DETROIT SPECTRUM PAINTERS

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Chapter 1 - Injury and Illness Prevention Program

1.1 Our Written Safety Plan

Every company must have a written Injury and Illness Prevention Plan. This is Detroit Spectrum Painters's plan. Please read it carefully. While no plan can guarantee an accident free work place, following the safety procedures set forth in this manual will significantly reduce the risk of danger to you and your co-workers. Thank you for all our safety.

1.2 Introduction to Our Program

State and federal law, as well as company policy, makes the safety and health of our employees the first consideration in operating our business. Safety and health in our business must be a part of every operation, and every employee's responsibility at all levels. It is the intent of Detroit Spectrum Painters to comply with all laws concerning the operation of the business and the health and safety of our employees and the public. To do this, we must constantly be aware of conditions in all work areas that can produce or lead to injuries. No employee is required to work at a job known to be unsafe or dangerous to his or her health. Your cooperation in detecting hazards, reporting dangerous conditions and controlling workplace hazards is a condition of employment. Inform your supervisor immediately of any situation beyond your ability or authority to correct. Employees will not be disciplined or suffer any retaliation for reporting a safety violation in good faith.

1.3 Safety First Priority

The personal safety and health of each employee is of primary importance. Prevention of occupationally induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity. To the greatest degree possible, management will provide all mechanical and physical protection required for personal safety and health, but our employees must bear primary responsibility for working safely. A little common sense and caution can prevent most accidents from occurring.

1.4 Individual Cooperation Necessary

Detroit Spectrum Painters maintains a safety and health program conforming to the best practices of our field. To be successful, such a program must embody proper attitudes towards injury and illness prevention on the part of supervisors and employees. It requires the cooperation in all safety and health matters, not only of the company and employee, but also between the employee and all co-workers. Only through such a cooperative effort can a safety program in the best interest of all be established and preserved. Safety is no accident; think safety and the job will be safer.

1.5 Safety Program Goals

The objective of Detroit Spectrum Painters is a safety and health program that will reduce the number of injuries and illnesses to an absolute minimum, not merely in keeping with, but surpassing the best experience of similar operations by others. Our goal is zero accidents and injuries.

1.6 Safety Policy Statement

It is the policy of Detroit Spectrum Painters that accident prevention shall be considered of primary importance in all phases of operation and administration. It is the intention of Detroit Spectrum Painters's management to provide safe and healthy working conditions and to establish and insist upon safe practices at all times by all employees. The prevention of accidents is an objective affecting all levels of our company and its operations. It is, therefore, a basic requirement that each supervisor make the safety of all employees an integral part of his or her regular management function. It is equally the duty of each employee to accept and follow established safety regulations and procedures. Every effort will be made to provide adequate training to employees. However, if an employee is ever in doubt about how to do a job or task safely, it is his or her duty to ask a qualified person for assistance. Employees are expected to assist management in accident prevention activities. Unsafe conditions must be reported immediately. Fellow employees that need help should be assisted. Everyone is responsible for the housekeeping duties that pertain to their jobs. Every injury that occurs on the job, even a slight cut or strain, must be reported to management and/or the Responsible Safety Officer as soon as possible. Under no circumstances, except emergency trips to the hospital, should an employee leave the work site without reporting an injury. When you have an accident, everyone is hurt. Please work safely. Safety is everyone's business.

1.7 Safety Rules for All Employees

It is the policy of Detroit Spectrum Painters that everything possible will be done to protect you from accidents, injuries and/or occupational disease while on the job. Safety is a cooperative undertaking requiring an ever-present safety consciousness on the part of every employee. If an employee is injured, positive action must be taken promptly to see that the employee receives adequate treatment. No one likes to see a fellow employee injured by an accident. Therefore, all operations must be planned to prevent accidents. To carry out this policy, the following rules will apply:

1. All employees shall follow the safe practices and rules contained in this manual and such other rules and practices communicated on the job. All employees shall report all unsafe conditions or practices to the proper authority, including the supervisor on duty and their immediate supervisor, if

corrective action is not taken immediately, a governmental authority with proper jurisdiction over such practices.

2. The Foreman shall be responsible for implementing these policies by insisting that employees observe and obey all rules and regulations necessary to maintain a safe work place and safe work habits and practices.
3. Good housekeeping must be practiced at all times in the work area. Clean up all waste and eliminate any dangers in the work area. Keeping your work area clean and free from materials or equipment that could cause workers to slip or trip.
4. Suitable clothing and footwear must be worn at all times. Personal protection equipment (hardhats, respirators, eye protection) will be worn whenever needed.
5. All employees will participate in a safety meeting conducted by their supervisor once every ten working days.
6. Anyone under the influence of intoxicating liquor or drugs, including prescription drugs, which might impair motor skills and judgment, shall not be allowed on the job.
7. Horseplay, scuffling, and other acts which tend to have an adverse influence on safety or well-being of other employees is prohibited.
8. Work shall be well planned and supervised to avoid injuries in the handling of heavy materials and while using equipment.
9. No one shall be permitted to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that it might expose the employee or others to injury.
10. There will be no consumption of liquor or beer on the job.
11. Employees should be alert to see that all guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly to the Foreman.
12. Employees shall not handle or tamper with any electrical equipment, machinery, or air or water lines in a manner not within the scope of their duties, unless they have received specific instructions.
13. All injuries should be reported to the Foreman so that arrangements can be made for medical or first aid treatment.
14. When lifting heavy objects, use the large muscles of the leg instead of the smaller muscles of the back.
15. Do not throw things, especially material and equipment. Dispose of all waste properly and carefully. Bend all exposed nails so they do not hurt anyone removing the waste.
16. Do not wear shoes with thin or torn soles.

1.8 Designated

In accordance with Detroit Spectrum Painters's safety and injury prevention program, Dave Durocher has been designated as the Responsible Safety Officer, and has responsibility and authority to do the following in the name of Detroit Spectrum Painters:

1. Develop and implement rules of safe practices for each function within the company.
2. Develop and implement safe operating rules for use of electrical and mechanical equipment consistent with manufacturer's recommendations and specifications.
3. Develop and implement a system to encourage employees to report unsafe conditions immediately.
4. Conduct a thorough investigation of each accident, whether or not it results in an injury, to determine the cause of the accident and to prevent recurrence. In cases of a known injury accident, the investigation shall proceed only after consultation with Detroit Spectrum Painters attorneys, who shall direct the investigation (the product of which investigation shall be considered the work product of the attorney).
5. Instruct supervisors in safety responsibilities.
6. Develop and implement a program of employee safety education.
7. Conduct scheduled and unscheduled inspections to identify and correct unsafe working conditions. Special attention shall be given to notice of serious concealed dangers.
8. Maintain records of training, periodic inspections, corrective actions and investigations as required by law. The Responsible Safety Officer for Detroit Spectrum Painters is Dave Durocher. Detroit Spectrum Painters will inform every person of the name of the Responsible Safety Officer and post his or her name and telephone/office number on the bulletin board where all other safety information is routinely maintained.

1.9 Duties

Overall responsibility and authority for implementing the injury and illness prevention program is vested in Dave Durocher, the Responsible Safety Officer. Management fully supports the Responsible Safety Officer. As part of the job, the Responsible Safety Officer will supplement this written injury and illness prevention program by: establishing workplace objectives and safety recognition programs; working with all government officials in both accident investigation and safety inspection procedures; maintaining safety and individual training records; encouraging reporting of unsafe conditions and promoting a safe workplace. Some of these responsibilities will be delegated to your immediate supervisor for implementation.

1.10 Employee Compliance

This written plan contains incentives designed to promote employee participation in the safety program. These incentives are not part of your regular compensation and are not intended to discourage you from reporting accidents.

1.11 Agreement to Participate

Every company is required to provide a safe and healthful workplace. Detroit Spectrum Painters is committed to fulfilling this requirement. A safe and healthful workplace is one of the highest priorities of Detroit Spectrum Painters. The information in this manual constitutes a written injury and illness prevention program. While Detroit Spectrum Painters cannot anticipate every workplace hazard, the following general principals should guide your conduct. To be safe, you must never stop being safety conscious. Study the guidelines contained in this manual. Discuss the workplace situation with the Foreman. Attend all company sponsored training and safety meetings. Read all posters and warnings. Listen to instructions carefully. Follow the Code of Safe Work Place Practices contained herein. Participate in accident investigations as requested. Accept responsibility for the safety of others. Maintain all required documentation. By signing the acknowledgement at the end of this handbook, each employee promises to read and implement this injury and illness prevention program. If you don't understand any policy, please ask your supervisor.

1.12 Safety Contest Awards / Accident Free Workplace

To recognize the importance of safety, Detroit Spectrum Painters may award a safety bonus based upon any or all of the following criteria:

1. No time-loss accidents.
2. Successfully passed periodic workplace safety inspections.
3. Active participation in Company safety discussions.
4. Active participation in safety suggestion program.
5. Other factors indicating a concern for safety.

The award and time period if and when implemented, will be announced in regular safety meetings or posted with the regular safety communications.

1.13 Employee Safety Suggestion Box

From time to time, Detroit Spectrum Painters may award a prize for the best safety suggestion. If and when implemented the following shall apply. To be eligible, please give your written safety suggestions to your supervisor during the safety meetings. All

these safety suggestions will be discussed at the meeting. The supervisor whose employee wins the best safety suggestion will also be given a prize. The group that consistently has the best safety suggestions will also be recognized. Management is the sole judge of the value of safety suggestions, and will implement as many of the good suggestions as possible.

1.14 Training

Employee safety training is another requirement of an effective injury and illness prevention program. While Detroit Spectrum Painters believes in skills training, we also want to emphasize safety training. All employees should start the safety training by reading this manual and discussing any problems or safety concerns with your direct supervisor. You may wish to make notes in the margins of this manual where it applies to your work.

1.15 Safety and Health Training

Training is one of the most important elements of any injury and illness prevention program. Such training is designed to enable employees to learn their jobs properly, bring new ideas to the workplace, reinforce existing safety policies and put the injury and illness prevention program into action. Training is required for both supervision and employees alike. The content of each training session will vary, but each session will attempt to teach the following:

a) The success of Detroit Spectrum Painters's injury and illness prevention program depends on the actions of individual employees as well as a commitment by the Company.
b) Each employee's immediate supervisor will review the safe work procedures unique to that employee's job, and how these safe work procedures protect against risk and danger.
c) Each employee will learn when personal protective equipment is required or necessary, and how to use and maintain the equipment in good condition.
d) Each employee will learn what to do in case of emergencies occurring in the workplace.

Supervisors are also vested with special duties concerning the safety of employees. The supervisors are key figures in the establishment and success of Detroit Spectrum Painters's injury and illness prevention program. They have primary responsibility for actually implementing the injury and illness prevention program, especially as it relates directly to the workplace. Supervisors are responsible for being familiar with safety and health hazards to which employees are exposed, how to recognize them, the potential effects of these hazards, and rules and procedures for maintaining a safe workplace. Supervisors shall convey this information to the employees at the workplace, and shall

investigate accidents according to the accident investigation policies contained in this manual.

1.16 Periodic Safety Training Meetings

Detroit Spectrum Painters will hold safety meetings Monthly. The purpose of the meeting is to convey safety information and answer employee questions. The format of most meetings will be to review, in language understandable to every employee, the content of the injury prevention program, special work site hazards, serious concealed dangers, and material safety data sheets. Each week, the Foreman will review a portion of the company's safe work practices contained in this booklet, or other safety related information. Whenever a new practice or procedure is introduced into the workplace, it will be thoroughly reviewed for safety. A sign-up sheet will be passed around each meeting, and notes of the meeting will be distributed afterwards. A copy of the notes will also be placed in the file of each employee who attends the meeting. Employee attendance is mandatory and is compensable unless part of an official state approved training program or pre-employment requirement.

1.17 Employee Responsibility for Training

Teaching safety is a two-way street. Detroit Spectrum Painters can preach safety, but only employees can practice safety. Safety education requires employee participation. Monthly, a meeting of all employees will be conducted for the purpose of safety instruction. The employees will discuss the application of the Company's injury and illness prevention program to actual job assignments. They will also read and discuss a section of the manual and review application of general safety rules to specific situations.

1.18 Communication

Companies should communicate to employees their commitment to safety and to make sure that employees are familiar with the elements of the safety program. Detroit Spectrum Painters communicates with its employees orally, in the form of directions and statements from your supervisor, written, in the form of directives and this manual, and by example. If you see a supervisor or management do something unsafe, please tell that person. We sometimes forget actions speak louder than words.

1.19 Accident Prevention Policy Posting

Each employee has a personal responsibility to prevent accidents. You have a responsibility to your family, to your fellow workers and to the Company. You will be

expected to observe safe practice rules and instructions relating to the efficient handling of your work. Your responsibilities include the following:

* Incorporate safety into every job procedure.
* No job is done efficiently unless it has been done safely.
* Know and obey safe practice rules.
* Know that disciplinary action may result from a violation of the safety rules.
* Report all injuries immediately, no matter how slight the injury may be.
* Caution fellow workers when they perform unsafe acts.
* Don't take chances.
* Ask questions when there is any doubt concerning safety.

1.20 Labor/Management Safety Committee

A Safety Committee has been established to help implement Detroit Spectrum Painters's injury prevention program. The committee shall meet regularly, but not less than once every six months. Written notes of all Safety Committee meetings shall be available and distributed to all employees and shall be maintained for three years. The Safety Committee will inspect the work areas Weekly and review production and safety programs and practices. The Committee also reviews investigations of occupational accidents and causes of incidents resulting in occupational injury, illness or exposure to hazardous substances, and where appropriate, submits suggestions to prevent future incidents. The Committee encourages and reviews employee safety suggestions, initiates investigations of hazardous conditions or unsafe workplaces, and upon request from OSHA, verifies abatement action taken in reaction to health and safety citations.

1.21 Safety Meetings

Detroit Spectrum Painters has safety meetings Monthly. The format of these meetings will be to review, in language understandable to every employee, the content of Detroit Spectrum Painters's Injury and Illness Prevention program, special work site hazards, serious concealed dangers, and MSDS sheets, which a copy of are kept in the job specific safety manual. Detroit Spectrum Painters requires all its employees to accept responsibility for their own safety, as well as that of others in the workplace. It is your responsibility to read this manual and to become familiar with the Code of Safe Work Practices and Specific Safety Rules contained in this manual, as well as any posted government Safety Orders.

1.22 Progressive Employee Disciplinary Program

Every employee that works for Detroit Spectrum Painters shall know and understand that safety and safety training are very important. We take safety seriously and do not

and will not tolerate employees who do not comply with the written safety training or the safety program in general. Know that disciplinary action will result from a violation of the safety rules. As stated all employees are required to report any unsafe act or procedure immediately to the proper person. Detroit Spectrum Painters will give written warnings to employees for any violation of the safety rules or safety training. A safety violation may also include willfully not attending or participating in a safety training session or safety meeting. The 1st warning will serve as such, just a warning. It will be in writing and given to the employee in violation by Responsible Safety Officer. The safety committee will determine if the violation occurred due to lack of training. If the safety committee or the Responsible Safety Officer comes to the conclusion that further training is required, then training will be provided. At any time you as an employee feel that you are not properly trained on how to perform a specific job or work procedure, you are immediately required to report to a supervisor. Detroit Spectrum Painters never wants anyone to do any type of work where the employee does not feel safe or properly trained. At that point, work must not be performed. If an employee performs work or continues to perform work where they are not properly trained, you are in direct violation of our safety rules. As stated, Detroit Spectrum Painters will give written warnings to employees for any violation of the safety rules or safety training. The 2nd safety infraction or violation will result in a 1 (one) day suspension without pay, if you are deemed properly trained and in direct violation of Detroit Spectrum Painters's safety rules. The 3rd safety infraction or violation will result in one of the following depending on the severity of the violation

- A 5 to 6 (five to six) day suspension without pay, if you are deemed properly trained and in direct violation of Detroit Spectrum Painters's safety rules or;
- **Be terminated**, if the violation is of a severe nature where others direct safety or lives are seriously at risk.

The 4th safety infraction or violation will result in Termination.

1.23 Hazard Identification & Abatement

This written safety and health plan sets out a system for identifying workplace hazards and correcting them in a timely fashion. This process is implemented in order to correct any identified hazards from inspections, accident investigations, anonymous reporting, employee safety suggestions and system hazard identifications. Please review it carefully with your supervisor. Remember, safety is everyone's responsibility. Hazards must be corrected in order of priority based on severity in an expeditiously manner.

1.24 Reporting Safety Hazards Anonymously

From time to time an employee may encounter a situation where he or she may feel threatened in reporting a safety hazard or unsafe working condition. If this situation arises the following are ways for an employee to report the situation anonymously. This is our policy on ‘‘Anonymous Safety Hazard Reporting’’:

- Please give your written safety hazard or safety suggestions to your supervisor at any time or during the safety meetings on the form named ‘‘Employee’s Safety Suggestion’’ or form “G” in the packet of safety forms. This form is also available at the ‘‘Employee Safety Suggestion Box’’. Your name and any personal information can be left off of the form.

- This form - ‘‘Employee’s Safety Suggestion’’ can also be filled out and placed in the ‘‘Employee Safety Suggestion Box’’. Your name and any personal information can be left off of the form.

- An employee can also fill out this ‘‘Employee’s Safety Suggestion’’ form and can also be filled out and placed in the U.S. Mail and mailed to:

  Detroit Spectrum Painters
  27560 College Park
  Warren, Michigan 48088

1.25 Safety Audits

The best method to establish a safer workplace is to study past accidents and worker compensation complaints. By focusing on past injuries, Detroit Spectrum Painters hopes to avoid similar problems in the future. Therefore, whenever there is an accident, and in many cases upon review of past accidents, you may be requested to participate in a safety audit interview. During the interview, there will be questions about the nature of the investigation and the workplace safety related to the incident. Please answer these questions honestly and completely. Also, please volunteer any personal observations and/or suggestions for improved workplace safety. Based upon the study of past accidents and industry recommendations, a safety-training program has been implemented. In addition to other preventative practices, there will be a group discussion of the cause of the accident and methods to avoid the type of accidents and injury situations experienced in the past. Work rules will be reviewed and modified based upon the study of these accidents.

1.26 Workplace Inspections

In addition to the examination of records, work place safety inspections will occur periodically Weekly, when conditions change, or when a new process or procedure is

implemented. During these safety inspections all obtained information will be documented. Furthermore, there will be a review of the injury and illness prevention policy and Detroit Spectrum Painters code of safe work practices.

1.27 Records

Detroit Spectrum Painters maintains records of employee training, hazard identification and abatement, and accident investigation. Records shall be kept to document safety and health training for each employee by name or other identifier, training date, types of training and training providers.

1.28 OSHA Records Required

Copies of required accident investigations and certification of employee safety training shall be maintained by the Responsible Safety Officer. A written report will be maintained on each accident, injury or on-the-job illness requiring medical treatment. A record of each such injury or illness is recorded on OSHA Injury and Illness Log (OSHA Form 300) and Summary of Occupational Injuries and Illnesses Form 300A according to its instructions. The OSHA 300A Summary form must be signed by a company official. Detroit Spectrum Painters will have this 300A form reviewed and signed by our company's – RSO, "rso". This is to certify that the RSO – "rso", has examined and reviewed the OSHA 300A Log form and that he or she reasonably believes, based on his or her knowledge of the process by which the information was recorded, that the annual summary is correct and complete.

Detroit Spectrum Painters will post a copy of the annual OSHA 300A summary in each establishment in a conspicuous place or places where notices to employees are customarily posted. Detroit Spectrum Painters will ensure that the posted annual summary is not altered, defaced or covered by other material.

Supplemental records of each injury are maintained on OSHA Form 301 (OSHA Injury and Illness Incident Record), and/or an equivalent of From 301, such as Companies Report of Injury or Illness as per local State requirements. This form must be completed 7 calendar days after the company receives information that a recordable work-related injury or illness has occurred. To be considered an equivalent form, any substitute must contain all the information asked on the OSHA Form 301.

1.29 General Statement on Safety

Familiarize yourself with and then follow all safety and health rules and regulations. General safety rules are:

1. Observe all smoking and fire prevention regulations.
2. Employees with long hair, regardless of their sex, must maintain their hair in such a way that it does not become a safety hazard.
3. Work clothing must not present a safety hazard. Shorts, loose or bulky clothing is not permitted.
4. Canvas or soft leather shoes will not be allowed on Construction Jobsites. Work boots or shoes must be worn. Safety toe shoes are highly recommended.
5. Protective head gear (hard hats), hearing protection, eye protection and other personal protective equipment will be worn in designated areas.
6. Horseplay is prohibited. This includes scuffling, yelling, running, throwing tools or material, or playing practical jokes on other employees.
7. No fighting will be allowed.
8. There will be no throwing of food or paper in lunchrooms. All garbage will be placed in a covered waste receptacle.
9. No equipment will be operated until safety guards are in place.
10. Lock out tags or locks shall not be removed unless authorization to remove them is given.
11. There will be no adjustment or removal of safety devices unless authorization is given.
12. Safety signs must be observed.
13. No riders will be allowed in or on company vehicles or any other equipment.
14. Drivers of vehicles must make daily safety inspections of their machines prior to operation. Report defects immediately to the supervisor or the repair shop.
15. Industrial injuries are to be reported to your supervisor immediately.
16. Orderly and clean work places are every employee's responsibility.
17. Fire extinguishers that have been used or that have a broken seal must be turned in to your supervisor.
18. Fire hoses are to be used for fire only.
21. Personal vehicles are to be parked in the designated area.
22. Obey the posted property speed limit.

You are Detroit Spectrum Painters's most important asset. We want to conduct all operations in a safe manner. Your cooperation is necessary for the protection of yourself and others. It is important that you follow safety rules; that you use the safeguards and the safety equipment provided; and, that you make safety part of your job. The Company is covered by the Occupational Safety and Health Act, and must comply with its requirements. Employees are expected to cooperate fully in maintaining such compliance, including notifying your supervisor immediately of any known or concealed dangers in your work area. If you feel uncomfortable or unsafe in any work situation please let a supervisor know that you need assistance. Do not perform any task or duty that you to do feel properly equipped or trained on executing.

Detroit Spectrum Painters does not believe that "accidents are bound to happen." Detroit Spectrum Painters gives utmost consideration to the safety of our employees. We constantly strive to eliminate hazards using the most up-to-date safety devices, constant inspection, and constant and continuous safety education. Part of your job is to help prevent accidents. The right way to perform a job is the safe way! We cannot give you an ironclad set of rules applying to all situations. Familiarize yourself with the general safety rules that are listed below. Be sure to familiarize yourself with your own departmental safety rules that are posted on the bulletin board in your department. When you see a dangerous work practice or safety hazard while working, be sure to report it immediately to your supervisor or to a member of the Employee Safety Committee.

Eyes - Protect your eyes. Safety glasses or face shields must be worn.
Housekeeping - Keep yourself and your work area clean. Dirty and disorderly conditions cause many accidents. Serious injury can be caused by an employee slipping on an oil spot. Any time you see oil or grease on the floor, be sure to report it to your supervisor immediately.
Compressed Air - To safeguard yourself and others from the danger of flying chips, do not use compressed air to clean off machines; use a brush. Never direct an air hose toward another employee. Never use compressed air to blow chips from your hands, face or hair. Above all, do not be guilty of using an air hose for any kind of horseplay.
Lifting - Do not strain to lift or push objects that are too heavy for you. Ask for help. Be sure you lift the right way by bending your knees, keeping your body erect and then pushing yourself upward with your legs. Make your legs do the work, not your back.
Machines - Inspect your machine for defective or worn parts. Safety guards on your machine are installed for your protection. Do not remove them without your supervisor's permission. Never try to repair machines, electrical equipment, or tools. Do not attempt to clean machines while they are in operation. Report any defective equipment to your supervisor. Defective tools should be exchanged for good ones at the tool crib.
Horseplay - We aren't trying to dampen anyone's spirits, but serious accidents can result from running, throwing things, scuffling, or playing practical jokes. Don't indulge in horseplay during rest or lunch periods or during working hours.
Clothing - Wear clothing suitable to your job. All employees working on or around machines must wear short-sleeved shirts or blouses, except those working around high temperatures.
Shoes - Substantial shoes must be worn to protect feet and toes. Those handling material or heavy objects should wear safety shoes. No cloth tennis shoes, sandals, or moccasins may be worn in construction zones.
Running - Running on company property, particularly in aisles or on stairs is dangerous and strictly prohibited.
Fires - A fire could burn us all out of a job. Be careful with matches, cigars, and cigarettes. Be sure that they are extinguished before you dispose of them. In case of fire, the plant is protected by an automatic sprinkler system. To report a fire in your own department, activate the nearest fire alarm. In case of fire in another part of the plant, do

not leave your area until ordered to do so, unless you have been designated to handle fire equipment. Remember to leave your place of work in an orderly manner. Use only regular exits. Exits must always be kept clear of obstructions.

1.30 Hard Hat Inspection and Replacement

It is each employee's responsibility to inspect and maintain his or her hard hat in a clean, usable condition. To accomplish this, hard hats shall be inspected on a regular basis at a minimum every two months while in use and before the start of any field project requiring the use of a hard hat.

Hard hat inspection.

Industrial head protection hard hats do not have an indefinite useful life. Detroit Spectrum Painters requires employees to replace all hard hats every five years, regardless of the cap's outward appearance or under the following conditions.

If a cap has been struck by a forcible blow of any magnitude, both the hard hat shell and suspension should be replaced immediately, even if no damage is visible.

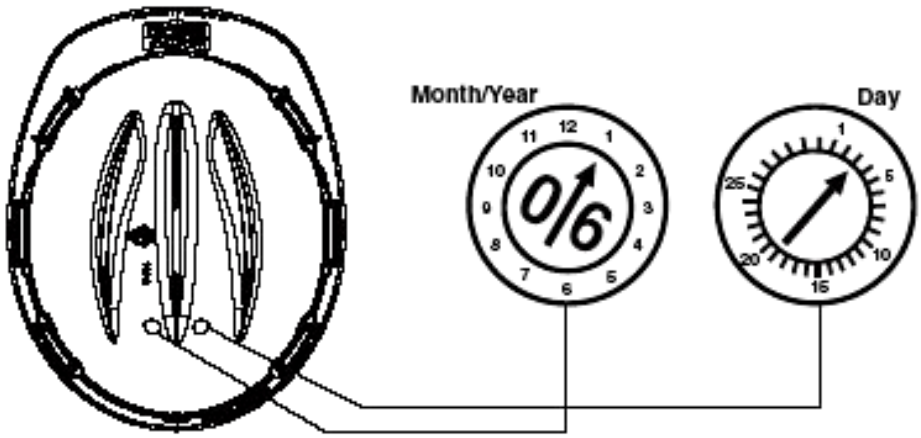
How old is your hard hat?

The date code indicates when the hat was molded. Date codes are molded into the hat shell and they specify the following:

- Day;
- Month; and
- Year the hat or cap was molded.

The large arrow inside the "Month / Year" circle points to the month, and the two digits inside that inner circle indicate the year. The arrow inside of the "Day" circle points to day of month. Depending on what model hard hat / cap you have you may find the date code in one of two locations on the hat, on the inside of the shell or the underside front brim of the hat / cap. See the examples below.

Location #1: This example shows a cap that was molded on January 3, 2006.



1.31 Protective Clothing

Proper safety equipment is necessary for your protection. The Company provides the best protective equipment it is possible to obtain. Use all safeguards, safety appliances, or devices furnished for your protection and comply with all regulations that may concern or affect your safety. Wear your gear properly -- all snaps and straps fastened, cuffs not cut or rolled. Your supervisor will advise you as to what protective equipment is required for your job.
Certain jobs require standard safety apparel and appliances for the protection of the employee. Your supervisor is aware of the requirements and will furnish you with the necessary approved protective appliances. These items shall be worn and effectively maintained as a condition of your continued employment and part of our mutual obligation to comply with the Occupational Safety and Health Act. Safety goggles, glasses and face shields shall correspond to the degree of hazard, i.e., chemical splashes, welding flashes, impact hazard, dust, etc. Do not alter or replace an approved appliance without permission from your supervisor. Rubber gloves and rubber aprons shall be worn when working with acids, caustics or other corrosive materials. Specified footwear must be worn. No jewelry shall be worn around power equipment. Hearing protection appliances (approved muffs or plugs) shall be worn by all employees working within any area identified as having excess noise levels. Your supervisor will instruct you in the proper use of the appliance.

