned to storage areas and stored in a safe manner.

6. Tools and materials shall not be left on site where they create a hazard.

7. Clean up spilled liquids immediately.

8. No material, tools, equipment or anything stored within (6) six feet of a guardrail on any elevated decks.

SANITATION

GENERAL REQUIREMENTS

Employers shall establish and maintain hygienic sanitation provisions for all employees in all places of employment as specified in the following paragraphs.

HOUSEKEEPING

1. Places of employment shall be kept as clean as possible, taking into consideration the nature of the work. Regular cleaning shall be conducted in order to maintain safe and sanitary conditions in the workplace.

2. Drainage shall be maintained where wet processes are used, and false floors, platforms, mats, or other dry standing places shall be provided, when possible. Appropriate footwear shall also be provided.

3. Tools and materials shall not be left on-site where they create a hazard, but rather secured and safely stored for next use.

4. No materials, tools or equipment is to be stored within six (6) feet of a guardrail on any elevated decks. This excludes materials staged temporarily for use in construction and will be used within the immediate work shift.

5. Spills of liquids presenting a slip, trip and fall hazard are to be cleaned up immediately.

6. Spills of hazardous liquids, combustible or flammable materials are to be controlled, mitigated and cleaned up as soon as possible.

DRINKING WATER

1. Cool drinking water shall be provided during hot weather.

2. Drinking water shall be dispensed by means that prevent contamination between the consumer and the source.

3. Portable drinking water dispensers shall be designed, constructed, and serviced to ensure sanitary conditions; shall be capable of being closed; and shall have a tap. Any container used to distribute drinking water shall be clearly marked "DRINKING WATER" and may not be used for other purposes.

TOILETS

Construction Sites

1. Toilet facilities on construction sites shall be provided as follows (the requirements of this subsection do not apply to mobile crews or to normally unattended work locations if employees working at these locations have transportation immediately available to nearby toilet facilities).

2. Where sanitary sewers are not available, job sites shall be provided with chemical toilets, re-circulating toilets, or combustion toilets unless prohibited by state/local codes.

3. Where it is not practical to provide running water, hand sanitizers may be used as a substitute for running water. (Many hand sanitizers contain flammable liquids and personnel shall be trained regarding their use, storage and safety precautions.).

FLAMMABLE AND COMBUSTIBLE LIQUIDS

1. Absolutely no smoking is permitted near any flammable liquid storage areas. Areas where flammable or combustible liquids are stored shall be marked with signs that read: Flammable-No Smoking or Open flame Within 50 Feet.

2. Storage of flammable and combustible liquids shall be in accordance with federal, state and city codes, and shall be away from open flames.

3. No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet or inside tool trailers. Approved metal safety containers will be used for indoor storage and handling. Containers are to be kept in good condition and inspected regularly. Any defective containers are to be disposed of immediately.

4. Storage areas shall be kept free of trash, weeds, debris or other combustible material.

5. At least one portable fire extinguisher with a rating of not less than 20-B units shall be located outside of, but not more than 10 feet from, the door to any room used for storage of flammable or combustible liquids.

6. Flammable or combustible liquids shall not be stored in areas used for safe passage of people.

7. Quantities of flammable or combustible liquids in excess of 25 gallons shall be stored in an acceptable or approved cabinet.

8. Storage areas outside of buildings shall be graded or otherwise provide some means of preventing spills from entering buildings.

9. Outdoor portable tanks shall not be located nearer than 20 feet from any building.

10. Within 200 feet of each portable tank, there shall be a 12-foot wide access way to permit approach of fire control apparatus.

11. At least one portable fire extinguisher having a rating of not less than 20-B units shall be located not less than 25 nor more than 75 feet from any flammable liquid storage area located outside.

12. Flammable liquids shall be kept in closed containers when not actually in use.

13. Transfer of flammable liquids from one container to another shall be done only when containers are electrically interconnected (bonded).

14. Dispensing devices and nozzles for flammable liquids shall be of an approved type. The dispensing nozzle shall be an approved automatic closing type without a latch-open device.

15. The gasoline-powered motors of all equipment being fueled shall be shut off during fueling operations.

16. Storage shall not present exposure to any structures.

17. Storage areas must be diked.

18. Storage tanks shall be labeled as to their contents.

19. Flammable liquids may be stored outside, away from buildings, in a safe and secure location in standard, approved storage containers or tanks. All approved storage containers and tanks must have a secondary containment system properly installed and capable of containing the volume of liquid in the container.

20. Portable fuel tanks will be installed in accordance with federal, state, and local requirements.

L.P. GAS/TEMPORARY HEATING

L. P. GAS

1. L. P. gas containers shall be secured in an upright position with valve protection caps or guards in place.

2. For temporary heating, heaters shall be located at least 6 feet from any L.P. gas container. Blower and radiant-type heaters shall not be directed toward any L.P. gas container within 20 feet.

3. Portable heaters, including salamanders, shall be equipped with an approved automatic device to shut off the flow of gas to the main burner, and pilot if used, in the event of a flame failure.

4. Storage of L.P. gas within buildings is prohibited.

5. Combustible floors (except bridge decks when monitored) shall be protected from excessive heat generated by heaters.

6. Heaters shall be kept at least 6 feet away from combustible walls, partitions, and other combustible material and shall not be placed directly on combustible flooring.

7. Only qualified personnel shall handle L.P. gas.

8. A proper storage facility shall be maintained on the job for tanks in storage.

9. Fire protection shall be immediately available at all locations where L.P. gas is in use.

10. Installations shall meet applicable local and N.F.P.A. codes.

11. Heaters shall, whenever practical, be hung. Heaters unsuitable for use on wood floors shall be so marked. When such heaters are used, they shall rest on suitable heat insulating material, such as concrete of at least 1 in (2.5 cm) thickness or equivalent; the insulating material shall extend 2 ft (0.6 m) or more in all directions from the edges of the heater.

12. Adequate ventilation shall be provided.

13. The storage and handling of L.P. gas shall be in accordance with N.F.P.A. pamphlet number 58.

OTHER TEMPORARY HEAT

1. Open-flame heating devices having exposed fuel below the flame are prohibited. This includes solid fuel salamanders, fire barrels, or open fires.

2. Temporary heating devices shall be installed and maintained by qualified personnel and in accordance with local and N.F.P.A. codes.

3. Fire protection shall be immediately available at locations where temporary heating devices are in use.

4. A minimum of 10 feet of clearance shall be maintained between heaters and combustible materials.

5. Heaters shall be installed securely on non-combustible bases.

6. In the event that insulation materials are required, they shall be of a non-combustible type. The use of unprotected Styrofoam, paper batting and the like is prohibited.

7. Adequate ventilation shall be provided. Air quality tests shall be made on a periodic basis.

8. Access to areas being heated shall be unobstructed.

9. Fire retardant materials shall be used to enclose areas to be heated.

10. Manufacturer's specifications for installation shall be followed.

11. Temporary heaters will not be used in confined spaces.

12. Temporary heaters will be checked for correct operation prior to being put into service each day. Heaters will not be modified or altered.

GAS CYLINDERS (ACETYLENE AND OXYGEN)

1. Storage of compressed gases shall be in accordance with nationally recognized safety practices and OSHA regulations.

2. Gas cylinders shall be:

    a. Stored in the vertical position at all times with valve caps in place.

    b. Secured to rigid vertical support to prevent tipping.

    c. Separated by 20 feet or ½ hour-rated wall when stored.

3. Empty cylinders should be separated from full cylinders and conspicuously marked.

WELDING AND CUTTING

GENERAL

- Welders, cutters, and their supervisor shall be trained in the safe operation of their equipment, safe welding/cutting practices, and welding/cutting respiratory and fire protection. ***AIHA publication "Welding Health and Safety: A Field Guide for OEHS Professionals" is recommended.***

- All welding equipment shall be inspected before each use to ensure that all required safety devices and ancillary equipment are in place and properly functioning. Defective equipment shall be removed from service, replaced or repaired, and re-inspected before again being placed in service.

Electrical and pressurized system requirements

- Welding cylinders and their use and maintenance shall meet the applicable requirements of compressed gas cylinder handling.
- Arc welding and cutting systems and their use shall meet the applicable requirements of this section.
- Arc welding and cutting operations shall be shielded by noncombustible or flameproof screens that will protect employees and other persons working in the vicinity from the direct rays of the arc, sparks, molten metal, spatter, and chipped slag.
- Cable, hoses, and other equipment shall be kept clear of passageways, ladders, and stairways.

Welding and cutting of hazardous material

- All structural welding performed on critical items, such as scaffolding, shoring, forms, ladders, piling, etc., as well as other critical items as designated by the Contractor Safety Representative, OCIP SHD or WisDOT Safety Engineer, shall only be performed by welders certified in accordance with American Welding Society (AWS) standards using qualified and approved welding practices and procedures (AWS certification or approved equivalent organization which trains to AWS standards).
- Before heat is applied to a drum, container, or hollow structure, a vent or opening shall be provided for the release of any built-up pressure generated during the application of heat.
- Employees performing welding, cutting, and heating work shall be protected by PPE appropriate for the hazards that they may encounter and based upon the results of a pre-task safety analysis conducted specifically for the welding, cutting, or heating operation that they will be performing. All required respiratory, eye and face, noise, head, foot, and skin protection equipment shall be selected and used in accordance with PPE safety requirements.
- All welding and cutting equipment and operations shall be in accordance with standards and recommended practices of American National Standards Institute (ANSI)/American Welding Society (AWS) Z49.1.

RESPIRATORY PROTECTION

General

- All welding, cutting, and heating operations shall be ventilated (natural or mechanical) such that personnel exposures to hazardous concentrations of airborne contaminants are within acceptable limits.
- Welding, cutting, and heating not involving conditions or materials described in this Section may normally be done without mechanical ventilation or respiratory protective equipment.
- Either general mechanical or local exhaust ventilation shall be provided whenever welding, cutting, or heating is performed in a confined space. ***Refer to Confined Space Entry requirements as necessary.***

Materials of toxic significance

- Welding, cutting, or heating operations that involve or generate any of the substances listed below shall be performed in accordance with the following subparagraphs: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Chromium (VI), Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Ozone, Selenium, Silver, or Vanadium.
- Whenever these materials are encountered in confined spaces, local mechanical exhaust ventilation and personal respiratory protective equipment shall be used. The use of local mechanical exhaust ventilation systems that permit the re-entry of exhaust air back into the work area, or local exhaust which incorporate a system for the filtration and recirculation of exhaust air back into the work area shall not be permitted.
- Whenever these materials, except beryllium and chromium (VI), are encountered in outdoor operations, and local mechanical exhaust ventilation systems sufficient to reduce and maintain personal exposures to within acceptable limits are not provided, then appropriate respiratory protective equipment shall be used.
- Whenever beryllium and chromium (VI) are encountered in outdoor operations, the need for and type of engineering and work practice controls to be implemented, as well as the need for and type of respiratory protection to be provided shall be based upon the results of an initial worker exposure assessment and exposure determination with regards to these substances.
- Workers may be exposed to hazardous concentrations of chromium (VI) while welding, cutting or performing hot work on stainless steel, high chrome alloys or chrome-coated metal, or during the application and removal of chromate-containing paints and other surface coatings. ***See OSHA's Standard for Hexavalent Chromium (Chromium (VI), 29 CFR 1926.1126.***
- Welding, cutting, or heating operations that involve or generate fluorine or zinc compounds shall be performed in accordance with the following:
    - In confined spaces, local mechanical exhaust ventilation and personal respiratory protection sufficient to maintain exposures to within acceptable limits shall be used.
    - In open spaces, sampling shall be performed to determine concentrations of fluorides or zinc compounds and the need for local exhaust ventilation and personal respiratory protection sufficient to maintain exposures to within acceptable limits.

Arc and gas cutting

- Oxygen cutting using either an iron powder or chemical flux, gas-shielded arc cutting, and plasma cutting shall employ local mechanical exhaust ventilation or other means adequate to remove the fumes generated.
- Other persons exposed to the same atmosphere as welders or cutters shall be protected in the same manner as welders or cutters.

FIRE PROTECTION

General

- Suitable fire extinguishing equipment of sufficient capacity shall be provided in the immediate vicinity of welding or cutting operations and maintained in a state of constant readiness for immediate use.
- Hot work permits shall be required when welding, cutting, or heating operations are performed unless otherwise indicated by the Contractor Safety Representative.
- Before conducting welding or cutting operations, the area shall be surveyed to ensure it is free of the following hazards:
    - Proximate combustible materials,
    - The presence or possible generation of potentially explosive atmospheres (flammable gases, vapors, liquids, or dusts); and
    - The presence or nature of an oxygen-enriched atmosphere.

Hierarchy of fire control

- Objects to be welded, cut, or heated shall be:
    - Moved to a location free of dangerous combustibles;
    - If the work cannot be moved, all moveable fire hazards in the vicinity shall be taken to a safe place (moved at least 35 ft (10.6 m) horizontally from the welding or cutting area) or the combustible material and construction shall be protected from the heat, sparks, and slag of welding;
    - When welding or cutting must be done in a location where combustible or flammable materials are located, inspection and authorization by the Contractor Safety Representative or OCHIP SHD shall be required before such operations are begun (the location shall be checked for latent fires by qualified fire watch personnel after the work is completed).

OXYFUEL GAS WELDING AND CUTTING

- **General**

  - Oxyfuel gas welding and cutting equipment shall be listed by a nationally-recognized testing laboratory.

- **Oxygen cylinders and apparatus**

  - Oxygen cylinders and apparatus shall be kept free from oil, grease, and other flammable or explosive substances and shall not be handled with oily hands or gloves.
  - Oxygen cylinders and apparatus shall not be used interchangeably with any other gas.

- **Hose and hose connections**

  - Fuel gas hose and oxygen hose shall be readily distinguishable from each other.
  - Oxygen and fuel gas hoses shall not be interchangeable. A single hose having more than one gas passage shall not be used.
  - Hose couplings of the type that can be unlocked or disconnected without a rotary motion are prohibited.
  - Hose that has been subject to flashback or that shows evidence of severe wear or damage shall be tested to twice the normal pressure to which it is subjected, and in no case less than 300 psi (2068.4-kPa) gauge. Damaged hose and hose connectors, or hose and hose connectors in questionable condition, shall not be used.
  - When parallel runs of oxygen and fuel gas hose are taped together, not more than 4 out of every 12 in (10 out of every 30.4 cm) shall be covered by tape.
  - Boxes used for the storage of gas hose shall be ventilated.
  - Hose connections shall be clamped or otherwise securely fastened in a manner that will withstand, without leakage, twice the pressure to which they are normally subjected in service, but not less than 300 psi (2,068 kPa) gauge.

- **Torches**

  - Torches shall be inspected before each use for leaking shutoff valves, hose couplings, and tip connections. Defective torches shall not be used.
  - Hoses shall be purged individually before lighting the torch for the first time each day. Hoses shall not be purged into confined spaces or near ignition sources.
  - Clogged torch tip openings shall be cleaned with suitable cleaning wires, drills, or other devices designed for such purposes.
  - Torches shall be lighted by friction lighters or other approved devices, not by matches or hot work.
  - Torch valves shall be closed and the gas supply shut off whenever work is suspended.
  - The torch and hose shall be removed from confined spaces whenever work is suspended.

- **Protective equipment**

  - Oxyfuel gas and other oxygen-fuel gas welding and cutting systems using cylinder-regulator-hose-torch shall be equipped with both a reverse-flow check valve and a flash arrestor, in each hose, at the torch handle or at the regulator.

  - Acetylene regulators shall not be adjusted to permit a discharge greater than 15 psi (103.4 kPa) gauge.

ARC WELDING AND CUTTING

- **General**

  - Electric welding apparatus shall be installed, maintained, and operated in accordance with the NEC.

- **Manual electrode holders**

  - Only manual electrode holders specifically designed for arc welding and cutting of a capacity capable of safely handling the maximum rated current required by the electrodes shall be used.
  - All current carrying parts passing through the portion of the holder that is gripped by the welder or cutter, and the outer surfaces of the jaws of the holder, shall be fully insulated against the maximum voltage encountered to ground.

- **Welding cables and connectors**

  - Cables shall be completely insulated, flexible, capable of handling the maximum current requirements of the work in progress, and in good repair. Cables in need of repair shall not be used.
  - Welding cables shall be inspected for wear or damage before each use. Cables with damaged insulation or connectors shall be replaced or repaired to achieve the same mechanical strength, insulating quality, electrical conductivity, and water tightness of the original cable. Cables containing splices or repaired insulation within a minimum distance of 10 ft (3 m) from the end of the cable to which the electrode holder is connected shall not be used.
  - Where it becomes necessary to connect or splice lengths of cable together, insulated connectors of a capacity at least equivalent to that of the cable shall be used. When connections are affected by cable lugs, they shall be securely fastened together to give good electrical contact and the exposed metal parts of the lugs shall be completely insulated. The joining of lengths of cable shall be accomplished by methods specifically intended for that purpose and connection methods shall provide insulation adequate for the service conditions.
  - Neither terminal of the welding generator shall be bonded to the frame of the welder.

- Pipelines containing gases or flammable liquids or conduits carrying electrical conductors shall not be used for a ground return circuit.
- Welding supply cables shall not be placed near power supply cables or other high-tension wires.
- Welding leads shall not be permitted to contact metal parts supporting suspended scaffolds.
- Equipment shall be shut down when the leads are unattended.

UTILITIES IDENTIFICATION AND PROTECTION

In general, the operations of the Contractor and all Subcontractors impact both private and public utilities. Damage to utilities can have disastrous results, including loss of power, fire, explosion, flooding and loss of life or serious injury.

The Contractor and all Subcontractors shall be required to identify, locate, arrange for removal and/or protect any utilities, which might interfere with the work to be performed.

CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES

For protection of underground utilities and according to Public Act 53, 1974, the Contractor shall dial **Diggers Hotline 811** a minimum of three full working days, excluding Saturdays, Sundays, and holidays, before beginning each excavation in areas where public utilities have not been previously located. Utility members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the Diggers Hotline alert system.

The Contractor shall not begin work until arrangements are made for the protection of adjacent utilities, or other property where damage might result in considerable expenses, loss, or inconvenience.

The Contractor shall cooperate with the owners of the utilities in their removal and rearrangement work.

NEW UNDERGROUND UTILITIES

Once installed, it is recommended that the Contractor place utility identification tape of a type and at a depth above the installed utility as specified by the drawings or specifications. The purpose of this tape is to provide a future warning in the event excavation may be performed in this area.

EXCAVATION, TRENCHING, AND SHORING STANDARDS

DEFINITIONS

Accepted engineering practices means those requirements that are compatible with standards of practice required by a registered professional engineer.

Aluminum hydraulic shoring means a pre-engineered shoring system comprised of aluminum hydraulic cylinders (cross braces) used in conjunction with vertical rails (uprights) or horizontal rails (walers). Such system is designed specifically to support the sidewalls of an excavation and prevent cave-ins.

Bell-bottom pier hole means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (benching system) means a method of protecting employees from cave-ins by excavating the sides of an excavation for form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

Competent person means who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Cross braces means the horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or walers.

Excavation means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

Faces or sides **mean** the vertical or inclined earth surfaces formed as a result of excavation work.

Failure means the breakage, displacement, or permanent deformation of a structural member of connection as to reduce its structural integrity and its supportive capabilities.

Hazardous atmosphere means an atmosphere which, by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness or injury.

Kickout means the accidental release or failure of a cross brace.

Protective system means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp means an inclined walking or working surface that is used to gain access to one point from another, and is constructed from earth or from structural materials such as steel or wood.

Registered Professional Engineer means a person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer, registered in any state is deemed to be a "registered professional engineer" within the meaning of this standard when approving designs for "manufactured protective systems" or "tabulated data" to be used in interstate commerce.

Sheeting means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (shield system) means a structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, shields can be either pre-manufactured or job-built in accordance with Section 1926.652 (c)(3) or (c)(4). Shields used in trenches are usually referred to as "trench boxes" or "trench shields".

Shoring (shoring system) means a structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

Sloping (sloping system) means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as soil type, environmental conditions of exposure, and application of surcharge loads.

Stable rock means natural solid mineral material that can be excavated with vertical sides and will remain intact while exposed. Unstable rock is considered to be stable when the rock material on the side or sides of the excavation is secured against caving-in or movement by rock bolts or by another protective system that has been designed by a registered professional engineer.

Structural ramp means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rocks are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (trench excavation) means a narrow excavation (in relations to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the sides of the excavation to 15 feet or less (measured at the bottom of the excavation), the excavation is also considered to be a trench.

Trench box. See "*U* shield."

Trench shield. See "*U* shield."

Upright means the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "*U* sheeting."

Wales (or waters): means horizontal members of a shoring system placed parallel to the excavation face whose sides bear against the vertical members of the shoring system or earth.

1926.651 GENERAL REQUIREMENTS

1. Surface encumbrances: All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

2. Underground installations:

    a. The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation.

    b. Utility companies or owners shall be contacted within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of the factual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours (unless a longer period is required by state or local law), or cannot establish the exact locations of these installations, the employer may proceed, provided the employer does so with caution, and the provided detection equipment or other acceptable means to locate utility installations are used.

    c. When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.

    d. While the excavation in open, underground installations shall be protected, supported or removal as necessary to safeguard employees.

3. Access and Egress

a. Structural Ramp.

(1) A competent person shall design structural Ramps that are used solely by employees, as a means of access or egress from excavations. Structural ramps used for access or egress of equipment shall be designed by a competent person qualified in structural design, and shall be constructed in accordance with the design.

(2) Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent displacement.

(3) Structural members used for ramps and runways shall be of uniform thickness.

(4) Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

(5) Structural ramps used in lieu of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

b. Means of Egress from Trench Excavations

A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet or more in depth so as to require no more than 25 feet of lateral travel for employees.

4. Exposure to Vehicular Traffic

Employees exposed to public vehicular traffic shall be provided with, and shall wear; warning vests or other suitable garments marked with or made of reflectorized or high visibility material.

5. Exposure to Falling Loads

No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to 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 or vehicles being loaded or unloaded when the vehicles are equipped, in accordance with 1926.601(9b)(6), to provide adequate protection for the operator during loading and unloading operations.

6. Warning System for Mobile Equipment.

When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

7. Protection from Hazards Associated with Water Accumulation

a. Employees shall not work in excavations in which there is accumulated water, or in excavations, in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazard posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.

b. If water is controlled or prevented from accumulating by the use of water removal equipment, a competent person to ensure proper operation shall monitor the water removal equipment and operations.

c. If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate draining of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person.

8. Stability of Adjacent Structures

a. Where the stability of adjoining buildings, walls, or other structures in endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

b. Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted except when:

1. A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure; or

2. The excavation is in stable rock; or

3. A registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity; or

4. A registered professional engineer has approved the determination that such excavation work will not pose a hazard to employees.

c. Sidewalks, pavements, and appurtenant structure shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.

9. Protection of Employees from Loose Rock or Soil

a. Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of scaling to remove loose material, installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection.

b. Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at lease 2 feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

10. Inspection

a. Daily 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 also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when employee exposure can be reasonable anticipated. These inspections must be documented.

b. Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

11. Fall Protection

a. When employees or equipment are required or permitted to cross over excavations, walkways or bridges with standard guardrails shall be provided.

b. Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and similar operations, temporary wells, pits, shafts, etc., shall be backfilled.

c. Should the fall potential exceed 6 feet from top of trench to the excavated bottom, adjacent areas shall be restricted to employees by use of tape or fencing and access restricted to personnel utilizing proper PPE for fall protection unless another engineered system of protection is installed.

12. Protection of Employees in Excavations

a. Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with sections 13 and 14, except when

(1) Excavations are made entirely in table rock; or

(2) Excavations are less than 5 feet in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

b. Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably expected to be applied or transmitted to the system.

13. Design of Sloping and Benching Systems

The slopes and configurations of sloping and benching systems shall be selected and constructed by the employer or his designee.

a. Options 1: Allowable Configurations and Slopes

(1) Excavations shall be sloped at an angle not steeper that one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the employer uses one of the other options listed below.

(2) Slopes shall be excavated to form configurations that are in accordance with the slopes for Type C soil.

b. Option 2: Determination of Slopes and Configurations.

Maximum allowable slopes and allowable configurations for sloping and benching systems shall be determined in accordance with the conditions and requirements set forth in section 18 and appendix B.

d. Option 3: Design Using Other Tabulated Data

(1) Designs of sloping or benching systems shall be selected from and be in accordance with tabulated data, such as tables and charts.

(2) The tabulated date shall be in written form and shall include all of the following:

(a) Identification of the parameters that affect the selection of a sloping or benching system drawn from such data.

(b) Identification of the limits for use of the data, to include the magnitude and configuration of slopes determined to be safe.

(c) Explanatory information as may be necessary to aid the used in making a correct selection of a protective system from the data.

(3) At least one copy of the tabulated data, which identifies the registered professional engineer who approved the data, shall be maintained at the job site during construction of the protective system. After that time, the data may be stored off the job site, but a copy of the data shall be made available to the Secretary of Labor upon request

e. Option 4: Design by a Registered Professional Engineer

(1) A registered professional engineer shall approve sloping and benching systems not utilizing Option 1, 2 or 3.

(2) Design shall be in written form and shall include at least the following:

(a) The magnitude of the slopes that were determined to be safe for the particular project.

(b) The configurations that were determined to be safe for the particular project.

(c) The identity of the registered professional engineer approving the design.

(3) At least one copy of the design shall be maintained at the job site while the slope is being constructed. Once constructed the design must be available to the Secretary of Labor upon request.

14. Design of Support Systems, Shields Systems, and Other Protective Systems.

Designs of support systems, shield systems, and other protective systems shall be selected and constructed by the contractor of his designee, unless otherwise specified.

a. Optional: Designs using Section 18, Appendices C and D

Designs for timber shoring in trenches shall be determined in accordance with the conditions and requirements set forth in Section 18 and appendix D. Designs for aluminum hydraulic shoring shall be in accordance with section b of this section but if manufacturer's tabulated data cannot be utilized, designs shall be in accordance with Appendix D.

b. Option 2: Designs Using Manufacturer's Tabulated Data

(1) Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.

(2) Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer shall only be allowed after the manufacturer issues specific written approval.

Manufacturer's specifications, recommendations, and limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations shall be in written form at the job site during construction of the protective system. After that time, this data may be stored off the job site, but a copy shall be made available to the Secretary of Labor upon request.

c. Option 3: Designs Using Other Tabulated Data

(1) Designs of support systems, shield systems, or other protective systems shall be selected from and be in accordance with tabulated data, such as tables and charts.

(2) The tabulated data shall be in written form and include all of the following:

(a) Identification of the parameters that affect the selection of a protective system drawn from such data;

(b) Identification of the limits of use of the data:

(c) Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.

(3) At least one copy of the tabulated data, which identifies the registered professional engineer who approved that data, shall be maintained at the job site during construction of the protective system. After that time, the data may be stored off the job site, but a copy of the data shall be made available to the Secretary of Labor upon request.

d. Option 4: Design by a Registered Professional Engineer

(1) A registered professional engineer shall approve support systems, shield systems, and other protective systems not utilizing Option 1, Option 2, or Option 3 above.

(2) Designs shall be in written form and shall include the following:

(a) A plan indicating the sizes, types, and configurations of the materials to be used in the protective systems; and

(b) The identity of the registered professional engineer approving the design.

(3) At least one copy of the design shall be maintained at the job site during construction of the protective system. After that time, the design may be stored off the job site, but a copy of the design shall be made available to the Secretary of Labor upon request.

15. Materials and Equipment

a. Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function.

b. Manufactured materials and equipment used for protective systems shall be used and maintained in a manner that is consistent with the recommendations of the manufacturer, and in a manner that will prevent employee exposure to hazards.

c. When material or equipment that is used for protective systems is damaged, a competent person shall examine the material or equipment and evaluate its suitability for continued use. If the competent person cannot assure the material or equipment is able support the indented loads or is otherwise suitable for safe use, then such material or equipment shall be removed from service, and shall be

evaluated approved by a registered professional engineer before being returned to service.

16. Installation and Removal of support – General

a. Members of support systems shall be securely connected together to prevent sliding, falling, kickouts or other predictable failure.

b. Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.

c. Individual members of support systems shall not be subjected to loads exceeding those, which those members were designed to withstand.

d. Before temporary removal of individual members begins, additional precautions shall be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.

e. Removal shall begin at, and progress from, the bottom of the excavation. Member shall be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

f. Backfilling shall progress together with the removal of support systems from excavations.

g. Additional requirements for support systems for trench excavations:

(1) Excavation of material to a level no greater than 2 feet below the bottom of the members of a support system shall be permitted, but only if the system is designed to resist the forces calculated for the **full** depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.

(2) Installation of a support system shall be closely coordinated with the excavation of trenches.

17. Sloping and Benching System

Employees shall not be permitted to work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

18. Shield System - General

a. Shield systems shall not be subjected to loads exceeding those, which the system was designed to withstand.

b. Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

c. Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.

d. Employees shall not be allowed in shields when shields are being installed, removed or moved vertically.

e. Additional Requirements for Shields Systems Used in Trench Excavations

Excavations of earth material to a level not greater than 2 feet below the bottom of a shield shall be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

Cemented soi*l* means a soil in which a chemical agent such as calcium carbonate holds the particles together, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.

Cohesive soil means clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, silty clay, clay and organic clay.

Dry soil means soil that does not exhibit visible signs of moisture content.

Fissured means a soil material that has a tendency to break along definite planes of fracture with little resistance or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

Granular soil means gravel, sand, or silt (coarse-grained soil), with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily dry.

Layered system means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.

Moist soil means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains more cohesive material will exhibit signs of cohesion between particles.

Plastic means a property of a soil, which allows the soil to be deformed or molded without cracking, or appreciable volume change.

***Saturated* soil** means a soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or sheer vane.

Soil classification system means a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the property and performance characteristics of the deposits and the environmental conditions of exposure.

Stable rock means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Submerged soil means soil, which is underwater or is free seeping.

19. Type A Soil

Type A soil means cohesive soil with an unconfined compressive strength of 1.5 tons per square foot (TSF) (144kPa) or greater. Examples of cohesive soils are: clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soil such as caliches and hardpan are also considered Type A. However, no soil is Type A if:

a. The soil is fissured; or

b. The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or

c. The soil has been previously disturbed; or

d. The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one (4H:lV) or greater; or

e. The material is subject to other factors that would require it to be classified as a less stable material.

20. Type B Soil

a. Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48kPa) but less than 1.5 tsf (144kPa); or

b. Granular cohesionless soils including; angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.

c. Previously disturbed soils except those, which would otherwise be classed as Type C soil.

21. Type C Soil

a. Cohesive soil with an unconfined compressive strength of 0.5tsf (48kPa) or less; or

b. Granular soils including gravel, s1nd, and loamy sand; or

c. Submerged sailor soil from which water is freely seeping; or

d. Submerged rock that is not stable, or

e. Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H: 1V) or sleeper.

22. Unconfined Compressive Strength

Means the load per unit area at which a soil will fall in compression. It can be determined by laboratory testing, or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.

23. Wet Soil

Means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

24. Classification of Soil and Rock Deposits

A competent person shall classify each soil and rock deposit as stable rock, Type A, Type B or Type C, in accordance with definitions set forth.

25. Basis of Classification

The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a competent person using recognized methods of soil classifications and testing such as those adopted by the American Society for Testing Materials, or the U.S. Department of Agriculture's textural classification system.

26. Visual and Manual Analyses

The visual and manual analyses, such as those noted as being accepted in Section 29 shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.

27. Layered Systems

In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.

28. Reclassification

If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, a competent person shall evaluate the changes. The deposit shall be reclassified as necessary to reflect the changed circumstances.

29. Acceptable Visual and Manual Tests

Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.

FALL PROTECTION REQUIREMENTS

WisDOT is committed to the philosophy of continuous full hazard control wherever the potential exists for personnel falls from heights of six feet or more. Accordingly, the Contractor and all Subcontractors will take all practical measures to eliminate, prevent, and control fall hazards. The project shall be surveyed to identify all hazards of personnel falling from elevations. First consideration shall be given to the elimination of those hazards. If a fall hazard cannot be practically eliminated, second consideration shall be given to implementing effective permanent means of fall protection.

All personnel who are working where fall hazards cannot be eliminated or the onset of falls prevented shall be uniformly equipped, trained, and given refresher training at specific intervals to minimize the adverse effects of accidental falls.

This 100% fall protection requirement at six (6') feet is mandatory for all trades, including structural steel erection; rebar assembly, concrete forming, pre-cast erection, masonry, inspection etc.

GENERAL FALL PROTECTION

All personnel working on this project exposed to falls of six feet or greater while working on ladders, scaffolding, elevated decks, elevated platforms, stairways, stairwells, reinforced steel, and any other elevated area or equipment must be tied off at all times, utilizing a full body harness and shock absorbing lanyard. Body belts are not permitted at any time while working on this project. On properly erected scaffolds, elevated decks, and elevated platforms where perimeter guardrail systems consisting of top rail, mid rail, and toe plate have been properly installed, individuals working in these areas may do so without tying-off. Shall the perimeter protection be removed (even temporarily); individuals working in the area exposed to a fall will tie-off until the perimeter protection has been properly reinstalled.

Personal fall arrest systems shall be inspected prior to each use for wear, damage, and other deterioration and defective components will be removed from service.

Positioning devices shall be rigged so that a worked cannot free-fall more than two feet. Positioning devices shall be secured to an anchorage point capable of supporting at least twice the potential impact load of a worker's fall or 3,000 pounds, whichever is greater.

TRAINING PROGRAM

1. Training shall be provided for workers to enable them to recognize hazards of falling and to train them in the procedures to be followed in order to minimize these hazards.

2. Training shall cover the following areas as, necessary:

    a. Nature of fall hazards in the work area;

b. Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems to be used;

c. Use and operation of guardrail systems, personal fall arrest systems, safety access zones, and other protection to be used;

d. Role of each worker in a safety monitoring system;

e. Limitations of mechanical equipment during the performance of roofing work on low-sloped roofs;

f. Correct procedures for handling and storage of equipment and materials and erection of overhead protection;

g. Role of the workers in fall protection plans; and

h. OSHA regulations.

Certification of Training

Compliance will be verified by preparing a written certification record of all training. The written certification record shall state the name or other identity of the workers trained, date(s) of training, and the signature of the person who conducted the training or signature of the employer.

Retraining

1. If there is a reason to believe any affected worker who has already been trained does not have the understanding and skill required, the worker shall be retrained.

2. Circumstances where retraining is required include situations where:

   a. Changes in the work place render previous training obsolete;

   b. Changes in type of fall protection systems or equipment to be used render previous training obsolete;
   c. Inadequacies in an affected worker's knowledge or use of fall protection systems or equipment indicate the worker has not retained the requisite understanding or skill.

FALL PROTECTION PROGRAM PURPOSE

While this program contains the generic components and parameters for fall protection, it is understood that protection must be project-specific, where control measures must be developed and implemented for each identified project and/or job function. The fall protection controls are unique to every project and a plan, which complies with the requirements of Subpart M, must be submitted for each job.

The purpose of this program is:

a. Supplement our standard safety policy by providing safety standards specifically designed to cover fall protection; and

b. Ensure that each employee who may be exposed to fall hazards is trained and made aware of the safety provisions which are to be implemented by this program prior to the start of each job.