1.32 Hand Tools

The company shall be responsible for the condition of tools when furnished by him and the user shall inspect any tool prior to using it to determine that it is in proper operating condition. Defective tools shall be removed from service. Handles shall be sound, straight and tight fitting. Driven tools shall be dressed to remove any mushrooming. Cutting tools shall be kept sharp and properly shaped. Tools shall be used for purposes for which they were designed. Hand tools shall be sheathed or boxed if transported in a vehicle with personnel. If not contained in a box, the sheathed tools shall be fastened to the vehicle. Proper storage facilities shall be provided for hand tools. Tools shall be stored in the provided location at all times when not in use.

1.33 Housekeeping

Good housekeeping not only improves the appearance of the work place, it also helps prevent fires, accidents and personal injuries. Clean workbenches, machines, lockers and floors also enable you to maintain a high standard of quality in your work. For your safety, do not leave tools, scrap, or materials piled on the floor where someone may stumble over them, or overhead where there is danger of them falling. When piling material, be careful not to exceed a safe height. Do not pile anything in front of or

against fire fighting apparatus, electrical equipment or drinking fountains. If you are a machine operator, give your machine the best possible care and be alert for signs of wear or faulty operations. Handle tools carefully and store them so that they cannot cause accidents.

1.34 Maintenance

Maintenance is essential to safe and efficient operation. A maintenance crew is employed full-time to keep the plant in order. However, they cannot keep the plant up to the required standard of cleanliness without the cooperation of everyone. If you notice a situation that requires maintenance, report it to your supervisor.

1.35 Emergencies

If a fire breaks out at Detroit Spectrum Painters, certain employees have volunteered to aid in extinguishing the fire. Detroit Spectrum Painters recognizes the potential risks involved in fighting fires, and employees will be compensated for those dangers. We do not require employees to help fight any fires; employees will only be allowed to participate after executing a mutual release of liability agreement between the Company and the employee. Unless you have been specially trained and assigned to fight a fire, in the event of fire, you must exit the facility immediately, in a safe manner. Every work area will have an evacuation diagram showing the most logical exits. You should familiarize yourself with the diagram. FIRE DOORS MAY NEVER BE LOCKED FROM THE INSIDE. Report any obstruction to egress routes to your supervisor immediately. If the obstruction is not cleared, send a written report to the Responsible Safety Officer.

It is every employee's responsibility to know the locations of the first aid stations that have been placed throughout the facility. Instructions for use of first aid equipment are located at each station. In the event of an emergency, contact the Responsible Safety Officer or a supervisor who is trained in first aid. Supervisors and employees who are trained in first aid have a first aid emblem on their hardhat or jacket.

1.36 Smoking & Fire Safety

Fire is one of the worst enemies of any facility. Learn the location of the fire extinguishers. Know how to use them. You can help prevent fires by observing the smoking rules:

- Smoking is not allowed on the site, except in designated areas.
- Smoking is not permitted in rest rooms.
- If you are not sure about where you may smoke, ask the supervisor.

1.37 Fire Fighting

A fire may break out at a wooded location during certain times of the year. If such an emergency occurs Detroit Spectrum Painters recognizes the potential risks involved in fighting fires, and we do not require employees to help fight any fires; employees will only be allowed to participate upon a mutual agreement releasing liability between the Company and the employee.

1.38 Special Rules

No employee shall work alone on high-voltage electrical lines. In certain areas, no employee will be allowed to work bare handed with wire or electricity at all. Rubber or other insulated gloves will be required. Everyone is required to be responsible for all tools and equipment that you use; remember which vehicle you took the item from and return it to that vehicle. When you lay the item or tool on the ground, remember where you placed it so you can return it to the proper vehicle. It would be appreciated that when leaving the job, that all Employees help by looking around for any tools or equipment that wasn't replaced.

1.39 Reporting

All serious accidents must be reported to OSHA. In cases of hospitalization or death, a full investigation with copies to governmental authorities will be required. In less serious cases, the investigation report must be presented to the company for disclosure to its insurance carrier and for remedial action at the work site.

Chapter 2 - Code of Safe Work Practices

2.1 General Fire Safety

Our local fire department is well acquainted with our facility, its location and specific hazards. All fire doors and shutters must be maintained in good operating condition. Fire doors and shutters should be unobstructed and protected against obstructions, including their counterweights. Fire door and shutter fusible links must be in place. All automatic sprinkler water control valves, if any, air and water pressures should be checked routinely. The maintenance of automatic sprinkler systems is assigned to the Responsible Safety Officer. Sprinkler heads should be protected by metal guards if they could possibly be exposed to damage. Proper clearance must be maintained below sprinkler heads. Portable fire extinguishers are provided in adequate number and type and are located throughout the facility. Fire extinguishers are mounted in readily accessible locations and all company trucks that may encounter a potential fire hazard. Fire extinguishers are recharged regularly and the date of last inspection noted on their tags. All employees are periodically instructed in the use of extinguishers and fire protection procedures. Notify the Responsible Safety Officer of any damage to fire protection equipment.

2.2 Powder Actuated Tools

The employees using powder-actuated tools must be properly trained and will be issued a card as proof of that training. Some of the powder-actuated tools being used have written approval of the Division of Occupational Safety and Health.

2.3 Machine Guarding

Before operating any machine, every employee must have completed a training program on safe methods of machine operations. It is the primary purpose of supervision to ensure that employees are following safe machine operating procedures. There will be a regular program of safety inspection of machinery and equipment. All machinery and equipment must be kept clean and properly maintained. There must be sufficient clearance provided around and between machines to allow for safe operations, set up, servicing, material handling and waste removal. All equipment and machinery should be securely placed and anchored when necessary, to prevent tipping or other movement that could result in personal injury.

2.4 Lockout/Blockout Procedures

Anyone who operates, cleans, services, adjusts, and repairs machinery or equipment should be aware of the hazards associated with that machinery. Any powered machinery or electrical equipment that can move in a way that would put people in danger is a hazard that can be prevented by following locking or tagging procedures.

Failure to lock out or tag power sources on equipment can result in electrocutions, amputations, and other serious-sometimes fatal-accidents.

2.5 Welding, Cutting & Brazing

Only authorized and trained personnel are permitted to use welding, cutting or brazing equipment. All operators must have a copy of the appropriate operating instructions and are directed to follow them. Compressed gas cylinders should be regularly examined for obvious signs of defects, deep rusting, or leakage. Use care in handling and storing cylinders, safety valves, relief valves and the like, to prevent damage. Precaution must be taken to prevent mixture of air or oxygen with flammable gases, except at a burner or in a standard torch. Only approved apparatus (torches, regulators, pressure-reducing valves, acetylene generators, manifolds) may be used.

2.6 Hoists & Auxiliary Equipment

Every overhead electrical hoist shall be equipped with a limit device to stop the hook travel at its highest and lowest points of safe travel. Check these limits without a load to ensure the device is working correctly. Each hoist should automatically stop and hold any load up to 125 percent of its rated load if its actuating force is removed. Check this periodically under controlled conditions. Make sure that the rated load of each hoist is legibly marked and visible to the operator.

2.7 Industrial Trucks/Forklifts

Only trained personnel should be allowed to operate industrial trucks. Lift Truck Operating rules must be posted and will be strictly enforced. When operating any industrial truck, substantial overhead protective equipment will be provided on high lift rider equipment. Directional lighting is also provided on each industrial truck that operates in an area with less than 2 foot candles per square foot of general lighting. Each industrial truck must have a warning horn, whistle, gong or other device which can be clearly heard above the normal noise in the area where operated. Before using a forklift, check that the brakes on each industrial truck are capable of bringing the vehicle to a complete and safe stop when fully loaded. The parking brake must effectively prevent the vehicle from moving when unattended. When motorized hand and hand/rider truck are operated, and when the operator releases the steering mechanism, make sure that both the brakes are applied and power to the motor shut off. Maintenance records are available so that a driver can check on the servicing of the truck in case of questions. When an industrial truck operates in areas where flammable gases, vapors, combustible dust, or ignitable fibers may be present in the atmosphere, the vehicle must be approved for such locations with a tag showing such approval posted on the vehicle itself. Industrial trucks with internal combustion engines, operated

in buildings or enclosed areas, should be carefully checked to ensure that the operation of the vehicle does not cause harmful concentration of dangerous gases or fumes.

2.8 Spraying Operations

In any spraying operation there should be adequate ventilation before starting any spraying job. As to the conditions of the area where the spray job is to be done, consideration should be taken before beginning work. If the area is enclosed, does it require mechanical ventilation? Before working, make sure that the area is free of combustible materials, and that there is "No Smoking" signs adequately posted and easily seen. If mechanical ventilation is provided when spraying in enclosed areas, air should not be recirculated so as to avoid contamination. There should be adequate space and ventilation for all drying areas. Also in an enclosed area, spray operations must be at least 20 feet from; flames, sparks, operating electrical motors, and other ignition sources. The spray area should be free of any hot surfaces. Any solvent used in the cleaning process should not have a flash point of 100 degrees or less. If portable lamps are used to illuminate the spray areas they must be approved for the location and must be suitable for use in a hazardous area. Approved respiratory equipment will be provided and must be used when appropriate during spraying operations. If a sprinkler system is within the confines of the spraying area operation, it should be in working order and will be inspected semi-annually to make sure that it is in operating condition. If a spraying booth is used for the spraying operation, it must be made of metal, masonry or other noncombustible material. Make sure that "NO SMOKING" signs are posted in spray areas, paint rooms, paint booths and paint storage areas. The spray booth must be completely ventilated. Booth floors and baffles must be easily cleaned and noncombustible. Ducts and access doors must be easily cleaned. Lighting fixtures for both outside and inside the spray booth must be enclosed in clear see-through sealed panels. Electric motors for exhaust fans must be placed outside the booth. Belts and pulleys must be completely enclosed. Drying apparatus should be located in a well-ventilated area in the booth and properly grounded. Infrared drying apparatus must be kept out of the spray area during a spraying operation.

2.9 Confined Spaces

Before entry into a confined space, all impellers, agitators, or other moving equipment contained in the confined space must be locked-out. Ventilation must be either natural or mechanically provided into the confined space. All hazardous or corrosive substances that contain inert, toxic, flammable or corrosive materials must be valved off, blanked, disconnected and separated. Atmospheric tests should be performed to check for oxygen content, toxicity and explosive concentration. Atmospheric tests must be performed on a regular basis in a confined area where entry is required. The area must also be checked for decaying vegetation or animal matter that could produce methane. Adequate lighting must be provided within the space. If the confined area is

located below the ground or near where motor vehicles are operating, care must be taken that vehicle exhaust or carbon monoxide does not enter the space. When personnel enter a confined area, assigned safety standby employees who are alert to the work being done, are able to sound an alarm if necessary and to render assistance, must be in the area.

2.10 Environmental Controls

All employees must be aware of the hazards involved when working with chemicals and the remedies that need to be used when an accident does occur. A training program will give instructions on how to handle the chemical being used and first aid to be applied to victims of chemical exposure. First aid and caution signs will be conspicuously posted so as to alert individuals on a constant basis. Charts identifying the chemicals utilized in the workplace, their symptoms and effects must also be posted. The workers must know what the acceptable level of exposure to a chemical is and what safety systems must be in place when working with a chemical. Staff should also be aware of new chemical products which may be available that are less harmful, and they must ensure that facilities are adequately ventilated when using chemicals on the premises. Spray-painting operations done in spray rooms or booths must be equipped with an appropriate exhaust system. Periodic inspections must be made of the booth and noted on an inspection tag posted on the booth. If welding is done, the welder should be certified. In the area of operation where the welding is taking place, the welder must be aware of ventilation available, the type of respirator that can be used in the area, and if exposure time or other means will suffice as a safe and adequate measure when welding as to the fumes that will be emitted. Welders should also be supplied with protective clothing and a flash shield during welding operations. When forklifts and other vehicles are used in buildings or other enclosed areas, carbon monoxide levels must be kept below maximum acceptable concentration. Noise levels also present a potential hazard. Noise levels within a facility must be at acceptable levels and if not, steps must be taken to reduce the level using recommended engineering controls..

2.11 Hazardous Chemical Exposures

In any company, which utilizes chemical substances, a training program on the handling, hazards, storage, exposure risks, symptoms of chemical exposure, and first aid needs to be part of any new employees training. There must also be follow-up training sessions as to any new chemical or processes that may be initiated by the company. Follow-up training sessions act as a reinforcement of safety standards that need to be followed on a daily basis. In a training program, employees will learn acceptable levels of chemical exposure, proper storage and labeling of chemicals, and usage of protective clothing and equipment for handling chemicals. They will also learn about potential fire and toxicity hazards, when not to have a chemical in a confined

area, or to store in closed containers, usage of eye wash fountains and safety showers, and the necessary posting of open, and dangerous areas. It is important that an employee recognize the Threshold Limit Values or Permissible Exposure Limits of airborne contaminants and physical agents in the workplace. A procedural manual or set of instructions must be part of the program, with periodic inspections that clearly indicate whether an employee may be mishandling a chemical or endangering himself or others. Part of the manual or procedures must establish a standard of when and how to deal with chemical spills, neutralizing, and disposing of spills or overflows. These procedures must also be posted in an area that is easily accessible for reference usage. First Aid training and equipment will be routine in any facility where chemicals are used. Employees must know how to handle equipment in emergency situations, what equipment needs to be used and whether the equipment is adequate for the situation. Respirators may be used either as protective safety equipment or for emergency usage. Therefore, the employee should recognize that respirators need to be stored in a clean, sanitary and convenient location and inspected on a regular basis. Also what respirators are approved by NIOSH for their particular applications. With a first aid program an employee will recognize when a problem may be occurring by exposure to a chemical ranging from headaches, nausea, and dermatitis problems to other factors of discomfort when they use solvents or chemicals. In the design of a facility that transports chemicals from storage to vats, the content of pipes and storage containers must be clearly marked. Within that facility design there must be an emergency shut off system in case of accident. Each employee will be trained as to these emergency shut-off systems. Ventilation is another major factor in the design of any facility. Whether by natural means or mechanical, the system must be designed to control dust, fumes, solvents, gases, smoke or vapors which may be generated in the workplace. It is also important that a medical or biological monitoring system be in operation as part of the safety standards. If internal combustion engines are used in the facility, or if there is a chance of leakage or mixture with a chemical that could create a toxic gas, atmospheric gas levels must be monitored. If toxic chemicals are used and stored in the facility they should be located in an isolated area to guarantee safety.

2.12 Hazardous Substances Communication

When hazardous substances are used in the workplace, a hazard communication program dealing with Material Safety Data Sheets (MSDS), labeling and employee training will be in operation. MSDS materials will be readily available for each hazardous substance used. A training program plus regular question and answer sessions on dealing with hazardous materials will be given to keep employees informed. The program will include an explanation of what an MSDS is and how to use and obtain one; MSDS contents for each hazardous substance or class of substances; explanation of the "Right to Know"; identification of where employees can see the company's written hazard communication program and where hazardous substances are present in their work area; the health hazards of substances in the work area, how to detect their

presence, and specific protective measures to be used; as well as informing them of hazards of non-routine tasks and unlabeled pipes.

2.13 Electrical

The workplace will be aware of the OSHA Electrical Safety Orders and will comply with the same. Employees will be required to report any hazard to life or property that is observed in connection with a job, electrical equipment or lines. Employees will be expected to make preliminary inspections or appropriate tests to determine conditions before starting work. When equipment or lines are to be serviced, maintained or adjusted, employees must be aware of open switches. Lockouts must be tagged whenever possible. Equipment such as electrical tools or appliance must be grounded or of the double insulated type. Extension cords being used must have a grounding conductor.

2.14 Noise

Noise levels are measured using a sound level meter or an octave bank analyzer and records kept. Engineering controls will be used to reduce excessive noise levels. When engineering controls are not feasible, administrative controls (i.e., worker rotation) will be used to minimize individual employee exposure to noise. An ongoing preventive health program will be utilized to educate employees in safe levels of noise, exposure, effects of noise on their health, and use of personal protection. Approved hearing protective equipment (noise attenuating devices) will be available to every employee working in areas where continuous noise levels exceed 85 dB. To be effective, ear protectors must be properly fitted and employees will be instructed in their use and care.

2.15 Fueling

Where flammable liquids are used, employees will be trained to deal with spillage during fueling operations, how it is to be cleaned, the types and designs of fueling hoses and the specific types of fuel it can handle, whether fueling is being done with a nozzle that is a gravity flow system or self-closing, how to avoid spills and recognition that if a spill does occur, the safety of restarting an engine. Employees must be aware that an open flame or light near any fuel is prohibited when fueling or the transfer of fuel is occurring. "NO SMOKING" signs will be posted conspicuously.

2.16 Piping Systems

Substances that are transported through piping need to be identified by color or labeling. Signs must be posted identifying the substance being transported through the

pipes as to whether it is hazardous and where turn-off valves, connections and outlets are located. All tags used for labeling will be of a durable material with distinguishable and clearly written print.

2.17 Material Handling

In the handling of materials, employees must know the following: There must be safe clearance for equipment through aisles and doorways. Aisle ways must be designated, permanently marked, and kept clear to allow unhindered passage. Motorized vehicles and mechanized equipment will be inspected daily or prior to use. Vehicles must be shut off and brakes must be set prior to loading or unloading. Containers of combustibles or flammables, when stacked while being moved, must be separated by dunnage sufficient to provide stability. If dock boards (bridge plates) are used when loading or unloading operations are taking place between vehicles and docks, precautions must be observed. Trucks and trailers will be secured from movement during loading and unloading operations. Dock plates and loading ramps will be constructed and maintained with sufficient strength to support imposed loading. Hand trucks must be maintained in safe operating condition. Chutes must be equipped with sideboards of sufficient height to prevent the handled materials from falling off. At the delivery end of rollers or chutes, provisions must be made to brake the movement of the handled materials. Pallets must be inspected before being loaded or moved. Hooks with safety latches or other arrangements will be used when hoisting materials, so that slings or load attachments won't accidentally slip off the hoist hooks. Securing chains, ropes, chockers or slings must be adequate for the job to be performed. When hoisting material or equipment, provisions must be made to assure no one will be passing under the suspended loads. Material Safety Data Sheets will be available to employees handling hazardous substances.

2.18 Transporting Employees & Materials

When employees are transporting either employees or materials, they must have an operator's license for that classification of vehicle and be certified or trained in the operation of that vehicle. For a safety program to be effective, they must also have knowledge of First Aid courses and safety equipment, as well as the vehicle and how it operates. As employees are transported by truck, provisions must be provided to prevent their falling from the vehicle. Vehicles should be in good working condition, inspected on a regular basis and must be equipped with lamps, brakes, horns, mirrors, windshields and turn signals in good working order.

2.19 Ventilation

In the operation of any facility ventilation system, there needs to be a design to integrate several systems of control, which will expel contaminates and provide clean air. The systems must take into consideration the volume and velocity that will be needed to successfully remove contaminates. The system must not fail in the case of an emergency situation where two contaminates are exposed to each other when a fire or explosion occurs. In the design of the system, clean-out ports or doors that are provided at intervals will not exceed 12 feet in all horizontal runs of exhaust ducts.

2.20 Crane Checklist

With the operation of cranes there are several functional areas to be considered. Cranes should be inspected on a biannual basis with the inspection certificate available when a question arises. The crane must be utilized in an operation, which does not violate OSHA regulations. Cranes will be visually inspected for defective components prior to any work shift. Electrically operated cranes will be effectively grounded, preventive maintenance established, have a clearly visible load; operating controls clearly identified; a fire extinguisher provided at the operator's station; rated capacity visibly marked; an audible warning device mounted on the crane, and sufficient illumination. Crane design shall be such that the boom will not fall over backwards when equipped with boom stops.

2.21 Safety Posters

Detroit Spectrum Painters is required to post certain employment related information. The required information is maintained in the office and in the warehouse where employees can find the following required posters: Various state and federal orders regulating the Wages, Hours and Working Conditions in certain industries. Pay Day Notice Anti-Discrimination Poster Equal Employment Opportunity is the Law (EEOC form) OSHA Safety and Health Protection on the Job Notice of Workers Compensation Carrier Notice to Employees: Unemployment Insurance and Disability Insurance Notice: Employee Polygraph Protection Act (form WH 1462) Access to Medical and Exposure Records Notice to Employees: Time Off to Vote In addition to the above listed notices, a copy of this injury prevention program, a log and summary of Occupational Injuries and Illnesses, a copy of Detroit Spectrum Painters's code of Safe Work Practices and a Fire Prevention and Evacuation Plan will be posted. Material Data Safety Sheets for Detroit Spectrum Painters's premises are available in the job specific safety manual. When employees are required to work on the premises of any other company, such as a service call or installation situation, the job site will maintain a collection of Material Data Safety Sheets that describe any hazards unique to that site. Check with the other company’s job site coordinator or supervisor for the exact location of the MSDS

information. In addition to these required safety postings, emergency numbers are maintained in the bangbox at job site. In most cases of real emergency call 911.

2.22 Licenses and Permits

In addition to other postings required by law, Detroit Spectrum Painters maintains a copy of all necessary business licenses, permits, and notices required by the National Labor Relations Board or other governmental bodies, notices of citations during abatement periods, and other required information which are posted during the appropriate times in the office and in the warehouse.

2.23 Personal Protective Equipment Clothing

A. Protective Goggles/Ear Protection

1. Where there is a danger of flying particles or corrosive materials, employees must wear protective goggles and/or face shields provided [or approved] by Detroit Spectrum Painters.

2. Employees are required to wear safety glasses at all times in areas where there is a risk of eye injuries such as punctures, contusions or burns.

3. Employees who need corrective lenses are required to wear only approved safety glasses, protective goggles, or other medically approved precautionary procedures when working in areas with harmful exposures, or risk of eye injury.

4. In cases where the noise level exceeds certain levels, ear protection is required.

B. Protective Clothing/ Footwear

1. Employees are required to wear protective gloves, aprons, shields and other means provided in areas where they may be subject to cuts, corrosive liquids and/or harmful chemicals.

2. From time to time long pants may be required for certain operations or certain jobs.

3. In cases of cleaning toxic or hazardous materials, protective clothing provided must be worn.

4. Hard hats must be worn in areas subject to falling objects, and at all times while at construction sites.

5. Appropriate footwear including steel-toed shoes must be worn in an area where there is any risk of foot injuries from hot, corrosive, poisonous substances, falling objects, crushing or penetrating action.

C. Safety Equipment

1. When necessary employees must use the approved respirators, which are provided for regular and emergency use.

2. All safety equipment must be maintained in sanitary condition and ready for use. Report any defective equipment immediately.

D. Emergency Eyewash/Shower

1. An eye wash facility is located in the first aid kit. If any irritant gets into an employee's eyes, call for medical assistance immediately and flush the eye out with clean water.

2. A shower is provided for emergencies. Ask your supervisor for more details on use of this facility.

E. Safe Eating Places

1. Food may not be eaten in work areas, or in places where there is any danger of exposure to toxic materials or other health hazards. Ask your supervisor to identify safe eating places.

2.24 Hardhats

In Detroit Spectrum Painters, hardhats may be required [in designated areas, when appropriate]. Hardhats will be required when working in areas, on or near roads where any vehicle and / or equipment are traveling at speeds in excess of 35 miles an hour or more. Sometimes a person fails to wear a hardhat, either through forgetfulness or through underestimating the risk of head injury, which can be prevented by wearing one. Remember that all it takes is a carelessly dropped tool or piece of material coming down on your head to cause severe injury or even death. There are a number of workers disabled with various type of head injuries and vision problems because they didn't wear a hardhat. When you wear a hardhat, wear it right. Keep it squarely on your head with the inside band properly adjusted. See you supervisor if you’re having trouble adjusting the hardhat.

2.25 Work Environment

Work sites must be clean and orderly. Work surfaces must be kept dry or appropriate means taken to assure the surfaces are slip-resistant. Spills must be cleaned up immediately. All combustible scrap, debris and waste must be stored safely and removed promptly. Combustible dust must be cleaned up with a vacuum system to prevent the dust from going into suspension. The accumulated combustible dust must be removed routinely. Metallic or conductive dust must be prevented from entering or accumulating on or around electrical enclosures or equipment. Waste containers must be covered. Oily and paint soaked rags are combustible and should be discarded in sealable metal containers only. Paint spray booths, dip tanks and paint areas must be cleaned regularly. All oil and gas fired devices should be equipped with flame failure controls that will prevent flow of fuel if pilots or main burners are not working. Ask your supervisor where these controls are located. Make sure all pits and floor openings are either covered or otherwise guarded.

2.26 Floor and Wall Openings

Be careful when working near floor and wall openings. All floor openings (holes) should be guarded by a cover, guardrail or equivalent barrier on all sides except at the entrance to stairways and ladders. Toe boards must be installed around the edges of a permanent floor opening. Skylights must be able to withstand at least 200 pounds pressure. Glass used in windows, doors, and walls (including glass block) must be able to withstand a human impact, and if required by code, be shatterproof safety glass." Before beginning work at a new location, inspect it to insure that all floor openings, which must remain open, such as floor drains, are covered with grates or similar covers. In roadways and driveways, covers with capacity to carry a truck rear axle load of at least 20,000 pounds must protect all manholes and trenches.

2.27 Work Area

Fire extinguishers must remain accessible at all times. Means of egress should be kept unblocked, well-lighted and unlocked during work hours. Excessive combustibles (paper) may be not stored in work areas. Aisles and hallways must be kept clear at all times. Designated employees have been trained to respond to a fire or other emergency. Workplaces are to be kept free of debris, floor storage and electrical cords. Adequate aisle space is to be maintained. File cabinet drawers should be opened one at a time and closed when work is finished. Proper lifting techniques are to be used by employees to avoid over exertion and strain when carrying loads.

2.28 Driving

Drive safely. If vehicles are used during the workday, seat belts and shoulder harnesses are to be worn at all times. Vehicles must be locked when unattended to avoid criminal misconduct. Do not exceed the speed limit. Vehicles must be parked in legal spaces and must not obstruct traffic. All employees must practice defensive driving. We require that employees provide proof of insurance when they are hired and annually thereafter. Our company uses the agency vans or vehicles when they are available. If there are no vans or vehicles available they use their own vehicles and are reimbursed mileage at .28 cents per mile (or the approved rate).

2.29 Cleanliness

All work sites must be clean and orderly. All work surfaces must be kept dry or appropriate means taken to assure that surfaces are slip-resistant. All spill materials or liquids should be cleaned up immediately and combustible scrap, debris and waste stored safely and removed from the work site promptly. Any accumulations of combustible dust must be routinely removed from elevated surfaces including the overhead structure of buildings. Combustible dust should be cleaned up with a vacuum system to prevent the dust going into suspension. Metallic or conductive dust must be prevented from entering or accumulating on or around electrical enclosures or equipment. Covered metal waste cans are provided for oily and paint-soaked waste. Use them. All oil and gas fired devices must be equipped with flame failure controls that will prevent flow of fuel if pilots or main burners are not working. Paint spray booths, dip tanks, etc., must be cleaned regularly. Washing facilities are provided, so wash your hands after handling materials.

2.30 Tool Maintenance

Faulty or improperly used hand tools are a safety hazard. All employees shall be responsible for ensuring that tools and equipment (both company and employee-owned) used by them or other employees at their workplace are in good condition. Hand tools such as chisels, punches, etc., which develop mushroom heads during use, must be reconditioned or replaced as necessary. Broken or fractured handles on hammers, axes and similar equipment must be replaced promptly. Worn or bent wrenches should be replaced regularly. Appropriate handles must be used on files and similar tools. Appropriate safety glasses, face shields, etc., must be worn while using hand tools or equipment which might produce flying materials or be subject to breakage. Eye and face protection must be worn when driving in tempered spuds or nails. Check your tools often for wear or defect. Jacks must be checked periodically to assure they are in good operating condition. Tool handles must be wedged tightly into the heads of tools. Tool

cutting edges should be kept sharp enough so the tool will move smoothly without binding or skipping. When not in use, tools should be stored in a dry, secure location.

2.31 Ladders

Check ladders each and every time before you climb. Ladders should be maintained in good condition: joints between steps and side rails should be tight; hardware and fittings securely attached; and movable parts operating freely without binding or undue play. Non-slip safety feet are provided on each ladder. Ladder rungs and steps should be free of grease and oil. Employees are prohibited from using ladders that are broken, missing steps, rungs, or cleats, or that have broken side rails or other faulty equipment. It is prohibited to place a ladder in front of doors opening toward the ladder except when the door is blocked open, locked or guarded. It is prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height. Face the ladder when ascending or descending. Be careful when you climb a ladder. Do not use the top step of ordinary stepladders as a step. When portable rung ladders are used to gain access to elevated platforms, roofs, etc., the ladder must always extend at least 3 feet above the elevated surface. It is required that when portable rung or cleat type ladders are used, the base must be so placed that slipping will not occur, unless it is lashed or otherwise held in place. All portable metal ladders must be legibly marked with signs reading "CAUTION" - "Do Not Use Around Electrical Equipment." Employees are prohibited from using ladders as guys, braces, skids, gin poles, or for other than their intended purposes. Only adjust extension ladders while standing at a base (not while standing on the ladder or from a position above the ladder). Metal ladders should be inspected for tears and signs of corrosion. Rungs of ladders should be uniformly spaced at 12 inches, center to center.

2.32 Portable Power Tools

Portable power tools pose a special danger to employees because they are deceptively small and light, yet they can do great bodily harm if used improperly or poorly maintained. These rules apply to all power tools, but are especially important when handling portable saws, drills and power screwdrivers. Check your equipment before you use it. All grinders, saws and similar equipment should be equipped with appropriate safety guards. Power tools should not be used without the correct shield, guard, or attachment, recommended by the manufacturer. Portable circular saws must be equipped with guards above and below the base shoe. Circular saw guards should be checked periodically and before each use to assure they are not wedged up, thus leaving the lower portion of the blade unguarded. All rotating or moving parts of equipment should be guarded to prevent physical contact. All cord-connected, electrically-operated tools and equipment should be effectively grounded or of the approved double insulated type. Effective guards must be in place over belts, pulleys, chains, sprockets, on equipment such as concrete mixers, air compressors, etc. If

portable fans are provided, they must be equipped with full guards or screens having openings 1/2 inch or less. Do not attempt to lift heavy objects without proper equipment. Hoisting equipment will be made available for lifting heavy objects, with hoist ratings and characteristics appropriate for the task. Power tools are either battery operated or wired.

2.33 Abrasive Wheel Equipment (Grinders)

The work rest used should be kept adjusted to within 1/8 inch of the wheel. The adjustable tongue on the top side of the grinder should be kept adjusted to within 1/4 inch of the wheel. The side guards should cover the spindle, nut and flange and 75 percent of the wheel diameter. Bench and pedestal grinders should be permanently mounted. Goggles or face shields should always be worn when grinding. The maximum RPM rating of each abrasive wheel should be compatible with the RPM rating of the grinder motor. Fixed or permanently mounted grinders must be connected to their electrical supply system with metallic conduit or by other permanent wiring method. Each grinder should have an individual on and off control switch.

2.34 Combustible Materials

All combustible scrap, debris and waste materials (oily rags, etc.) must be stored in covered metal receptacles and removed from the work site promptly. Proper storage to minimize the risk of fire, including spontaneous combustion must be practiced. Only approved containers and tanks are to be used for the storage and handling of flammable and combustible liquids. All connections on drums and combustible liquid piping, vapor and liquid must be kept tight. All flammable liquids should be kept in closed containers when not in use (e.g., parts-cleaning tanks, pans, etc.). Bulk drums of flammable liquids must be grounded and bonded to containers during dispensing. Storage rooms for flammable and combustible liquids must have explosion-proof lights. Storage rooms for flammable and combustible liquids should have mechanical or gravity ventilation. Liquefied petroleum gas must be stored, handled, and used in accordance with safe practices and standards. No smoking signs must be posted on liquefied petroleum gas tanks. Liquefied petroleum storage tanks should be guarded to prevent damage from vehicles. All solvent wastes and flammable liquids should be kept in fire-resistant, covered containers until they are removed from the work site. Vacuuming should be used whenever possible rather than blowing or sweeping combustible dust.

2.35 Mechanical Lockout/Tagout

Point of operation devices shall protect the operator by: Preventing and/or stopping normal stroking of the press if the operator's hands are inadvertently placed in the point of operation; or Preventing the operator from inadvertently reaching into the point of

operation or withdrawing his/her hands if they are inadvertently located in the point of operation, as the dies close; or Preventing the operator from inadvertently reaching into the point of operation at all times; or Requiring application of both of the operator's hands to machine operating controls and locating such controls at such a safety distance from the point of operation that the slide completes the downward travel or stops before the operator can reach into the point of operation with his/her hands; or Enclosing the point of operation before a press stroke can be initiated and maintaining this closed condition until the motion of the slide had ceased; or Enclosing the point of operation before a press stroke can be initiated, so as to prevent an operator from reaching into the point of operation prior to die closure or prior to cessation of slide motion during the downward stroke. A gate or movable barrier device shall protect the operator.

2.36 First Aid Kits

First-aid kits and required contents are maintained in a serviceable condition. Unit-type kits have all items in the first-aid kit individually wrapped, sealed, and packaged in comparable sized packages. The commercial or cabinet-type kits do not require all items to be individually wrapped and sealed, but only those which must be kept sterile. Items such as scissors, tweezers, tubes of ointments with caps, or rolls of adhesive tape, need not be individually wrapped, sealed, or disposed of after a single use or application. Individual packaging and sealing shall be required only for those items, which must be kept sterile in a first-aid kit.

2.37 Late Night Crime Prevention

All establishments operating between the hours of 11:00 p.m. and 6:00 a.m. should provide crime prevention training to their employees. Crime prevention training shall be a part of the accident prevention program. Training will be made available to ensure that the purpose and function of robbery and violence prevention are understood by employees and that the knowledge and skills required for their safety have been provided. The training and training materials outline security policies, safety and security procedures, and personal safety and crime avoidance techniques. Formal instruction through a training seminar or training video presentation will be made available and upon completion the employee shall sign off on the date, time, and place of training. The training documentation will be placed in the employee's personnel file. The following elements will be covered in the crime prevention training program: An explanation of the importance of keeping the location clean, neat, and uncluttered thereby makes it as unattractive as possible to robbers. An explanation of the purpose of maintaining an unobstructed view of the cash register from outside the store, provided the cash register is located in a position visible from the street. Instruction on reasons for operating only minimum number of cash registers at night. Keeping the cash register fund to a minimum. Taking extra precautions after dark, i.e., keep alert,

observe lighting and dark corners, spot possible hiding places. Violence prevention procedures in case of robbery. A refresher course on crime prevention on or near the employee's anniversary date.

2.38 Company Fire Brigades

In some industries, the company establishes a fire fighting brigade. The company does this by drafting a policy statement that announces the existence of a fire brigade; the basic organizational structure; the type, amount, and frequency of training to be provided to fire brigade members; the expected number of members in the fire brigade; and the functions that the fire brigade is to perform at the workplace. The organizational statement is available for inspection by government officials and by employees or their designated representatives. Employees who are expected to do interior structural fire fighting must be physically capable of performing duties, which may be assigned to them during emergencies. The company shall not permit employees with known heart disease, epilepsy, or emphysema, to participate in fire brigade emergency activities unless a physician's certificate of the employees' fitness to participate in such activities is provided. Approved self-contained breathing apparatus shall be provided to and worn by fire brigade members while working inside buildings or confined spaces where toxic products of combustion or an oxygen deficiency may be present. Such apparatus shall also be worn during emergency situations involving toxic substances. Approved self-contained breathing apparatus may be equipped with either a "buddy-breathing" device or a quick disconnect valve, even if these devices are not certified by NIOSH. If these accessories are used, they shall not cause damage to the apparatus, or restrict the air flow of the apparatus, or obstruct the normal operation of the apparatus.

Chapter 3 - Employee Health Services

3.1 Medical Services

The objectives of the Medical Services Department are: To ensure that employees are assigned duties or jobs that they are physically able to perform their function. To provide medical care and rehabilitation of the occupationally ill or injured. To provide emergency treatment of serious illnesses or injuries. To encourage employees to maintain their physical and mental health. To assist in maintaining a healthful and safe work environment. When necessary Detroit Spectrum Painters will perform pre-employment physicals during the hiring process for certain job types or specific duties where it is important to make sure that the worker is deemed physically capable to perform the required job functions or duties. Detroit Spectrum Painters will also perform pre-employment physicals when a current employee or worker is changing into certain job functions and different environments.

3.2 Occupational Health Monitoring

Pre-placement, periodic, special, and termination examinations including drug screening may be conducted and emergency services are provided. The pre-placement testing shall include drug and alcohol screenings. Random drug and alcohol testing may also be performed. All employees shall be subject to a post-accident drug and alcohol screening as deemed necessary by the RSO. At times Detroit Spectrum Painters there will be instances where our company will be performing work for another company where we will be required to undergo drug and alcohol testing as prescribed by them or DOT standards. If and when this occurs Detroit Spectrum Painters will make our employees or workers aware of such processes and requirements. Potential occupational exposures to hazardous situations or agents are investigated on a continuing basis in cooperation with the Responsible Safety Officer. Diagnosis and treatment of non-occupational illness or injury are limited to minor first aid, emergencies, and special situations for which treatment is in the best interest of Detroit Spectrum Painters and the patient. The Company offers confidential counseling for employees to aid in resolving work-related or personal problems.

3.3 Safe Work Practices and Procedures

At Detroit Spectrum Painters we will ensure that safe work procedures are in place. Examples might include, hot work permitting, confined space, Lockout/Tagout, PSM, Electrical Safety, Operator Safety, etc. All of the necessary procedures are covered in the ‘‘Safety Program’’.

3.4 Notifying the Supervisor

Employees must report all medications they are taking. Over-the-counter medications

such as allergy or cold and flu medications could also impair one's ability to perform safely and must also be reported to their supervisor.

Employees must be responsible for ensuring they are physically and mentally fit to perform their job functions safely. Employees must take responsibility for their own safety as well as not reporting to work in a condition as to endanger the safety of their fellow workers.

3.5 Monitoring Employee Activities and Behaviors

Employee's activities and behaviors shall be monitored to determine if employee should be removed from the work site. Management shall have the right to remove a worker or employee from their job if they are found to be physically, mentally or emotionally unfit to perform their job duties.

3.6 Safety Glasses

Appointments with an optometrist to fit safety glasses are available. The glasses are supplied free of charge to employees needing this protection. Employees may bring a recent prescription or have a refraction done here for a nominal cost.

3.7 Occupational Injury/Illness

Treatment is coordinated with outside specialists in accordance with the provisions and requirements of Workers' Compensation laws. Every injury sustained while performing Detroit Spectrum Painters assigned tasks, no matter how minor, must be reported to the employee's supervisor and to the Responsible Safety Officer. If an employee goes to a private off-site doctor about a job-incurred injury or illness, the physician consulted should be informed that the injury or illness is industrial. It is the employee's responsibility to notify the RSO and his/her supervisor of the injury or illness and the treatment received. An occupational injury or illness is one which results from a work accident or from an exposure involving an incident in the work environment. In most cases, the employee will be referred to his/her private physician, a selected specialist, or a hospital emergency room. Standard procedures for ingestion of poisons, eye injuries, burns, cardiac arrest, coma, etc., are followed. In the event that a patient cannot be moved from the site of the injury, primary aid will be rendered by Detroit Spectrum Painters physicians, nurses, firefighters, or ambulance personnel. A physician should be notified of any major accident that occurs at any time at the workplace. When the company physician has been notified, he/she will take the responsibility for appropriate notification of family, relatives, and the President's Office. In the event of an occupational injury or illness that requires care by a specialist, the patient is referred to his/her personal physician or a physician selected from a panel of

locally practicing specialists. Medical Services is prepared to provide definitive treatment for minor occupational injuries or illnesses and rehabilitation where appropriate. Diagnosis and treatment such as suturing, splinting, dressing, and analgesia are given routinely when appropriate by the physicians and registered nurses on site. Minor injuries and illnesses not associated with work frequently are treated by the physician or nurse on duty. Patients who present themselves with more severe or chronic health problems are consulted with and referred to their personal physician or transported, if necessary by ambulance, to nearby hospitals for emergency care. No injured or ill persons, regardless of employment status, are denied first aid or referral to medical resources in the community. Detroit Spectrum Painters personnel are advised by the Responsible Safety Officer regarding known personal exposure to radiation. The procedure and urgency of notification and subsequent action by the physician vary in detail depending on the particulars of the exposure or spill. Usually, in the event of contamination by radioactive isotopes or possible activation by high-energy beam, the employee(s) will receive a whole-body count and bioassay of excreta, if indicated. Dose estimates are the joint responsibility of Responsible Safety Officer and Medical Services Departments. Medical Services is prepared to assist in decontamination of personnel when necessary especially of contaminated wounds. Detroit Spectrum Painters has written mutual aid agreements with local hospitals to admit and care for contaminated injured personnel. Employees who are injured severely or become seriously ill at work are transported to Medical Services in the ambulance operated by the Fire Department, except when other transportation is specifically approved by Medical Services. If necessary, the ambulance is used to transport patients to nearby hospitals or clinics.

3.8 Privacy Notice

Detroit Spectrum Painters should provide the information below to individuals who are asked to complete medical history forms or otherwise supply personal information about themselves. The information on this form is requested for purposes of maintaining a complete medical record on each Detroit Spectrum Painters employee as part of the Occupational Medical Program of the Medical Services Department. Furnishing the requested information is voluntary, but failure to provide such information on pre-employment examination may delay or even prevent medical approval for employment. Supplying information on subsequent examinations is in the best interest of the employee and is intended to protect the health of Detroit Spectrum Painters employees. All information in employee medical records is available only to Medical Services staff.

3.9 Assigned Task Training

Before any employee starts or is assigned to begin a new or unfamiliar task, they shall receive job or task specific training. Detroit Spectrum Painters shall ensure that all employees and workers will receive proper training that is specific to their assigned task or duty.

Chapter 4 - Drug and Alcohol Free Workplace

DRUG AND ALCOHOL FREE WORKPLACE

4.1 Purpose

Detroit Spectrum Painters recognizes the problems which drug abuse have created in the construction industry and the need to develop drug abuse prevention programs. Accordingly, in order to enhance the safety of the workplace and to maintain a drug-free environment, **Detroit Spectrum Painters** has amended its Drug and Alcohol Prevention Program to comply with Federal Regulations. **Detroit Spectrum Painters** intends to abide by all future Federal Regulation and amendments, and specific requirements as determined by our customers.

4.2 Scope

This revised Drug and Alcohol Prevention Program is effective on January 1, 2003. The provisions of this Drug and Alcohol Prevention Program are **applicable to all employees of Detroit Spectrum Painters**.

Implementation and continued enforcement of the Drug and Alcohol Prevention Program is subject to appropriate local, state, and federal laws as well as any collective bargaining agreements, and customer requirements.

Any special customer requirements not included in this policy will be adopted and enforced as required by that customer.

4.3 General Provisions

It is the intent of **Detroit Spectrum Painters** to provide a drug free working environment by maintaining a strong drug and alcohol prevention program as part of our safety program which ensures that all employees are healthy and fit for work, including job site, management, shop, and clerical personnel.

4.4 Pre-Employment

Testing of potential new hires for the presence of drugs will be required at the sole discretion of Detroit Spectrum Painters's management.

4.5 Reasonable Suspicion

Employees who exhibit through identification of abnormal job performance or behaviors

which suggest that drug or alcohol abuse may be a factor, may be requested to test for the presence of alcohol of drug test.

4.6 Random Testing

All employees will undergo unannounced drug testing based on a computerized random selection process.

4.7 Post Accident Testing

Will involve any employee in an accident or contributing to an accident as defined in this policy.

ON-THE-JOB USE, POSSESSION OR SALE OF DRUGS OR ALCOHOL

4.8 Alcohol

Being under the influence of alcohol by any employee while performing company business or at any **customer** location is prohibited to the extent that such use or influence may affect the safety of co-workers or members of the public, the employee's job performance, or the safe or efficient operation of the company facility.

4.9 Legal Drugs

Except as provided below, the use or being under the influence of any legally obtained drug by any employee while performing company business or while at a company or **customer** facility is prohibited to the extent such use or influence may affect the safety of co-workers or members of the public, the employee's job performance, or the safe or efficient operation of the company.

An employee may continue to work, even though under the influence of a **legal drug** if management has determined, after consulting with the Medical Department and Employee Relations, that the employee does not pose a threat to his or her own safety or the safety of their co-workers and that the employee's job performance is not significantly affected by the legal drug.

4.10 Illegal Drugs

The use, sale, purchase, transfer or possession of an illegal drug by an employee while at a company or **customer** facility or while performing company business is prohibited.

The presence in detectable amount of any illegal drug in an employee while performing company business or while in a customer or company facility is prohibited.

4.11 Disciplinary Action

Violation of the Policy can result in disciplinary action, up to and including termination, even for a first offense. An individual will not be hired if he/she fails the drug screening.

4.12 Customer or Owner Requirements

It is understood that **Detroit Spectrum Painters's "customers"** may, under the provisions of the contract, retain the right to search employees and their belongings for drugs, controlled substances, alcohol, or firearms while on the customer's property.

4.13 Employee's Reporting Requirements – Legal Drugs

For certain job positions, an employee's use of a legal drug can pose a significant risk to the safety of the employee or others. Employees who feel or have been informed that the use of a legal drug may present a safety risk are to report such drug use to the Personnel Department to determine job related consequences. Supervision that is aware of such a situation is to instruct the employee to report to the Personnel Department.

4.14 Definitions

"Under the influence" means, for the purposes of this policy, that the employee is affected by a drug or alcohol or the combination of a drug and alcohol in any detectable manner. The symptoms of influence are not confined to those consistent with misbehavior, nor to obvious impairment of physical or mental ability, such as slurred speech or difficulty in maintaining balance. A determination of influence can be established by a professional opinion, a scientifically valid test and, in some cases such as alcohol, by a layperson's opinion.

"Illegal drug" means any drug; (a) which is not legally obtained, or (b) which is legally obtainable but has not been legally obtained. The term includes prescribed drugs not legally obtained and prescribed drugs not being used for prescribed purposes. It also includes marijuana.

4.15 Prohibited Drugs

Testing under Part 199 is currently limited to the following drugs:

1. Cannabinoids (Marijuana, Hashish);
2. Benzoylecgonine (Cocaine);
3. Opiates (Heroin, Morphine, Codeine);
4. Amphetamines; and
5. Phencyclidine (PCP).

Chapter 5 - Workplace Violence Prevention Plan

5.1 Workplace Violence Prevention

The following chapter is the Violence Prevention Program for Detroit Spectrum Painters. We have developed policies and procedures identifying and respecting potential workplace violence. Detroit Spectrum Painters recognizes and ensures that workplace violence is considered a hazard for the purposes of Hazard Assessment, Elimination, and Control.

5.2 Implementation Guide

Detroit Spectrum Painters will make preventing and controlling workplace violence a priority and announce the formation of a management team to develop, review and implement policies dealing with violence in the workplace.

The management team will:

- Undertake an assessment of the company's readiness for dealing with workplace violence.
- Become experts on workplace violence.
- Serve as a liaison with specialized resources from the community.
- Be responsible for the education of supervisors and managers regarding workplace violence.
- Be responsible for developing an action plan to deal with an incident of workplace violence.

Detroit Spectrum Painters will conduct an education program regarding early warning signs of potentially violent behavior and steps to be followed in responding to and investigating an incident of workplace violence to include:

- Ominous threats - such as, "This could be like the post office."
- Threatening actions - intimidation, menacing gestures.
- Bizarre thoughts - perception that the world is falling apart, highly overstated sense of entitlement to a promotion.
- Obsession - holding a grudge, unrequited romantic interest.
- Supervisors and managers will be taught to recognize these behaviors and employees will be taught to report these signs to their management or to the threat management team.

Detroit Spectrum Painters will increase physical security measures and develop a cooperative relationship with local law enforcement authorities. Detroit Spectrum Painters will have in place a comprehensive plan for maintaining the security of the work environment.

5.3 Crisis procedures

These procedures will be developed for responding to an incident of workplace violence. They are to include the following:

- What is the chain of command? What are the responsibilities of the immediate supervisor? When does the responsibility shift to the management team?

- What emergency notification is necessary? Local police, medical, fire, EAP, others? Internal security? Team members?
- What resources need to be solicited? Trauma consultant, physicians, security consultant, legal representative?
- What assessment procedures should be immediately instituted to determine the immediate safety of the workplace and the effect of the incident on the workplace?
- What information is available as to what occurred? Who are the witnesses? Is photographic information needed?
- What external and internal notifications need to be made?
- What counseling needs are necessary?
- What public relations concern should be dealt with immediately? What can be said, who should talk to reporters?

5.4 Compliance

Management of Detroit Spectrum Painters is responsible for ensuring that all safety and health policies and procedures involving workplace security are clearly communicated and understood by all employees. Managers and supervisors are expected to enforce the rules fairly and uniformly. All employees are responsible for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe and secure work environment. Our system of ensuring that all employees, including supervisors and managers, comply with work practices that are designed to make the workplace more secure, and do not engage in verbal threats or physical actions which create a security hazard for others in the workplace. This includes:

- Informing employees, supervisors, and managers of the provisions of our Program for Workplace Security.
- Evaluating the performance of all employees in complying with Detroit Spectrum Painters workplace security measures.
- Recognizing employees who perform work practices which promote security in the workplace.
- Providing training and/or counseling to employees whose performance in complying with work practices designed to ensure workplace security is deficient.
- Disciplining workers for failure to comply with workplace security practices.

5.5 Recordkeeping & Documentation

Records of workplace security inspections, including the person or persons conducting the inspection, the unsafe conditions and work practices that have been identified and the action taken to correct the identified unsafe conditions and work practices, are recorded on a hazard assessment and correction form. Documentation of safety, health and security training for each worker, including each workers name or other identifier, training dates, type(s) of training, and training providers are recorded on a worker training and instruction form.

5.6 Three Categories of Violence

Type I

An assailant with no legitimate ties to the workplace enters to commit a robbery or some other criminal act.

Type II

Acts of violence are committed by recipients of company services, such as customers, clients, patients, or passengers.

Type III

Involves violent acts by current or former employees, supervisors or managers, or others with ties to the workplace (e.g. spouses, relatives, or friends of employees).

5.7 Workplace Security Training Program

Detroit Spectrum Painters Program for Workplace Security addresses the hazards known to be associated with the three major types of workplace violence.

Type I workplace violence involves a violent act by an assailant with no legitimate relationship to the workplace who enters the workplace to commit a robbery or other criminal act.

Type II involves a violent act by a recipient of a service provided by our establishment, such as a client, patient, customer, passenger or a criminal suspect or prisoner.
Type III involves a violent act by a current/former employee, supervisor or manager, or another person who has some employment-related involvement with Detroit Spectrum Painters, such as an employee's spouse or lover; an employee's relative or friend; or another person who has a dispute with one of our employees.

5.8 Levels of Workplace Violence Exhibited by Employees

Level One:

- Refuses to cooperate with immediate supervisor.
- Spreads rumors and gossip to harm others.
- Consistently argues with coworkers.
- Belligerent toward customers/clients.
- Constantly swears at others.
- Makes unwanted sexual comments.

Level Two:

- Argues increasingly with customers, vendors, coworkers and management.
- Openly refuses to obey company policies and procedures.
- Sabotages equipment and steals property for revenge.
- Verbalizes wishes to hurt coworkers and/or management.

- Sees self as victimized by management ("They're all against me").

Level Three:
Frequent displays of intense anger resulting in:

- Recurrent Suicidal Threats
- Recurrent Physical/Verbal Fights
- Destruction of Property
- Recurrent Threats
- Utilization of Weapons to Harm Others

Chapter 6 - Fire Safety

6.1 Introduction

Policy and planning for fire safety at Detroit Spectrum Painters takes into account the special fire hazards for specific operating areas, the protection of high-value property, and the safety of employees. These ends are met by: * Non-combustible or fire-rated materials and construction practices suitable to the assigned uses of buildings and facilities. * Alarm systems and automatic extinguishing systems. * Availability of suitable hand extinguishers and local hose lines for use before firefighters arrive. * Access to professional fire department, always staffed and trained in the control of emergencies that could occur at the Company. (The Fire Department makes the initial response to all requests for emergency aid received on the emergency telephone number, 911.) This chapter covers the fire safety responsibilities of employees and supervisors and sets forth the fire safety rules and procedures.

6.2 Fire Department

The Community Fire Department is responsible for protecting people and property from fires, explosions, and other hazards through prevention and expeditious control of such events. In addition, the Fire Department provides first-response rescue and transportation services in medical emergencies. The Fire Department's inspection staff is responsible for ensuring company-wide compliance with fire safety and protection requirements and for reviewing all plans and procedures for compliance with these requirements; for inspecting and testing automatic fire protection and alarm systems and ensuring their maintenance and repair; for conducting fire safety and protection inspections; and for providing fire prevention recommendations. Other responsibilities include training employees in fire safety equipment, practices, and procedures. All these fire protection and response functions are performed in conformance with OSHA regulations, Michigan law, Detroit Spectrum Painters policies, and nationally recognized standards and guidelines for fire and life safety. The Fire Chief and the Fire Marshall have the authority to enforce applicable requirements of the Uniform Building Code; the Uniform Fire Code; National Fire Protection Association Codes (including the Life Safety Code), Standards, and Recommended Practices; and the fire protection provisions of OSHA Orders. All employees must immediately report fires, smoke, or potential fire hazards to the Fire Department (dial 911). All employees must conduct their operations in such a way as to minimize the possibility of fire. This means applying rules such as keeping combustibles separated from ignition sources, being careful about smoking, and avoiding needless accumulations of combustible materials. Supervisors are responsible for keeping their operating areas safe from fire. The Responsible Safety Officer and the Fire Department will provide guidance and construction criteria with respect to fire and life safety as well as inspections. The provision and maintenance of fire detection systems and both automatic and manual fire extinguishing equipment is the responsibility of the Responsible Safety Officer. But the supervisor, who best knows the day-to-day nature of his/her operations, is responsible for notifying the Responsible

Safety Officer of operations that change the degree of fire risk and will therefore require a change in the planned fire protection provisions.

6.3 Class A Combustibles

Class A combustibles are common materials such as wood, paper, cloth, rubber, plastics, etc. Fires in any of these fuels can be extinguished with water as well as other agents specified for Class A fires. They are the most common fuels to be found in non-specialized operating areas of the work place such as offices. Safe handling of Class A combustibles means: Disposing of waste daily. Keeping work area clean and free of fuel paths, which can spread a fire, once started. Keeping combustibles away from accidental ignition sources such as hot plates, soldering irons, or other heat or spark-producing devices. Keeping all rubbish, trash, or other waste in metal or metal-lined receptacles with tight-fitting covers when in or adjacent to buildings. (Exception: wastebaskets of metal or of other material and design approved for such use, which are emptied each day, need not be covered.) Using safe ash trays for disposal of smoking materials and making sure that the contents are extinguished and cold to the touch before emptying them into a safe receptacle. Planning the use of combustibles in any operation so that excessive amounts need not be stored. Storing paper stock in metal cabinets and rags in metal bins with automatically closing lids. Making frequent inspections and checks for noncompliance with these rules in order to catch fires in the potential stage.