RESPONSIBILITY

It is the responsibility of the Contractor and all Subcontractors to coordinate the fall protection program. The Contractor and all Subcontractors are responsible for continual observational safety checks of work operations to enforce that the safety policy procedures will be performed. Fall protection systems are to be provided for all employees in work areas where injury from a fall to a lower level is a recognized hazard. Contractor and Subcontractors are required to develop an emergency rescue plan to address rescue efforts and a copy of that plan shall be submitted to the OCIP SHD. It is the responsibility of all employees to bring to the attention of management any unsafe or hazardous conditions or acts that may cause injury to either himself/herself or other employees.

WALKING/WORKING SURFACES

A determination will be made of the walking/working surface on which employees are to work to ensure the strength and structural integrity to support them safely. Employees are allowed to work on those surfaces only when the surfaces have the requisite strength and structural integrity as required by the standards.

GENERAL REQUIREMENTS

Each employee on a walking/working surface, which is six feet or more above a lower level, shall be protected from falling by the use of guardrail systems, systems, or personal fall arrest systems for the following exposures:

- Unprotected sides and edges
- Leading edges
- Hoist areas
- Holes
- Ramps, runways, and other walkways
- Excavations
- Wall openings
- Walking/working surfaces not otherwise addressed

PROTECTION FROM FALLING OBJECTS

1. Although all employees are required to wear hard hats at all times, those employees potentially exposed to injury from falling objects shall be protected by one of the following measures, designed and installed as per CFR 29,1926.5020.

2. Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels.

3. Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced.

4. Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

CRITERIA AND PRACTICES FOR FALL PROTECTION SYSTEMS

Guardrail Systems

Guardrail systems shall meet the following requirements:

1. Top rail 42 inches: +/- 3 inches, above the working/walking level and can withstand 200 pounds of force.

2. Mid rail (or suitable alternative) 21 inches or one-half the distance above the walking/working surface.

3. If wire cable is used for the top rail, it must be a minimum of 3/8 inch in diameter and shall be flagged at not more than 6-foot intervals with high-visibility material.

4. Ability to withstand a force of at least 200 pounds in any outward or downward direction, and flex no more than 3 inches for wire cable.

5. So surfaced as to prevent injury from puncture, laceration, or snagging of clothing.

6. Designed so as not to constitute a projection hazard.

7. Inspected at regular intervals.

Safety Net Systems

Safety net systems shall meet the following requirements:

1. Installed as close as practicable under the walking/working surface, but in no case more than 30 feet below such level.

2. Extend outward from the outermost projection of the work surface.

3. Installed with sufficient clearance under them to prevent contact with the surface due to impact on the net.

4. Capable of absorbing an impact force equal to that produced by the drop test specified in 1926.502(c)(4)(ii) of the fall protection standard.

5. Inspected at least weekly for wear, damage, and/or deterioration defective components removed.

6. Mesh openings shall not exceed 36 square inches or longer than 6 inches on any side.

Personal Fall Arrest Systems

Personal fall arrest systems shall meet ANSI Standards and conform to the following requirements:

1. Connectors, D-rings, snap hooks, lanyards, lifelines, and anchorages are designed, constructed, and installed according to specifications addressed in 1926.502(d)(1-15).

2. Limit maximum arresting force on an employee to 900 pounds when used with a body harness.

3. Rigged such that an employee cans neither free-fall more than 6 feet or contact any other level.

4. Body belts, harnesses, and related components shall be used only for employee fall protection, not to hoist materials.

5. A competent person shall remove personal fall arrest systems and components subject to impact loading from service until inspected and approved for use.

6. Prompt rescue of employees in the event of a fall.

7. Inspected prior to each use for wear, damage and/or deterioration with removal of defective components.

8. Not to be attached to guardrail systems.

Positioning Device Systems

Positioning device systems shall meet the following requirements:

1. Rigged such that an employee cannot fall more than 2 feet.

3. Secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds, whichever is greater?

4. Connectors, D-rings, and snap hooks are designed, constructed, and installed according to specifications addressed in 1926.502(e)(1-8).

5. Inspected prior to each use for wear and/or deterioration with defective components removed.

Warning Line Systems

Warning line systems shall meet the following requirements:

1. Erected around all sides or fall hazard areas.

2. Erected not less than ten feet from fall hazard areas.

3. Points of access, material handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.

4. Consists of ropes, wire, or chains and supporting stanchions erected according to 1926.502(f)(2)(I-v).

5. No employee is allowed in the area between the fall hazard edge and warning line unless personal fall arrest systems are used.

6. Mechanical equipment in fall hazard areas used or stored only in areas where employees are protected by warning line system, guardrail system, or personal fall arrest system.

7. When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the fall hazard edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet from the fall hazard edge which is perpendicular to the direction of mechanical equipment operation.

Controlled Access Zones (CAZ)|

Safety monitoring systems shall meet the following requirements:

A safety monitoring system can only be used if conventional fall protection system is impossible and prior approval of the OCIP SHD.

1. A competent person shall be designated to monitor the safety of other employees, and the employer shall ensure that the safety monitor complies with the following:

    a. The safety monitor shall be competent to recognize fall hazards.

    b. The safety monitor shall warn the employee when it appears that the employee is unaware of a hazard or is acting in an unsafe manner.

    c. The safety monitor shall be on the same walking/working surface within visual sighting distance of the employee being monitored.

    d. The safety monitor shall be close enough to communicate orally with the employee.

    e. The safety monitor shall not have other responsibilities, which could take the monitor's attention from the monitoring function.

2. Mechanical equipment shall not be used or stored in areas where safety-monitoring systems are being used to monitor employees.

3. No employee, other than an employee engaged in active work operations shall be allowed in an area where an employee is being protected by a safety monitoring system.

4. Each employee working in a CAZ shall be directed to comply promptly with fall hazard warning from safety monitors.

Covers for holes in floors, roofs, and other walking/working surfaces shall meet the following requirements:

Floor holes and floor openings shall be securely protected through the use of a standard guardrail or cover. If a cover is used, it shall be secured against movement (shut down) and shall be of sufficient strength to support 2 times the intended load of personnel or material that may be required to pass over it. Also the covering shall be marked with high visibility paint "hole".

1. When covers are removed to run piping, conduit, ductwork, etc., through floor openings, the covers shall be replaced and re-secured when the work is completed or when workers leave the area.

<u>Wall Openings</u>

Protection: a standard railing shall guard Wall openings, from which there is a drop of more than four feet, and where the bottom of the opening is less than 3 feet above the working surface. If the bottom of the wall opening is less than 4 inches above the working surface, a toe board, screen, or solid cover shall be used.

FALL PROTECTION PLAN

A fall protection plan may be required from the contractor for special situations. Pre-cast concrete work and certain demolition operations would be occasions for a specific plan. The fall protection plan would need to be submitted to and approved by the OCIP prior to beginning the operation.

TRAINING REQUIREMENTS

The employer shall provide a training program for each employee who might be exposed to fall hazards.

The employer shall ensure that a competent person qualified in the following areas has trained each employee, as necessary:

1. Nature of fall hazards in the work area.

2. Correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.

3. Use of and operation of guardrail systems, personal fall arrest systems, safety monitoring systems, controlled access zones, and other protection to be used.

4. The role of each employee in the safety monitoring system when this system is used.

5. The limitations of the use of mechanical equipment during the performance of roofing work on low-sloped roofs.

6. The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection.

7. The role of employees in fall protection plans.

THE FALL PROTECTION STANDARDS, 1926.500-1926.503

The employer shall verify compliance of the training requirement by a written record. The record shall contain the name of the employee trained, date of training, and the signature of the person who conducted the training or the signature of the employer. The latest training record shall be maintained.

The employer shall retrain an employee when the employer has reason to believe that the employee does not have the understanding and skill required. Circumstances where retraining is required include, but are not limited to, situations where there are:

- Changes in the workplace;
- Changes in the type of fall protection systems or equipment; and/or

- Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment.

INSTRUCTIONS AND GUIDELINES FOR THE USE OF WIRE ROPE WHEN USED AS A GUARDRAIL

Wire Rope Size

1. All wire rope is to be a minimum of 3/8 in diameter.

2. It must be able to withstand a 200-pound load in any direction.

Connections

1. All connections are to be in the form of eyes.

2. Dead ends are not to be overlapped and clamped together.

3. Ends are not to be joined with "tuck" splices.

Eyes in Rope

1. At least three clips are to be used at each rope eye.

2. Clips are to be turned in so that the saddle does not ride on the dead end of the rope.

Hardware

1. Hardware shall be drop forged, malleable iron type.

2. Circular eyelets to run the rope through shall be of the closed-eye type. The rope comes out of the open eyes.

3. Shanks shall be as short as possible.

4. The shank shall not extend beyond the anchor material, usually a concrete column, more than one inch.

Supports

1. Supports for the rope need not be spaced the same as for wood guardrails but more than 3 inches of sag shall not be allowed.

2. A tension device can be used but the hook shall be of the closed, not open, type. Open hooks will jump off if loaded and then unloaded.

Anchor Points

Considerations must be given to the anchor points for eyelets, floor plates for vertical supports, for all anchors shot into concrete, and for other anchoring methods. They must be capable of holding the load of the guardrail **UNDER STRESS.**

NOTICE

The Contractor's and all Subcontractors' employees must request permission from the superintendent in charge to remove or alter any temporary guardrail.

Any Contractor's and all Subcontractors' employee who removes or alters a temporary guardrail without the permission of the superintendent in charge will be subject to disciplinary action, up to and including terminations.

STAIRWAYS AND LADDERS

GENERAL REQUIREMENTS – LADDERS

GENERAL

All types of ladders shall be inspected from time to time for damage and deterioration. Defective ladders shall be removed from use. Ladders shall be set up at a pitch of about one to four. Ladder side rails shall extend a minimum of three feet above the landing and be tied off, blocked or otherwise secured to prevent their being displaced. Ladders shall not be placed in passageways, doorways, driveways or any location where they may be displaced by activities being conducted or any other work, unless protected by barricades or guards. The area around the top and bottom of each ladder shall be kept clear.

The side rails of ladders shall extend not less than 36 inches above the top landing. When this is not practical, grab rails, which provide a secure grip for an employee moving to or from the point of access, shall be installed.

Portable ladders in use shall be tied, blocked, or otherwise secured to prevent their being displaced or be provided with safety feet.

A manufactured ladder shall be branded or have a permanent label permanently affixed by manufacturer which shows the type of ladder and certifies that it meets the requirements of the appropriate ANSI standards.

Stepladders may not be used as straight ladders.

All OSHA requirements regarding ladder usage shall be observed.

JOB-MADE LADDERS

1. All materials shall be thoroughly seasoned, straight-grained, and free from knots, decay and other defects.

2. Job-made ladders shall be constructed for the intended use. If a ladder is to provide the only means for access or exit from a working area for 25 or more employees, or simultaneous two-way traffic is expected, a double cleat ladder shall be installed.
3. A job-built ladder shall not exceed:

    a. Double cleat: 24 feet
    b. Single cleat: 12 feet

4. If the length of a required job-built ladder should exceed the maximum length, two or more separate ladders shall be used and shall be offset with a platform between each ladder, which is not supported by the ladders. Ladders used with a platform shall be secured at the top and bottom.

5. The platform shall be designed to withstand four times the intended load. Guardrails and toe boards shall be erected on the exposed sides of the platform. Rails shall extend above the top landing not less than 36" or more than 42" to provide handholds for mounting and dismounting, and cleats shall be eliminated above the landing level. When two or more separate job-built ladders are used with a platform, the ladders shall be completely offset from each other and the minimum horizontal distances between adjacent side rails shall be six inches.

    a. Side rails of a job-built ladder shall be continuous.

    b. Each cleat of a job-built ladder shall be a continuous member.

    c. A wood cleat shall be not less than nominal 1" x 4" construction grade lumber for a cleat less than 20" in length and not less than nominal 2" x 4" construction grade lumber for a cleat from 20" to 50" in length. Knot-free lumber shall be used for cleats.

    d. The cleat shall be uniformly spaced 12" top to top.

    e. Filler blocks of the same thickness as the cleats shall be inserted between cleats and butted tightly against the underside of each cleat.

    f. Cutting into the side rails to house cleats shall not be permitted.

6. Single-Cleat ladders:

    a. The width of a single-cleat ladder shall not be less than 20" or more than 20" between rails. Side rails shall be parallel.

    b. Side rails shall be at least 2" x 4" for ladders less than 12' and 2" x 6" for ladders 13' – 24' in length.

7. Double-Cleat Ladders:

    a. The width between outside rails of double-cleat ladders shall be not less than 40" or more than 40".

    b. It shall have an additional rail located at the center of the ladder.

    c. The side rails shall be constructed of 2" x 4" construction grade lumber for a ladder less than 12' and 2" x 6" construction grade lumber for ladders 12' – 24' in length.

    d. The side rails shall be secure at the bottom and top to prevent moving or tipping.

STAIRS

1. Railings: Every flight of stairs having four or more risers shall be equipped with standard stair railings or handrails. All open stair sides shall be protected. Enclosed stairs 44 inches or less in width require only one stair railing. Enclosed stairs 44 inches wide but less than 88 inches wide require two railings or enclosed stairs over 88 inches wide require three railings. All railings shall be secured to withstand a load of at least 200 pounds applied in any direction at any point on the top rail, with a minimum of deflection.

2. Landings: All landings shall have standard guardrails on all open sides.

3. Metal Pan Stairs: Metal pan treads shall be filled level with wood for the full width for temporary use prior to filling with concrete.

LADDER AND STAIRWAY TRAINING PROGRAM

In compliance with the Federal Rules and Regulations, 1926.1050 training requirements, the following training program will be used by the Contractor and Subcontractors' competent person to train employees to recognize hazards related to ladders and stairways and the procedures to be followed to minimize these hazards.

Training shall include, but is not limited to, the following:

1. The fall hazards associated with stairs, and the procedures to be followed to minimize these hazards.

2. Trash around stairs causing a tripping hazard.

3. Stair not completed – standard requirements, fillers, hand and guardrails.

4. Lighting.

5. Running on stairs or not using handrails.

6. Removal of temporary rails and installation of permanent rails.

7. Working on and in stairwells – fall protection systems to be used.

The type of fall hazards associated with ladders and the procedures to be followed to minimize these hazards:

1. Proper set up of:

a. Step ladders.

b. Extension of straight ladders.

c. Job-built ladders.

2. Proper use of:

a. Step ladders.

b. Extension of straight ladders.

c. Job-built ladders.

3. Inspection of ladders:

a. Setup.

b. Distance above landing.

c. Condition.

d. Guarding.

e. Clearance around ladders.

f. Construction of job-built ladders:

g. Proper rung placement.

h. Maximum intended load.

i. Painting wood ladders.

Retraining shall be provided as necessary to maintain understanding for required compliance with this section.

Documentation shall be made of each employee trained under this specific program.

FALL HAZARDS ASSOCIATED WITH STAIRWAYS

1. Trash on Stairs: 1926. 1052 (a) (6). All parts of stairways shall be free of hazardous projections. Tool and equipment should be placed so as not to create a trip hazard.

2. Stairs Not Completed: Except during stairway construction, foot traffic is prohibited unless temporary requirements are met for stair rail systems.

3. Where treads or landings are to be filled in with concrete or other material at a later date, foot traffic is prohibited unless the stairs are temporarily fitted with wood or other solid material to the top edge of the pans. Temporary treads and landings shall sufficiently cover the entire tread area before foot traffic is permitted.

4. Stairways having four or more risers or rising more than 30 inches, whichever is less, shall be equipped with at least one handrail and one stair rail system also serves as a handrail, the height of the top edge shall be not more than 37 inches nor less than 36 inches from the upper surface of the stair rail system to the surface of the tread, in line with the face of the riser at the forward edge of the tread.

5. Running: Running is prohibited on stairways at all times.

6. Working on and in stairwells: Employees engaged in the construction of stairwell must be trained in the proper use of any fall protection system that is required during the task. This includes, but is not limited to, safety nets, safety belts, life lines, and lanyards, etc.

SCAFFOLDING

GENERAL REQUIREMENTS

1. Scaffold means any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

2. Scaffolds shall be erected on firm foundation. The footing or anchorage shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete block shall not be used to support scaffolds or planks. Leveling jack adjusting screws, when used, shall not extend more than 18 inches below the base of the scaffold.

3. Guardrails and toe boards shall be installed on all open sides and the ends of platforms that are more than **six (6) feet** above the ground or floor or one scaffolding lift, whichever is lower.

4. Wire mesh screening shall be used between the toe board and guardrail whenever persons are required to work or pass under the scaffold.

5. Guardrails must be 2 x 4 lumber, or equivalent, 42 inches high, with 2" x 4" mid rail. Supports must be at intervals not to exceed eight feet. Toe boards shall be a minimum of four inches in height.

6. Working platforms shall be capable of sustaining a minimum-working load as specified in Rule 1217 and have a safety factor of 4 to 1.

7. Stationary scaffolds shall be secured to a fixed structure every 26 feet vertically and horizontally every 30 feet.

8. Proper access to scaffold platforms shall be provided.

9. Horizontal diagonal bracing shall be used to prevent racking of the scaffold.

10. Overhead protection shall be provided for men on a scaffold exposed to overhead hazards.

11. Only competent personnel shall erect scaffolds.

Note: *Some OSHA requirements will be exceeded:

*A competent person is required for erection and dismantlement.

*Scaffold on this site shall have proper mudsills, base plates, all connecting pins will be installed, and a complete guardrail system when the scaffold reaches a fall height of 6 foot or greater. Cross braces cannot be used for handrails.

*The 100% fall protection rule is required on scaffold erection and disassembly.