6.4 Class B Combustibles

Class B combustibles are flammable and combustible liquids (including oils, greases, tars, oil-base paints, lacquers) and flammable gases. Flammable aerosols (spray cans) are treated here. Cryogenic and pressurized flammable gases are treated elsewhere in this manual. The use of water to extinguish Class B fires (by other than trained firefighters) can cause the burning liquid to spread carrying the fire with it. Flammable-liquid fires are usually best extinguished by excluding the air around the burning liquid. Generally, this is accomplished by using one of several approved types of fire-extinguishing agents, such as the following: Carbon dioxide ABC multipurpose dry chemical Halon 1301 (used in built-in, total-flood systems) Halon 1211 (used in portable extinguishers) Fires involving flammable gases are usually controlled by eliminating the source of fuel, i.e., closing a valve. Technically, flammable and combustible liquids do not burn. However, under appropriate conditions, they generate sufficient quantities of vapors to form ignitable vapor-air mixtures. As a general rule, the lower the flash point of a liquid, the greater the fire and explosion hazard. It should be noted that many flammable and combustible liquids also pose health hazards. NOTE: The flash point of a liquid is the minimum temperature at which it gives off sufficient vapor to form an ignitable mixture with the air near the surface of the liquid or within the vessel used. It is the responsibility of the user to ensure that all Class B combustibles are properly

identified, labeled, handled, and stored. If assistance is required, contact the Responsible Safety Office. Safe handling of Class B combustibles means: Using only approved containers, tanks, equipment, and apparatus for the storage, handling, and use of Class B combustibles. Making sure that all containers are conspicuously and accurately labeled as to their contents. Dispensing liquids from tanks, drums, barrels, or similar containers only through approved pumps taking suction from the top or through approved self-closing valves or faucets. Storing, handling, and using Class B combustibles only in approved locations, where vapors cannot reach any source of ignition, including heating equipment, electrical equipment, oven flame, mechanical or electrical sparks, etc. Never cleaning with flammable liquids within a building except in a closed machine approved for the purpose. Never storing, handling, or using Class B combustibles in or near exists, stairways, or other areas normally used for egress. In rooms or buildings, storing flammable liquids in excess of 10 gallons in approved storage cabinets or special rooms approved for the purpose. Knowing the locations of the nearest portable fire extinguishers rated for Class B fires and how to use them. Never smoking, welding, cutting, grinding, using an open flame or unsafe electrical appliances or equipment, or otherwise creating heat that could ignite vapors near any Class B combustibles.

6.5 Electrical Fires

There are many combustible materials, including electrical equipment, oxidizing chemicals, fast-reacting or explosive compounds, and flammable metals, which present specialized fire safety and extinguishing problems. Refer to other appropriate chapters of this manual for safe handling advice. If in doubt, request advice from the Responsible Safety Officer.

6.6 Welding and Other Permits

As part of the local Fire Department's program to control and reduce fire hazards, a permit system is in effect to cover welding, burning, or other operations with a high fire hazard. Typically, operations that require a permit are: Welding (arc, oxyacetylene, or heliarc) Soldering (which requires an open flame) Use of a torch (for cutting, bending, forming, etc.) Use of tar pots (for road work or roofing, etc.) Open fires for any purpose Spray painting to obtain additional information or to request a permit for these operations, call the Fire Department on it business line, not the emergency 911 number.

6.7 Fire Fighting Equipment

This section describes the fixed and portable equipment that is provided in working areas for fire protection. The fixed equipment includes automatic sprinklers, detectors

and alarms, fire doors, etc. The portable equipment consists of fire extinguishers and hoses to be operated by employees before the arrival of the local Fire Department.

6.8 Fire Detectors

Several types of automatic fire detectors are used throughout Detroit Spectrum Painters, according to particular needs and purposes. All of them will detect fire (by one of several means) and transmit an alarm to the fire station. In the many buildings equipped with evacuation alarm bells, the automatic detectors activate those alarms, as do the manual pull boxes. In some cases, automatic extinguishing systems are activated by automatic detectors. The Fire Department always dispatches firefighters and apparatus to the scene of any automatically actuated alarm.

6.9 Fire Exits

Exit corridors must not be used for storage. The Life Safety Code, NFPA 101, requires that buildings designed for human occupancy must have continuous and unobstructed exits to permit prompt evacuation of the occupants and allow necessary access for responding emergency personnel. The intent of the Code is to keep exits free from obstructions and clear of combustible materials.

6.10 Exit Corridors

Exit corridors must not be used for storage. The Life Safety Code, NFPA 101, requires that buildings designed for human occupancy must have continuous and unobstructed exits to permit prompt evacuation of the occupants and allow necessary access for responding emergency personnel. The intent of the Code is to keep exits free from obstructions and clear of combustible materials. Attention to housekeeping, therefore, is very important. "Temporary" storage of furniture, equipment, supplies, or anything else is not permitted in exit ways. Combustibles, including recyclable waste paper, are not permitted in exit ways. Metal lockers with ends and tops ferried to the walls and that do not interfere with minimum exit width requirements may be installed in exit corridors when approved by the Fire Department and the Responsible Safety Officer. The following requirements must be met for storage locker/cabinets: Cabinets will be permitted on one side of the corridor only. Cabinets must end at least 6 ft from the corridor exit door. Cabinet ends must be at least 12 in. from the edge of the doorway on the latch side and from the edge of the door leaf when fully opened into the corridor. The cabinets must not be more than 20 in. deep by 37 in. wide by 72-3/4 in. high. The cabinets must be all metal construction with positive latches to prevent spillage of contents in the event of an earthquake. All doors must return automatically to the closed position when not held open manually. A 45 degree-angle fairing must be provided from the wall to the corridor corner of the cabinet. Fairing must be provided at both ends of

cabinet or bank of cabinets. * A 45 degree-angle fairing must be provided at the top of the cabinets from the outside corridor edge of cabinet to the wall. All cabinets must be anchored to the wall firmly enough to withstand 0.5g of lateral acceleration (or a lateral load equal to 1/2 the total dead weight of the cabinet and its contents) in the event of an earthquake. Liquids and chemicals are not to be stored in corridor lockers. All cabinets must be kept locked, with one key being retained by the Building Manager. All cabinets must be labeled with the contents and the name, address, and telephone number of the assigned user. Any deviation from the above requirements must be approved by Responsible Safety Officer.

Chapter 7 - Chemical Safety

7.1 Introduction

The objective of this chapter is to provide guidance to all Detroit Spectrum Painters employees and participating guests who use hazardous materials so that they may perform their work safely. Many of these materials are specifically explosive, corrosive, flammable, or toxic; they may have properties that combine these hazards. Many chemicals are relatively non-hazardous by themselves but become dangerous when they interact with other substances, either in planned experiments or by accidental contact. To avoid injury and/or property damage, persons who handle chemicals in any area of the Company must understand the hazardous properties of the chemicals with which they will be working. Before using a specific chemical, safe handling methods must always be reviewed. Supervisors are responsible for ensuring that the equipment needed to work safely with chemicals is provided. The cost of this equipment is borne by the Company.

7.2 Hazcom Plan

On May 25, 1986 the Occupational Safety and Health Administration (OSHA) placed in effect the requirements of a new standard called Hazard Communication (29 CFR 1910.1200). This standard establishes requirements to ensure that chemical hazards in the workplace are identified and that this information, along with information on protective measures, is transmitted to all affected employees. This section describes how Detroit Spectrum Painters employees are informed of the potential chemical hazards in their work area so they can avoid harmful exposures and safeguard their health. Components of this program include labeling, preparing a material safety data sheet (MSDS), and training. With regard to MSDS, Detroit Spectrum Painters has limited coverage under the OSHA Hazard Communication Standard. The Company is required to maintain only those sheets that are received with incoming shipments for the following reasons: the Company commonly uses small quantities of many different hazardous materials for short periods of time; that the hazards change, often unpredictably; many materials are of unknown composition and most workers are highly trained. Responsibilities of Supervisors/Management Identify hazards for respective work areas. Ensure hazards are properly labeled. Obtain/maintain copies of material safety data sheets, as required, of each hazardous material used in the work area and make them accessible to employees during each work shift. Have the written Hazard Communication Program available to all employees. Provide hazard-specific training for employees. Identify hazardous materials in the hazard review section of the Detroit Spectrum Painters purchase requisition form. Employees must: Attend safety training meetings. Perform operations in safe manner. Notify management immediately of any safety hazards or injuries. When ordering materials, identify hazardous chemicals in the hazard review section of the Detroit Spectrum Painters purchase requisition form. The Responsible Safety Officer must: Develop a written Hazard Communication Program. Maintain a central file of material safety data sheets. Review and update Detroit

Spectrum Painters stock safety labels. Provide generic training programs. Assist supervisors in developing hazard-specific training programs. Oversee the Hazard Communication Standard written policy and implementation plans. Alert on-site contractors to hazardous materials in work areas. Alert on-site contractors that they must provide to their employees information on hazardous materials they bring to the work site. The number of hazardous chemicals and the number of reactions between them is so large that prior knowledge of all potential hazards cannot be assumed. Therefore, when the chemical properties of a material are not fully known, it should be assumed hazardous and used in as small quantities as possible to minimize exposure and thus reduce the magnitude of unexpected events. The following general safety precautions should be observed when working with chemicals: Keep the work area clean and orderly. Use the necessary safety equipment. Carefully label every container with the identity of its contents and appropriate hazard warnings. Store incompatible chemicals in separate areas. Substitute less toxic materials whenever possible. Limit the volume of volatile or flammable material to the minimum needed for short operation periods. Provide means of containing the material if equipment or containers should break or spill their contents. Follow the requirements of this manual, if systems that can generate pressure or are operated under pressure are involved. Provide a back-up method of shutting off power to a heat source if any hazard is involved. Obtain and read the Material Safety Data Sheets.

7.3 Task Evaluation

Each task that requires the use of chemicals must be evaluated to determine the potential hazards associated with the work. This hazard evaluation must include the chemical or combination of chemicals that will be used in the work, as well as other materials that will be used near the work. If a malfunction during the operation has the potential to cause serious injury or property damage, an Operational Safety Procedure (OSP) must be prepared and followed. Operations must be planned to minimize the generation of hazardous wastes. Additionally, unused chemicals should be recycled.

7.4 Supervisor Responsibility

Supervisors are responsible for establishing safe procedures and for ensuring that the protective equipment needed to work with the chemicals is available. Supervisors must instruct their workers about possible hazards, safety precautions that must be observed, possible consequences of an accident, and procedures to follow if an accident does occur. The supervisor is required to enforce the proper use of protective equipment and the established safety practices. It is the responsibility of employees and all who use Detroit Spectrum Painters facilities to understand the properties of the chemicals with which they will work and to follow all precautions that apply to each specific task. When faced with an unexpected threat of malfunction, injury, or damage, employees are expected to choose a course of action that provides the most protection to themselves

and to others in the area. Every employee is expected to report to the supervisor any unsafe condition seen in the area that would not permit him/her to work safely.

7.5 Safety Equipment

Eyewash fountains are required if the substance in use presents an eye hazard. The eyewash fountain must provide a soft stream or spray of aerated water. In areas where a corrosive chemical or rapid fire hazard exists, safety showers must be provided for immediate first aid treatment of chemical splashes and for extinguishing clothing fires. The shower must be capable of drenching the victim immediately in the event of an emergency. Eyewash fountains and safety showers should be located close to each other so that, if necessary, the eyes can be washed while the body is showered. Access to these facilities must always remain open. In case of accident, flush the affected part for at least 15 minutes. Report the accident to the Responsible Safety Officer immediately.

7.6 Emergencies

In case of an emergency, consider any of the following actions if appropriate: Evacuate people from the area. Isolate the area. If the material is flammable, turn off ignition and heat sources. Call the Fire Department or 911 for assistance. Wear appropriate personal protective equipment. Pour Sorb-all or appropriate neutralizing agent on spill. Clean up; place waste in plastic bag for disposal. Chemical spill cleanup materials are available from stores as listed below: Flammable solvent spill kit Flammable solvent absorbent Acid spill kit Acid spill absorbent Caustic (base) spill kit Caustic (base) absorbent Safety equipment kit (contains scoops, sponge, safety glasses, disposal bags, etc.) Cabinet to hold kits

7.7 Disposal of Chemicals

All Detroit Spectrum Painters employees, participating guests, and visitors using hazardous chemicals are responsible for disposing of these chemicals safely. Federal and state regulations mandate strict disposal procedures for chemicals. To comply with these regulations all persons using Company facilities must observe these procedures. Routine Disposal of Chemicals In general the disposal of hazardous chemicals to the sanitary sewer is not permitted. The Responsible Safety Officer will advise on the proper disposal of chemical wastes. In using chemical waste storage containers, certain procedures must be observed, as listed below: Incompatible chemicals must not be mixed in the same container (e.g., acids should not be mixed with bases; organic liquids should not be mixed with strong oxidizing agents). Waste oils must be collected in 55-gallon drums. Disposal solids, and explosive materials must be stored in separate

containers. The following requirements must be met as a condition for pickup and disposal of chemicals by the Responsible Safety Officer: Chemicals must be separated into compatible groups. Leaking containers of any sort will not be accepted. Dry materials (gloves, wipes, pipettes, etc.) must be securely contained in plastic bags and over packed in a cardboard box. Packages that are wet or have sharp protruding objects will not be accepted for pick up. Unknown chemicals will require special handling. The responsible department must make every effort to identify the material that is to be disposed. If all the user's attempts to identify the waste chemicals have failed, the Responsible Safety Officer will accept the waste and analyze the material. For more information call the Responsible Safety Officer. Each breakable container must be properly boxed. Place all bottles in plastic bags, then place in a sturdy container and use an absorbent cushioning material that is compatible with the chemicals. Each primary container must be labeled with content, amount, physical state, and the percentage breakdown of a mixture. Each box must have a complete list of contents or description written on an official Responsible Safety Officer hazardous materials packing list. Blank packing lists are available from the Responsible Safety Officer. For safety purposes, boxes must be of a size and weight so that one person can handle them. Boxes that exceed 45 pounds or 18 inches on a side cannot be safely handled by one person and will not be acceptable for pick up. General Housekeeping Rules: Maintain the smallest possible inventory of chemicals to meet your immediate needs. Periodically review your stock of chemicals on hand. Ensure that storage areas, or equipment containing large quantities of chemicals, are secure from accidental spills. Rinse emptied bottles that contain acids or inflammable solvents before disposal. Recycle unused laboratory chemicals wherever possible. DO NOT: Place hazardous chemicals in salvage or garbage receptacles. Pour chemicals onto the ground. Dispose of chemicals through the storm drain system. Dispose of highly toxic, malodorous, or lachrymatory chemicals down sinks or sewer drains.

Chapter 8 - Backs and Lifting Safety

Back injuries continue to rise in number and severity in all industries. Detroit Spectrum Painters believes that many of these injuries can be eliminated with proper lifting and carrying techniques and related education and the motivation to utilize these techniques. The backs and lifting safety program addresses proper lifting and carrying techniques and related back injury information.

8.1 Scope and application

This program covers operations and activities which require lifting, carrying, manually moving materials, tools, and other loads, and activities which may require reaching, bending over, twisting, and turning.

The program is intended to reduce and eliminate incidents of back injury and to promote back injury prevention.

8.2 Responsibilities

8.2.a Program Administrator/Safety Director

The program director is responsible for providing training and education on back injuries, proper lifting and carrying techniques, exercise and conditioning, use of lifting aids, and related back injury prevention information.

8.2.b Employees

Employees are responsible for utilizing available lifting aids, using proper manual lifting and carrying techniques, and taking appropriate actions and precautions to prevent back injuries.

8.3 Program Elements

Education and training

The education and training program will include the following elements:

1. Discussion of back activities; bending, reaching, lifting, sitting, recreational activities, work
2. Back safety goals
    a. Back injury and injury prevention
    b. Lifting techniques
3. Back statistics
    a. 80% of Americans will have a back injury that requires medical attention
    b. Back injuries are the second most common cause of lost work time,

next to the common cold
c. Back injuries occur more often at home than at work
d. Injured backs are often subject to reinjury
e. In addition to missed work, there may be a lifetime of pain

4. Back parts

a.Vertebrae
b. Spinal cord
c. Disks
d. Muscles, ligaments, tendons

Potential back injury

a. Strain or sprain
b. Bulging disk
c. Herniated disk

Causes of injury

a. Years of abuse
b. Poor posture
c. Unconditioned back
d. Excess weight and potbellies
e. Bad lifting techniques

Back posture

a. Maintain the back's natural curves
b. Standing
c. Sitting
d. Sleeping
e. Changing posture and stretching
f. Adaptive posture

Conditioning your back

a. Physical conditioning
b. Flexibility
c. Excess weight loss, potbelly loss

Exercises

a. Walking
b. Stretching
c. Sit-ups
d. Leg lifts
e. Squats

Lifting equipment

a. Powered equipment such as forklifts, powered carts, electric pallet jacks
b. Handtrucks, carts, pallet jacks

c. Cranes, hoists
d. Conveyors

Lifting plan

a. Size up the load's weight, shape, and size
b. Clear path considering objects, tight doorways, stairs, ramps
c. Unloading zone

Proper lift

a. Stand with a shoulder-width stance
b. Squat by bending your knees and hips
c. Pull the load close and grip it
d. Tighten stomach, lift head
e. Rise up with your legs

Carrying the load

a. Make sure you can see where you are going
b. Take small, stable steps
c. Do not twist your back

Proper unloading

a. Squat down with the load (reverse of the lift, using legs)
b. Do not bend your back excessively with the load
c. Be careful of fingers

Overhead lifts

a. Shoulder level with the load
b. Slide the load close
c. Use your legs

Long loads

a. Pick up one end
b. Place the balance point on your shoulder
c. Watch both ends

Lifting bags

a. Squat down next to the bag
b. Grab it at opposite corners
c. Lift it to your thigh or waist
d. Stand up
e. Put the load on your shoulder

Team lifting

a. Designate a person to lead the lift

b. Lift at the same time
c. Keep the load level
d. Unload slowly together

Think about your back

a. Don’t be lazy
b. Think long term
c. Don’t try to lift too much
d. Consider your back in all efforts

8.4 Program Evaluation

Injuries and illnesses will be evaluated and those related to material handling and back injuries will be specifically reviewed to determine cause and how the back and lifting program may better interact or may be more effective.

8.5 Documentation & Recordkeeping

Material handling and back injury records will be evaluated and recorded as required by OSHA and the insurance industry. All training participants will be documented and retained.

Chapter 9 - Hazards Communications

9.1 Introduction

Every company must establish, implement and maintain a written Injury and Illness Prevention Program and a copy must be maintained at each workplace or at a central worksite if the company has non-fixed worksites. The requirements consist of the following eight elements:

Responsibility
Compliance
Communication
Hazard Assessment
Accident/Exposure Investigation
Hazard Correction
Training and Instruction
Recordkeeping

This program has been prepared for use by SafetyManual.com Consultants for your industry which has been determined to potentially be 'high hazard'. Proper use of this program requires that the RSO is to carefully review the requirements for each of the eight IIP Program elements found in this program, fill in the appropriate blank spaces and check those items that are applicable to your workplace. The recordkeeping section requires that the RSO select and implement the category appropriate for your establishment. Sample forms for hazard assessment and correction, accident/exposure investigation, and worker training and instruction are provided with this program. This program must be maintained by Detroit Spectrum Painters and Dave Durocher in order to be effective.

9.2 Injury and Illness Prevention Program Responsibility

The Injury and Illness Prevention Program (IIP Program) administrator, also known as
The Responsible Safety Officer – Dave Durocher is the Program Administrator, and has the authority and responsibility for implementing the provisions of this program for Detroit Spectrum Painters.

All managers and supervisors are responsible for implementing and maintaining the IIP Program in their work areas and for answering worker questions about the manual. A copy of this manual is available from each manager and supervisor.

9.3 Compliance

Management is responsible for ensuring that all safety and health policies and procedures are clearly communicated and understood by all employees. Managers and supervisors are expected to enforce the rules fairly and uniformly.
All employees are responsible for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe work environment.
Our system of ensuring that all workers comply with the rules and maintain a safe work environment includes:

- Informing workers of the provisions of our IIP Program;
- Evaluating the safety performance of all workers;
- Recognizing employees who perform safe and healthful work practices;
- Providing training to workers whose safety performance is deficient;
- Disciplining workers for failure to comply with safety & health work practices; and

9.4 Communication

We recognize that open, two-way communication between management and staff on health and safety issues is essential to an injury-free, productive workplace. The following system of communication is designed to facilitate a continuous flow of safety and health information between management and staff in a form that is readily understandable and consists of one or more of the following checked items:

- New worker orientation including a discussion of safety and health policies and procedures.
- Review of our IIP Program.
- Workplace safety and health training programs.
- Regularly scheduled safety meetings.
- Effective communication of safety and health concerns between workers and supervisors, including translation where appropriate.
- Posted or distributed safety information.
- A system for workers to anonymously report about workplace hazards.
- Our establishment has less than ten employees and communicates with and instructs employees orally about general safe work practices and with respect to hazards unique to each employee's job assignment.
- A labor/management safety and health committee that meets regularly, prepares written records of the safety and health committees meetings, reviews results of the periodic scheduled inspections, reviews investigations of accidents and exposures and makes suggestions to management for the prevention of future incidents, reviews investigations of alleged hazardous conditions, and submits recommendations to assist in the evaluation of employee safety suggestion.

9.5 Hazard Assessment

Periodic inspections to identify and evaluate workplace hazards shall be performed by the following competent observer(s) in the following areas of our workplace:

Competent Observer	Area

Periodic inspections are performed according to the following schedule: Weekly, and when the follow circumstances occur:

- When we initially established our IIP Program;
- When new substances, processes, procedures or equipment which present potential new hazards are introduced into our workplace;
- When new, previously unidentified hazards are recognized;
- When occupational injuries and illnesses occur;
- When we hire and/or reassign permanent or intermittent workers to processes, operations, or tasks for which a hazard evaluation has not been previously conducted; and
- Whenever workplace conditions warrant an inspection.
- Periodic inspections consist of identification and evaluation of workplace hazards utilizing applicable sections of the attached Hazard Assessment Checklist and any other effective methods to identify and evaluate workplace hazards.

9.6 Training and Instruction

All workers, including managers and supervisors, shall have training and instruction on general and job-specific safety and health practices. Training and instruction shall be provided as follows:

- When the IIP Program is first established;
- To all new workers, except for construction workers who are provided training through a OSHA approved construction industry occupational safety and health training program;
- To all workers given new job assignments for which training has not previously provided;
- Whenever new substances, processes, procedures or equipment are introduced to the workplace and represent a new hazard;
- Whenever the company is made aware of a new or previously unrecognized hazard;

Chapter 10 - Emergencies

10.1 Organization

Detroit Spectrum Painters requires that during every emergency an organized effort be made to protect personnel from further injury and to minimize property damage. All of Detroit Spectrum Painters's resources can be made available to respond to an emergency. Each supervisor must know what to do during an emergency in his or her area and must be certain that his or her employees understand their roles.

10.2 Master Emergency Response Plan

Detroit Spectrum Painters's Master Emergency Response Plan delineates lines of authority and responsibility for emergency response. In this context, a major emergency may be one of the following: a potential major loss to a building or facility; an emergency that involves more than one building or facility; a situation in which a choice must be made in the assignment of relative levels of authority among emergency-response groups; a potential hazard to the surrounding community; threat; civil disturbances or alerts; natural disasters such as earthquakes, floods, and landslides; and site wide electrical power or other utility failure. During response to such major events, if deemed necessary by management or Detroit Spectrum Painters Fire or Police may be summoned, and a predesignated succession of management personnel would determine who would take charge. The primary responsibility person designated to be in charge is to ensure that priorities are established, that the response is appropriate and adequately implemented, and that the proper notifications are made. In most cases the direct involvement of local supervision and remedial action will be necessary. Adequate emergency response will be made at the group, department, and building levels, with support from Fire, Medical, Protective Services, and other support organizations. As a practical matter it must be recognized that management personnel are normally on site only 40 of the 168 hours per week. Thus, there may be considerable delay before management personnel can assume on-site direction of major emergencies. This highlights the importance of local initiative, at least at the onset of an emergency. The underlying philosophy of the emergency response plan is the recognition that each employee has a vital role and a basic responsibility in the area of safety and emergency action. The only reasonable expectation is that at the onset of an emergency the initial response will be at the individual level. Immediate and knowledgeable action is vital. The emergency plans for individual buildings and facilities set forth the responses to be taken by employees following the discovery of an emergency. Following the immediate measures taken by the individual, the responsibility for action will normally proceed upward through normal organizational lines of authority to the Building Manager and to emergency-response groups. Involvement of individuals at a higher level of responsibility will depend on the particular situation. To reiterate, levels of responsibility proceed downward from top management while action and response levels proceed upward from the first person involved. Don't be afraid to call outside assistance like police and firefighters. Dial 911. When the

police, firefighters or paramedics arrive, surrender command to a qualified emergency specialist. Notify management as soon as practical, which means after all immediate responses have been exercised. The operator at 911 will tell you who is the person in charge of the specialized personnel assigned to respond to the emergency. An orderly transfer of responsibility is then made from the local building or facility organization to this responding unit. The examples listed below identify the most likely outside incident commander for the following types of emergencies: Injury: Ranking Fire Officer or Physician Fire: Ranking Fire Officer Bomb Threat: Ranking Police Officer Civil Disturbance: Ranking Police Officer Radioactive or Chemical Spills: Ranking Fire Officer Responsible Safety Officer Special Toxic Clean Up crew or alternate Power Outage: Pacific Gas and Electric or local Plant Power Engineer Mechanical Utility Failures: Construction and Maintenance Department Superintendent Structural Plant Failures: Engineering Department Head or alternate Landslide: Engineering Department Head or alternate In most emergencies the person who should be in charge is obvious. However, an emergency might arise that requires the major involvement of more than one emergency-response group. In such a case the ultimate authority among those on the scene may not be obvious. In this event, management should be consulted for direction.

10.3 Building Emergency Plan

A specific emergency plan for each building or facility must be prepared under the direction of the Building Manager. A Building Manager and Deputy Manager must be appointed and oriented for each building or complex. Generally, the Building Manager is the person in charge of a building or facility. The Building Manager has specific responsibility for the preparation, updating, and implementation of the emergency plan for this area. This responsibility includes recommending personnel to attend indoctrination and training programs. Specifically, each plan must contain the following information and procedures as appropriate for each building: The names of the Building Manager, Deputy Manager, and Assistant Manager(s). A list of people with specific duties during an emergency and a description of their duties. For example, specific people should be assigned to supervise evacuation and to carry out a rapid search of the area (assuming this can be done safely). Floor plans showing evacuation routes, the location of shutoff switches and valves for the utility systems (water, gas, electricity), and the locations of emergency equipment and supplies (including medical). Indications on the floor plans of areas where specific hazards (i.e., toxic, flammable, and/or radioactive materials) exist. Location and description of special hazards or hazardous devices should be included in the text together with shutdown procedures if applicable. Designation of a primary assembly point for evacuees, well away from the building. An alternate site should also be designated in case the first choice cannot be used. Reentry procedures. No one should reenter an evacuated building or area without specific instructions from the Building Manager or other person in charge. Department Head and Supervisor responsibilities regarding emergency preparedness and action procedures.

Emergency plans for facilities or equipment requiring an Operational Safety Procedure (OSP). Personal Protective Equipment – PPE & Respiratory Protection.

10.4 Protection Issued

Protective clothing will be issued to employees who work with hazardous material for the purpose of protecting their health and safety. The Responsible Safety Officer is available for consultation as needed.

10.5 Radiation Monitoring

Protective clothing must be monitored for radioactive contamination before being sent to the laundry.

10.6 Protective Shoes

Detroit Spectrum Painters encourages the wearing of safety shoes by making them available to any employee at cost from a manufacturer. For certain types of work the wearing of safety shoes is required by Company policy or by federal regulations. Examples are when employees are exposed to foot injuries from hot, corrosive, or poisonous substances; in shops, in equipment handling, or in construction jobs where there is a danger of falling objects; or in abnormally wet locations.

10.7 Protective Gloves

Detroit Spectrum Painters provides proper hand protection to employees exposed to known hand hazards. The supervisor must obtain the suitable hand protection and ensure that it is used. The individual department must maintain a supply of special or infrequently used hand protection. Assistance in selecting the proper hand protection may be obtained by consulting the Responsible Safety Officer.

10.8 Head Protection

Detroit Spectrum Painters provides appropriate head protection devices for employees to protect them from head or other injuries that could result from their working environment. Some head protection devices are available from stock. The supervisor must also maintain sufficient supply of head protection devices for visitors in the area.

10.9 Eye Protection

Detroit Spectrum Painters provides appropriate eye protection devices for employees assigned to tasks in which an eye-injury hazard exists. The supervisor of the operation is responsible for determining the need for suitable eye-protection devices and for ensuring that the employees use them. The Responsible Safety Officer and appropriate Medical Services agency will assist the supervisor in defining eye-hazard operations and in selecting appropriate eye protection. An optometrist is available to issue, repair, adjust, and fit personal safety glasses and also for consultation regarding occupational eye protection. The standard sign: CAUTION, EYE HAZARD AREA, DO NOT ENTER WITHOUT EYE PROTECTION, must be posted in every area where eye protection is mandatory. All employees who work in such an area must wear the eye protection issued to them. Every visitor to the area must also be provided with suitable eye protection.

10.10 Eye Protection Devices

Eye-protection devices are classified in four categories: Personal safety glasses. Goggles, face shields, etc. Temporary safety glasses provided to visitors in eye-hazard areas Laser safety eye wear.

10.11 Respiratory Protection - General

Any operation that generates harmful airborne levels of dusts, fumes, sprays, mists, fogs, smokes, vapors, or gases or that may involve oxygen-deficient atmospheres requires the use of effective safety controls. This must be accomplished, as much as feasible, by accepted engineering control measures (for example, enclosure 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 respiratory protection must be used in accordance with Detroit Spectrum Painters requirements as prescribed by OSHA in ANSI 288.2-1980, Standard Practices for Respiratory Protection.

Chapter 11 - Hand and Power Tools

11.1 Condition of Tools

All hand and power tools and similar equipment, whether furnished by Detroit Spectrum Painters or by the employee, shall be kept and maintained in a safe condition.

When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use. The guard may not be manipulated in any way that will comprise its integrity or compromise the protection in which it was intended. Guarding shall meet the requirements set forth in ANSI B15.1

11.2 Personal Protective Equipment

Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases shall be provided with the particular personal protective equipment necessary to protect them from the hazard.

All personal protective equipment shall meet the requirements of this program and will be maintained in good working order.

11.3 Non-Compliant Machinery / Tools & Equipment

The use of any machinery, tool, material, or equipment which is not in compliance with any applicable requirement of this program is prohibited. Such machine, tool, material, or equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

11.4 Company Provided Tools

Detroit Spectrum Painters provides hand and powered portable tools that meet accepted safety standards. A damaged or malfunctioning tool must not be used; it must be turned in for servicing and a tool in good condition obtained to complete the job. Employees must use the correct tool for the work to be performed; if they are unfamiliar with the operation of the tool, they must request instruction from their supervisor before starting the job. Supervisors are responsible for ensuring that their subordinates are properly trained in the operation of any tool that they are expected to operate. An employee is not permitted to use a powder-actuated tool unless instructed and licensed by the manufacturer.

Everyone is required to be responsible for all tools and equipment that you use; remember which vehicle you took the item from and return it to that vehicle. When you lay the item or tool on the ground, remember where you placed it so you can return it to

the proper vehicle. It would be appreciated that when leaving the job, that all Employees help by looking around for any tools or equipment that wasn't replaced.

11.5 Grounding

Tools that are not double-insulated must be effectively grounded and tested. Testing must be accomplished before initial issue, after repairs, and after any incident that could cause damage, such as dropping or exposure to a wet environment. Grounded tools must always be used with an effectively grounded circuit. Any extension cord used with a grounded tool must be a three-wire, grounded type. Electric-powered hand tools used on construction sites, on temporary wired circuits, or in wet environments will be used in conjunction with an approved ground fault circuit interrupter (GFCI). The responsibility for implementing and maintaining this program rests with the individual supervisors involved. Tool testing equipment will be maintained by the Responsible Safety Officer. Documentation of tool testing will be maintained by the group owning powered hand tools. Tools maintained in a tool crib and tested prior to issue are exempted from this requirement. Repairs of defective tools will only be made by qualified electrical personnel.

11.6 Shop Rules

Any Detroit Spectrum Painters facility housing shop tools is defined by OSHA as a shop. It is the responsibility of the person in charge of each shop to ensure compliance with the following practices: Shop machines and tools are to be used only by qualified personnel. It is the responsibility of the person in charge of the shop to render a judgment as to who is qualified. The person in charge will take whatever action is deemed necessary to prevent a personal injury or damage to equipment. Equipment guards and protective devices must be used and must not be compromised. Approved eye protection (visitor's glasses) must be worn by anyone entering and/or passing through shop areas. Approved industrial safety eye protection must be worn by anyone working in a posted shop area. Shoes or boots covering the whole foot must be worn in shop areas. Persons using machine tools must not wear clothing, jewelry, or long hair in such a way as to represent a safety hazard.

11.7 Portable Power Tools

Portable power tools pose a special danger to employees because they are deceptively small and light, yet they can do great bodily harm if used improperly or poorly maintained. These rules apply to all power tools, but are especially important when handling portable saws, drills and power screwdrivers. Check your equipment before you use it. All grinders, saws and similar equipment should be equipped with appropriate safety guards. Power tools should not be used without the correct shield, guard, or attachment, recommended by the manufacturer. Portable circular saws must be equipped with guards above and below the base shoe. Circular saw guards should be checked periodically and before each use to assure they are not wedged up, thus

leaving the lower portion of the blade unguarded. All rotating or moving parts of equipment should be guarded to prevent physical contact. All cord-connected, electrically-operated tools and equipment should be effectively grounded or of the approved double insulated type.

11.8 Hand Tools

Hand tools are non-powered and include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance, such as;

1. Using a screwdriver as a chisel may cause the tip of the screwdriver to break and fly, hitting the user or other employees.
2. If a wooden handle on a tool such as a hammer or an axe is loose, splintered, or cracked, the head of the tool may fly off and strike the user or another worker.
3. A wrench must not be used if its jaws are sprung, because it might slip.
4. Impact tools such as chisels, wedges, or drift pins are unsafe if they have mushroomed heads. The heads might shatter on impact, sending sharp fragments flying.

Detroit Spectrum Painters is responsible for the safe condition of tools and equipment used by employees, but employees must be responsible for properly using and maintaining tools in a safe usable condition.

Detroit Spectrum Painters should caution and instruct employees that saw blades, knives, or other tools should be directed away from aisle areas and other employees working in close proximity. Knives and scissors must be sharp. Dull tools can be more hazardous than sharp ones.

11.9 Hand-held Power Tools.

Switches for all powered hand tools shall comply with the following:

All hand-held powered platen sanders, grinders with wheels 2-inch diameter or less, routers, planers, laminate trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth of an inch wide or less may be equipped with only a positive "on-off" control.

All hand-held powered drills, tappers, fastener drivers, horizontal, vertical, and angle grinders with wheels greater than 2 inches in diameter, disc sanders, belt sanders, reciprocating saws, saber saws, and other similar operating powered tools shall be equipped with a momentary contact "on-off" control and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.

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Chapter 12 - Ladders and Scaffolds

12.1 Ladders

Ladders must be in good condition, made of suitable material, of proper length, and of the correct type for the use intended. Damaged ladders must never be used; they should be repaired or destroyed. Ladders used near electrical equipment must be made of a non-conducting material. Stored ladders must be easily accessible for inspection and service, kept out of the weather and away from excessive heat, and well supported when stored horizontally. A portable ladder must not be used in a horizontal position as a platform or runway or by more than one person at a time. A portable ladder must not be placed in front of doors that open toward the ladder or on boxes, barrels, or other unstable bases. Ladders must not be used as guys, braces, or skids. The height of a stepladder should be sufficient to reach the work station without using the top or next to the top steps. Bracing on the back legs of stepladders must not be used for climbing. The proper angle (75-1/2 degrees) for a portable straight ladder can be obtained by placing the base of the ladder a distance from the vertical wall equal to one quarter of the vertical distance from base to top of ladder's resting point. Ladders must be ascended or descended facing the ladder with both hands free to grasp the ladder. Tools must be carried in a tool belt or raised with a hand line attached to the top of the ladder. Extension ladders should be tied in place to prevent side slip.

12.2 Scaffolds

All scaffolds, whether fabricated on site, purchased, or rented must conform with the specifications found in ANSI A10.8, Safety Requirements for Scaffolding. Rolling scaffolds must maintain a 3:1 height to base ratio (use smaller dimension of base). The footing or anchorage for a scaffold must 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 blocks must not be used to support scaffolds or planks. No scaffold may be erected, moved, dismantled, or altered unless supervised by competent persons. Scaffolds and their components must be capable of supporting at least four times the maximum intended load without failure. Guard rails and toe boards must be installed on all open sides and ends of scaffolds and platforms more than 10 ft above the ground or floor. Scaffolds 4 feet to 10 feet in height having a minimum horizontal dimension in either direction of less than 45 inches must have standard installed on all open sides and ends of the platform. Wire, synthetic, or fiber rope used for suspended scaffolds must be capable of supporting at least 6 times the rated load. No riveting, welding, burning, or open flame work may be performed on any staging suspended by means of fiber or synthetic rope. Treated fiber or approved synthetic ropes must be used for or near any work involving the use of corrosive substances. All scaffolds, bosun's chairs, and other work access platforms must conform with the requirements set forth in the Federal Occupational Safety and Health Regulations for Construction, 29 CFR 1926.451, except where the specifications in ANSI A10.8 are more rigorous.

12.3 Floors

Workroom floors must be in a clean and, as much as possible, dry condition. Drainage mats, platforms, or false floors should be used where wet processes are performed. Floors must be free from protruding nails, splinters, holes, and loose boards or tiles. Permanent aisles or passageways must be marked. Floor holes must be protected by covers that leave no openings more than one inch wide. Floor openings into which persons can accidentally walk must be guarded by standard railings and toe boards. Open-sided floors, platforms, and runways higher than four feet must be guarded by standard railings. Toe boards must be used wherever people can pass below or hazardous equipment or materials are below.

12.4 Fall Arrester Systems Required

When workers are required to work from surfaces that are in excess of 7-1/2 ft above an adjacent safe work place and are unprotected by railings, the following procedures and guidelines must be applied: Before selecting personnel for work at elevated work stations, supervisors must consider the workers' physical condition, such as medical problems, fear of heights, and coordination. The Medical Services Department should be contacted for information in this regard. Approved fall-arrester systems are required for all work at heights of 10 or more feet. A recommended fall-arrester system consists of a full body-harness, a lanyard consisting of 1/2inch nylon rope or equivalent with a breaking strength of 5400 lb and a maximum length to provide for a fall no greater than 6 feet, Sala-type fall-arrester block (optional), and an anchored hook-up location Alternate equipment must be approved by the Responsible Safety Officer. Fall-arrester systems are recommended for light work at heights between 7-1/2 and 10 feet. Fall-arrester systems are not required when work is being done while standing on a ladder. Ladders should be tied off. Use of a controlled descent device is not necessary unless it is impossible to reach a stranded person by another means. The Responsible Safety Officer will advise, on request, regarding usage and procedures. It is the responsibility of the supervisor to plan the intended work sufficiently to ensure that job planning and proper precautions have been taken. The Responsible Safety Officer is available for consultation.

12.5 Personnel Platforms

Work may be performed from a crane-suspended platform where another procedure is not possible because of structure design or work site conditions. Personnel platforms must be designed by a qualified engineer and reviewed by the Responsible Safety Officer. The suspension system must minimize tipping. The platform must be designed with a minimum safety factor of 5 based on the ultimate strength of the members, and the design must conform to 29 CFR 1926.550(g).

12.6 Powered Platforms and Equipment for Building Maintenance

12.6.a Operations.

(a) Training.

(1) Working platforms shall be operated only by qualified persons who are proficient in the operation, safe use and inspection of the particular working platform to be operated.

(2) All employees who operate working platforms shall be trained in the following:

(A) Recognition of, and preventive measures for, the safety hazards associated with their individual work tasks.

(B) General recognition and prevention of safety hazards associated with the use of working platforms, including the provisions in the article relating to the particular working platform to be operated.

(C) Emergency action plan procedures are required.

(D) Work procedures required in subsection (a)(4) of this section.

(E) Personal fall arrest system inspection care, use and system performance.

(3) Training of employees in the operation and inspection of working platforms shall be done by a qualified person.

(4) Written work procedures for the operation, safe use and inspection of working platforms shall be provided for employee training. Pictorial methods of instruction, may be used, in lieu of written work procedures, if employee communication is improved using this method. The operating manuals supplied by manufacturers for platform system components can serve as the basis for these procedures.

(5) The company shall certify that employees have been trained in operating and inspecting a working platform by preparing a certification record which includes the identity of the person trained, the signature of the company or the person who conducted the training and the date that training was completed. The certification record shall be prepared at the completion of the training required in subsection (a)(2) of this section, and shall be maintained in a file for the duration of the employee's employment. The certification record shall be kept readily available for review by the Division.

(b) Use.

(1) Working platforms shall not be loaded in excess of the rated load, as stated on the

platform load rating plate.

(2) Employees shall be prohibited from working on snow, ice, or other slippery material covering platforms, except for the removal of such materials.

(3) Adequate precautions shall be taken to protect the platform, wire ropes and safety lines from damage due to acids or other corrosive substances, in accordance with the recommendations of the corrosive substance producer, supplier, platform manufacturer or other equivalent information sources. Platform members which have been exposed to acids or other corrosive substances shall be washed down with a neutralizing solution, at a frequency recommended by the corrosive substance producer or supplier.

(4) Platform members, supporting members constructed of aluminum, wire ropes and safety lines shall be protected when using a heat producing process. Wire ropes and safety lines which have been contacted by the heat producing process shall be considered to be permanently damaged and shall not be used.

(5) The platform shall not be operated in winds in excess of 25 miles per hour except to move it from an operating to a storage position. Wind speed shall be determined based on the best available information, which includes on-site anemometer readings and local weather forecasts which predict wind velocities for the area.

(6) On exterior installations, an anemometer shall be mounted on the platform to provide information of onsite wind velocities prior to and during the use of the platform. The anemometer may be a portable (hand held) unit which is temporarily mounted during platform use.

(7) Tools, materials and debris not related to the work in progress shall not be allowed to accumulate on platforms. Stabilizer ties shall be located so as to allow unencumbered passage along the full length of the platform and shall be of such length so as not to become entangled in rollers, hoists or other machinery.

Chapter 13 - Materials Handling

13.1 Introduction

Detroit Spectrum Painters requires that safety planning and practices for commonplace tasks be as thorough as for operations with unusual hazards. Commonplace tasks make up the greater part of the daily activities of most employees and, not unexpectedly, offer more potential sources of accidents with injuries and property damage. Every operation or work assignment begins and ends with handling of materials. Whether the material is a sheet of paper (paper cuts are painful) or a cylinder of toxic gas, accident risks can be reduced with thorough planning. Identifying obvious and hidden hazards should be the first step in planning work methods and job practices. Thorough planning should include all the steps associated with good management from job conception through crew and equipment decommissioning. Most of the material presented in this chapter is related to the commonplace and obvious. Nevertheless, a majority of the incidents leading to injury, occupational illness, and property damage stem from failure to observe the principles associated with safe materials handling and storage. A less obvious hazard is potential failure of used or excessive motorized handling or lifting equipment. The Responsible Safety Officer must be notified whenever it is desired to acquire a crane, forklift truck, or other motorized handling or lifting equipment from excessed sources.

13.2 Lifting and Moving

Lifting and moving of objects must be done by mechanical devices rather than by manual effort whenever this is practical. The equipment used must be appropriate for the lifting or moving task. Lifting and moving devices must be operated only by personnel trained and authorized to operate them. Employees must not be required to lift heavy or bulky objects that overtax their physical condition or capability.

13.3 Rigging

Planning for safe rigging and lifting must begin at the design stage, and lifting procedures must be developed for assembly and installation. The lifting procedure should be developed and discussed with the rigging crew fore person. Responsibility for all rigging jobs is shared between the rigging crew and the customer. The customer is responsible for defining and requesting the move, for providing technical information on relevant characteristics of the apparatus, including special lifting fixtures when required, for providing suggestions on rigging and moving, and for assigning someone to represent them both in planning and while the job is being carried out. The riggers are responsible for final rigging and for carrying out whatever moves have been designated. Before any movement takes place, however, each representative must approve the rigging and other procedures associated with the intended move. Each must respect the responsibility and authority of the other to prevent or terminate any action he or she

judges to be unsafe or otherwise improper. The supervisor must make certain that personnel know how to move objects safely by hand or with mechanical devices in the operations normal to the area and must permit only those employees who are formally qualified by training and certification to operate a fork truck, crane, or hoist. The supervisor must enforce the use of safe lifting techniques and maintain lifting equipment in good mechanical condition. Employees are required to observe all established safety regulations relating to safe lifting techniques. The Responsible Safety Officer provides training programs followed by certification for employees who have demonstrated the ability to operate fork trucks of up to 4-ton capacity and for incidental crane operations that require no special rigging.

13.4 Manual Lifting Rules

Manual lifting and handling of material must be done by methods that ensure the safety of both the employee and the material. It is Detroit Spectrum Painters policy that employees whose work assignments require heavy lifting be properly trained and physically qualified, by medical examination if deemed necessary. The following are rules for manual lifting: Inspect the load to be lifted for sharp edges, slivers, and wet or greasy spots. Wear gloves when lifting or handling objects with sharp or splintered edges. These gloves must be free of oil, grease, or other agents that may cause a poor grip. Inspect the route over which the load is to be carried. It should be in plain view and free of obstructions or spillage that could cause tripping or slipping. Consider the distance the load is to be carried. Recognize the fact your gripping power may weaken over long distances. Size up the load and make a preliminary "heft" to be sure the load is easily within your lifting capacity. If it is not, get help. If team lifting is required, personnel should be similar in size and physique. One person should act as leader and give the commands to lift, lower, etc. Two persons carrying a long piece of pipe or lumber should carry it on the same shoulder and walk in step. Shoulder pads should be used to prevent cutting shoulders and help reduce fatigue. To lift an object off the ground, the following are manual lifting steps: Make sure of good footing and set your feet about 10 to 15 inches apart. It may help to set one foot forward of the other. Assume a knee-bend or squatting position, keeping your back straight and upright. Get a firm grip and lift the object by straightening your knees - not your back. Carry the load close to your body (not on extended arms). To turn or change your position, shift your feet - don't twist your back. The steps for setting an object on the ground are the same as above, but in reverse.

13.5 Mechanical Lifting

Mechanical devices must be used for lifting and moving objects that are too heavy or bulky for safe manual handling by employees. Employees who have not been trained must not operate power-driven mechanical devices to lift or move objects of any weight. Heavy objects that require special handling or rigging must be moved only by riggers or

under the guidance of employees specifically trained and certified to move heavy objects.

13.6 Inspections

Each mechanical lifting or moving device must be inspected periodically. Each lifting device must also be inspected before lifting a load near its rated capacity. Defective equipment must be repaired before it is used. The rated load capacity of lifting equipment must not be exceeded. Material moving equipment must be driven forward going up a ramp and driven backward going down a ramp. Traffic must not be allowed to pass under a raised load. The floor-loading limit must be checked before mobile lifting equipment enters an area. Passengers must not be carried on lifting equipment unless it is specifically equipped to carry passengers.

13.7 Load Path Safety

Loads moved with any material handling equipment must not pass over any personnel. The load path must be selected and controlled to eliminate the possibility of injury to employees should the material handling equipment fail. Equipment worked on while supported by material handling equipment must have a redundant supporting system capable of supporting all loads that could be imposed by failure of the mechanical handling equipment. A suspended load must never be left unattended but must be lowered to the working surface and the material handling equipment secured before leaving the load unattended.

13.8 Off Site Shipping

Material being shipped off site must be packed or crated by competent shipping personnel. Boxes, wooden crates, and other packing materials must be safely consigned to waste or salvage as soon as practicable following unpacking.

13.9 Truck Loading

All objects loaded on trucks must be secured to the truck to prevent any shifting of the load in transit. The wheels of trucks being loaded or unloaded at a loading dock must be chocked to prevent movement.

13.10 Clean Work Areas

All areas controlled by Detroit Spectrum Painters must be kept in orderly and clean condition and used only for activities or operations for which they have been approved. The following specific rules must also be followed: Keep stairs, corridors, and aisles clear. Traffic lanes and loading areas must be kept clear and marked appropriately. Store materials in work rooms or designated storage areas only. Do not use hallways, fan lofts, or boiler and equipment rooms as storage areas. Do not allow exits, passageways, or access to equipment to become obstructed by either stored materials or materials and equipment that is being used. Arrange stored materials safely to prevent tipping, falling, collapsing, rolling, or spreading - that is, any undesired and unsafe motion. Do not exceed the rated floor capacity of stored material for the area. The load limit and the maximum height to which material may be stacked must be posted. Place materials such as cartons, boxes, drums, lumber, pipe, and bar stock in racks or in stable piles as appropriate for the type of material. Store materials that are radioactive, fissile, flammable, explosive, oxidizing, corrosive, or pyrophoric only under conditions approved for the specific use by the Responsible Safety Officer. Segregate and store incompatible materials in separate locations. Remove items that will not be required for extended periods from work areas and put them in warehouse storage. Call for assistance. Temporary equipment required for special projects or support activities must be installed so that it will not constitute a hazard. A minimum clearance of 36 inches must be maintained around electrical power panels. Wiring and cables must be installed in a safe and orderly manner, preferably in cable trays. Machinery and possible contact points with electrical power must have appropriate guarding. The controls for temporary equipment must be located to prevent inadvertent actuation or awkward manipulation. When heat-producing equipment must be installed, avoid accidental ignition of combustible materials or touching of surfaces above 60 degrees C (140 F). Every work location must be provided with illumination that meets OSHA requirements. Evaluation of illumination quality and requirements is made by the Responsible Safety Officer, but the supervisor of an area is responsible for obtaining and maintaining suitable illumination. Areas without natural lighting and areas where hazardous operations are conducted must be provided with enough automatically activated emergency lighting to permit exit or entry of personnel if the primary lighting fails.

13.11 Cranes

There are two types of heavy duty cranes at Detroit Spectrum Painters. Bridge cranes are classified as cab-operated or pendant-operated. Mobile cranes consist of a boom and controls mounted on a truck chassis. Bridge and mobile cranes must be operated only by trained operators designated by the supervisor in charge of the facility. The supervisor is also responsible for ensuring that operators are trained, carrying out the inspections and following the safe operating rules explained in the Operator/Rigger Training Program. The Operator/Rigger Training Program is administered by the Responsible Safety Officer. The training staff consists of a qualified crane consultant, professional riggers, and the Responsible Safety Officer. There are two levels of required training and performance: Professional Operator/Rigger: Person whose principal assignment includes crane operation and rigging functions. The chief operator/rigger must ensure that those professional operator/riggers under his/her supervision maintain the necessary qualifications. Incidental Operator/Rigger: Person who performs operating/rigging functions as an incidental part of his/her normal work

assignment. Persons in this category are restricted to lower load limits and rigging of specific types of hardware.

All crane functional operating mechanisms for maladjustment interfering with proper operation and for excessive wear of components. On days used inspection is required by a crane operator. Deterioration or leakages in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems. On days used inspection is required by a crane operator. Hooks: On days used visual inspection by a crane operator is required. Annual inspections must have signed reports by Detroit Spectrum Painters or an outside Engineer. Hooks with cracks or having deformation more than 15% in excess of normal throat opening or more than 10 degrees twist from the plane of the unbent hook must be discarded. Wire-rope slings, including end connections, for excessive wear, broken wires, stretch, kinking, or twisting. Visual inspection by crane operator on days used. The Responsible Safety Officer, the primary user or the Building Manager must ensure that an annual inspection with a signed report is made. Detroit Spectrum Painters or an outside Engineer must inspect rope reeving for noncompliance with manufacturer's recommendations before first use and annually thereafter.

13.12 Crane Maintenance

All crane hooks and lifting fixtures must be magnafluxed at least every four years. This will normally coincide with the certification load testing and inspection. The person in charge of a crane may request testing of hooks and/or lifting fixtures more frequently than every four years. The person in charge must give the Responsible Safety Officer a schedule of the desired frequency for testing the hook so that disassembly of the hook block can be included in their schedule for preventive maintenance of a particular crane.

13.13 OSHA Crane Standards

Routine maintenance, adjustments, and repairs must be performed by a qualified mechanic and reported to the Responsible Safety Officer according to each machine's established schedule and according to OSHA requirements.

13.14 Forklift Operators

The Responsible Safety Officer must be notified whenever it is desired to acquire a crane from excess sources.

13.15 OSHA Standards for Forklifts

Forklift users must familiarize themselves with and comply with OSHA Standard 29 CFR 1910.178 and ANSI B56.1. Modifications and additions must not be performed by the customer

or user without manufacturer's prior authorization or qualified engineering analysis. Where such authorization is granted, capacity, operation and maintenance instruction plates, tags, or decals must be changed accordingly. If the forklift truck is equipped with front end attachments other than factory installed attachments, the user must ensure that the truck is marked with a card or plate that identifies the current attachments, shows the approximate weight of the truck with current attachments and shows the lifting capacity of the truck with current attachments at maximum lift elevation with load laterally centered. The user must see that all nameplates and caution and instruction markings are in place and legible. The user must consider that changes in load dimension may affect truck capacities.

13.16 Safety Inspection, Responsibility

Each operator is responsible for the safety and safety inspection of his or her lifting devices (such as screw pin shackles, hoist rings, commercial equipment, etc.) and for its lifting fixtures (such as spreader bars, special slings, Detroit Spectrum Painters-designed equipment, etc.). All lifting fixtures designed at Detroit Spectrum Painters must be proof tested to twice their maximum rated loads before they are placed in service. A magnetic particle inspection or other appropriate crack detection inspection is required after the proof test. The capacity must be marked on the lifting fixture so that it is clearly visible to the equipment operator. All lifting device pins of 2-inch diameter or larger must have a magnetic particle inspection before they are placed in service. All lifting fixtures must be inspected at least once every four years (or upon request), using magnetic particle detection or other appropriate methods. The Responsible Safety Officer must ensure that proof testing is performed on all lifting fixtures designed at Detroit Spectrum Painters before they are placed in service; that adequate test records are kept; and that the lifting devices and fixtures are used and maintained correctly. Upon request, the Responsible Safety Officer will provide a current test report to the user.

13.17 Crane Loads

When equipment is designed to be crane lifted at a single point with a single-bolt pickup device, the vertical lifting load through the screw thread of the bolt must be in line with the axis of the bolt so that the load will remain level when it is lifted. With this bolt alignment the lift will be through the center of gravity and will be safer since the load will not tilt or kick out when it is lifted. A single-bolt pickup device, such as a Safety Hoist Ring or equivalent carefully designed and maintained in-house device must be used. When a load is to be crane-lifted by slings from a crane hook through 2, 3, or 4 single-load pickup points located at the corners of the load, and without the use of a spreader bar, the forces at the lift points will be non-vertical. In this case a single bolt pickup device, such as a safety hoist ring or equivalent carefully designed and maintained in-house device must be used at each pickup point. The use of eye bolts with shoulders is permitted for lifting light incidental loads after receiving approval from the crane certified operator or supervisor and when the following conditions are met: The load is in line with the axis of the eye bolt and side loads are minimal (a spreader bar may be required). The average stress at the root area of the thread does not exceed 5000 psi. The thread engagement is at least two bolt diameters.