*All scaffold planks shall be scaffold grade lumber at a minimum dimension of 2" by 10".

*All scaffolds shall have a safe access; workers will not be allowed to climb the end frames unless there is an approved ladder in the frame.

*Scaffold under construction shall be labeled, as such and no one except the workers erecting the scaffold will be allowed to be on it.

*When the scaffold is complete the scaffold will be tagged complete and safe for use.

*A scaffold plan shall be submitted to the OCIP safety department before use.

*A competent person before each work shift, and after any occurrence, which could affect a scaffold's structural integrity, shall inspect scaffolds and scaffold components for visible defects.

12. **Tagging System**

Green Tag
A green tag indicates that the scaffold is complete and safe to use with no additional precautions.

Yellow Tag
A yellow tag indicates that the scaffold requires additional fall protection equipment as indicated on the back of tag.

Red Tag
A red tag indicates an unsafe scaffold and is not to be used. The only person who may enter a red-tagged scaffold is a trained scaffold builder while completing or doing repairs on the scaffold, and has the proper personal protective equipment.

No Tag
If a scaffold has no tag, it is not to be used until inspected and properly tagged, if a scaffold is found to be deficient or unsafe and is tagged green or yellow that tag shall be immediately removed and the contractor fined.

13. **Training**

All persons using or engaged in assembling/dismantling of scaffolding or persons intending to use scaffolding must be trained in the requirements and the recognition of hazards with regard to the safe use of scaffolding. This training is to be conducted upon initial entry to the jobsite. Any employee who displays apparent lack of knowledge with regard to scaffold hazards and use shall be immediately retrained by a qualified trainer. (Added April 25, 05)

TUBULAR WELDED-FRAME SCAFFOLDS

1. All scaffolds shall include diagonal braces, handrails, midrail, toe boards, and proper access.

2. Scaffold legs shall be set on adjustable bases or plain bases placed on mudsills or other foundations adequate to support the maximum rated load.

3. Frames shall be placed one on top of the other with coupling or stacking pins to provide proper vertical alignment of the legs.

4. Where uplift may occur, panels shall be locked together vertically by pins or other equivalent suitable means.

5. Scaffolds over 125 feet in height above the base plates shall be designed by a registered professional engineer.

6. Scaffolds shall be secured to building or structure at intervals not to exceed 30 feet horizontally and 26 feet vertically.

7. Guardrails made of lumber not less than 2" x 4" 42 inches high with a mid rail and toe boards shall be installed at all open sides and ends of scaffolds more than six (6) feet above the ground or floor.

PLANKING

1. Planking shall extend over the end bearer not less than six inches, but not more than 12 inches.

2. Planking shall be certified scaffold grade as recognized by approved grading rules for the species of wood used. Maximum allowable spans 2" x 10" nominal planking are as follows:

Span (ft)	Load (psf)
7	62
8	50
10	25

3. Scaffold platforms shall be fully planked between guardrails.

4. Planking shall be secured to scaffold when necessary to prevent uplift or displacement.

NOTE: LEAN-TO TYPE SCAFFOLDS ARE PROHIBITED AND SHALL NOT BE USED.

CONFINED SPACE ENTRY PROGRAM

PURPOSE

To establish a written program that contains the requirements for safe practices and procedures to protect employees from the hazards of entry into permit-required spaces.

OSHA DEFINITIONS

Confined Space: A space that 1) is large enough and so configured that an employee can bodily enter and perform assigned work; 2) has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and 3) is not designed for continuous employee occupancy.

Permit-required Confined Space: 1) Contains or has potential to contain a hazardous atmosphere; 2) contains material that has the potential for engulfing an entrant, has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly covering walls or by floors which slope downward and tapers to a smaller cross section; or 3) contains any other recognized serious safety and health hazard.

Non-Permit Confined Space: A confined space that does not contain or, with respect to atmosphere hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

GENERAL REQUIREMENTS

1. The Contractor and all Subcontractors shall evaluate and monitor the work site to determine if any spaces are permit-required confined spaces,

2. If the work site contains permit-required confined spaces, the Contractor and all Subcontractors will employ the services of a "qualified employer" to develop and implement a written permit confined space entry program that is in full compliance with the OSHA 1910.146 Permit-Required Confined Spaces.

PERMIT-REQUIRED CONFINED SPACE PROGRAM

1. Under the Permit-Required Confined Space Program, the "qualified employer" shall:

    a. Implement the measures necessary to prevent unauthorized entry.

    b. Identify and evaluate the hazards of permit spaces before employees enter them.

2. Develop and implement the means, procedures, and practices necessary for safe permit space entry operation, including but not limited to the following:

    a. Specifying acceptable entry conditions;

b. Isolating the permit space;

c. Purging, inserting, flushing or ventilating the permit space as necessary to eliminate or control atmospheric hazards;

d. Providing pedestrian, vehicle, or other barriers necessary to protect entrants from external hazards; and

e. Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.

3. Provide the following equipment to employees, maintain the equipment properly, and ensure that employees use the equipment properly:

   a. Testing and monitoring equipment need to comply with OSHA 1910.146 and all equipment must be calibrated in accordance with manufacturers recommendation;

   b. Ventilating equipment needed to obtain acceptable entry conditions;

   c. Communications equipment necessary for compliance with OSHA 1910.146;

   d. Personal protective equipment insofar as feasible engineering and work practice controls do not adequately protect employees;

   e. Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency;

   f. Barriers and shields as required by OSHA 1910.146;

   g. Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;

   h. Rescue and emergency equipment needed to comply with OSHA 1910.146, except to the extent that the equipment is provided by rescue services; and

   i. Any other equipment necessary for the safe entry into and rescue from permit spaces.

4. Evaluate permit space conditions as follows when entry operations are conducted:

   a. Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is unfeasible because the space is large or is part of a continuous system (such as sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the area where authorized entrants are working;

b. Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations; and

c. When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.

5. Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations.

6. If multiple spaces are to be monitored by a single attendant, include in the permit program the means and procedures to enable the attendant to respond to an emergency affecting one or more of the permit spaces being monitored without distraction from the attendants responsibilities.

7. Designate the persons who are to have active roles (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required by OSHA 1910.146.

8. Develop and implement procedures for summoning rescue and emergency service, for rescuing entrants from permit space, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue.

9. Develop and implement a system for the preparation, issuance, use, and cancellation of entry permits as required by OSHA 1910.146.

10. Develop and implement procedures to coordinate entry operations when employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees of one or more employer do not endanger the employees of any other employer.

11. Develop and implement procedures (such as closing off a permit space and canceling the permit) necessary for concluding the entry after entry operations have been completed.

12. Review entry operations when the employer has reason to believe that the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized.

13. Review the permit-required confined space program, using the canceled permits retained within one (1) year of each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.

PERMIT SYSTEM

1. Before entry is authorized, the employer shall document completion of measures required in preparing an entry permit.

2. Before entry begins the entry supervisor identified on the permit shall sign the permit to authorize entry.

3. The completed permit shall be made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that the pre-entry preparations have been completed.

4. The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit.

5. The entry supervisor shall terminate entry and cancel the permit when:

    a. The entry operations covered by the permit have been completed; or

    b. A condition that is not allowed under the entry permit arises in or near the permit space.

6. The employer shall retain each canceled entry permit for at least one (1) year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revision to the permit space program can be made.

ENTRY PERMIT

The entry permit that documents compliance with OSHA 1910.146 and authorized entry to a permit space shall identify:

- The permit space to be entered.

- The purpose of the entry.

- The date and the authorized duration of the entry permit.

- The authorized entrants within the permit space, by name or by such other means (for example, through the use of roster or tracking systems) as will enable the attendant to determine quickly and accurately for the duration of the permit, which authorized entrants, are inside the permit space.

- The personnel, by name, currently serving as attendants.

- The individual, by name, currently serving as entry supervisor, with a space for the signature of initials of the entry supervisor who originally authorized entry.

- The hazards of the permit space to be entered.

- The measures used to isolate the permit space and to eliminate or control permit space hazards before entry.

- The acceptable entry conditions.

- The results of initial and periodic tests performed, accompanied by the names or initials of the testers and by an indication of when the tests were performed.

- The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services.

- The communications procedures used by authorized entrants and attendants to maintain contact during the entry.

- Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment to be provided for compliance with OSHA 1910.146.

- Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety.

- Any additional permits, such as for hot work that has been issued to authorized work in the permit space.

TRAINING

1. The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned.

2. Training shall be provided to each affected employee:

    - Before the employee is first assigned duties under this section.

    - Before there is a change in assigned duties.

    - Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained.

    - Whenever the employer has reason to believe that there are inadequacies in the employee's knowledge or use of these procedures.

3. The training shall establish employee proficiency in the duties required and shall introduce new or revised procedures, as necessary, for compliance.

4. The employer shall certify that the training required has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

DUTIES OF AUTHORIZED ENTRANTS

The employer shall ensure that all authorized entrants:

1. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences for the exposure.

2. Properly use equipment as required.

3. Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.

4. Alert the attendant whenever:

    - The entrant recognized any warning sign or symptom of exposure to a dangerous situation; or

    - The entrant detects a prohibited condition.

5. Exit from the permit space as quickly as possible whenever:

    - An order to evacuate is given by the attendant or the entry supervisor.

    - The entrant recognized any warning sign or symptom of exposure to a dangerous situation.

    - The entrant detects a prohibited condition.

    - An evacuation alarm is activated.

DUTIES OF ATTENDANTS

The employer shall ensure that each attendant:

1. Knows the hazards that may be faced during entry, including information on the modes, signs, or symptoms, and consequences of the exposure.

2. Is aware of possible behavior effects of hazard exposure in authorized entrants.

3. Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants accurately identifies who is in the entry space.

4. Remains outside the permit space during the entry operations until relieved by another attendant.

5. Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.

6. Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate immediately under any of the following conditions:

    - If the attendant detects a prohibited condition.

    - The attendant detects the behavioral effects of hazard exposure in an authorized entrant.

    - If the attendant detects a situation outside the space that could endanger the authorized entrants.

    - If the attendant cannot effectively and safely perform all the duties required.

7. Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.

8. Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:

    a. Warn the unauthorized person that they must stay away from the permit space.

    b. Advise the unauthorized person that they must exit immediately if they have entered the permit space.

    c. Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.

9. Performs non-entry rescues as specified by the employer's rescue procedures.

10. Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

DUTIES OF ENTRY SUPERVISOR

The employer shall ensure that each entry supervisor:

1. Knows the hazard that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

2. Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.

3. Terminates the entry and cancels the permit as required.

4. Verifies that rescue services are available and that the means for summoning them are operable.

5. Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operation.

6. Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards of operations performed within the space, that entry operation remain consistent with terms of the entry permit and that expectable entry condition are maintained.

RESCUE AND EMERGENCIES

1. The following requirements apply to employers who have employees enter permit spaces to permit rescue services:

    - The employer shall ensure that each member of the rescue service is provided with and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.

    - Each member of the rescue service shall be trained to perform the assigned rescue duties.

    - Each member of the rescue service shall also receive the training of authorized entrants.

    - Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operation, which they remove, dummies, mannequins, or actual persons from the actual permit space or from

representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.

- Each member of the rescue service shall be trained in basic first aid and cardiopulmonary resuscitation (CPR). At least one member of the rescue service holding certification in first aid in CPR shall be available.

2. When an employer (host employer) arranges to have persons other than the host employer's employees perform permit space rescue, the host employer shall:

   a. Inform the rescue service of the hazards that they may confront when called on to perform rescue at the host employer's facility.

   b. Provide the rescue service with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.

3. To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase to overall risk of entry or would not contribute to the rescue of the entrant.

4. Retrieval systems shall meet the following requirements:

   - Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, or above the entrant's head. Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of chest or full body harness is unfeasible or crates a greater hazard and that the use of wristlets is the safest and most effective alternative.

   - The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces and more than 5 feet deep.

   - If an injured entrant is exposed to a substance for which Material Safety Data Sheet (MSDS) or other similar written information is required to be kept at the work site, that MSDS or written information shall be made available to the medical facility treating the exposed entrant.

HAZARD COMMUNICATION PROGRAM

OBJECTIVE

Henceforth, it shall be the policy of the Contractor and all Subcontractors to implement the various requirements of the Chemical Hazard Communication Regulation as required by the U.S. Department of Labor Occupational Safety and Health Administration or any governing state requirements.

RESPONSIBILITY

Unless notified otherwise, the Contractor's and all Subcontractors' safety representative, superintendent, or supervisor is designated as the person responsible for implementing this written program.

COMPLIANCE REQUIREMENTS

1. A written Hazard Communications Program is required by all contractors and available upon request, to the OCIP SHD. A copy shall be maintained at the main office.

2. A list shall be developed and maintained of the Contractor's and all Subcontractors' hazardous chemicals or substances that are on the job site.

3. Obtain and retain in the job site records Material Safety Data Sheets (MSDS) on substances, which contain one or more hazardous chemicals.

4. Provide information and training to all Contractor's and all Subcontractors' employees relative to the Hazard communication Regulation and about any known potential exposure to hazardous chemicals.

5. Explain how to read, interpret, and comply with information on MSDS and labels to the Contractor's and all Subcontractors' employees as part of the ongoing safety training. Employees have a right to receive data contained on the MSDS. Employees will not be discharged or discriminated against for exercising their rights in this regard.

6. Training will be conducted and documented at a safety meeting of information on hazardous chemicals to which the employee will be exposed in the work area.

7. Maintain records of employee accidental overexposure to hazardous chemicals.

8. Advise and transmit to other contractors or Subcontractors MSDS information on hazardous chemicals being used by the Contractor and all Subcontractors on the job site.

9. The Contractor and all Subcontractors will post signs throughout the workplace advising employees of all of the following:

a. The location of the material safety data sheets and the name of the person from whom to obtain the sheets.

b. The Contractor and all Subcontractors are prohibited from discharging or discriminating against an employee who exercises their right regarding information about hazardous chemicals.

c. That, as an alternative, the employee may obtain a copy of the material safety data sheet from the department of public health. The sign will include the address and telephone number of the division of the Department of Public Health that has the responsibility of responding to such request.

10. Within five working days after receipt of a new or a revised material safety data sheet, the Contractor and all Subcontractors will post for a period of 10 working days a notice of the existence of the new or revised sheet and directions for locating the new or revised sheet.

HAZARD COMMUNICATION PROGRAM
PROCEDURES FOR COMPLIANCE

STEP 1: IDENTIFICATION OF HAZARDOUS CHEMICALS AND SUBSTANCES

A. A survey of the project should be made to identify all hazardous chemicals and substances to be used by the Contractor and all Subcontractors' to whom their employees will be exposed by way of the posters and Subcontractor meetings.

B. The hazardous chemical list should contain the following information:

1. The chemical name and common name used on the container label and the material Safety Data Sheet (MSDS).

2. The manufacturer's name, address and telephone number.

3. The work area in which the chemical is used or stored.

4. Date MSDS was requested or received.

C. The hazardous chemical list must be updated annually as additional hazardous chemicals and substances are brought on to the job site to which the Contractor's and all Subcontractors' employees will be exposed.

D. Definition:

"Hazardous Chemical" is defined as any chemical, which is a physical, or health hazard and falls into the following categories:

	HEALTH HAZARD		**PHYSICAL HAZARD**
a)	Carcinogen	a)	Combustible or flammable liquid
b)	Corrosive	b)	Compressed gas
c)	Irritant	c)	Explosive
d)	Sensitize	d)	Organic Peroxide
e)	Toxic	e)	Oxidizer
f)	Chemicals affecting Specific organs, e.g., Liver, kidney	f)	Pyrophoric (ignites spontaneously in air at or below 130 degrees)
g)	Water reactive	g)	Unstable

STEP 2: MATERIAL SAFETY DATA SHEETS

A. Definition:

"MSDS" is the abbreviation used to identify a Material Safety Data Sheet. "MSDS" is a document, which supplies information about a particular hazardous chemical.

The MSDS must provide:

1. Information on the physical and chemical characteristics of the hazardous chemical;

2. Known acute and chronic health effects and related health information;

3. Exposure limits;

4. Whether the chemical is considered to be a carcinogen by NIOSH or OSHA;

5. Precautionary measures;

6. Emergency and first aid procedures;

7. Identification of the organization responsible for preparing the sheet, including name, address and telephone number.

B. Obtaining an MSDS

Copies of MSDS sheets for all hazardous substances to which employees of this company may be exposed will be obtained from manufactures and kept in the field office.

A review will be made of incoming data sheets for new and significant health/safety information. New information will be passed on to the affected employees and Subcontractors on the job site by way of the posters and Subcontractor meetings.

If an MSDS is missing or obviously incomplete, a new MSDS will be requested from the manufacturer.

C. Employees Rights

Employees have the right to receive data contained on the MSDS.

STEP 3: EMPLOYEE TRAINING

A. Employees are to attend an employee health and safety orientation or toolbox meeting set up by the superintendent, prior to starting work, for information and training on the following:

1. An overview of the requirements contained in the Hazard Communication Regulation, including their rights under the Hazard Regulation.

2. Inform employees of any operation in their work area where hazardous chemicals are present. (Utilize hazardous chemical list.)

3. Location and availability of the written Hazard Communication Program.

4. Physical and health effects of the hazardous chemicals.

5. Methods and observation techniques used to determine the presence of or the release of hazardous chemicals in the work area.

6. How to lessen or prevent exposure to these hazardous substances through usage of engineering controls, work practices, and/or the use of personal protective equipment.

7. Steps the company has taken to lessen or prevent exposure to these chemicals.

8. Emergency and first aid procedures to follow if employees are exposed to hazardous substance(s).

9. How to read labels and review MSDS to obtain appropriate hazard information.

10. Have each employee trained in the above, sign the Employer Acknowledgement Form.

11. Conduct an annual review of the Hazard communication Program with all employees and maintain a record of those in attendance.