Chapter 14 - Scaffolds – General Requirements

14.1 General Requirements.

(a) Scaffolds shall be provided for all work that cannot be done safely by employees standing on permanent or solid construction at least 20 inches wide, except where such work can be safely done from ladders.
EXCEPTIONS:
1. Work of a limited nature and of short duration when the permanent or solid construction is less than 20 inches in width and the fall distance does not exceed 15 feet in height and provided adequate risk control is recognized and maintained under competent supervision.
2. Work of a short duration from joists or similar members at 2 feet or closer centers, planks resting on these members forming a plank platform 12 inches wide or equivalent protection.

(b) Scaffolds shall be constructed of wood or other suitable materials such as steel or aluminum members of known strength characteristics. Where materials other than wood are used or where scaffold designs differ from those specified in these Orders, the scaffold and its parts must provide a degree of strength, rigidity and safety equivalent to that provided by the described scaffold it replaces.

(c) Anchorage and bracing shall be such that scaffolds and falsework will be prevented from swaying, tipping, or collapsing.

(d) Scaffold lumber, except for planks, used on suspended or ladder-jack scaffolds, shall be the equivalent of "selected lumber," free from damage that affects its strength. (See definitions for lumber specifications.)

(e) (1) Extension planking of the finger type shall be made with at least 5 fingers on each side. These fingers shall be at least 1-inch by 2 1/8-inch selected straight-grained Douglas fir or material of equal strength. All metal fittings shall be adequate to maintain the structural qualities of the device. (2) The length of the extended planking shall not exceed 12 feet 6 inches, and the actual mechanical overlap between the 2 halves shall be not less than 1/8 of the length of the extended planking. A substantial stop shall be provided to maintain this overlap.
(3) Not more than one employee shall be permitted at one time on any extension planking that is more than 3 feet in height.
(4) Extension planking shall not be used as a platform on ladder-jack, suspended, or other unstable scaffolds.

(f) (1) Except as specified in other Orders, all planking shall be at least equivalent to 2-inch x 10-inch (nominal) lumber selected for scaffold grade plank as defined Lumber--"Structural Plank."
(2) The maximum permissible spans for 2 x 10-inch (nominal) or 2 x 9-inch (rough) planks shall be as shown in the following Table:

Working Load (psf)	25	50	75
Permissible Span (ft.).....	10	8	7

(3) Manufactured planks with spans in excess of 10 feet shall be labeled to indicate the maximum safe working load based on a safety factor of four.
(4) All planks shall be capable of safely sustaining the intended load.

(g) Except as specified in other Orders, a scaffold plank shall not overhang its support by more than 18 inches, unless access to this overhanging portion is prevented by a guardrail, or other barrier, or unless the other plank end is securely anchored.

(h) Inspection of Lumber. All scaffold lumber shall be visually inspected for defects before and during use. Defective lumber shall not be used.

(i)
(1) Nailing. All nailed joints in scaffolds and wooden falsework must contain enough properly placed nails of ample size to carry the loads they are intended to support.
(2) Nailed joints or connections shall not be used to support concrete hoppers with a capacity in excess of 1/2 cubic yard.
(3) Double-headed nails shall not be used for attaching railings or in other service where the projections might catch on the clothing of workers or create similar hazards.
(4) No nail smaller than 8-penny shall be used in the construction of scaffolding.
(5) All nails shall be driven full length or to the first head when double-headed nails are used.
(6) The minimum number of nails per connection shall be in accordance with the following table:

	1" x 6" Material	1" x 8" Material	2" Material
Ledgers	4-8d	5-8d	2-16d
Ribbons	3-8d	3-8d	
Braces	3-8d	3-8d	2-16d
Guardrails	2-8d	2-8d	2-16d

(7) Lubricated or wax-coated nails shall not be used in the construction of scaffolds, falsework, or other temporary installations.
(j) Prohibited Types of Scaffolds. Lean-to or jack scaffolds, shore scaffolds, nailed brackets, loose tile, loose brick, loose blocks, stilts, or other similar unstable objects shall not be used as working platforms, or for the support of such platform.
EXCEPTION: Bricklayer's "jump boards" no higher than 20 inches above the regular scaffold platform are acceptable for such service when supported by piers of carefully

piled bricks or concrete blocks.

(k) Erection and Dismantling.
(1) The erection and dismantling of scaffolds or falsework shall be performed under the supervision and direction of a qualified person.
NOTE: In addition to persons meeting the requirements of "qualified persons" or person(s) possessing a certification of competence in scaffold erection, dismantling and use issued by trade associations, State-approved apprenticeship or training programs or other similar training programs shall be considered a "qualified person(s)."
(2) Erection and dismantling of scaffolds shall be performed in accordance with good engineering practice. Where engineering design is required by these orders, the engineering drawings shall be made available at the job site during erection or upon request by the Division.
(3) All required ties to the structure shall be installed as soon as the scaffold has been completed to the tie-in area during erection.
(4) Ties shall only be removed during dismantling as the work progresses downward unless other methods are used to prevent the scaffold from falling over.
(5) No structural members shall be removed from scaffolds during dismantling operations below the level being dismantled.
(6) Where work platforms are proposed, guardrails shall be installed before other work not directly related to scaffold erection is permitted to begin.
(7) The requirements of the General Section (k) (2) through (6), inclusive, may be temporarily suspended for short durations, provided adequate risk control is recognized and maintained under immediate, competent supervision.

(l) Removal of Braces. Scaffolds or falsework installations shall not be altered by removing uprights, braces, or supports unless other members providing equivalent strength are substituted.

(m) Loading. Scaffolds shall not be overloaded. Material shall not be allowed to accumulate to the extent that a scaffold is subjected to loading it is not designed to support.

(n) Access.
(1) A safe and unobstructed means of access, such as a walkway, stair, or ladder shall be provided to all scaffold platforms.
(2) Climbing ladders or stairways on scaffolds used for access and egress shall be affixed or built into the scaffold by proper design and engineering, and shall be so located that their use will not disturb the stability of the scaffold.
(A) If a ladder is used as a means of access to the scaffold, it shall be securely attached and shall comply with the Section on Ladders.
(B) Permanent stairways shall comply with the applicable provisions of the General Industry Safety Orders. Prefabricated scaffold steps or stairs shall comply with the design, manufacture and installation requirements of ANSI

A10.8-1988, scaffolding-Safety Requirements, which is hereby incorporated by reference.
(C) Horizontal members of end frames may be designed and used as a climbing device provided that the steps are:
1. Reasonably parallel and level.
2. Continuous climb as required in this chapter under the Metal Scaffolds Section (a) (8), using frames of the like configuration.
3. Provided with sufficient clearance to provide a good handhold and foot space.

(o) Sloped Platforms. Platforms shall not be sloped more than 2 feet vertically to 10 feet horizontally and shall be positively secured against slipping from supports.

(p) Slippery Conditions. No worker shall be permitted to work on a scaffold platform where slippery conditions exist unless such conditions are a necessary part of the work.

(q) Overhead Protection. Workers on scaffolds who are exposed to overhead hazards shall be provided with overhead protection or other means that will effectively eliminate the hazard.

(r) Bolted Connections. Bolts used in the construction of scaffolds shall be of a size and in sufficient numbers at each connection to develop the designed strength of the scaffold.

(s) Hoisting of Materials. Where materials are line-hoisted onto a scaffold, a tag line shall be used where necessary to control the load.

(t) Platform Planks at Corners. When a scaffold materially changes its direction, the platform planks shall be laid to prevent tipping. The planks that meet the corner ledger at an angle shall be laid first, extending over the diagonally placed ledger far enough to have a good safe bearing, but not far enough to involve any danger from tipping. The planking running in the opposite direction at an angle shall be laid so as to extend over and rest on the first layer of planking.

14.2 Light-Trade Wooden Pole Scaffolds.

(a) Pole scaffolds to be used by carpenters, lathers, shinglers, painters, plasterers, sheet metal workers, or other trades not using heavy tools or storing heavy materials on the scaffolds, shall be constructed as follows:

(b) Light-Trade Exterior Scaffolds.
(1) Uprights. For heights not to exceed 20 feet, the uprights shall be 2-inch by 4-inch lumber or heavier spaced not more than 3 feet between uprights at right angles

to the wall and not more than 10 feet center to center, parallel to the wall. The inside uprights may be omitted and ledgers attached to the permanent structure, provided that the method of attaching the ledgers to the permanent structure will make the connection as secure as though the ledger were nailed to the upright with 5 8-penny nails. The splices of uprights shall be made with square butt joints, and scabs of 1-inch by 4-inch or heavier material at least 48 inches long shall be nailed on 2 sides of each upright with 6 nails in each 1/2 of each scab. If the uprights of the scaffold rest on a surface that might cause slipping, a continuous sill or other means shall be provided to hold the uprights in place. When the scaffold is resting on earth or other such material, the uprights shall rest on and be secured to the equivalent of a 2-inch by 10-inch by 10-inch wooden base.

NOTE: 1 1/8-inch by 10-inch by 10-inch piece of exterior grade plywood may be used in lieu of the wooden base mentioned above.

(2) Ledgers and Ribbons. The platforms of the scaffold shall be supported by ledgers. For ledgers spanning not more than 3 feet between uprights, use 2 pieces of 1-inch by 6-inch board, 1 being on each side of the uprights and fastened securely at each point of support. Single 2-inch by 4-inch ledgers are not permitted. Vertical spacing of ribbons and ledgers shall not exceed 7 feet.

The ribbons shall be 1-inch by 6-inch or heavier material, placed on the outer uprights, directly under, and in contact with, the ledgers. The ribbons shall be long enough to extend from upright to upright without splices.

EXCEPTIONS:

1. When metal ledgers are used or when ledgers are bolted or when a 45-degree angle brace is nailed to the uprights between double ledgers, and ledgers also nailed to this brace, the ribbon may be placed at other elevations such as guardrail height, but they cannot be eliminated from the scaffold.
2. Metal ledgers and ribbons that are part of a patented scaffold system may be used when installed in accordance with the manufacturer's instructions.

(3) Ties and Braces. The scaffold shall be securely tied to the building or structure by means of a double looped No. 12 iron wire, or single looped No. 10 iron wire or 1-inch by 4-inch boards with at least 2 nails at each connection or equivalent means. Ties shall connect to the inside uprights and shall not be more than 20 feet apart horizontally and vertically. The outside line of uprights shall contain sufficient diagonal bracing of 1-inch by 6-inch material in a vertical plane across the entire face of the scaffold in both directions to prevent swaying, tipping, or collapsing. (See Appendix Plate B-18).

EXCEPTION: Bracing of 2-inch by 4-inch material may be used provided that the bracing extends from ledger to next higher or lower ledger or from ledger to sill in the form of an "X" in the end bays and in every third bay in between so that the "X" bracing also extends from the upper-most ledger to the sill, vertically, in each of these bays.

(4) Railing. Open sides and ends of intermediate working levels 7 1/2 feet or more above grade shall be guarded by a 2-inch by 4-inch top rail nailed to the uprights so that the top edge is between 42 inches and 45 inches above the platform. Midrails of at least 2-inch by 4-inch material are required at all work levels. The uppermost platform shall be protected by a top rail consisting of double 2-inch by 4-inch members. One member

shall be fastened in a flat position on top of the uprights and the other member shall be fastened in an edge-up position to the inside of the uprights and at the side of the top member. A single 2-inch by 4-inch member having an allowable bending stress of at least 1,900 psi may be used as a top rail.
(5) Platforms.
(A) Platform planks shall be of 2-inch by 10-inch or larger material and of such length that they overlap the ledgers at each end by at least 6 inches. A plank shall not overlap an unsupported end of another plank. The working platform shall cover the entire space between scaffold uprights, except for the open area under the backrailing, which shall not be more than 8 inches wide. Platforms shall be at least 20 inches wide and within 14 inches of the structure wall.
When moving platforms to the next level, the old platform shall be left undisturbed until the new ledgers have been set in place ready to receive the platform planks.
EXCEPTION: A single 2-inch by 10-inch plank may be used for light trades work up to a height of 4 feet.
(B) Working platforms for light-trades work may be made of 3/4-inch Douglas fir plywood instead of 2-inch plank if the platform is at least 2 feet wide, nailed in place and supported on cross members at 4-foot or closer intervals along its length.
(C) Light-Trade Interior Scaffolds.
(1) Loading. For scaffolds of the following design the imposed load on the platform area shall not apply more than 1,500 pounds to any 1 ledger or a single upright, and the total load on the whole platform area shall not average more than 15 pounds per square foot.
(2) Uprights.
(A) For heights not to exceed 20 feet the uprights shall be 2-inch by 4-inch lumber, or heavier. For heights between 20 feet and 60 feet, the uprights shall be 3-inch by 4-inch lumber, or heavier, except for the top 20 feet which may be 2-inch by 4-inch material. The horizontal distance between uprights shall not exceed 10 feet measured either parallel or at right angles to the direction of the platform planks.
(B) If uprights are spliced, the joints must conform to that described in subsection 1640(b) (1), and they shall be located near a point where ribbons are attached or where equivalent lateral support is provided. Pairs of horizontal ribbons at right angles to one another are required at vertical intervals of 7 feet, or less.
(3) Ledgers and Ribbons. The platform of the scaffold shall be supported by ledgers made of one piece of 2-inch by 10-inch or heavier material, placed with the edge upward. The ribbons shall be 1-inch by 6-inch or heavier material, placed on all uprights directly under and in contact with the ledgers. Additional horizontal ribbons, in pairs at right angles to one another, shall be provided at lower levels in order to provide lateral support for all uprights at vertical intervals not greater than 7 feet.
(4) Diagonal Braces. Each line of uprights shall contain sufficient diagonal bracing of 1-inch by 6-inch material in vertical planes, lengthwise and crosswise, to prevent swaying, tipping, or collapsing. If the scaffold extends to and bears against the walls of the building, the horizontal ribbons and ledgers may provide adequate support without diagonal braces, but provision must always be made for adequate lateral stability.
(5) Platforms.

(A) The platform shall consist of 2-inch by 10-inch or larger planks laid closely together. There shall be no other openings in the platform except those necessary for the passage of employees and material. Unless nailed in place, planks shall be of such length that they overlap the ledgers at each end by at least 6 inches. A plank shall not overlap an unsupported end of another plank.
(B) Working platforms shall cover the entire space between scaffold uprights, except for the open area under the backrailing which shall not be more than 8 inches.
(C) Platforms shall extend within 14 inches of the finished face of the building.
(D) Douglas fir plywood that is 3/4 inch thick, or thicker, may be used for platforms if the panels are 4 feet wide, or wider, and are supported on ledgers or crossmembers at 4-foot or closer intervals.
(6) Railings. Open sides of working levels 7 1/2 feet or more above grade shall be provided with top rails and midrails as specified in Light Trade Wooden Pole Scaffolds Subsection (b)(4).
When scaffold platforms are erected in sections it is necessary for workers to travel between these sections, such sections shall be provided with connecting runways equipped with railings as described in the Standard Railing Section.

14.3 Heavy-Trade Wooden Pole Scaffolds.

(a) Pole scaffolds to be used by bricklayers, stonemasons, concrete workers, or other trades using heavy tools or storing heavy material on the scaffold shall be constructed as follows:

(b) When buggies are used on scaffolds to transport concrete, a strong scaffold shall be designed that is capable of supporting a concentrated load equal to the weight of a loaded buggy at any point on girders, beams, or planking.

(c) Uprights. For heights not to exceed 20 feet the uprights shall be of 4-inch by 4-inch lumber or heavier material, with a space of 4 feet between uprights at right angle to the wall and not more than 7 feet, center to center, parallel to the wall. The splices of 4-inch by 4-inch uprights shall be made with square butt joints, and scabs of 2-inch by 4-inch material at least 48 inches long shall be nailed in place on 2 sides with 6 nails in each 1/2 of each scab. Uprights laminated from 2-inch by 4-inch material are acceptable if the joints of each lamination are staggered, and either reinforced by scabs or so arranged that they occur at or near ribbon attachment points. If the uprights rest on a surface that might cause slipping, a continuous sill or other means shall be provided to hold the uprights in place. When the scaffold is resting on earth or other such material, the uprights shall rest on and be secured to the equivalent of a 2-inch by 10-inch by 10-inch wooden base.
Note: A 1 1/8-inch by 10-inch by 10-inch piece of exterior grade plywood may be used in lieu of the wooden base mentioned above.

(d) Ledgers and Ribbons.
(1) The platform shall be supported by ledgers and ribbons, nailed or bolted to the uprights. For ledgers spanning not more than 4 feet between uprights, use either 1 piece of 2-inch by 6-inch lumber securely fastened at each point of support or 2 pieces of 1-inch by 6-inch board, 1 being on each side of the uprights and fastened securely at each point of support.
(2) Ribbons shall be 1-inch by 6-inch or heavier material securely fastened to both inside and outside uprights directly under and in contact with the ledgers.
Vertical spacing of ribbons and ledgers shall not exceed 7 feet. Ribbons shall be long enough to extend from upright to upright without splices.
(e) Railing. Open sides and ends of working levels 7 1/2 feet or more above grade shall be provided with top rails and midrails as specified in the Light Trade Wooden Pole Scaffolds subsection (b)(4).
EXCEPTION: That side of bricklayers' and masons' scaffolds adjacent to the work under construction provided that the wall is higher than the adjacent work platform.

(f) Ties and Braces.
(1) The scaffold shall be rigidly tied to the building or structure by means of a double looped No. 12 iron wire, or single looped No. 10 iron wire or equivalent or stronger material used in combination with spacer blocks between inside uprights and the structure. Ties shall connect to the inside uprights, and they shall be not more than 15 feet apart vertically or horizontally.
(2) The entire scaffold shall be rigidly braced with 1-inch by 6-inch boards, and every part thereof so secured as to prevent swaying, tipping, or collapsing.
The diagonal bracing shall extend in both directions across the entire outside vertical face.

(g) Platforms.
(1) The platform shall be not more than 4 feet wide, constructed of planks at least 2 inches thick and 10 inches wide, laid closely together. Platform planks that are butt-ended (not overlapped) must be nailed to ledgers consisting of 2-inch by 6-inch or heavier material. If the planks are not nailed, they shall be of such length that they overlap the ledgers at each end by at least 6 inches. A plank shall not overlap an unsupported end of another plank. The working platform shall cover the entire space between scaffold uprights except for the open area under the backrailing, which shall not be more than 8 inches.
(2) Platforms shall extend within 14 inches of the finished face of the building, except those used primarily by bricklayers and stonemasons shall extend to within 7 inches of the finish face of the building on which the work is being performed.
(3) When moving platforms to the next level, the old platform shall be left undisturbed until the new ledgers have been set in place ready to receive the platform planks.

14.4 Schedules of Timber Scaffolds up to 60 Feet in Height.

(Listed lumber sizes are those required for the specified spans; other sizes may be used for different spans, if equivalent strength is provided.)

	Light Interior	Heavy Trades	Trades
Uprights for scaffolds not over 20'in height.....	2"x4"	2"x4"	4"x4"
Uprights for scaffolds 20' to 60'in height.....	3"x4"	3"x4"	4"x6"
Ribbons directly under ledgers..	1"x6"	1"x6"	1"x6"
Ledgers.....	2"x10"	2--1"x6"	2--1"x6" or 1--2"x6"
Spacing uprights, transverse, at right angles to platform planks.....	10'	3' in clear	4' in clear
Spacing uprights, longitudinal, parallel to direction of platform planks.....	10'	10'	7'
Spacing ribbons or ledgers, vertical.....	7'0" max.	7'0" max.	7'0" max.
Splice pieces 48" long (for uprights).....	2--1"x4"	2--2"x4"	(2--2"x4")
Braces.....	1"x6"	1"x6"	1"x6"
Railing.....	2"x4"	2"x4"	2"x4"
Toeboard.....	1"x4"	1"x4"	1"x4"
Width of platform.....	10'	3' max.	4' max.
Planking	2" thick and at least 10" wide		

14.5 Scaffolds over 60 Feet in Height.

All wooden pole scaffolds over 60 feet in height shall be designed by a Civil Engineer currently registered in this State and constructed and erected in accordance with such design.

14.6 Metal Scaffolds.

(a) General.
(1) Metal scaffolds shall be designed to support all dead, live, and wind loads to which they will be subjected.
(2) No metal scaffold equipment that is broken or deteriorated to the extent that its section is structurally weakened shall be used.

(3) All stationary scaffold legs, including those of outriggers, shall rest upon base plates available from the manufacturer for this service. Each base plate shall have support adequate to sustain the load and prevent horizontal movement.
When the scaffold or outrigger is resting on earth or soft material, the base plate shall rest on and be secured to the equivalent of a 2-inch by 10-inch by 10-inch wooden base.
NOTE: A 1 1/8-inch by 10-inch by 10-inch piece of exterior grade plywood may be used in lieu of the wooden base mentioned above.
(4) Platform planks shall not be placed on guardrails to obtain greater height.
(5) Metal scaffolds shall be securely tied to the building or structure by means of a double looped No. 12 iron wire, or single looped No. 10 iron wire or equivalent at intervals not to exceed 30 feet horizontally and subject to the following:
(A) Ties shall be required at the free ends of the scaffold when the height of the scaffold platform exceeds 3 times the least base dimension. The remaining ties of the first row shall be required when the height of the scaffold platform is four times the least base dimensions.
(B) Ties for subsequent levels shall be installed at 26-foot intervals vertically, with the last tie no further from the top than four times the least base dimension.
(C) As an alternate means, scaffolds shall be guyed or outriggers shall be used to prevent tipping or upsetting.
(D) Wind Loading. When scaffolds are partially or fully enclosed, specific precautions shall be taken to assure the frequency and adequacy of ties attaching the scaffolding to the building.
(6) Securely attached railings as provided by the scaffold manufacturer, or other material equivalent in strength to the standard 2- by 4-inch wood railing made from "selected lumber" (see definition), shall be installed on open sides and ends of work platforms 7 1/2 feet or more above grade. The top rail shall be located at a height of not less than 42 inches nor more than 45 inches measured from the upper surface of the top rail to the platform level. A midrail shall be provided approximately halfway between the top rail and the platform.
NOTE: Toeboards or side screens may also be required.
(A) "X" bracing is acceptable as a toprail if the intersection of the "X" occurs at 45 inches (plus or minus 3 inches) above the work platform, provided a horizontal rail is installed as a midrail between 19 and 25 inches above the work platform. The maximum vertical distance between the "X" brace members at the uprights shall not exceed 48 inches.
(B) "X" bracing is acceptable as a midrail if the intersection of the "X" falls between 20 inches and 36 inches above the work platform.

EXCEPTIONS:

(1) Railings are not required on that side of bricklayers' and masons' scaffold adjacent to the work under construction provided the wall is higher than the adjacent work platform.

(2) For end rail openings less than 3 feet, double wrapped iron wire at least No. 12 gauge in thickness, or wire rope at least ¼ inch minimum diameter is permitted, provided the wire or wire rope is securely fastened.

(7) Platform planks shall be of 2-inch by 10-inch or wider material and of such length that they overlap the ledgers at each end by at least 6 inches.
A plank shall not overlap an unsupported end of another plank.
The working platform shall cover the entire space between scaffold uprights, except for the open area under the back railing. Such open area shall not exceed 10 inches in width.
The inboard edge of the work platform shall be no more than 16 inches from the building or structure wall except for those scaffolds used by bricklayers and stonemasons the platforms of which shall extend to within 7 inches of the finish face of the building or structure on which the work is being performed.
(8) All ladders used for access shall conform to ladders. When only a part of the width of the metal scaffold frame conforms to ladder spacing, then these frames must be erected in a manner that makes a continuous ladder bottom to top, with ladder sides of the frames in a vertical line.

(b) Tube and Coupler Scaffolds.
(1) A light duty tube and coupler scaffold shall have all posts, ledgers, ribbons and bracing of nominal 2-inch O. D. steel tubing. The posts shall be spaced no more than 6 feet apart by 10 feet along the length of the scaffold.
Other structural metals when used must be designed to carry an equivalent load.
No dissimilar metals shall be used together.
(2) A medium duty tube and coupler scaffold shall have all posts, ribbons and bracing of nominal 2-inch O. D. steel tubing. Posts spaced not more than 6 feet apart by 8 feet along the length of the scaffold shall have ledgers of nominal 2 1/2-inch O. D. steel tubing. Posts spaced not more than 5 feet apart by 8 feet along the length of the scaffold shall have ledgers of nominal 2-inch O. D. steel tubing. Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be used together.
(3) A heavy duty tube and coupler scaffold shall have posts, ribbons, and bracing of nominal 2-inch O. D. steel tubing, with the posts spaced not more than 6 feet by 6 feet 6 inches. Other structural metals, when used, must be designed to carry an equivalent load. No dissimilar metals shall be used together.
(4) Tube and coupler scaffolds shall be limited in heights and working levels to those permitted in Tables 1, 2, and 3. Drawings and specifications of all tube and coupler scaffolds above the limitations in Tables 1, 2, and 3 shall be designed by a Civil Engineer currently registered in this State.
(5) All tube and coupler scaffolds shall be constructed and erected to support 4 times the maximum intended loads as set forth in Tables 1, 2, and 3, or as set forth in the specifications by a Civil Engineer currently registered in this State.

Table 1
Light Duty Tube and Coupler Scaffolds

Uniformly distributed load.....Not to exceed 25 p.s.f.

Post spacing (longitudinal).....10'0"
Post spacing (transverse).....6'0"

Working Levels	Additional Planked Levels	Maximum Height
1	8	125'
2	4	125'
3	0	91'0"

Table 2
Medium Duty Tube and Coupler Scaffolds

Uniformly distributed load..... Not to exceed 50 p.s.f.
Post spacing (longitudinal)..... 8'0"
Post spacing (transverse)..... 6'0"

Working Levels	Additional Planked Levels	Maximum Height
1	6	125'
2	0	78'0"

Table 3
Heavy Duty Tube and Coupler Scaffolds

Uniformly distributed load.....Not to exceed 75 p.s.f.
Post spacing (longitudinal)..... 6'6"
Post spacing (transverse)..... 6'0"

Working Levels	Additional Planked Levels	Maximum Height
1	6	125'

(6) Posts shall be accurately spaced, erected on suitable bases, and maintained plumb.
(7) Ribbons shall be erected along the length of the scaffold, located on both the inside

and the outside posts at even height. Ribbons shall be interlocked to the inside and the outside posts at even heights. Ribbons shall be interlocked to form continuous lengths and coupled to each post. The bottom ribbons shall be located as close to the base as possible. Ribbons shall be placed not more than 6 feet 6 inches on centers.
(8) Ledgers shall be installed transversely between posts and shall be securely coupled to the posts bearing on the ribbon coupler. When coupled directly to the ribbons, the coupler must be kept as close to the posts as possible.
(9) Ledgers shall be at least 4 inches but not more than 12 inches longer than the post spacing or ribbon spacing.
(10) Cross bracing shall be installed across the width of the scaffold at least every third set of posts horizontally and every fourth ribbon vertically. Such bracing shall extend diagonally from the inner and outer ribbons upward to the next outer and inner ribbons.
(11) Longitudinal diagonal bracing on the inner and outer rows of poles shall be installed at approximately a 45 degree angle from near the base of the first outer post upward to the extreme top of the scaffold. Where the longitudinal length of the scaffold permits, such bracing shall be duplicated beginning at every fifth post. In a similar manner, longitudinal diagonal bracing shall also be installed from the last post extending back and upward toward the first post.
Where conditions preclude the attachment of this bracing to the posts, it may be attached to the ribbons.

(c) Tubular Welded Frame Scaffolds.
(1) Metal tubular frame scaffolds, including accessories such as braces, brackets, trusses, screw legs, ladders, etc., shall be designed, constructed, and erected to safely support four times the maximum rated load. The scaffold manufacturer's erection instructions shall be followed on all installations.
(2) Spacing of panels or frames shall be consistent with the loads imposed.
(3) Panels or frames shall be braced by horizontal bracing, cross bracing, diagonal bracing or any combination thereof for securing vertical members together laterally, and the cross braces shall be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, square, and rigid. All brace connections shall be made secure.
(4) Panel or frame legs shall be set on adjustable bases or plain bases placed on mud sills or other foundations adequate to support the maximum anticipated load.
(5) Panels or frames shall be placed one on top of the other with coupling or stacking pins to provide proper vertical alignment of the legs.
NOTE: Where an intervening ledge prevents the vertical stacking of legs, the ledge may be used as a base provided that an equally safe installation is obtained.
(6) Where uplift may occur, panels shall be locked together vertically by pins or other equivalent suitable means.
(7) Drawings and specifications for all frame scaffolds over 125 feet in height above the base plates shall be designed by a Civil Engineer currently registered in This State.

14.7 Outrigger and Bracket Scaffolds.

(a) Heavy Trades.
(1) Outrigger beams of outrigger scaffolds for use by bricklayers, stonemasons, or other heavy trades shall be made of "selected lumber," or better. Those of the following sizes shall not project more than 6 feet beyond the outer support; shall be securely anchored and braced to prevent tipping or turning; and shall be spaced at centers of 7 feet 6 inches, or closer.
The inboard end of outrigger beams, measured from the fulcrum point to anchorage point, shall not be less than 1 1/2 times the outboard end in length. The fulcrum point of the beam shall rest on a secure bearing at least 6 inches square.
(2) On continuous scaffolds, where the beams may receive load from work platforms on each side, such beams shall not be less than 3 inches by 16 inches in cross section. For single scaffolds, consisting of a platform between 2 beams, the outrigger beams may have a smaller cross section, but not less than 3 inches by 12 inches. The platforms shall consist of planks, at least 2 inches by 10 inches, covering the full width of the projection. Planking shall be nailed or bolted or otherwise secured to outriggers. The ends of the planks shall not project more than 18 inches beyond the outrigger, and not less than 6 inches, unless they are nailed in place. Every outrigger scaffold 7 1/2 feet or more in height shall be provided with a railing and toeboard. The top rail shall consist of double 2-inch by 4-inch members. One member shall be fastened in a flat position on top of the posts and the other member shall be fastened in an edge-up position to the inside of the posts and at the side of the top rail.
Additional protection in the form of screen enclosing the opening between rails and toeboard shall be provided if material on the scaffold is piled higher than the toeboard.
(3) Where additional working levels are required to be supported by the outrigger method, the plans and specifications of the outrigger and scaffolding structure shall be prepared by a Civil Engineer currently registered in this State.

(b) Figure Four or Light Outrigger Scaffolds. Figure Four or light outrigger frames shall be spaced not more than 10 feet apart, and shall be constructed as follows from sound lumber:
The outrigger ledger shall consist of 2 pieces of 1-inch by 6-inch or heavier material nailed on opposite sides of the vertical and angle braces. Ledgers shall project not more than 3 feet 6 inches from the outside wall line and shall be substantially braced and secured to prevent tipping or turning. The knee or angle brace shall intersect the beam at least 3 feet from the wall at an angle of 45 degrees, and the lower end shall be nailed to a vertical brace near the point where it contacts the wall. The platform shall consist of 2 or more 2-inch by 10-inch planks, which shall be of such length that they extend at least 6 inches beyond ledgers at each end. Unsupported projecting ends of planks shall be limited to an overhang of 18 inches, or less.
Each wooden bracket shall be hooked over a well-secured and adequately strong supporting member.
Every Figure Four or light outrigger scaffold 7 1/2 feet or more in height shall be

provided with a railing and toeboard. The top rail shall consist of double 2-inch by 4-inch members. One member shall be fastened in a flat position on top of the posts and the other member shall be fastened in an edge-up position to the inside of the posts and at the side of the top member.

(c) Stud Jacks. Stud-jack scaffold supports shall have ledgers of at least 2-inch by 6-inch materials, or equal, not longer than 5 feet, and each jack shall attach to not less than 2 sound, adequately fastened, 2-inch by 4-inch wall studs of normal length. Stud-jack scaffolds shall not be used at elevations of 7 1/2 feet or higher above the ground, unless so designed that a substantial backrail may be easily attached.

(d) Bracket Scaffolds. The use of bracket scaffolds shall be permitted only when through-bolted to walls, with at least 5/8-inch diameter bolts; welded to steel tanks; secured with a metal stud attachment device; or, hooked over a well-secured and adequately strong supporting member.

NOTE: This Order does not prohibit the use of bracket scaffolds that are an integral part of movable form panels or similar construction.

All form scaffolds shall be designed and erected with a minimum safety factor of 4, computed on the basis of the maximum rated load; i.e., the total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.
(1) Spacing of brackets shall be such that they are not more than 10 feet apart horizontally.
(2) If brackets are secured to walers held by snap-tie or she-bolts, they must extend through both wall forms and be properly secured.
(3) Railings shall be installed on bracket scaffolds for all heights 7 1/2 feet or more above the ground.
(4) The platform shall consist of two or more 2-inch by 10-inch planks, laid closely together, and shall be of such length that they overlap the ledgers at each end by at least 6 inches. Unsupported projecting ends of planks shall be limited to an overhang of 18 inches or less.
(5) Wooden bracket form scaffolds shall be an integral part of the form panel and shall not be used to support loads exceeding 25 pounds per square foot, unless specifically designed for a heavier loading. Ledgers shall be made from 2-inch by 6-inch or heavier material and shall not project more than 3 feet 6 inches from the form panel. Uprights shall consist of 2-inch by 4-inch or heavier material. Scaffold planks shall be either nailed, wired, or bolted to the ledgers. Planks shall overlap the ledgers at each end by at least 6 inches.
Unsupported projecting ends of platform planks shall be limited to a maximum overhang of 18 inches. Ledgers shall not be spaced more than 8 feet on centers.
(6) Bracket scaffolds installed on metal tanks larger than 40 feet in diameter for the use of those engaged in tank erection operations, shall have platforms that are at least 30

inches wide, with the open ends and sides protected by a substantial railing, with midrail, which may be altered by the substitution of 3/8-inch wire rope for the top and middle rails. Platforms on 40-foot or smaller diameter tanks will be acceptable if not less than 24 inches in width, consisting normally of two 2-inch by 12-inch planks side by side, protected by railings as described above.

(e) Carpenters' Bracket Scaffolds.
(1) The brackets shall consist of a triangular wood frame not less than 2 x 3 inches in cross section, or of metal of equivalent strength. Each member shall be properly fitted and securely joined.
(2) Each bracket shall be attached to the structure by means of one of the following:
(A) A bolt, no less than 5/8-inch in diameter, which shall extend through to the inside of the building wall;
(B) A metal stud attachment device;
(C) Welding to steel tanks;
(D) Hooking over a well-secured and adequately strong supporting member.
(3) The brackets shall be spaced no more than 10 feet apart.
(4) No more than two employees shall occupy any given 10 feet of a bracket scaffold at any one time. Tools and materials shall not exceed 75 pounds in addition to the occupancy.
(5) The platform shall consist of not less than two 2- x 10-inch nominal size planks extending not more than 18 inches or less than 6 inches beyond each end support.

14.8 Tower Scaffolds and Rolling Scaffolds, Wood or Metal.

(a) The minimum dimension of the base of any free-standing tower or rolling scaffold shall not be less than 1/3 the height of the scaffold unless such scaffold is securely guyed or tied. For restrictions when worker rides scaffold see paragraph (f) following.

(b) Construction and Erection.
(1) The uprights, ledgers, ribbons, braces, and splices shall be equivalent to the standards specified in other applicable Sections of these Orders. Railings are required if the platform is 7 1/2 feet or more above grade. Railings shall be installed in accordance with the provisions of Section Metal Scaffolds (a) (6).
NOTE: Toeboards or side screens may also be required.
(2) The screw jack shall extend into its leg tube at least 1/3 its length, but in no case shall the exposed thread exceed 12 inches.
(3) The uprights (legs of rolling scaffolds) shall not exceed 24 inches without being braced according to the manufacturer's specifications.

(c) Wheels or casters of rolling scaffolds shall be provided with an effective locking device, and kept locked when workers are climbing or working on the scaffold. At least 2 of the 4 casters or wheels shall be a swivel type. All wheels or casters shall be properly

designed for strength and dimension to support at least 4 times the maximum intended load.

(d) Joints of metal scaffolds shall be locked together with lock pins, bolts or equivalent fastening, including caster joints. Lock pins used must be of a locking type.

EXCEPTION: Screw jacks and guardrail posts.

(e) Platform planks on rolling or tower scaffolds shall not project farther than 18 inches past supports at the edges of the scaffold. An effective method of preventing platform planks on rolling scaffolds from slipping off must be provided. The nailing of cleats of 1-inch material on the underside of each projecting end, or other equivalent means, will be acceptable. Platforms shall be tightly planked for the full width of the scaffold except for any necessary entrance openings.
NOTE: Refer to Standard Railings and Scaffolds – General Requirements (f) for regulations on required plank and platform sizes.

(f) Riding. Employees may ride on rolling scaffold moved by others below if the following conditions exist:
(1) The floor or surface is within 3 degrees of level, and free from pits, holes, or obstructions.
(2) The minimum dimension of the scaffold base, when ready for rolling, is at least 1/2 of the height. Outriggers, if used, shall be installed on both sides of staging.
(3) The wheels are equipped with rubber or similar resilient tires. For towers 50 feet or over metal wheels may be used.

(g) Ladders. Ladders or other unstable objects shall not be placed on top of rolling scaffolds to gain greater height.

(h) Scaffolds on Vehicles. When scaffolds are built on motor trucks or vehicles, they must be rigidly attached to the truck or vehicle. The attachment must be made in a manner that will develop the full strength of the scaffold in resisting an overturning force.

(i) Trucks or vehicles that have scaffolds attached to them shall have a device in use whenever employees are on the scaffold that prevents swaying or listing of the platforms.

14.9 Horse Scaffolds.

(a) General. (1) Lumber for construction of scaffolded horses shall be of "selected lumber" grade.
NOTE: The lumber sizes specified are nominal sizes for which standard finished sizes may be substituted.

(2) The members of horses used for scaffolds shall be securely nailed or bolted together, and well braced to prevent collapse.
(3) The distance between the bottoms of adjacent legs measured perpendicular to the ledger shall be approximately 1/2 the horse height.
(4) The shimming of horse ledgers to obtain added height is prohibited.
(5) Horses or parts which have become weak or defective shall not be used.
(6) When horse legs are extended by splicing, the joints must be butt-ended, and scabs not less than 18 inches long and of the same cross section as the leg shall be nailed on each side of the joint. As an alternative, new legs of adequate length may be installed, provided that they completely overlap the original legs and are well secured to them from top to bottom. Vertical extensions shall not be used to extend height of metal folding horses if the stability of the horse is impaired.
(7) When arranged in tiers, each horse shall be placed directly over the horse in the tier below.
(8) On all scaffolds arranged in tiers, the legs shall be nailed down or otherwise secured to the planks to prevent displacement or thrust and each tier shall be substantially cross braced.
(9) Railings meeting the requirements shall be installed on all open sides and ends of work platforms 7 1/2 feet or more above the ground, floor or level underneath.

(b) Light Trades.
(1) Horses for light-trade scaffolds shall have top horizontal members or ledgers of 2-inch by 4-inch lumber or material of equivalent strength, if the distance between the leg connections is 4 feet or less. Ledgers of 2-inch by 6-inch lumber or material of equivalent strength are required if the distance between the leg connections is greater than 4 feet but does not exceed 8 feet. If the distance between leg connections exceeds 8 feet, the ledger strength must be increased in proportion to the amount by which the 8-foot distance is exceeded.
(2) The legs of horses for light-trade scaffolds shall be 1-inch by 6-inch lumber or material of equivalent strength for horses not exceeding 4 feet in height and 2-inch by 4-inch lumber or material of equivalent strength for horses between 4 feet and 10 feet in height. Horse scaffolds shall not be constructed or arranged more than two tiers or 10 feet in height.

(c) Heavy Trades.
(1) Horses for heavy-trade scaffolds shall have top horizontal members or ledgers of 3-inch by 4-inch lumber or material of equivalent strength, if the distance between the leg connections is 4 feet or less. Ledgers of 2-inch by 6-inch lumber or material of equivalent strength are required if the distance between the leg connections is greater than 4 feet but does not exceed 8 feet. If the distance between leg connections exceeds 8 feet, the ledger strength must be increased in proportion to the amount by which the 8-foot distance is exceeded.
(2) The legs of horses for heavy-trade scaffolds shall be 1-inch by 8-inch lumber or material of equivalent strength, for horses not exceeding 4 feet in height, and 2-inch by

4-inch lumber or material of equivalent strength, for horses between 4 feet and 10 feet in height.

(d) Collapsible Types.
(1) Collapsible horses constructed of well-braced frames hinged at the top may be used in place of the specified rigid horses, if construction is such that equivalent strength is provided.
(2) Adjacent legs of a collapsible horse shall be connected near the bottom with securely attached chains, hinged brackets, or other suitable links to prevent the legs from spreading beyond the distance intended. The height of collapsible horse scaffolds shall not exceed 6 feet.

(e) Platforms.
(1) Scaffold platforms shall not be supported by single horses having a total height exceeding 10 feet. Tiered horse scaffolds shall be limited to 10 feet in height made from no more than 2 tiers of horses. All horse scaffolds shall be substantially constructed and braced both transversely and laterally.
(2) Platforms shall be not less than 20 inches wide for light trades, and 4 feet wide for bricklayers, stonemasons, stone cutters, or concrete workers. Platforms used primarily by bricklayers or stonemasons shall extend to within 5 inches of the building face upon which the work is being performed. A single 2-inch by 10-inch plank may be used for light trades work up to a height of 4 feet.
(3) Planks used for platforms shall not be less than 2 inches by 10 inches, and the distance between supports shall not exceed 10 feet for light trades and 7 feet 6 inches for heavy trades.
(4) For horse scaffolds up to a height of 6 feet, platform planks shall not be more than 2 inches apart. Platform planks on higher scaffolds shall be laid closely together. Planks shall be of such length that they overlap the supports at each end by at least 6 inches. A plank shall not overlap an unsupported end of another plank. Unsupported projecting ends of planks shall be limited to an overhang of 18 inches or less.
(5) Douglas fir plywood that is 3/4 inch thick or thicker may be used for platforms if the panels are 4 feet wide or wider and are supported on cross members at 4-foot or closer intervals for light trades and 2-foot intervals for heavy trades.
(6) Provide standard ladder or other safe, unobstructed means of access to all

14.10 Ladder-Jack Scaffolds.

(a) Ladder-jack scaffolds shall not be used when the platform is over 16 feet above the ground. Not more than two employees shall be allowed on a scaffold of this type. The ladders shall be secured against displacement.

(b) The platform shall be at least 14 inches wide consisting of ladder staging, "structural plank" or equivalent, free from damage that affects the strength. The ladders shall not

be placed over 16 feet center to center, and where the platform consists of a single-dressed 2-inch by 14-inch plank, the spacing shall not be greater than 12 feet. Both metal and wood platform planks shall overlap the bearing surface by at least 12 inches.

(c) Drop lines of at least 3/4-inch diameter Manila rope or other rope of equivalent diameter and strength shall hang from secure overhead anchorages where the working platform is 7 1/2 feet high or more. An independently anchored line shall be provided for and used by each employee in accordance with the provisions of Safety Belts and Nets of this manual.

(d) All ladders used in connection with ladder jack scaffolds shall be heavy-duty ladders and shall be designed and constructed in accordance with the General Industry Safety Orders, Job-built ladders shall not be used for this purpose.

(e) The ladder jack shall be so designed and constructed that it will bear on the side rails in addition to the ladder rungs, or if bearing on rungs only, the bearing area shall be at least 10 inches on each rung.

14.11 Bricklayers' Square Scaffolds.

(a) The squares shall not exceed 5 feet in width and 5 feet in height.

(b) Members shall be not less than those specified in the Schedule below:

Minimum Dimensions for
Bricklayers' Square Scaffold Members

Members	Dimensions
Ledgers or horizontal members.....	2 x 6 in.
Legs.....	2 x 6 in.
Braces at corners.....	1 x 6 in.
Braces diagonally from center frame.....	1 x 8 in.

(c) The squares shall be reinforced on both sides of each corner with 1- x 6-inch gusset pieces. They shall also have diagonal braces 1 x 8 inches on both sides running from center to center of each member, or other means to secure equivalent strength and rigidity.

(d) The squares shall be set not more than 5 feet apart for medium duty scaffolds, and not more than 8 feet apart for light duty scaffolds. Bracing, 1 x 8 inches, extending from the bottom of each square to the top of the next square, shall be provided on both front and rear sides of the scaffold.

(e) Platform planks shall be at least 2- x 10-inch nominal size. The ends of the planks

shall overlap the ledgers of the squares and each plank shall be supported by not less than three squares.

(f) Bricklayers' square scaffolds shall not exceed three tiers in height and shall be so constructed and arranged that one square shall rest directly above the other. The upper tiers shall stand on a continuous row of planks laid across the next lower tier and be nailed down or otherwise secured to prevent displacement.

(g) Scaffolds shall be level and set upon a firm foundation.

(h) For guardrailing requirements see Standard Railings.

14.12 Window Jack Scaffolds.

(a) Window jack scaffolds shall be used only for the purpose of working at the window opening through which the jack is placed.

(b) Window jacks shall not be used to support planks placed between one window jack and another or for other elements of scaffolding.

(c) Window jack scaffolds shall be provided with guardrails unless safety belts and lanyards are provided for and used by employees.

(d) Not more than one employee shall occupy a window jack scaffold at any one time.

14.13 Pump Jack Scaffolds.

(a) Pump jack scaffolds shall:
(1) Be limited to a maximum working load of 500 pounds; and
(2) Have a Safety Factor of at least four times the maximum intended load.
(3) The manufactured components shall not be loaded in excess of the manufacturer's recommended limits.

(b) Pump jack brackets, braces, and accessories shall be fabricated from metal plates and angles. Each pump jack bracket shall have two positive gripping mechanisms to prevent any failure or slippage.

(c) The platform bracket shall be fully decked and the planking secured.
Planking, or equivalent, shall conform to the section in this chapter on General Requirements.
(1) When wood scaffold planks are used as platforms, poles used for pump jacks shall not be spaced more than 10 feet center to center. When fabricated platforms are used that fully comply with all other provisions of this Order, pole spacing may exceed 10 feet

center to center.
(2) Poles shall not exceed 30 feet in height.
(3) Poles shall be secured to the work wall by rigid triangular bracing, or equivalent, at the bottom, top, and other points as necessary, to provide a maximum vertical spacing of not more than 10 feet between braces. Each brace shall be capable of supporting a minimum of 225 pounds tension or compression.
(4) For the pump jack bracket to pass bracing already installed, an extra brace shall be used approximately 4 feet above the one to be passed until the original brace is reinstalled.

(d) All poles shall bear on mud sill or other adequate firm foundations.

(e) Pole lumber shall be two 2 x 4's, of Douglas fir, or equivalent, straight-grained, clear, free of cross-grain, shakes, large loose or dead knots, and other defects which might impair strength.

(f) When poles are constructed of two continuous lengths, they shall be 2 x 4's, spiked together with the seam parallel to the bracket, and with 10d common nails, no more than 12 inches center to center, staggered uniformly from opposite outside edges.

(g) If 2 x 4's are spliced to make up the pole, the splices shall be so constructed as to develop the full strength of the member.

(h) Not more than two employees shall be permitted at one time upon a pump jack scaffold between any two supports.

(i) Pump jacks scaffolds shall be provided with standard guardrails as described in Article 16 but no guardrail is required when safety belts with lanyards are provided for and used by employees.

(j) When a work bench is used at an approximate height of 42 inches, the top guardrail may be eliminated, if the work bench is fully decked, the planking secured, and is capable of withstanding 200 pounds load in any direction.

(k) Employees shall not be permitted to use a work bench as a scaffold platform.

Chapter 15 - Tool Box Talks

15.1 Purpose

The purpose of Tool Box Talks/Work Group Safety Meetings is to provide a method for the dissemination of information to all employees regarding safety and health issues.

15.2 Regular Tool Box Talks

Regular Tool Box Talks/Work Group Safety Meetings demonstrate the Detroit Spectrum Painters's concern for the lives and well being of its employees. Tool Box Talks/Work Group Safety Meetings help build a cooperative climate by providing employees with the opportunity to contribute ideas, and to make suggestions that may improve quality, productivity, morale, and safety.

Safety education is required of all employees *at all levels* within the organization. Detroit Spectrum Painters will have a formalized safety training program to prevent accidents and to train employees to do their job safely. Scheduled, Tool Box Talks/Work Group Safety Meetings will be conducted Monthly just prior to starting work or at times deemed necessary by the Responsible Safety Officer or supervisory personnel.

15.3 Responsibilities

The Foreman will provide the direction and motivation to ensure that all managers conduct regular Tool Box Talks/Work Group Safety Meetings.

Managers and Supervisory Personnel that conduct safety discussions will maintain a log of what was discussed and who attended the meeting. This information shall be turned over to the Responsible Safety Officer on a weekly basis.

The Responsible Safety Officer shall be a resource for safety and health discussion topics, and shall keep all documentation of all training at a central location.

Employees are required to attend all Tool Box Talks/Work Group Safety Meetings. In the event an employee misses a Tool Box Talk/Work Group Safety Meeting, the employee shall be given individual instruction by their supervisor concerning what was discussed/covered. The supervisor shall document this "training session" and will provide the Responsible Safety Officer with this documentation.

15.4 Procedure:

The Tool Box Talk/Work Group Safety Meeting is a method used by this Company to

develop the employees' safety awareness.

15.5 Conducting Tool Box Talks/Work Group Safety Meetings

For greatest effectiveness, cover subjects that most interest the employees. These topics might include accidents, inspection results, the safety program, or a work procedure.

These safety meetings should last no longer than 15-30 minutes. Ideally, the meeting would include time for active participation by employees; at the least, there should be a question and answer session.

Schedule meetings at the beginning of new operations to ensure that all of the employees are familiar with safe job procedures and the requirements of the upcoming work. These meetings save a lot of time in the long run.

Tool Box Talks/Work Group Safety Meetings may be either motivational or instructional. The motivational meeting creates awareness and aims at worker self protection. The instructional meeting covers a particular job task or procedure.

The supervisor is the key management communicator for work groups, because he or she is most familiar with the individual workers and their work requirements.

Chapter 16 - Hazard Signs / Warnings

16.1 Introduction

Every reasonable method to warn employees of hazards and dangers and to inform them of the actions required must be utilized. Signs, characteristic lights, and audible alarms as additional safeguards for built-in mechanical and physical protection must be used. To ensure uniform response by personnel, the warning signs and devices must be of the same type for similar hazards. Obtaining and installing the warning systems is the responsibility of the group needing them.

16.2 Contents and Configuration

Signs must conform to the colors, symbols, lettering size, and proportions as specified by Detroit Spectrum Painters, except that radiation signs must conform to the requirements stated in 10 CFR 20. Every warning sign must include the following components: An approved heading that indicates the relative hazard A statement of the type of hazard A statement of what to do or not to do in the area.

16.3 Danger Signs

Danger signs are used only where injury or damage is certain to occur if approved operating instructions and procedures are not followed. Personnel must be warned of the serious consequences of ignoring the message. The top of this sign says DANGER in white letters on a red oval that is edged by a rectangular black border. The body of the sign is white with the message printed in black.

16.4 Caution Signs

Caution signs are used where injury or damage is possible and employees must be on their guard. The top of this sign says CAUTION in yellow letters on a black rectangle. The body of the sign is yellow with the message printed in black.

16.5 Informational Signs

Informational signs are used where instructions are needed. The heading says NOTICE in white letters on a green rectangle when the message relates to safety and on a blue rectangle for other messages. The body of the sign is white with the message printed in black.

16.6 Directional Signs

Directional signs are used to indicate exits, fire escapes, evacuation routes, stairways, location of first aid, etc. The direction symbol appears near the top in white on a green rectangle. The body of the sign must have a color contrasting with the general background.

16.7 Sign Selection

The sign portfolio maintained by the Responsible Safety Officer may be used to help in selecting suitable signs. The Responsible Safety Officer will also advise regarding the types needed and their sources of supply. The Responsible Safety Officer stocks some signs. Special signs are custom made in the Detroit Spectrum Painters shops or are purchased outside.

16.8 Warning Devices

Warning devices such as lights and audible alarms must be installed where they are needed to warn personnel against remaining in or entering hazardous areas. Personnel must be instructed about the meaning and the response required when an alarm sounds. An explanatory sign (describing hazard and action to take) must be posted near a warning light that when ON indicates danger, caution, high explosives, or radioactivity. In a highly illuminated area, the warning light should be surrounded by a disk or wide-angled cone of a contrasting color.

16.9 Evacuation Alarm

All buildings on site are equipped with a means of notifying personnel to leave the building, which is usually the public address system. Every dangerous operation area, indoor and outdoor, must be provided with devices to notify personnel to leave the area. The general evacuation alarm is a steady klaxon horn sound that means "Everyone leaves the building immediately and goes to the prearranged assembly point or as directed by the public address system." The extensiveness and reliability of the alarm system must be proportional to the magnitude of the credible accidents that could occur from the operations in or near the building.

16.10 Evacuation Alarm, Automatic

An automatic evacuation alarm must be installed that is triggered by a detector directly sensitive to the nature of the hazard for any operation in which an accident could rapidly endanger employees outside the immediate area. Such an operation must not proceed unless the alarm system is functional. Manual activation capability and a public address back-up system must be provided in the building. This alarm system must be protected by an automatic emergency power supply.

16.11 Manual Alarm System

A manually operated alarm system must be installed for operations in which accidents would not cause immediate danger to personnel outside the area of the incident but that could develop into dangerous situations. A public address system operable from the building and from the Fire Department and Protective Services must be provided.

Chapter 17 - Asbestos Awareness

17.1 Asbestos Awareness Training

Detroit Spectrum Painters will provide Asbestos Awareness Training for all employees who work in areas that contain or may contain Asbestos or Asbestos Hazards. The Asbestos Awareness Training is required for employees whose work activities may contact Asbestos Containing Material (ACM) or Presumed Asbestos Containing Material (PACM) but do not disturb the ACM or PACM during their work activities. All training is documented and the files are kept with the ‘‘Safety Director’’.

17.2 Possible Exposure to Asbestos

Asbestos materials are used in the manufacture of heat-resistant clothing, automotive brake and clutch linings, and a variety of building materials including insulation, soundproofing, floor tiles, roofing felts, ceiling tiles, asbestos-cement pipe and sheet, and fire-resistant drywall. Asbestos is also present in pipe and boiler insulation materials, pipeline wrap and in sprayed-on materials located on beams, in crawlspaces, and between walls.

17.3 Asbestos Defined

The definition of Asbestos is divided into two parts, friable and non-friable.

Friable:

Friable means that the material can be crumbled with hand pressure and is therefore likely to emit fibers. The fibrous or fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable, and they readily release airborne fibers if disturbed.

Non-friable:

Materials such as vinyl-asbestos floor tile or roofing felts are considered non-friable and generally do not emit airborne fibers unless subjected to sanding or sawing operations. Asbestos-cement pipe or sheet can emit airborne fibers if the materials are cut, abraded or sawed, or if they are broken during demolition operations.

17.4 Possible Ill Health Effects of Asbestos

Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon. Detroit Spectrum Painters takes all preventative measures to reduce this risk to its employee’s.

17.5 Warning Signs And Labels

Signs and labels shall identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that Asbestos Containing Material (ACM) and/or Presumed Asbestos Containing Material (PACM) will not be disturbed. Detroit Spectrum Painters shall ensure that employees working in and adjacent to regulated areas comprehend the warning signs.