12. Employees involved in non-routine task (such as acid wash of concrete) will be informed of the hazards involved and trained at specific training sessions so as to ensure awareness of required information.

NOTE: It is critically important that all employees understand the training. They should know what an MSDS is, how to read labels and the protective requirements, as well as first aid procedures for any hazardous chemical they are using. Employees should contact the project superintendent with any additional questions.

B. When new hazardous chemicals are introduced, the superintendent will review the above items as they relate to the new chemical in a safety meeting prior to employees being

exposed to the chemicals or substance. A list of new chemicals will also be posted in a conspicuous place.

STEP 4: LABELING

A. Definition:

Material received at the job site shall be properly labeled. If labels are not provided, contact the supplier for specific labels. Information contained on labels must not conflict with federal, state or local laws and/or regulations in labeling requirements. These labels should provide the following:

1. Identify the chemical products or substance in the container.

2. Hazard warnings.

3. List name, address and telephone number of the manufacturer or other responsible party.

4. Target organs affected by chemical.

B. Use of Labels:

1. The labels must not be removed and should be replaced if illegible.

2. All containers of chemical products, including laboratory bottles, solvent cans and dispensers must be labeled. For smaller containers (less than one gallon or 3.7 liters), labels must be consistent with the standards that are specified above. Only those chemicals that can be classified as "immediate use," one gallon or less are exempt from the labeling procedures described above.

   "Immediate use" is defined as the hazardous chemicals under control of, and used only by the person who transfers it from the labeled container and only within the work shift in which it is transferred.

3. In storage areas where similar chemical products are stored, signs and/or placards may be posted to identify the material and transmit the required information in lieu of individual container labels.

4. If any materials are to be transferred from a storage tank or container through a pipeline, labels with the required information will be affixed to the line at the discharge point (valve).

5. In cases where a chemical product other than that specified on the container label is placed in the container, re-label the container to accurately reflect the hazards of the chemical product that has been substituted.

6. Pipes or piping systems in a workplace that contain hazardous chemical shall be identified to an employee by label or by a sign, placard, written operating instruction, process sheet, or batch ticket. The employer shall establish a pipe and stationary process container entry procedure that will assure that the information required by 29 CFR 1910.1200 (f) is conveyed to an employee before entry.

STEP 5: SHARING OF INFORMATION

A. The Contractor/Subcontractors' Responsibilities

1. Access of information by other employers: the Contractor will make available to Subcontractors a list of the hazardous chemicals being used by the Contractor on the job site. A copy of the appropriate MSDS will be available for any hazardous chemical or substance to which the Subcontractors' employees or others may be exposed.

2. Likewise, it shall be the responsibility of all Subcontractors to provide the Contractor the appropriate MSDS's for hazardous chemicals being used by their company at the job site to which the Contractor's and all Subcontractors' employees may be exposed.

STEP 6: RECORDKEEPING (Job Site)

A. Material Safety Data Sheets and requests for any MSDS not furnished.

B. Hazardous chemical list.

C. Records or employee training and employee acknowledgment copies.

D. Records of any employee accidentally overexposed to a hazardous chemical.

E. Records of any environmental testing.

F. Written Hazard Communication Program.

TRAINING AID
LABELS AND MATERIAL SAFETY DATA SHEETS

LABELS

A label can be a word, symbol, or a picture that communicates the hazards of a chemical project. Any product that contains a hazardous chemical must be labeled by the manufacturer. The label must contain the following information:

1. Identity of the hazardous chemicals.

2. Appropriate hazard warning with respect to their contents.

3. Name and address of the manufacturer, importer, or other responsible party.

We will be using the labels that are placed on the product by the manufacturer. For more detailed information, refer to the Material Safety Data Sheet (MSDS). If you see a container that has no label or a damaged label, report it to your supervisor.

MATERIAL SAFETY DATA SHEETS

The MSDS gives you detailed information about a chemical and its hazards. It tells you how to use, handle, and store chemicals safely. Please look at your copy of the MSDS as we review the information provided in each section.

I. Chemical name and manufacturer are provided, as well as emergency phone number in the event of a spill or the need for emergency treatment. Trade names are also provided.

II. All the hazardous ingredients and the quantity in which they are present are provided. The Threshold Limit Value (TLV), which is a measure of the toxicity of this material, will also be provided.

III. Information designed to help you identify the material by observing its appearance and odor is provided in this section. Other date is given to help you control your exposure to the hazard.

IV. This section contains information on both physical hazards and reactivity. Special fire protection information and the flash point, the temperature at which the material gives off a vapor that will burn, are provided.

V. This section identifies reactive materials. It tells you what conditions to avoid and what other materials must be kept away from this material to assure safety.

VI. Health concerns are covered here, including the TLV's, the effect of overexposure, and where in the body the health effects occur. Some of the effects listed will only apply to

very high doses of the material. Emergency and first aid information will provide methods for treating overexposure.

VII. Covered in this section are special handling precautions. Here, you are told the precautions to take when using the material, how to store it safely, and methods for cleaning up spills. Special Instructions on waste disposal are also given.

VIII. This section is very important in protecting yourself from the physical and health effects of the material. Using the correct type of special protective equipment should prevent overexposure.

IX. Special precautions are listed in this section.

ELECTRICAL

1. Temporary electrical services to the job site shall conform to local codes and to the applicable National Electric Code.

2. All 15 and 20 amp receptacle outlets on single-phase circuits for construction sites shall be equipped with approved ground fault circuit interrupters (GFCIs). This also applies to portable generators.

3. Electric panel boxes shall be marked as to what each circuit controls.

4. Substantial covers, either manufactured metal covers; plywood, or equal shall be in place on any energized panel box. Boxes shall also be marked as energized when alive.

5. Main disconnects shall be conspicuously marked.

6. Temporary lighting shall be strung a minimum of 7 feet from the floor and bulb guards shall be used.

7. Temporary electrical wiring and extension cords shall be suspended and secured with non-conducting material.

8. A temporary light shall not be suspended by its electrical cord unless the cord and light are designed for suspension.

9. Flexible cords and cables shall be protected from damage. Sharp corners and projections shall be avoided. Flexible cords and cables may pass through doorways or other pinch points if protection is provided to avoid damage.

10. Extension cord sets used with portable electric tools and appliances shall be designed for hard or extra-hard usage. Flexible cords used with temporary and portable lights shall be designed for hard or extra-hard usage.

11. Flexible cords shall be used only in continuous lengths without splice or tape.

12. Sixteen (16) gauge extension cords are prohibited.

PORTABLE GENERATORS

1. Portable generators shall be grounded pursuant to manufacturer specifications.

2. The placement of generators shall be such to minimize the build up of fumes in work areas.

3. All generators shall be protected with GFCIs.

LOCKOUT / TAGOUT PROCEDURES

The Contractor's, all Subcontractors', and other third-party employees working on this project shall comply with the following lockout / tagout procedures. These procedures will be broken down into two phases:

1. Construction Phase – Pre-commissioning, check, test, and start up.
2. Commissioning, check, test, and start up.

CONSTRUCTION PHASE: PRE-START-UP EQUIPMENT CHECKOUT (TESTING)

Intent of lockout/tag out procedures for equipment check out (testing) operations: This system is designed to establish the initial and singular control systems for all operations involved in pre-start-up testing activities: The application of this system permits the creation of a standardized format for the Contractors/Subcontractors to maintain all necessary and appropriate safety engineering measures, to best protect the owner-contractor, contractor-vendor, and contractor-employee relationships. The OCIP SHD shall install, oversee, and perform audits to ensure full compliance to this procedure. All team members shall adhere to and respect the enforcement rule of "strict compliance" which shall lead to the ultimate success of an incident-free checkout operation.

Successful completion of any project is most critical during the checkout phase, when there are multiple craft personnel, vendor representatives, and client personnel engaged in testing activities that, until this time, were not part of traditional construction activities in which exposure to checkout operations is essentially non-existent. Therefore, it is in the best interest of all team members to have a responsible, centralized lockout system. Personal locks will not be used at any time during the construction phase.

The system lends itself to developing an efficient and effective bank of knowledge by gathering, in one location, information surrounding the checkout operation. Time, place, and responsible parties may be quickly ascertained with this system.

Consolidation of lockout efforts among all parties eliminates guesswork and footwork, thereby effectively speeding the checkout activities to an incident-free completion.

CONSTRUCTION PHASE: PRE-START-UP EQUIPMENT CHECKOUT (TESTING)

As equipment becomes installed, the employer shall place a lock and tag on all energy sources.

When equipment becomes ready for checkout (testing), the employer will notify the OCIP SHD, the Contractor, and all Subcontractors that equipment checkout (testing) will be performed and what equipment is being checked out (tested). The Contractor and all Subcontractors shall then

notify their employees working in or around the equipment test area and what equipment is being checked out (tested), and to keep out of those areas barricaded with red danger tape.

The equipment that is being checked out (tested) shall be barricaded with red danger barricade tape and shall be off limits to all employees not involved in the check out (testing). This shall be completed before the area manager/engineer removes his locks.

RED barricade tape means **DANGER. DO NOT ENTER.** All employees shall walk around areas that are barricaded off with red danger tape. Unless an employee is part of the work assignment that the area is barricaded off for, he or she must stay out. Any employee that enters an area that is red taped or barricaded shall be subject to disciplinary action to include possible termination.

Every contractor working on equipment check out (testing) shall sign out a sufficient number of locks from the contractor's lockout cabinet to lock out all energy sources and ancillary equipment attached to or part thereof to allow the various alignments, adjustments, etc. (mechanical, electrical, hydraulic, pneumatic, etc.). Each contractor will remove their locks and return them to the lockout cabinet when their task is complete.

The employer and designated safety and health representative shall be notified when check out (testing) is complete at the end of each shift. The employer will then lockout all equipment being checked out (tested).

At the start of the next shift, if the Contractor and any Subcontractors are still working on equipment check out (testing), the supervisor shall sign out a sufficient number of locks from the safety department to lockout equipment as necessary for various alignments, adjustments, etc. (mechanical, electrical, hydraulic, pneumatic, etc.).

When equipment check out (testing) is complete, the area manager/engineer shall lock it out until equipment is ready for start-up operations.

LOCKOUT / TAGOUT PROCEDURES

Scope

The objective of lockout/tagout procedures is to ensure the control of hazardous energy for the safety of all employees working on the project. If any employee performs any servicing or maintenance on or near any machine, equipment, or process where the unexpected energizing, start-up or release of stored energy could occur or cause injury, the machine, equipment, or process shall be isolated and rendered inoperable.

The designed safety representative shall provide a lockout padlock board for use by all contractors' employees. The board will be equipped with an adequate supply of padlocks (keyed and numbered differently); multiple lock hasps, and padlock sign-out forms (attached).

The Contractor or the Subcontractors' superintendent/foreman will be responsible for locking out all circuits and energy sources before commencing work on any machine, equipment, or process that has been terminated, charged, or could otherwise be considered operable.

When more than one crew, craft, or carpenter will be working on the same machine, equipment, etc., each foreman or designated person shall apply a lock on all isolating devices that provide energy to the machine equipment, etc. that is to be worked on. When each crew, craft, or contractor completes their work, their locks shall be removed from the isolating devices and returned to the lockout boards.

Lockout Procedure

The following should happen as they appear.

A designated, qualified electrician shall accompany the contractor's and the Subcontractor's superintendent or foreman and conduct tests as required to ensure de-energizing of all electrical lockouts and when service is to be restored.

The Contractor's and the Subcontractor's superintendent or foreman shall sign out all padlocks taken from the lockout board in the Safety trailer.

The Contractor's and the Subcontractor's superintendent or foreman shall then notify all affected personnel that the machine, equipment, overhead crane, etc., will be rendered inoperable and locked-out. An unexpected loss of power could also be hazardous.

The Contractor's and the Subcontractor's superintendent or foreman and electrician will then make sure that the machines, equipment's, etc., normal operating controls are in the "off" position.

The electrician shall then apply his/her assigned locks to each isolating device that provides power to the machine, equipment, process, etc. that is to be worked on or near. The Contractor's and the Subcontractors' superintendent or foreman and electrician shall then ensure that all energy sources to the machine, equipment, etc., are de-energized by the isolating devices so that the energy source no longer feeds the machine, equipment, etc.

The Contractor and the Subcontractor's superintendent or foreman shall then apply his/her locks to each isolating device that provides power to the machine, equipment, etc., that is to be worked on or near.

The Contractor's and the Subcontractor's superintendent or foreman and electrician shall then ensure the machine, equipment, etc., is de-energized by attempting a start-up following normal procedures. This shall require testing by the qualified electrician to ensure power sources have, in fact, been de-energized.

Stored or residual energy shall then be dissipated or restrained by whatever means are necessary. Capacitors shall be discharged and high capacitance elements shall be short circuited and grounded by the electrician, if the stored electric energy might endanger personnel.

The area, machine, equipment, etc., is now locked-out.

Restoring Service

The following should happen as they appear.

The Contractor's and the Subcontractor's superintendent or foreman shall notify all affected personnel including the area manager/engineer and the project safety department of his/her intent to restore power to the area, machine, equipment, etc.

The Contractor's and the Subcontractor's superintendent or foreman and electrician shall then make a visual inspection of the area, machine, equipment, etc., to make sure that all restraining devices, tools, materials, equipment, etc., have been removed and all essential equipment components including guards are in place. The qualified electrician shall conduct tests as necessary to verify that all electrical jumpers, shorts, grounds, and other such devices have been removed, so that the circuits and equipment can be safety energized.

The Contractor's and the Subcontractor's superintendent or foreman and electrician shall then check to make sure the machines', equipment's, etc., controls are in the "off" or "neutral" position to prevent an automatic start-up when power is restored.

The Contractor's and the Subcontractor's superintendent or foreman will then remove his/her locks and the electrician shall remove his/her locks and close the circuit of the isolating device.

The Contractor's and the Subcontractor's superintendent or foreman shall then notify all affected personnel including the area manager/engineer and the project safety and health director that the power has been restored and the equipment is in service.

Fluid Power Lockout Procedure

Fluid power is defined as energy transmitted by pipe or those through a pressurized medium of air, gas, steam, or liquid at any pressure.

The following should happen as they appear.

A designated qualified pipe fitter shall accompany the Contractor's and the Subcontractor's superintendent or foreman to ensure all fluid power supply energy sources are isolated and depressurized on all fluid power lockouts and when restoring fluid power service.

The Contractor's and the Subcontractor's superintendent or foreman shall notify all affected personnel that the pipe, valve, hose, process, etc., will be de-pressurized, rendered inoperable, and locked-out.

The Contractor's and the Subcontractor's superintendent or foreman and pipe fitter will then make sure that all valves, etc., providing energy to the pipes, hose, process, etc., are in the "off" or "closed" position.

The Contractor's and the Subcontractor's superintendent or foreman and pipe fitter shall then ensure that all energy sources to the pipe, valve, hose, process, etc., are de-pressurized by valves or other isolating devices so that the energy source no longer feeds the pipe, valve, hose, process, etc.

The pipe fitter shall then apply his/her locks to each valve or other isolating devices that provide energy to the pipe, valve, process, etc. The Contractor's and the Subcontractor's superintendent or foreman shall then apply his/her locks to each valve or other isolating devices that provide energy to the pipe, valve, process, etc., that is to be worked on.

The Contractor's and the Subcontractor's superintendent or foreman and the pipe fitter will then make sure that any energy that remains in the pipe, hose, process, etc., is dissipated or restrained and the valve blanks are installed. On welded valve connections, the valve handles shall be removed and the item tagged "DO NOT OPERATE." All valves and other isolating devices must be physically prevented from being operated.

The Contractor's and the Subcontractor's superintendent or foreman and pipe fitter shall then ensure that the pipe, hose, and process is de-pressurized by in-line pressure gauges or by opening a valve down line.

Hydraulic and pneumatic equipment shall be blocked to prevent movement before employees begin any repairs, adjustments, etc., to the equipment.

NOTE: Combustible or flammable gas or liquid piping, hose, process, etc. must be purged with nitrogen before commencing work.

The pipe, hose, process, etc., is now locked-out.

<u>Restoring Fluid Power Service</u>

The following should happen as they appear.

The Contractor's and the Subcontractor's superintendent or foreman and pipe fitter shall make a visual inspection of the area, pipe, hose, process, etc., to make sure that all restraining devices, blanks, tools, materials, equipment, etc., have been removed and all essential equipment components including guards are in place.

The Contractor's and the Subcontractor's superintendent or foreman shall then check the area, pipe, hose, process, etc., to ensure all of his/her employees are accounted for and all personnel are clear and safely positioned.

The Contractor's and the Subcontractor's superintendent or foreman and the pipe fitter shall then check to make sure that all controls, valves, etc., are in the "off," "neutral," or "closed position to prevent an automatic start-up when power is restored.

The Contractor's and the Subcontractor's superintendent or foreman will then remove his/her locks and the pipe fitter shall remove his/her locks and shall follow proper guidelines to reintroduce the energy into the pipe, hose, process, etc.

The foreman shall then notify all affected personnel that energy has been restored and the pipe, hose, process, etc., is in service.

NOTE: Each lock shall be removed by the employee that applied it or under his/her direct supervision. However, if this employee is absent from the workplace, then the lock or tag may be removed by a designated qualified person only with approval from the project safety and health director or his designee provided that:

1. The Contractor and all Subcontractors ensure that the employee that applied the lock or tag is not available at the workplace, and

2. The Contractor and all Subcontractors ensure that the employee is aware that the lock or tag has been removed before he/she resumes work at that workplace.

MOTOR VEHICLES, MECHANIZED EQUIPMENT

OPERATOR SELECTION

Heavy earth moving and handling equipment: Only trained and qualified individuals shall be permitted to operate this type of equipment. Training must include a thorough review of the hazards, safe and unsafe procedures, and a good working knowledge of the machine itself.

Licensed Motor vehicles: Operators must be experienced and licensed drivers regardless of whether they are operating on or off highways.

EQUIPMENT

Equipment stored adjacent to active roadways shall have appropriate lights, reflectors, or barricades and kept no less than 34 feet from the edge of the active traffic lane.

All construction equipment shall be inspected at the beginning of each shift to ensure that the equipment and accessories are in safe operating condition and free of apparent damage that could cause failure while it is in use. All defects shall be repaired before the equipment or vehicle is put back in service. Defective equipment shall be tagged out of service with an explanation of its defects until repaired. All heavy construction equipment inspections shall be documented daily before use and submitted to the OCIP SHD weekly.

Cab glass shall be safety glass or equivalent that introduces no visible distortion affecting the safe operation of any machine.

Wherever it is not feasible to reduce the noise levels or duration of exposures as specified in the permissible noise exposure tables, each operator shall be required to wear hearing protection devices when operating such equipment.

Equipment (except skid steers and rollers) shall be equipped with a fire extinguisher having a 5 BC rating or higher.

Whenever the equipment is parked, the parking brake shall be set. Equipment parked on inclines must have the wheels chucked and the parking brake set.

All equipment must be equipped with working back-up alarms and strobe lights. Strobe lights must be in use at all times while vehicle is in operation on the jobsite.

Slow-moving vehicles (less than 25 mph) shall be clearly identified by posting a triangular emblem, colored fluorescent yellow-orange with a dark red reflective border. All equipment equipped with ROPS requires that a seatbelt be used at all times.

Heavy equipment has the right of way.

The use, care, and charging of all batteries shall conform to the requirements of Subpart K of 29 CFR 1926, Construction Standards.

All equipment shall comply with the requirements of 29 CFR 1926.550(a)(15) when working or being moved in the vicinity of power lines or energized.

The speed limit is **25 mph** in the worksite **10 mph** within 200 feet of workers.

MOTOR VEHICLES

Vehicles shall have a service brake system, an emergency break system, and a parking brake system. These systems may use common components and shall be maintained in operable condition.

The safety standards listed below apply to the following types of earth moving equipment: scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment.

Seatbelts shall be provided on all equipment and shall meet the requirements of the Society of Automotive Engineers and Seat Belts for Construction Equipment. Seatbelts are to be worn at all times while traveling on the USH 41 NORTH/SOUTH CORRIDOR PROJECT.

Seatbelts need not be provided for equipment that is designed only for stand-up operation.

Earth moving equipment shall have a service break capable of stopping and holding the equipment, fully loaded, as specified in Society of Automotive Engineers, Loader, Dozer, Graders, and Scrapers specifications.

The speed limit is **25mph** in the work site, **10 mph** within 200 feet of workers.

Cell phone usage is prohibited while operating heavy equipment.

All bi-directional equipment shall be equipped with a horn, distinguishable from the surrounding noise level, which shall be operated as needed when the machine is moving in either direction.

No employer shall permit earth moving or compacting equipment, which has an obstructed view to the rear to be used in reverse gear unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level or an employee signals that it is safe to do so.

Fenders: Pneumatic-tired earth moving haulage equipment (trucks, scrapers, tractors, and trailing units) whose maximum speed exceeds 15 mph shall be equipped with fenders on all wheels.

All construction vehicles shall be inspected at the beginning of each shift to ensure that the equipment and accessories are in safe operating condition and free of apparent damage that could cause failure while it is in use. All defects shall be repaired before the equipment or vehicle is put back in service. Defective equipment shall be tagged out of service with an explanation of its defects until repaired. All heavy construction equipment inspections shall be documented daily and submitted to the OCIP SHD weekly.

Scissors Points: Scissors points on all front-end loaders, which constitute a hazard to the operator during normal operation, shall be guarded.

ROPS PROTECTION

Included, but not limited to the following list is equipment that shall be equipped with a Rollover Protective Structures (ROPS) cab:

- Rubber-tired, self-propelled scrappers
- Rubber-tired, front-end loaders
- Rubber-tired dozers
- Motor graders
- Bulldozers
- Scrappers, tractors, etc., with or without attachments, that are used in construction

This requirement does not apply to pipe laying tractors.

The design of ROPS shall provide vertical clearance of at least 52 inches from the work deck to the ROPS at the point of ingress or egress. Each ROPS shall have the following information permanently affixed to the structure:

- Manufacturer or fabricator's name and address
- ROPS model number (if any)
- Machine make, model, or series number that the structure is designed to fit.

ROLLOVER PROTECTIVE STRUCTURES; OVERHEAD PROTECTION

COVERAGE

This section applies to the following types of material handling equipment: all rubber-tired, self-propelled scrapers; rubber-tired, front-end loaders; rubber-tired dozers; wheel-type agriculture and industrial tractors; crawler tractors; crawler tractors; crawler-type loaders; and motor graders with or without attachments that are used in construction. This requirement does not apply to side-boom pipe-laying tractors.

A. Equipment Manufactured on or after September 1, 1972

Material handling machinery shall be equipment with rollover protective structures that meet the minimum performance standards.

B. Equipment Manufactured before September 1, 1972

1. All material handling equipment shall be fitted with rollover protective structures no later than the dates listed below:

   (a) On or after January 1, 1972, fitted April 1, 1973

   (b) Between July 1, 1971, and December 31, 1971, fitted July 1, 1973

   (c) Between July 1, 1970, and June 30, 1971, fitted no latter than January 1, 1974

   (d) Between July 1, 1969, and June 30, 1970, fitted no later than July 1, 1974

   (e) Before July 1, 1969, reserve pending further study.

2. Rollover protective structures and supporting attachment shall meet the minimum performance criteria detailed in 29 CFR 1926.1001 and 1926.1002, as applicable, or shall be designed, fabricated, and installed in a manner which will support, based on the ultimate strength of the metal, at least two times the weight of the prime mover applied at the point of impact.

   (a) The design objective shall be to minimize the likelihood of a complete overturn and thereby minimize the possibility of the operator being crushed as a result of a rollover or upset.

   (b) The design shall provide a vertical clearance of at least 52” from the work deck to the ROPS at the point of ingress or egress.

C. Remounting

ROPS removed for any reason shall be remounted with equal quality or better bolts or welding as required for the original mounting.

D. Labeling

Each ROPS shall have the following information permanently affixed to the structure:

1. Manufacturer or fabricator's name and address
2. ROPS model number (if any)
3. Machine make, model, or series number that the structure is designed to fit.

E. Machines Meeting Certain Existing Governmental Requirements

Any machine in use, equipped with rollover protective structures, shall be deemed in compliance with this section if it meets the rollover protective structures requirements of the State of California, the U.S. Army Corps of Engineers, or the Bureau of Reclamation of the U.S. Department of the Interior in effect since April of 1972.

STEEL ERECTION/BRIDGE GIRDER

Trusses and beams shall be braced laterally and progressively during construction to prevent buckling or overturning.

During placing of structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts drawn up wrench tight.

When performing work including connecting and where the fall distance is greater than six (6) feet, employees shall be protected by approved fall protection devices

Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.

When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.

Impact wrenches shall be provided with a locking device for retaining the socket.

Turnbuckles shall be secured to prevent unwinding while under stress.

Employees working above grade or any surface and exposed to protruding reinforcing steel or other similar projections shall be protected against the hazard of impalement by the use of guardrails, approved fall protection systems, or protective covers.

Exposed edges of all decking at the periphery of the structure shall be protected by a complete guardrail system.

In order to begin steel erection, the controlling contractor shall ensure that the steel erector is provided with the following written notifications:

1. The concrete in the footings, piers and walls and the mortar in the masonry piers have attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the integrated minimum compressive design strength, or sufficient strength to support the loads imposed during steel erection.

2. Any repairs, replacements, and modifications to the anchor bolts are in accordance with 29 CFR 1926.775(b).

SITE LAYOUT

The controlling contractor shall ensure that the following is provided and maintained:

1. Adequate access roads into and through the site for safe delivery and movement.

2. A firm properly graded, drained area, readily accessible to the work with adequate space for safe storage of materials and the safe operation of the erector's equipment.

MULTIPLE LIFT RIGGING PROCEDURES (CHRISTMAS TREEING)

A multiple lift shall only be preformed if the following criteria are met:

1. A multiple lift rigging assembly is used.

2. A maximum of five members is hoisted per lift.

3. Only beams and similar structural members are lifted.

4. All employees engaged in the multiple lift have been trained in these procedures in accordance with 29 CFR 1926.761(c)(1).

No cranes are to be used for a multiple lift where such use is contrary to the manufacturer's specifications and limitations.

CRANES AND DERRICKS

MANUFACTURER'S REQUIREMENTS

The manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks must be complied with. The manufacturer's recommended rated load capacities, operating speeds, special hazard warnings, or instructions shall be visible to the operator while he is at his control station. No modifications or additions, which affect the capacity of safe operation of the equipment, shall be made without the manufacturer's written approval.

OPERATOR REQUIREMENTS

Certified crane operators (CCO) are required for all cranes 75-tons or greater.

DESIGN CRITERIA AND SITE INSTALLATION

Cranes and derricks shall be constructed and installed to adequately meet all stress imposed in main members and components under normal conditions when handling loads not exceeding manufacturer's load ratings. They must be designed, constructed, installed, tested, maintained, inspected, and operated as prescribed in the ANSI Standards.

A positive acting device or warning device shall be used which prevents contact between the load block or overhaul ball and the boom tip (anti-two-blocking devices), or a system shall be used which deactivates the hoisting action before damage occurs in the event of a two-blocking situation (two-block damage prevention feature).

Positive Anti-two-blocking devices and power down is required on all cranes used to lift man-baskets. (Man-baskets must be designed by an engineer and signed off) and have the proper test weights, and tested each time the crane is moved.

CRANE SIGNALS

Hand signals to crane and derrick operators shall be those prescribed by the applicable ANSI Standard for the type of crane in use. An illustration of the signals must be posted at the job site. The operators(s) shall move the hoisting apparatus only on signals from the rigger-in-charge. No response shall be made unless signals are clearly understood.

A stop signal must be obeyed regardless of who gives it.

CABS

The general arrangement of the cab and the location of control and protective equipment must be such that all operating handles are within convenient reach of the operator when facing the area to be served by the load hook or while facing the direction of travel of the cab.

Each cab must be equipped with a portable fire extinguisher having a 10 BC or higher rating. Operating and maintenance personnel must be familiar with the use and care of the fire extinguishers provided. Cabs must be equipped with a warning signal device that will clearly be audible over surrounding noise levels. Windows in cabs shall be of safety glass or equivalent that introduces no visible distortion that will interfere with the safe operation of the machine.

MECHANICAL GUARDING AND BARRICADING

Belts, gears, shafts, etc., or other reciprocating, rotating, or other moving parts or equipment must be guarded when such parts are exposed to contact by employees or otherwise create a hazard.

Guards must be securely fastened.

Exhaust pipes shall be guarded or insulated in areas where contact by employees is possible in the performance of normal duties.

Accessible areas within the swing radius of the rear of the rotating superstructure of the crane, either permanently or temporarily mounted shall be barricaded in such a manner as to prevent an employee from being struck by or crushed between the car body, tracks or fixed object .

OPERATION OF EQUIPMENT ADJACENT TO ELECTRIC POWER LINES

Unless insulating barriers that are not part of or an attachment to the equipment or machinery have been erected to prevent physical contact with the lines, equipment of machines shall be operated in proximity to power lines only in accordance with the following:

- For lines rated 50kv or below, minimum clearance between the lines and any part of the crane or loads shall be 10 feet.

- For lines rated over 50kv, minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1kv over 50kv, or twice the length of the line insulator, but never less than 10 feet.

- In transit with no load and boom lowered, the equipment clearance shall be a minimum of 4 feet for voltage less than 50kv, and 10 feet for voltages over 50kv up to and including 345kv and 16 feet for voltages up to and including 750kv.

- Crane operations within 100' of a power line will have overhead power line signs in place before setup and operation.

- A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.

CRANES AND DERRICKS

Equipment shall comply with the American National Standard B30.5 Safety Codes for Cranes, Hoists, and Derricks and to the Occupational Safety and Health Standards 29 CFR 1926.550 Subpart N—Cranes, Hoists, and Derricks.

Rated load capacities, including wind load ratings, and recommended operating speeds: special hazard warnings or instructions shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to the operator. Any crane shall not exceed 90% of its rated lifting capacity. All critical lifts, any lift over 70% of the crane load rating, and for multiple crane lifts, must be planned with copies sent to the OCIP SHD.

The subcontractor shall provide a current annual inspection certificate of the crane immediately on the cranes arrival to the job site.

The annual inspection of hoisting machinery shall be made by a qualified third party person or by a government or private agency recognized by the U.S. Department of Labor prior to operation.

Inspection procedure for cranes and derricks in regular service is divided into two general classifications based upon the intervals at which inspection should be performed. The intervals in turn are dependent upon the nature of the critical components of the crane or derrick and the degree of their exposure to wear, deterioration, or malfunction. The two general classifications are herein designated as "frequent" and "periodic" with respective intervals defined as:

- Frequent inspection = Daily to monthly intervals
- Periodic inspection = 1 to 12 month intervals

RIGGING

Any person, who is rigging any loads on the USH 41 NORTH/SOUTH CORRIDOR PROJECT job site, shall be trained by their employer in proper rigging techniques and inspection of rigging equipment. Documentation of this training shall be provided to the OCIP SHD upon request. All rigging shall have permanently affixed durable identification stating size, grade, rated capacity, and sling manufacturer.

TOOLS

PERSONAL PROTECTIVE EQUIPMENT

Employees using hand and power tools shall be provided with and required to wear the personal protective equipment necessary to protect them from the hazards involved.

USE OF HAND TOOLS

A part of every site-specific training program shall include training in the proper use of hand tools.

PORTABLE POWER TOOLS

1. The tool shall be disconnected from the power source before accessories are changed or repairs are made. Guards shall be replaced and put in correct adjustment prior to the tool being used.

2. Tools shall not be left in an overhead place where there is a possibility that the cord, if pulled, will cause the tool to fall.

3. Electric extension cords, when used, shall be laid out in such a way that they will be protected from damage and will not present a tripping hazard.

GUARDING

Power tools designed to accommodate guards shall be so equipped. Belts, gears, shafts, pulleys, or other reciprocating, rotating, or moving parts of equipment must be guarded if such parts are exposed to contact by employees or otherwise create a hazard.

ELECTRIC POWERED TOOLS

1. Electrically operated tools shall either be of the approved double insulated type or shall be effectively grounded. GFCI's are always required.

2. Electric cords shall be inspected periodically and kept in good condition. Heavy-duty plugs that clamp to the cord shall be used to prevent strain on the current carrying parts.

PNEUMATIC POWER TOOLS

1. Air operated power tools shall be secured to the hose by a positive means to prevent the tools from becoming accidentally disconnected.

2. Air lines greater than ½" inside diameter shall be wired, cabled, chained, or otherwise secured.

3. The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.

4. The use of hoses for hoisting or lowering tools shall not be permitted.

5. Hoses exceeding ½" inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in event of hose failure.

OTHER TYPES OF POWERED TOOLS

1. Fuel powered tools shall be shut off while being refueled, serviced, or maintained.

2. When fuel operated tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases, use of personal protective equipment, and ventilation required must be followed; and the area could be considered a confined space.

3. Manufacturer's safe operating pressures for hydraulic powered tools for hoses, valves, pipes, filters, and other fittings shall not be exceeded.

4. A hydraulically powered tool shall use approved fire-resistant fluids that do not change the performance characteristics during temperature extremes.

5. Hoses used on or around an electrically energized line or equipment shall be nonconductive.

6. Gas powered cutoff, chop, partner, etc., require the use of a face shield in addition to the standard eye protection. Any saw used to cut concrete requires a respirator.

POWDER ACTUATED TOOLS

1. Only employees who have been trained in the operations of the particular tool in use shall be allowed to operate a powder-actuated tool.

2. After training, an employee should be issued a card certifying his/her competence in operating and caring for powder actuated tools.

3. An employee must have the card that certifies training in his/her possession at all times while operating the tools.

4. The tool shall be checked each day for use before loading to see that safety devices are in proper working order. The method of testing shall be in accordance with the manufacturer's recommended procedure.

TOOL RPM RATING

1. The RPM rating on abrasive grinding wheels, cup stones, and wire wheels must be equal to or greater than the RPM rating of the tool being used.

MATERIALS HANDLING

MATERIALS HANDLING

1. Where mechanical handling equipment is used, sufficient safe clearances shall be maintained.
2. Materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling, or collapse.

3. Materials shall not be stored on scaffolds or runways in excess of supplies needed for immediate operations.

4. Lumber piles shall not exceed ten (10) feet in height. If lumber is to be handled manually, piles shall not exceed six (6) feet in height.

5. Structural steel, poles, pipes, bar stock and other cylindrical material unless racked shall be stacked and blocked so as to prevent spreading or tilting.

6. Gloves or other hand protection shall be used when necessary to prevent hand injuries.

7. When opening a wire-bound bale or box, employees shall wear eye protection, as well as stout gloves to prevent the ends of the bindings from striking their face or body.

8. If material is dusty or toxic, the employee handling it shall wear a respirator as well as other suitable personal protective equipment.

9. Bagged material

    a. The height of a manually stacked pile of bagged material weighing more than 30 pounds per bag shall not exceed 5 feet.

    b. Pallets should not be more than 36” high, should be secured to prevent displacement, and stacked only two pallets high.

10. Loose brick or tile

    a. Tapered back 2” for every foot of height above 4 feet.

CONCRETE PUMPING

The major hazards of concern include high pressures, temporary piping systems, cranes, clean-up problems, and high noise levels. Operational procedures and equipment control programs should include the following considerations:

A. The pumping unit should be placed on a firm, level base allowing sufficient unrestricted access and maneuvering space for ready-mix trucks.

B. If boom-equipped, the unit should be placed to allow maximum rotation and extension of the boom. Outriggers should be properly set and the manufacturer's operating instructions adhered to.

C. Boom-equipped units should not be operated within 10 feet of any energized conductor, or in any position where the boom or any portion of the unit or pipeline can come within this zone. In addition a distance of 3 inches should be added for every 50 KV over 50 KV that are approached. If operated within 100', danger overhead power line signs required.

D. All pipes should be properly connected, supported, restrained, and provided with washers, O-rings, or gaskets to prevent leakage.

E. Pipes should be provided with retainer wires, cables, or chains across all joints and between the pipeline and boom.

F. If it is necessary to use a discharge pipe of two or more different diameters, the larger diameters should be placed farther away from the pump and the smaller diameters closer to the pump end. This will prevent pressure build-up.

G. The pipeline should be laid as straight as possible. Vertical runs should be supported and restrained at predetermined intervals. Surge pressures should be provided for in the design.

H. The lubricating mortar mix used to "wet" the pump and pipeline should be wasted (disposed of) and not used as part of the construction.

I. Obviously, the pour must be continuous; thus, it is necessary to arrange for continuous delivery of ready-mix, the use of a return line, or pump speed reduction to prevent the stopping of the flow of concrete.

J. If the pumping is stopped and flow cannot be restarted, the pump and piping system must be immediately and thoroughly cleaned in accordance with the manufacturer's recommendations.

K. All equipment should be inspected on a regular basis to assure that it is in good operating condition. The piping should be inspected and/or monitored to assure that there is no

excess wear which could cause high pressure leaks, ruptures, and ultimately interruption of the pumping operation.

L. The operator and all persons working in the vicinity of the pump shall wear hearing protection.

M. The pump operator should be in constant communication with the individual in charge at the pour site so that the pump may be stopped in an emergency such as a form collapse or broken line. Communication should also be maintained with the concrete supplier.

LEAD EXPOSURE CONTROL PLAN

Lead Exposure Control Plan must comply with 1926.62 of the 29 CFR 1926.

The disturbance, handling, or removing of lead contaminated materials are prohibited. If materials are discovered that may contain lead, the WisDOT Project Manager and the OCIP SHD will be contacted immediately and the contractual provisions concerning lead will be followed.

ASPHALT

ASPHALT FUMES

Exposures vary considerably between different asphalt jobs and different worker tasks. More research is needed to determine and control important factors that cause increase or decrease in worker exposure such as application temperatures, equipment, environmental conditions, workplace practices, and asphalt constituents.

Human studies have reported lung, stomach, and skin cancers following long and frequent exposures to asphalt fumes. However, the studies are inconclusive, and the possible chronic effects to workers following exposures to asphalt fumes are areas of continuing investigation. There are currently no standards for permissible levels of asphalt fumes; however, steps may be taken to keep exposures to a minimum:

- Rotate job duties.
- Breathe fresh air when possible by standing upwind.
- Wear gloves, boots, and protective clothing when working with hot asphalt.
- Limit time working on and around fresh asphalt.
- If hot material gets on your skin, cool in cold water as soon as possible to stop further damage. Do not try to remove the solidified bitumen material from the skin in any way. Get to the first-aid trailer immediately.

ASPHALT BURN AND PARTICLE HAZARDS

Three of the hazards workers face from asphalt are:

1. Burns because asphalt is spread at temperatures of more than 300°F and can easily stick to the skin.

2. Particles in the eyes.

3. Inhaling crystalline silica that may be released when cutting or grinding old asphalt pavement.

PREVENTION, CONTROL, AND ABATEMENTS

Administrative/Engineering Controls

- Provide a water source to flush skin or eyes after contact with material that can cause burns.
- Provide supplies for treating burns, such as water, gel, fire blankets, or pads.
- Put warning labels on all tanks and containers of hot asphalt.

Personal Protective Equipment

- Face shield, safety glasses, or goggles
- Gloves with knit cuffs
- Boots, tightly laces and at least six inches high
- Long-sleeved shirts and pants that fit over gloves and boots

Training

- Make workers aware that chemicals can burn skin just as heat can. Workers must also know how to get information about chemical hazards from MSDS's.

SILICA

SILICOSIS

There are a variety of conditions in the construction industry that can lead to the development of silicosis. Our efforts to prevent silicosis include the five following areas:

1. Increase awareness about the sources of silica exposure, the nature of silicosis, and the cause of the disease.

2. Substitute abrasive blasting materials that are less toxic than those containing silica.

3. Utilize engineering controls and work practices.

4. Conduct exposure surveillance programs.

5. Assess potential need for respiratory protection programs.

TYPES OF SILICA

Crystalline silica may be of several distinct types. Quartz, a form of silica and the most common mineral in the earth's crust, is associated with many types of rock. Other types of silica include cristobalite and tridymite.

POTENTIAL FOR EXPOSURE DURING CONSTRUCTION

Many concrete and masonry products include sand and rock, which may contain silica. Since these products are common materials for construction, construction workers may be exposed to respirable crystalline silica during much of the following:

- Chipping, hammering and drilling of rock.
- Abrasive blasting using silica sand as the abrasive.
- Abrasive blasting of concrete (regardless of abrasive used).
- Sawing, hammering, drilling, grinding, and chipping of concrete or masonry.
- Demolition of concrete and masonry structures.
- Dry sweeping or pressurized air blowing of concrete, rock, or sand dust.

Even materials containing small amounts of crystalline silica may be hazardous if they are used in ways that produce high dust concentrations.

HEALTH EFFECTS OF CRYTSALLINE SILICA EXPOSURE

DESCRIPTION OF SILICOSIS

When workers inhale crystalline silica, the lung tissue reacts by developing fibrotic nodules and scarring around the trapped silica particles.

TYPES OF SILICOSIS

A worker may develop any of three types of silicosis depending on the airborne concentration of crystalline silica:

1. Chronic silicosis, which usually occurs after 10 or more years of exposure to crystalline silica at relatively low concentrations.

2. Accelerated silicosis, which results from exposure to high concentrations of crystalline silica and develops 5 to 10 years after the initial exposure.

3. Acute silicosis, which occurs where exposure concentrations are the highest and can cause symptoms to develop within a few weeks to 4 or 5 years after the initial exposure.

COMPLICATIONS

Initially, workers with silicosis may have no symptoms. As silicosis progresses, there may be difficulty in breathing and other chest symptoms such as cough. Infectious complications may cause fever, weights loss, and night sweats. Severs micro bacterial or fungal infections can complicate silicosis and may be fatal.

ABRASIVE BLASTING MATERIALS

When possible investigate a less hazardous substitution.

ENGINEERING AND WORK PRACTICE CONTROLS

DUST CONTROL

The key to preventing silicosis is to keep dust out of the air. Dust controls can be as simple as a water hose to wet the dust before it becomes airborne. Use the following methods to control respirable crystalline silica:

- Use the dust collection systems available for many types of dust-generating equipment. Use local exhaust ventilation to prevent dust from being released into the air. Do not use equipment if the dust control system is not working properly.

- During rock drilling, use water through the drill stem to reduce the amount of dust in the air, or use a drill with a dust collection system. Use drills that have a positive-pressure cab with air conditioning and filtered air supply to isolate the driller from the dust.
- When sawing concrete or masonry, use saws that provide water to the blade when they are available.
- Use good work practices to minimize exposures and to prevent nearby workers from being exposed. For example, remove dust from equipment with a water hose rather that with compressed air. Use vacuums with high-efficiency particulate air (HEPA) filters, or use wet sweeping instead of dry sweeping.
- Use abrasives containing less than 1% crystalline silica during abrasively blasting to prevent quartz dust from being released in the air.
- Use containment methods such as blast-cleaning machines and cabinets to prevent dust from being released into the air.

SCHEDULING

Many times silica exposure to the bulk of the work force can be eliminated simply by rescheduling or suspending operations in a specific area during a silica generating activity, or by scheduling a silica activity for "off-hours". For example: A contractor needing to sandblast a new concrete bridge abutment to obtain a raised aggregate finish could schedule the sandblasting for Saturday afternoons when other contractors were not in the area.

PERSONAL HYGIENE

The following personal hygiene practices are essential for protecting workers from respirable crystalline silica and other contaminants such as lead, particularly during abrasive-blasting operations:

- Do not eat, drink, or use tobacco products in dusty areas.
- Wash hands and face before eating, drinking, or smoking outside dusty areas.
- Park cars where they will not be contaminated with silica and other substances such as lead.

PROTECTIVE CLOTHING

The following steps are to assure clothes do not contaminate cars, homes, or worksite outside the dusty area:

- Wear washable work clothes at the worksite
- Remove contaminated clothing (i.e. coverall, etc.) before leaving the worksite.

WARNING SIGNS

Warning signs should be posted to mark the boundaries of work areas contaminated with crystalline silica. These signs should warn workers about the hazard and specify any protective equipment required (for example, respirators).

ADMINISTRATIVE CONTROLS

Administrative controls can be used in conjunction with engineering controls to further reduce the likelihood of worker exposure or to minimize the number of workers who are over exposed. Administrative controls include but are not limited to:

- Contractors who anticipate doing silica dust creating work should notify all other onsite contractors as far in advance as possible as to: location, date, start time, and duration.
- Contractors will, to the extent feasible, limit silica-generating work to off-hours or coordinate times when other contractors can vacate the immediate work area.
- Contractors will, to the extent feasible, leave the immediate work area while other contractors are conducting other silica generating operations.
- Contractors on all projects with silica generating activities will notify their workers of the potential for silica exposure by: posting warning signs where other employee notices are posted; having the area flagged off, if necessary and feasible, to prevent unauthorized workers form entering during silica generating operations.

RESPIRATORY PROTECTION

Respirators should not be used as the primary means of preventing or minimizing exposures to airborne contaminants. Instead, use effective source controls such as substitution, automation, enclosed systems, local exhaust ventilation, wet methods, and good work practices. Such measures should be the primary means of protecting workers. However, when source controls cannot keep exposures below the NIOSH REL, controls should be supplemental with the use of respirators. (See the company's Respiratory Protection Program for additional information on Respirators and Respirator Training)

CONDUCTION	MINIMUM RESPIRATORY PROTECTION
0.5 MG/M3 (10xREL)	Any half-mask, air purifying respirator w/HEPA filter
1.25 mg/m3 (25xREL)	Any powered, air-purifying respirator w/HEPA filter
2.5 mg/m3 (50xREL)	Any air-purifying full-face piece respirator w/HEPA filter
50 mg/m3 (1000xREL)	Any supplied-air respirator equipped with a half-mask in a pressure-demand or other positive-pressure mode

ASBESTOS

Scope and Application

Asbestos is a widely used; mineral based material that is resistant to heat and corrosive chemicals. Typically, asbestos appears as a whitish, fibrous material that may release fibers that range in texture from course to silky. Airborne fibers that can cause health damage may be too small to see with the naked eye.

The USH 41 NORTH/SOUTH CORRIDOR PROJECT Contractors shall not perform any work involving asbestos or asbestos-like materials unless specifically stated in a contract. However, if subcontractors suspect the presence of such material at any work site, they shall immediately inform their supervisor, WisDOT, and OCIP SHD.

Aerial Lifts

Aerial lifts will comply with OSHA standard 29 CFR 1926.453 and ANSI A92.2-1990 and the provisions of this section.

1. Aerial lifts include the following types of vehicle mounted aerial devices used to elevate personnel to job-sites above ground, these devices include:

a. Extensible boom platforms

b. Aerial ladders

c. Articulating boom platforms

d. Vertical towers

e. A combination of the above devices

2. Aerial lifts may be field modified for uses other than intended by the manufacturer provided the modification had been certified in writing by the manufacturer or by equivalent entity.

3. Lift control devices shall be tested each day prior to use to determine the controls are in good working order.

4. Only trained personnel shall operate aerial lifts.

5. Belting off to adjacent structures while in the lift shall not be permitted.

6. Employees shall be required to stand firmly on the floor of the basket while operating.

7. 100% fall protection including a harness and lanyard will be worn and connected to the anchorage point on the basket whenever the aerial device is in motion or in the working position.

8. Boom and basket load limits shall not be exceeded according to the manufacturer's specifications.

9. To safely position the aerial lift, set the brakes and position the outriggers on pads or a solid surface. In addition, wheel chocks shall be used when on an incline.

10. Articulating boom and extensible platforms will have upper and lower controls, the lower controls will only be used if permission has been granted by the personnel in the basket.

11. Aerial lifts shall not be used when working near overhead power lines. Line clearance distance needed is based on power line voltage:

    a) $\leq$ 50 kV = 10 feet

b) 200 kV = 15 feet

c) 350 kV = 20 feet

d) 500 kV = 25 feet

e) 650 kV = 30 feet

f) 800 kV = 35 feet

12. An aerial lift truck shall not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation.

Demolition

Scope and Application

It is the intent of the USH 41 NORTH/SOUTH CORRIDOR PROJECT Safety team to monitor and review the safety procedures during demolition processes to ensure the safety of all subcontractors and the public. The Contractor superintendent and Safety Director will be responsible for providing direction and guidance to all of its employees during the demolition operation. It is the sole responsibility of the Contractor who conducts these processes to utilize and enforce the following procedures and meet all current federal, state, and WisDot requirements relevant to the operation(s). The contractor shall be responsible for submitting a job Safety Analysis/Job Hazard Analysis and work procedures plan at a minimum of seven days prior to the start of demolition for each phase.

Procedures

1. Prior to the beginning of demolition operations, an engineering survey will be made by a qualified person designated by the contractor. This survey shall determine the condition of the structure, deck, and sides, and will also determine the possibility of an unplanned collapse of any part of this structure or any adjacent structures. A joint analysis of risk will be conducted and a plan developed between Project Safety Team, Contractor, and Project Manager and OCIP Safety and Health Director.

2. Prior to the beginning of demolition operations, the contractor will obtain from the owner a site survey identifying the locations of asbestos and lead containing materials. If the owner is unable to provide this information, the contractor shall employ a testing agency that can identify and/or verify areas suspected of containing these materials prior to their disturbance during demolition operation at their own cost.

3. All electric, gas, water, sewer, and other service lines shall be shut off capped, or otherwise controlled outside the demolition area before demolition work is started. Any utility company whose services are affected will be notified in advance by the contractor.

4. All roadway and guardrail openings, which pose a fall exposure, shall be protected by sufficient temporary guardrails, fall protection system and/or covers.

5. Removal of steel: steel construction shall be dismantled column length by column length and tier by tier. If cutting and burning is to be done on steel then the steel must be checked for lead based paint. If lead is found in the paint, the proper precautions must be taken to prevent worker exposure. Also a fire watch must be maintained for a minimum of thirty minutes after all cutting and burning had been completed.

6. When demolition balls, clam buckets, or sheers are used for demolition, no craft personal will be allowed to enter an area where they can be adversely affected by this operation.

Only those contractors necessary for the performance of the demolition operation will be permitted in this area during demolition.

7. The weight of a demolition ball shall not exceed 50 percent of the crane's rated load. This is based on the length of the boom and the maximum angle of operation at which the ball will be used; or it will not exceed 25 percent of the nominal breaking strength of the line by which it is suspended, whichever is less.

8. The ball will be attached to the load line with a swivel-type connection to prevent twisting of the loadline, and attached so that the weight cannot become accidentally disconnected.

9. During demolition, continuing inspections by the contractor's assigned Competent Person shall be made as the work progresses so that hazards that could result from weakened or deteriorated roadways, sides, or columns or loosened material are detected. No contractor employee will be allowed to work where such hazards exist until these hazards are corrected by shoring, bracing, or other effective means.

10. All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.

11. Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed load.

12. When using a demolition ball, the crane boom and load line shall be as short as possible.

13. During demolition, continuing inspections by a competent person shall be made as the work progresses to detect hazards resulting from weakened or deteriorated bridge decks or loosened material. No employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

Training

Contractors are responsible for training their employees in all applicable demolition operations and all applicable Federal, State and Local laws, codes and standards.

USH 41 NORTH/SOUTH CORRIDOR PROJECT

SUBSTANCE ABUSE TESTING PROGRAM

I. INTRODUCTION

A. This Substance Abuse Testing Program ("Program") has been adopted and implemented in an effort to assure a safe and drug-free workplace environment for all workers, vendors, suppliers, customers and visitors who provide services and/or perform work on the USH 41 NORTH/SOUTH CORRIDOR PROJECT ("Project").

B. Each Contractor and any Subcontractor ("contractor") hired to perform work on the Project is responsible for complying with the terms and conditions set forth in this policy governing the Program.

C. Every employee of the contractor is expected to follow the terms and conditions of this policy at all tiers, including bargaining unit and non-bargaining unit employees.

D. Drug abuse can jeopardize the safety of employees, coworkers and customers. For this reason, the Project is committed to ensuring a drug free workplace for every employee covered hereunder. In addition, all contractors have an obligation to their customers and to the public to ensure that high quality services, product and workmanship achieve an equally high level of customer satisfaction. Substance abuse by workers could result in serious mistakes in judgment and thereby compromise both the high quality of services and customers' trust.

E. Express Drug Screening has been retained to provide Third Party Administration services for all elements of the Program.

F. Maintaining confidentiality of workers' private information, including substance abuse information, is of utmost concern to everyone under this Program. Each Contractor must designate one or more "Contractor Communicator(s)" within their company who shall be the sole person(s) that will receive any information relating to employee substance abuse test results and related information under this Program. The Contractor Communicators, the clinics, the laboratories, the MRO, and the Third-Party Administrator will treat as confidential all test-related information, subject to the terms of this Program. Such information includes, but is not limited to, test results, information regarding referral for counseling, rehabilitation, other treatment, or aftercare, the result of any such referral for counseling, rehabilitation, other treatment or aftercare, and the reason(s) for any disciplinary action taken under this Program.

G. This Program has been established to:

(1) Provide a safe and healthy workplace free of illegal and/or unauthorized drugs;

(2) Teach workers about the consequences of substance abuse;

(3) Encourage workers with substance abuse problems to get appropriate care and assistance.

(4) Reduce substance abuse related injuries and property damage;

(5) Reduce substance abuse related absenteeism and tardiness:

(6) Improve employee productivity/workmanship;

(7) Demonstrate the commitment of contractors and their workers to a workplace free from the ill effects of substance abuse.

H. This Program recognizes that chemical dependency and other medical behavioral conditions are highly complex problems, which often can be successfully treated. Workers who have substance abuse problems are invited and encouraged to seek assessment, counseling and/or rehabilitation through their employer or union Employee Assistance Program.

II. GENERAL PROVISIONS

A. This Program prohibits the use, possession, sale or distribution of alcohol, illegal and/or unauthorized drugs and drug paraphernalia on work premises or work sites included in the Project. For purposes of this Program, "premises" means all Project land, property, buildings, structures, installations, parking lots, equipment and/or means of transportation owned by or leased to the contractor. Employees must not report to work or be on work premises under the influence of alcohol or any other illegal drugs, even if used off contractor premises and time. The use and possession of legally prescribed drugs is permitted provided the drugs are in the original prescription container, prescribed by a medical practitioner for current use of the person in possession of the drug, and do not impair the worker's ability to perform his or her job. The Program also permits use of lawfully acquired over-the-counter drugs provided the use is consistent with the manufacturer's instructions.

B. Persons found illegally in possession, offering for sale, purchasing or distributing any illegal drug may be reported to civil authorities.

C. Any contractor employee working on a Federal project is required by law to report any conviction of a violation relating to a criminal drug statute occurring in the workplace to his or her employer within five days of such conviction.

III. TYPES OF TESTING TO BE CONDUCTED

A. Pre-assignment Testing. All employees of any contractor performing work on the Project will be required to take a pre-assignment drug screen.

B. Random Testing. All workers covered by this Program are subject to testing for illegal and/or unauthorized drugs and alcohol on a periodic, unannounced basis pursuant to random testing. Selection of individuals to be tested will be made by Express DS from its computer database of all workers on-site at the time of the random selection. Random selections will be made on an annualized basis of 24% of the on-site workforce.

C. Reasonable Suspicion Testing. Any worker whose supervisor has reasonable suspicion to believe the employee is in the possession of or under the influence of alcohol or an illegal drug will be required to undergo a drug and alcohol test. "Reasonable suspicion" is a belief based on behavioral observations or other evidence, sufficient to lead a reasonable person to suspect an employee is under the influence and exhibits such traits as slurred speech, inappropriate behavior, decreased motor skills, etc. Circumstances, both physical and psychological, will be given consideration.

Whenever possible, before a worker is required to submit to testing based on reasonable suspicion, the worker should be observed by more than one supervisory or managerial employee. A form that may be used in documenting a reasonable suspicion incident is attached to this Program. The contractor who is requiring an employee to be tested based upon reasonable suspicion will provide transportation for the employee to the drug-testing trailer or outside facility, if necessary. Under no circumstances will a worker thought to be under the influence of alcohol or an illegal drug be allowed to operate a vehicle or other equipment for any purpose. Such employee will not be allowed to work pending the contractor's notification of the test result from Express DS. If the test result is positive, the employee will face the consequences as defined in this policy. If the test result is negative, the employee will be put to work by the contractor and be paid for all lost time according to the shift the employee was working prior to undergoing testing.

D. Post-incident Testing. This Program also requires a drug and alcohol test at an Aurora facility, when a worker is involved in or causes a work related accident or where a worker was operating or helping to operate machinery, equipment or vehicles involved in a work related accident, or property damage. Such worker will not be allowed to work pending the contractor's notification of the test result from Express DS. If the test result is negative, the worker is put back to work by the contractor and paid for all lost time, according to the shift the employee was working prior to undergoing testing. If the test result is positive, the employee will face the consequences as defined in this policy.

IV. TESTING PROCEDURES

A. A positive drug test result means a result having a drug concentration that meets or exceeds the levels set by appropriate state or federal Department of Health & Human Services (DHHS) and/or Department of Transportation (DOT) regulations as amended from time to time. Positive tests for drugs other than alcohol will be confirmed. Initial testing for drugs other than alcohol will include an initial Enzyme Multiplied

Immunoassay Screening Test (EMIT). Confirmation testing for drugs other than alcohol will be gas chromatography/mass spectrometry. The laboratory will be certified for Federal Workplace Drug Testing Programs by the U.S. DHHS - Substance Abuse and Mental Health Services Administration (SAMHSA). Chemicals tested for, and their cut-off levels include:

DRUG	IMMUNOASSAY LEVEL	GC/MS LEVEL
Amphétamines	1000ng/ml	500ng/ml
Cocaine	300ng/ml	150ng/ml
Marijuana	50ng/ml	15ng/ml
Opiates	2000ng/ml	2000ng/ml
Phencyclidine	25ng/ml	25ng/ml

Testing for alcohol content will be by a Breathalyzer unless necessity for blood analysis is required. A confirmed positive test result for alcohol will be reflected by breath/blood-alcohol content equal to or greater than .04% (current Wisconsin regulations).

B. The "split specimen" method of collection will be followed with conformance to SAMHSA collection procedures and protocols. Urine, blood, saliva or breath specimens may require collection by an off-site clinic(s) selected by EDS. An unbroken chain of custody, including tamper proof handling methods, shall be maintained to protect employee confidentiality and to protect specimens from adulteration and misidentification. All urine samples collected under this program will be analyzed by a SAMHSA certified laboratory.

C. Prior to being tested, a worker must complete and sign the provided Project consent and release form authorizing and agreeing to the test. In the event a worker is not competent or able to authorize specimen collection or is in need of medical help, such help shall not be delayed pending specimen collection. Such worker, however, must authorize the treating health care provider to conduct specimen collection and release to the Medical Review Officer the necessary records to monitor the worker's compliance with this Program.

D. To protect the worker's right to confidentiality, any test results shall be disclosed only to the testing lab, the Contractor Communicator, Medical Review Officer, the employee and the designated Company Representative.

E. All tests indicating a potentially positive result will be reviewed by the Express DS Medical Review Officer (MRO) for final interpretation and evaluation to determine if a violation of this Program has occurred. The MRO is a licensed physician who has knowledge of substance abuse disorders and is able to interpret and evaluate an

individual's positive drug test result as it relates to the worker's medical history or other biomedical information.

Workers will have the opportunity to discuss their drug test result with the MRO before The MRO makes a final ruling on the test result. The worker will be given reasonable opportunity to provide information the MRO deems necessary to make a determination that the worker's test result was or was not positive, before being reported to the Contractor Communicator as positive.

F. Any worker who has a confirmed positive drug test result may submit a written request to the MRO to have the original specimen re-tested at a DHHS laboratory of the worker's choice. Such request must be made within 3 working days of the worker's notification by the MRO of the confirmed positive test result. The cost for this re-test will be paid to the MRO by the worker.

In the event of a first confirmed positive test for drugs or alcohol, the worker will be removed from the Project jobsite and barred from performing any work on the jobsite for a period of 60 days (or longer as consistent with the Employer's policy or Evaluation). The worker will be permitted to return to work at the job site after 60 days if the worker can provide Express DS with proof of successful completion of an Alcohol and Other Drug Abuse (AODA) program.

G. The worker provides a negative drug test, at personal cost, through Express DS.

H. In the event a worker tests positive for drugs and/or alcohol a second time, the worker will be permanently barred from future work on the Project jobsite.

I. The following examples will constitute a positive drug test and its consequences:

(i) Testing above the established cutoff levels

(ii) Refusal to submit to testing as directed

(iii) Refusal to complete consent/release form for testing

(iv) Using a drug prescribed for someone else or abusing one's own prescription drug

(v) Failure to call the MRO as directed

(vi) Switching, adulterating, tampering with, or attempting to switch, adulterate or tamper with a specimen for testing, or otherwise interfering with the specimen collection and/or testing process

(vii) Using, possessing, concealing, storing, selling, or distributing illegal drug(s) on the Project

J. This Program may be modified as determined necessary by Express DS.

V. INSTRUCTIONS FOR USE OF THE OPTIONAL REASONABLE SUSPICION CHECKLIST

This reasonable suspicion checklist was designed to assist Contractors in focusing on the symptoms of drug use. Some of the symptoms manifest themselves when a person is under the influence of alcohol or an illicit drug. Other symptoms manifest themselves over longer periods of abuse. Both types of symptoms are listed on the checklist for consideration.

The checklist, while not mandatory, is helpful for anyone requesting an employee to submit to a drug and alcohol test or an EAP referral.

REASONABLE SUSPICION CHECKLIST

Date of Report: _____

Time Period Covered by Observation: _____

Employee Name: _____

Address: _____

_____

_____

Social Security Number: _____

Check all that apply:

PHYSICAL SYMPTOMS

- ☐ Flushed or Pale Face
- ☐ Dilated Pupils
- ☐ Glassy Eyes
- ☐ Bloodshot Eyes
- ☐ Swaying, Wobbling, Stumbling, Staggering or Falling
- ☐ Dizziness
- ☐ Excessive Sweating in Cool Areas
- ☐ Smell of Liquor
- ☐ Strange Chemical Odor on Breath
- ☐ Drowsiness
- ☐ Incoherent, Confused or Slurred Speech
- ☐ Apparent Insensitivity of Pain
- ☐ Reduced Reaction Time
- ☐ Poor Coordination
- ☐ Increased Breathing Rate

MOOD SYMPTOMS

- ☐ Antagonistic
- ☐ Restless
- ☐ Overreacts to Minor Things
- ☐ Insulting
- ☐ Unusually Talkative
- ☐ Excessively Withdrawn
- ☐ Excessive Laughter or Hilarity
- ☐ Baseless Panic
- ☐ Withdrawn
- ☐ Rapid Mood Swings
- ☐ Irritable
- ☐ Combative
- ☐ Aggressive
- ☐ Depressed
- ☐ Exaggerated Sense of Self Importance

WORK SYMPTOMS

- ☐ Doesn't Follow Task Instructions
- ☐ Shows Disregard for Safety of Self and Others
- ☐ Exhibits Excessive Carelessness
- ☐ Appears Unable to Concentrate
- ☐ Excessive Mistakes
- ☐ Unexplained Declines in Productivity
- ☐ Dangerous Behavior
- ☐ Unable to Order Tasks
- ☐ Excessive Focus on Minute Details

LONG TERM FACTORS

- ☐ Complaints from Co-Workers
- ☐ Excessive Work Absences
- ☐ Leaves Job Early for Variety of Reasons
- ☐ Comes Late for a Variety of Reasons
- ☐ Accident Prone
- ☐ Unexplained and Frequent Absences from Work Areas
- ☐ Deteriorating Physical Condition

Recommendation - Conclusion

_____

_____

_____

_____

Date of Report _____

By (Signature) _____

Title: _____

By (Signature) _____

Title _____

Refer to EAP _____

Refer to Testing Facility _____

NOTES: _____

_____

_____

_____

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_____

USH 41 NORTH/SOUTH CORRIDOR PROJECT

INJURED WORKER

RETURN-TO-WORK PROGRAM

The purpose of this program is to establish an organizationally specific Return-to-Work plan through which eligible employees will be provided temporary alternate employment or job tasks that accommodates any medically imposed restrictions during the healing period. **Prior to proceeding with any work on this project**, contractors are required to develop organizationally appropriate alternate duty programs for injured workers that are consistent with the goals of this program.

The goal of this Return-to-Work program is to provide employees who have sustained work-related injuries or illness to appropriate levels of employment as soon as practical, medically advisable and safe. The program requires each employer to develop a list of tasks or projects that the injured worker may perform subject to medical concurrence, on a temporary basis during a healing period. These "alternate duties" are considered transitional and temporary in nature. The OCIP program will provide appropriate medical management of the injured worker. Employers and Employees will be equally engaged in the medical management of each case.

Each contractor/subcontractor shall appoint/designate a Return-to-Work Coordinator who has the responsibility of coordinating the alternate duty assignment between the OCIP Insurance Case Manager and the employee.

RETURN-TO-WORK PROGRAM

General Program Information

1. The Return-to-Work program is designed to allow an employee with medical restrictions to safely return to work in a modified position. Return to work programs assist in the employee's rehabilitation, and allow employee's to stay connected with their co-workers which enables a return to a full duty position sooner, maintains self-esteem, and provide a higher level of compensation during participation in the program.

2. All OCIP enrolled employees are included in the Return to Work program.

3. Any employee who refuses to participate in the program may forfeit their disability compensation.

4. The employer may request the OCIP insurance carrier or the OCIP insurance carrier may on their own initiative, require the employee to be examined by an independent physician.

5. The employer must pay the employee's wage at a rate appropriate for the modified duty. (Appropriate in this context means the same rate the employer would pay any other non-

injured employee for similar work). The OCIP Insurance Carrier will pay any difference in the wage rate between the employer's rate for the modified duty and the worker's compensation disability benefit.

Responsibility

Injured Employee

1. Reports injury to supervisor and OCIP safety manager immediately.

2. Completes all appropriate reports.

3. Maintain contact with your employer/return-to-work coordinator, providing regular updates on health condition, treatment and medical status to Return to Work Coordinator at least weekly.

Contractor/Subcontractor Manager/Supervisor

1. Conducts a through investigation of the incident to verify how it happened and what could have been done to prevent the incident.

2. Completes Supervisor Accident Investigation Report and all other needed paperwork.

3. If the incident resulted from violations of work rules and practices including terms and conditions of the OCIP Safety Program the employer is required to take appropriate corrective action and to notify the OCIP Safety Director of that action.

4. Maintains contact with the injured employee and Return-to-Work Coordinator.

5. Provides modified work for employee, within restrictions.

Return-to-Work Coordinator

1. Coordinates modified duty assignments and monitors its effectiveness.

Contractors Responsibility

Employee does not report for next scheduled shift:

1. If/when the employee calls to report their absence from work; the manager needs to ascertain whether it is due to the job-related injury or illness. If the employee fails to call, the manager contacts employee at home that day to find out if loss of time is due to on-the-job injury.

2. Direct employee to seek treatment with the designated physician, report findings and complete appropriate forms to initiate a claim with the OCIP Insurance Carrier.

If:

Employee released for work, no restrictions.

1. Employee returns to regular work.

2. Manager/supervisor checks back with employee throughout the shift and advise OCIP Insurance Carrier of the employees return to full duty.

Employee released for work with restrictions.

1. Review medical restrictions and assign appropriate alternate duties within the medical restrictions to the employee.

2. Notify the OCIP Insurance Carrier and the OCIP S&H Manager of the modified duty.

3. If the employer is unable to provide appropriate modified duty, the employer must submit a written certification to the WisDOT Risk Manager within 24 hours of such determination requesting a waiver of the penalty for failing to return the employee to alternate duty. The employer certification must demonstrate due diligence in their efforts to accommodate the employee including but not limited to work off-site, work for other contractors, work for outside agencies such as Vocational Rehabilitation Centers, etc.

    a. If the WisDOT Risk Manager determines that due diligence has been made and reasonable accommodations cannot be offered, the Risk Manager will waive any fines for failing to return the employee to alternate duty work.

4. The employer and the OCIP S&H will work closely with the OCIP Insurance Carrier to keep appraised of changing medical conditions and aggressively seek out opportunities to provide alternate duty.

Employee reports to modified work.

    a. As treatment progresses and the restrictions are further modified or lifted, re-assess the job modification as appreciate until full return is accomplished.

Employee refuses or fails to report to work.

1. The employer shall:

    Inform the OCIP Insurance Case Manager immediately.

a. If employee has been offered modified duty within the medical restrictions of the doctor and declines to accept such duty, the employer shall provide written notification to the OCIP SHD.

b. Upon notification that the employee has refused alternate duty, the OCIP SHD will notify the OCIP insurance carrier.

c. Document that the employee was informed of Injured Worker Responsibility; employee has been sent job offer which meets the medical restrictions as identified by the doctor.

Employee has permanent restrictions.

1. Upon release from doctor, employee must notify employer within five days that he or she is available to return to work with permanent restriction.

2. If suitable employment is available, employee is offered work in permanent position. Offer made in writing, sent by certified mail.

3. If suitable employment is not available, employee is placed on injured worker re-employment list. Return-to-Work Coordinator and personnel manager will then review and consider other position available in the facility. The employer and the OCIP Insurance case Manager should discuss vocational issues and benefits and work proactively towards permanent job placement.

Penalties

The Contractor and its subcontractors must provide a modified return to work program for any of its employees injured under Workers Compensation as part of the OCIP program. Failure to provide reasonable alternate duty to an injured employee will result in a penalty assessment to the Contractor of **$3,000 per week**. The penalty assessment shall continue until such time as the injured worker is returned to work in a position that accommodates the workers restrictions or until such time as the worker returns to work without medical restrictions. Such an accommodation is not restricted to work on this project and may include assignment to other locations. .

Contractors will be billed for penalty assessments and are required to pay directly as follows:

Send and make Payable to:

USH 41 North/South Corridor Project Safety Violations Fund
USH 41 NORTH/SOUTH CORRIDOR PROJECT Safety Office
330 East Kilbourn Ave.
Suite 450
Milwaukee, WI 53202

Funds collected for failure to provide reasonable alternate duties will be applied to WisDOT's Loss Control Costs. The WisDOT OCIP Administrator shall direct the withdrawals from the Trust Account.