17.6 When Working On Multi-Contractor Worksites

All employees shall be protected from any risk of exposure. If we are ever on a job-site where there are other contractors or sub-contractors working, Detroit Spectrum Painters will do its due diligence in order to keep all of our employees safe from asbestos exposure. If at any time you as an employee notice any type of asbestos or possible asbestos danger or exposure, immediately notify the site foreman.

If employees working immediately adjacent to a Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such job, their employer shall either remove the employees from the area until the enclosure breach is repaired; or perform an initial exposure assessment pursuant to 1926.1101(f).

Chapter 18 - Aerial Lifts

18.1 General Requirements

Aerial lifts acquired for use on or after January 22, 1973 shall be designed and constructed in conformance with the applicable requirements of the American National Standards for 'Vehicle Mounted Elevating and Rotating Work Platforms,' ANSI A92.2-1969, including appendix. Aerial lifts acquired before January 22, 1973 may not be used unless they have been modified to conform to the applicable design and construction requirements of ANSI A92.2-1969.

Aerial lifts include the following types of vehicle-mounted aerial devices used to elevate personnel to job-sites above ground:

- Extensible boom platforms;
- Aerial ladders;
- Articulating boom platforms;
- Vertical towers; and
- A combination of any such devices.

Aerial equipment may be made of metal, wood, fiberglass reinforced plastic (FRP), or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis.

18.2 Modifications

Aerial lifts may be 'field modified' only with Detroit Spectrum Painters prior authorization for uses other than those intended by the manufacturer provided the modification has been certified in writing from the manufacturer or by any other equivalent entity, such as a nationally recognized testing laboratory.

The modifications will be in conformity with all applicable provisions of ANSI A92.2-1969 and this program and will be at least as safe as the equipment was before modification.

18.3 Testing, Inspections and Authorized Personal

Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition.

Visual inspections shall be made of the equipment to determine that it is in good condition each day the equipment is to be used.

Tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working

condition.

Only authorized persons designated by Detroit Spectrum Painters shall operate an aerial lift. Boom and basket load limits specified by the manufacturer shall not be exceeded.

18.4 Vehicle Clearance and Reversing

All Detroit Spectrum Painters company vehicles must have a reverse signal alarm audible above the surrounding noise level or: the vehicle is backed up only when an observer signals that it is safe to do so.

Except where electrical distribution and transmission lines have been deenergized and visibly grounded at point of work or where insulating barriers that are not part of or attach to the equipment or machinery have been erected to prevent physical contact with the lines, all Detroit Spectrum Painters equipment or machines are to be operated in proximate to power lines only for lines rated 50 kV or below. Further, the minimum clearance between the lines and any part of the crane or load shall be 10 feet.

18.5 Fall Protection & Positioning Device Systems

Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.

A body harness shall be worn and a lanyard attached to the boom or basket when working from an aerial lift.

Body harnesses and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.

Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet (.9 m).

Positioning devices shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kN), whichever is greater.

Chapter 19 - First Aid / CPR

19.1 Head of Emergency First Aid

In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite and which is available for the treatment of injured employees, Detroit Spectrum Painters has authorized The Competent Person to be available at the worksite to render first aid.

The Competent Person shall make available on request, a valid certificate in first-aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training that will be verified by documentary evidence.

19.2 General

19.2.a Jobsite Specific

Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury, including a written report is available at Detroit Spectrum Painters.

19.2.b First Aid Kits

All first aid supplies shall be easily accessible when required. Every Detroit Spectrum Painters First Aid Kit shall consist of the follow items:

1910.151 Appendix A - OSHA First Aid Kit

OSHA Wall Mount First Aid Kit - Exceeds OSHA Guidelines 352 pieces: 40-3/8x1 3/4 55-3x3/4 3-Butterfly 12-Wound Closure Strips 1-Elastic Wrap 3-Knuckle 1-Ad. Tape Roll 1/2x2.5yds 1-Ad. Tape Roll 1 inch x 5yds 1-Triangular Bandage 36 inches x 36 inches x 51 inches; 10-Cottontip App. 4-Fingersplints 12-2x2 10-4x4 2-Trauma Pads 2-Gauze Rolls 6-Gloves 2-Chem. Cold Packs 1-Metal Tweezers 1-Metal Scissor 2-Burn Cream Packs 2-Lip Ointment Packs 5-Antibacterial Ointment Packs 39-Antibacterial Towelettes 39-Alcohol Prep Pads 12-Povidone Iodine Prep Pads 12-Sting Relief Pads 10-Antacid Tabs 16-Ibuprofen Tabs 16-Electrolyte Tabs 16-Non-Aspirin Tabs 1-Sterile Water Packet 1-Thermal Blanket 5-Insect Repellent Pack 2-Ice Bags 1-Arm Splint 1-First Aid Instruction Guide

The contents of the first aid kit shall be placed in a weatherproof container with individual sealed packages for each type of item, and shall be checked by Detroit Spectrum Painters before being sent out on each job and at least weekly on each jobsite by The Competent Person to ensure that the expended items are replaced.

19.3 Emergency Procedures / Requirements

Proper equipment for prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service, shall be provided at each job site. The Competent Person will also perform on a weekly basis, a inspection review of Detroit Spectrum Painters's written emergency procedures for each job site.

They are also responsible for, in areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances to be conspicuously posted.

19.4 Eyewash

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use. The Competent Person will ensure that, when required, Detroit Spectrum Painters will have a certified eye-wash device onsite at all times.

Chapter 20 - Incident Investigation and Reporting

20.1 Investigations of Incidents

While all incidents should be investigated, including incidents involving property damage only, the extent of such investigation shall reflect the seriousness of the incident.

20.2 Local Reporting Sequence of Events

Reporting of the incident must occur in a specified manner and the reporting sequence must be posted. For example, in the event of incidents, the following are contacted in order; 911, department supervisor, section manager, company physician, security, human resources, safety department, and other organizations as required.

20.3 Reportable Incidents to OSHA and Assigning of Responsibilities

OSHA requires reporting of work related incidents resulting in the death of an employee or the hospitalization of three or more employees. Detroit Spectrum Painters must verbally report such incidents to OSHA within 8 hours after the employer learns of it. Owner Clients require the incident to be reported as soon as possible or in a timely manner, i.e. immediately, within 24 hours.

Individual responsibilities for reporting and investigation must be pre-determined. Responsibilities must be assigned prior to incidents.

20.4 Personnel training in Responsibilities and Training in Techniques for Incident Investigation

Personnel must be trained in their roles and responsibilities for incident response and trained in incident investigation techniques utilizing a root cause process or method.

20.5 Equipment to Assist in Conducting an Investigation

Proper equipment will be readily available to assist in conducting an investigation. Equipment may include some or all of the following items; writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, marking devices such as flags, equipment manuals, etc.

20.6 On Site First Response and Actions to Control Further Loss

Employees who could be first responders should be trained and qualified in first aid techniques to control the degree of loss during the immediate post-incident phase.

After immediate rescue, actions to prevent further loss should occur. For example, maintenance personnel should be summoned to assess integrity of buildings and equipment, engineering personnel to evaluate the need for bracing of structures, and special equipment/response requirements such as safe rendering of hazardous materials or explosives employed.

20.7 Initial Identification/Assessment of Evidence & Collection, Preservation, and Security of Evidence

Initial identification of evidence immediately following the incident might include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Evidence such as people, positions of equipment, parts, and papers must be preserved, secured, and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment.

20.8 Public and Media Relations and Coordination

Dealings with the news media, release of photographs and names of the injured, informing relatives of the injured, internal release of information, and development of press releases must be detailed.

20.9 Witness Interviews and Statements

Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations, and use of trained interviewers should be detailed. The need for follow-up interviews should also be addressed.

20.10 Preparation of the Written Incident Report

Written incident reports should be prepared and include an incident report form and a detailed narrative statement concerning the events. The format of the narrative report may include an introduction, methodology, summary of the incident, investigation board member names, narrative of the event, findings and recommendations. Photographs, witness statements, drawings, etc should be included in the appendices.

20.11 Documentation and Communication of Lessons Learned and review of similar operations to prevent reoccurrence

Lessons learned should be reviewed and communicated and changes to processes placed into effect to prevent reoccurrence of the same or similar events.

20.12 Identifying Corrective Actions

Incident investigations shall result in corrective actions, individuals will be assigned responsibilities relative to the corrective actions, and these actions shall be tracked to closure.

Chapter 21 - Hazard Identification and Risk Assessment

21.1 Emergency and Risk Assessment Policy

On each job site (Office, Fabrication Shop and Field), the manager and superintendent/supervisor will gather information such as the location of the nearest hospital, fire station and first aid station so as to help minimize travel time to treatment for all employees.

This information is to prevent confusion for all during an emergency situation. Superintendents /supervisors and managers will be aware of the various procedures to follow on each job site should an accident occur.

All employees are to be aware of the action required, but should also follow the instructions set by their Superintendent/Supervisor.

Detroit Spectrum Painters has a Hazard Identification and Risk Assessment Policy and the following processes as outlined in this chapter are in place to identify potential hazards by the use of JSA's, JHA's, facility wide or area specific analysis/inspections.

	Date: August 23, 2013

Dave Durocher

21.2 Hazard Assessment

Our company will assess a work site and identify existing and potential hazards before work begins at the work site or prior to the construction of a new work site.

The Hazard Identification and Risk Assessment Program will provide processes to insure employees and/or sub-contractors are actively involved in the hazard identification process and hazards are reviewed with all employees concerned.

21.3 Process Of Hazard Assessment

The Hazard Identification and Risk Assessment Program and process should be used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.

We will also prepare a report of the results of a hazard assessment and the methods used to control or eliminate the hazards identified. We will also ensure that the date on which the hazard assessment is prepared or revised is recorded on it.

21.3.a Hazards Are Classified And Ranked Based On Severity

Hazards are classified/prioritized and addressed based on the risk associated with the task / (Risk analysis matrix outlining severity and probability).

21.4 Repeating And Reviewing The Process Of Hazard Assessment

Detroit Spectrum Painters will and must ensure that the hazard assessment is repeated

(a) at reasonably practicable intervals to prevent the development of unsafe and unhealthy working conditions,
(b) when a new work process is introduced,
(c) when a work process or operation changes, or
(d) before the construction of significant additions or alterations to a work site.

Review Process

Detroit Spectrum Painters will identify a review process is in place to avoid creating new hazards derived from the corrective measures.

21.5 Worker Participation and Training

If reasonably practicable, an Detroit Spectrum Painters
must involve affected workers in the
hazard assessment and in the control or elimination of the hazards identified.
All employees involved will be trained in the hazard identification process including the use and care of proper PPE.

21.6 Employee Hazard Notification

Detroit Spectrum Painters will and
must ensure that workers affected by the hazards identified
in a hazard assessment report are informed of the hazards and the methods used to control or eliminate the hazards.

We have a requirement for documentation of workers names and participation in the process either on the written hazard assessment reports or in tool box meeting forms.

21.7 Hazard Elimination And Control

The Hazard Identification and Risk Assessment Program will demonstrate how identified hazards are addressed and mitigated. This can be accomplished by dedicated assignment, appropriate documentation of completion, and implemented controls.

If there is an existing or potential hazard to workers is identified during a hazard assessment, an Detroit Spectrum Painters will take appropriate measures in order to address, correct and mitigate any such hazardous measures as follows:

(a) eliminate the hazards, or

(b) if elimination is not reasonably practicable, control the hazard.

If reasonably practicable, an Detroit Spectrum Painters will
eliminate or control a hazard through the use of
engineering controls. If a hazard cannot be eliminated or controlled under this subsection, Detroit Spectrum Painters will
use administrative controls that control the hazard to a level
as low as reasonably achievable.

If the hazard cannot be eliminated or controlled under the two above subsections Detroit Spectrum Painters will ensure that the appropriate personal protective equipment is used by workers affected by the hazard.

If the hazard cannot be eliminated or controlled under any of the above subsections Then we will use a combination of engineering controls, administrative controls or personal protective equipment if there is a greater level of worker safety because a combination is used.

21.8 Emergency Preparedness

Emergency preparedness means that we are ready to respond to any emergency situation at our facility or any worksite. The purpose of an Emergency Response Plan is to protect our employees, contractors and the public from serious injury along with minimizing damage to equipment or property. In the event of a major disaster, this Emergency Response Plan describes the initial responsibilities and actions to be taken to protect all employees until the appropriate emergency responders take over.

21.8.a Emergency Response Procedures:

In the event of an emergency our initial steps should involve assessing the hazard, evacuating personnel from the area, identifying any resources and delegating priority activities such as, rendering first aid, acquiring outside emergency assistance, using a fire extinguisher, etc.

- Contact key personnel (supervisor, first aid personnel).
- Give location and provide a short detailed account of the incident, identify any types of injures.
- Protect yourself and others from any immediate hazards.
- Have designated person administer any required first aid.
- Secure the accident scene.
- Contain any spills, if possible.
- Assist authorities as required.

21.8.b Emergency Response Communication Flow Diagram

ONSITE SUPERVISOR

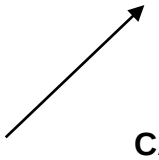
- Access Situation
- Make Areas Safe (Isolate)
- Rescue
- Administer First Aid

↓

EMERGENCY MEDICAL SERVICES

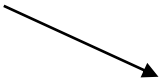
- Ambulance _____
- Helicopter _____
- Fire _____
- Police: _____

NOTE
All phone numbers should be included in each box or frame.



CALL FOR HELP

- Identify yourself
- Give location or site
- Seriousness
- Number injured



CUSTOMER

- Area Foreman
- Inspector
- Field Operator

Number: _____

LOCAL MANAGEMENT

- Manager
- Other Foreman

Number:_____

CORPORATE OFFICE

Reference Health, Safety & Loss Control Manual

Establish in pre-job meeting if on site Supervisor or local management will contact customer and emergency services.

21.8.c Project Location & Emergency Phone Numbers

JOB SITE LOCATION: _____

Customer Name:

Project Name: _____

Project Location (LSD) _____ Job Number _____

Customer Contact: _____ Mobile Number: _____

Office Number: _____

Start Date: _____ Estimated Completion Date: _____

NEAREST EMERGENCY SERVICES:

Ambulance/Medicare: _____ or _____

Airport at: _____ or _____

Hospital at: _____ or _____

Fire Dept. at _____ or _____

R.C.M.P. at _____ or _____

E.U.B. at or

Const. Supt. Name _____ Cellular Number _____

Office Number _____

Supervisor's Name: _____ Cellular Number: _____

Office Number _____

Customer Field Operator: _____ Cellular Number: _____

Office Number _____

Muster Points _____

O.H.&S.. Inspection Branch (24 Hours) _____ or _____

W.C.B. at _____ or _____

Environmental Spill Hotline _____ or _____

Other: _____ or _____

Other _____

Chapter 22 - Emergency Action Plan

22.1 Written And Oral Emergency Action Plans

Detroit Spectrum Painters has a written emergency action that is kept in the workplace, and available to employees for review at any time. Detroit Spectrum Painters generally has more than 10 employees however, if we ever have 10 or fewer employees we may communicate the plan orally to all employees.

22.2 Minimum Elements Of The Emergency Action Plan

An emergency action plan must include at a minimum:

- Procedures for reporting a fire or other emergency;
- Procedures for emergency evacuation, including type of evacuation and exit route assignments;
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;
- Procedures to account for all employees after evacuation;
- Procedures to be followed by employees performing rescue or medical duties.
- The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.

22.3 Employee Alarm System

Detroit Spectrum Painters has in place and will maintain a system to alert employees of emergencies. The alarm system shall be distinctive and recognizable as a signal to evacuate the work area or perform actions designated under the emergency action plan. At Times if and when our company has 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm. The employee alarm system must use a distinctive signal for each purpose.

22.4 Training

An employer must designate and train employees to assist in a safe and orderly evacuation of other employees. This is covered under is chapter within the section titled “Building Emergency & Evacuation Plan”.

22.5 Review Of Emergency Action Plan

An employer must review the emergency action plan with each employee covered by

the plan:

- *When the plan is developed or the employee is assigned initially to a job;*
- *When the employee's responsibilities under the plan change; and*
- *When the plan is changed.*

22.6 Develop Safe Work Plan

Prior to any construction or new site work a site map of the project shall be developed or obtained if already developed. The 'Safe Work Plan' shall identify usage area, hazards, Emergency Action Plan and be reviewed with Operating Personnel that will be at the site.

22.7 Organization

Detroit Spectrum Painters requires that during every emergency an organized effort be made to protect personnel from further injury and to minimize property damage. All of Detroit Spectrum Painters's resources can be made available to respond to an emergency. Each supervisor must know what to do during an emergency in his or her area and must be certain that his or her employees understand their roles.

22.8 Master Emergency Response Plan

Detroit Spectrum Painters's Master Emergency Response Plan delineates lines of authority and responsibility for emergency response. In this context, a major emergency may be one of the following: a potential major loss to a building or facility; an emergency that involves more than one building or facility; a situation in which a choice must be made in the assignment of relative levels of authority among emergency-response groups; a potential hazard to the surrounding community; threat; civil disturbances or alerts; natural disasters such as earthquakes, floods, and landslides; and site wide electrical power or other utility failure. During response to such major events, if deemed necessary by management or Detroit Spectrum Painters Fire or Police may be summoned, and a predesignated succession of management personnel would determine who would take charge. The primary responsibility person designated to be in charge is to ensure that priorities are established, that the response is appropriate and adequately implemented, and that the proper notifications are made. In most cases the direct involvement of local supervision and remedial action will be necessary. Adequate emergency response will be made at the group, department, and building levels, with support from Fire, Medical, Protective Services, and other support organizations. As a practical matter it must be recognized that management personnel are normally on site only 40 of the 168 hours per week. Thus, there may be considerable delay before management personnel can assume on-site direction of major emergencies. This highlights the importance of local initiative, at least at the

onset of an emergency. The underlying philosophy of the emergency response plan is the recognition that each employee has a vital role and a basic responsibility in the area of safety and emergency action. The only reasonable expectation is that at the onset of an emergency the initial response will be at the individual level. Immediate and knowledgeable action is vital. The emergency plans for individual buildings and facilities set forth the responses to be taken by employees following the discovery of an emergency. Following the immediate measures taken by the individual, the responsibility for action will normally proceed upward through normal organizational lines of authority to the Building Manager and to emergency-response groups. Involvement of individuals at a higher level of responsibility will depend on the particular situation. To reiterate, levels of responsibility proceed downward from top management while action and response levels proceed upward from the first person involved. Don't be afraid to call outside assistance like police and firefighters. Dial 911. When the police, firefighters or paramedics arrive, surrender command to a qualified emergency specialist. Notify management as soon as practical, which means after all immediate responses have been exercised. The operator at 911 will tell you who is the person in charge of the specialized personnel assigned to respond to the emergency. An orderly transfer of responsibility is then made from the local building or facility organization to this responding unit. The examples listed below identify the most likely outside incident commander for the following types of emergencies: Injury: Ranking Fire Officer or Physician Fire: Ranking Fire Officer Bomb Threat: Ranking Police Officer Civil Disturbance: Ranking Police Officer Radioactive or Chemical Spills: Ranking Fire Officer Responsible Safety Officer Special Toxic Clean Up crew or alternate Power Outage: Pacific Gas and Electric or local Plant Power Engineer Mechanical Utility Failures: Construction and Maintenance Department Superintendent Structural Plant Failures: Engineering Department Head or alternate Landslide: Engineering Department Head or alternate In most emergencies the person who should be in charge is obvious. However, an emergency might arise that requires the major involvement of more than one emergency-response group. In such a case the ultimate authority among those on the scene may not be obvious. In this event, management should be consulted for direction.

22.9 Building Emergency & Evacuation Plan

THIS PLAN IS SETUP TO SAFELY AND ORDERLY EVACUATE ALL PERSONNEL IN THE EFFECTED AREA.

The first person noticing the EMERGENCY shall make all other Employee/Visitors aware of the EMERGENCY by using the “ALL PAGE” button on the Intercom system.

THE MESSAGE SHALL BE MADE IN A CLEAR AND CALM MANNER, THE TYPE AND LOCATIONS OF THE EMERGENCY SHALL BE REPORTED.

UPON HEARING THE ANNOUNCEMENT ALL PERSONNEL IN EFFECTED AREA

SHALL IN AN ORDERLY AND SAFE MANER EVACUATES THE EFFECTED AREA USING THE NEAREST SAFE EXIT.

THE LEAD ASSOCIATE FOR THIS AREA SHALL MAKE A VISUAL INSPECTION OF THE AREA TO INSURE ALL PERSONNEL HAVE SAFELY LEFT THE AREA.

ALL PERSONNEL SHALL REPORT TO THEIR DESIGNATED REPORTING AREA AND REMAIN IN THIS AREA FOR A HEAD COUNT UNTIL THEY ARE RELEASED BY THE LEAD ASSOCIATE. **NO PERSONNEL MAY REENTER THE AREA UNTIL THE EMERGENCY HAS BEEN CLEARED BY THE PERSONNEL REASONABLE FOR THE REQUIRED ACTION TO RESOLVE THE EMERGENCY.**
THE LEAD ASSOCIATE IS THE ONLY PERSON TO CALL FOR OUTSIDE ASSISTANCE.

THE LEAD ASSOCIATE SHALL ASSIGN SOME ONE TO CONTACT THE PROPER PERSONNEL TO BE CONTACTED TO IMPLEMENTATION OF THE PLAN OF ACTION.

BELOW IS THE LISTED REPORTING AREA FOR PERSONNEL:

FRONT OFFICE PERSONNEL (PARKING LOT NEXT TO SERVICE SHOP)
MODULAR 1 AND 2 PERSONNEL (PARKING LOT NEXT TO POLE BARN)
SHOP PERSONNEL (PARKING LOT NEXT TO POLE BARN)
SERVICE SHOP PERSONNEL (PARKING LOT IN FRONT OF MAIN OFFICE)

A specific emergency plan for each building or facility must be prepared under the direction of the Building Manager. A Building Manager and Deputy Manager must be appointed and oriented for each building or complex. Generally, the Building Manager is the person in charge of a building or facility. The Building Manager has specific responsibility for the preparation, updating, and implementation of the emergency plan for this area. This responsibility includes recommending personnel to attend indoctrination and training programs. Specifically, each plan must contain the following information and procedures as appropriate for each building: The names of the Building Manager, Deputy Manager, and Assistant Manager(s). A list of people with specific duties during an emergency and a description of their duties. For example, specific people should be assigned to supervise evacuation and to carry out a rapid search of the area (assuming this can be done safely). Floor plans showing evacuation routes, the location of shutoff switches and valves for the utility systems (water, gas, electricity), and the locations of emergency equipment and supplies (including medical). Indications on the floor plans of areas where specific hazards (i.e., toxic, flammable, and/or radioactive materials) exist. Location and description of special hazards or hazardous devices should be included in the text together with shutdown procedures if applicable. Designation of a primary assembly point for evacuees, well away from the building. An

alternate site should also be designated in case the first choice cannot be used. Reentry procedures. No one should reenter an evacuated building or area without specific instructions from the Building Manager or other person in charge. Department Head and Supervisor responsibilities regarding emergency preparedness and action procedures. Emergency plans for facilities or equipment requiring an Operational Safety Procedure (OSP). The evacuation plans will also be posted on each facility map with the directions listed for the safest evacuation.

22.10 Operation Of Critical Procedures Or Operations

Depending on the type of emergency and the severity of risks involved, certain employees have been designated to remain behind during an evacuation in an emergency situation. These employees are titled as “Emergency Critical Operations Specialist” or “ECOS”. Each ECOS has been trained in the rapid procurement of safe operations of critical plant operations. These employees have a specific job to perform if the situation allows. They are to see that the overall safety of the plant or facility so that the emergency situation at hand does not increase the severity of the overall emergency. At no time are the ECOS to put their lives or overall safety at risk.

22.11 Operational Safety Procedures

OSP's for individual facilities or pieces of equipment must include emergency plans for the facilities or equipment.

22.12 Supervisors Responsibilities

During an emergency, the supervisor must: Ensure that those under his or her supervision are familiar with the plan for the building, particularly the recommended exit routes and how to report an emergency. Render assistance to the person in charge during an emergency, as required. Maintain familiarity with the shutdown procedures for all equipment used by those under his or her supervision. Know the location and use of all safety equipment on his or her floor. Keep employees from reentering an evacuated area until reentry is safe.

22.13 No Loitering Policy

Employees not involved in the emergency must stay away from the scene and follow the instructions issued over the public address system or directly from the person in charge. The sounding of a fire bell means immediate evacuation by the nearest exit. Employees must not reenter an area that they have evacuated until notified that it is safe to return.

22.14 Employee Responsibilities

Employees, other than emergency-response groups, involved in any emergency greater than a minor incident are expected to act as follows: If there is threat of further injury or further exposure to hazardous material, remove all injured persons, if possible, and leave the immediate vicinity. If there is no threat of further injury or exposure, leave seriously injured personnel where they are. Report the emergency immediately by phone. State what happened, the specific location, whether anyone was injured, and your name and phone number. Proceed with first aid or attempt to control the incident only if you can do so safely and have been trained in first aid or the emergency response necessary to control the incident. Show the ranking emergency-response officer where the incident occurred, inform him or her of the hazards associated with the area, provide any other information that will help avoid injuries, and do as he or she requests.

Chapter 23 - Respiratory Protection

23.1 Overview

Detroit Spectrum Painters will provide effective training to employees who are required to use respirators. The training must be comprehensive, understandable, and recur annually and more often if necessary. If Detroit Spectrum Painters employees choose to voluntary use respirators, they will be required to review and comprehend some basic information about respirators. Detroit Spectrum Painters will ensure that each employee can demonstrate knowledge of at least the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
- What the limitations and capabilities of the respirator are;
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
- How to inspect, put on and remove, use, and check the seals of the respirator;
- What the procedures are for maintenance and storage of the respirator;
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and
- The general requirements of this section.

The training will be conducted in a manner that is understandable to the employee. Detroit Spectrum Painters shall provide the training prior to requiring the employee to use a respirator in the workplace. Previous training not repeated initially by Detroit Spectrum Painters must be provided no later than 12 months from the date of the previous training. Retraining shall be administered annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

23.2 General Practices

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination.

This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure 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 this section.

When the atmosphere is oxygen deficient with oxygen content below 19.5% by volume, respirators are required.

Respirators shall be provided by Detroit Spectrum Painters when such equipment is necessary to protect the health of the employee. Detroit Spectrum Painters shall provide the respirators which are applicable and suitable for the purpose intended.

Detroit Spectrum Painters shall be responsible for the implementation and maintenance of a respiratory protection program which shall include the requirements outlined in this chapter.

23.3 Selection of Respirators

23.3.a General Requirements

Detroit Spectrum Painters shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability. The respirator shall be a NIOSH-certified respirator used in compliance with the conditions of its certification.

Detroit Spectrum Painters will identify and evaluate the respiratory hazard(s) in the workplace; this evaluation includes a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form.

Detroit Spectrum Painters shall select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

Where Detroit Spectrum Painters cannot identify or reasonably estimate the employee exposure, Detroit Spectrum Painters will consider the atmosphere to be IDLH.

23.3.b Respirators for IDLH Atmospheres

Detroit Spectrum Painters provides the following respirators for employee use in IDLH atmospheres:

- A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

All oxygen-deficient atmospheres shall be considered IDLH.

Exception: If Detroit Spectrum Painters **demonstrates that, under all foreseeable conditions, the oxygen concentration can be maintained within the ranges specified in Table II of this chapter (i.e., for the altitudes set out in the table), then any atmosphere-supplying respirator may be used.**

TABLE II

Altitude (ft.)	Oxygen deficient Atmospheres (% 02) for which the employer atmosphere-may rely on supplying respirators
Less than 3,001	16.0-19.5
3,001-4,000	16.4-19.5
4,001-5,000	17.1-19.5
5,001-6,000	17.8-19.5
6,001-7,000	18.5-19.5
7,001-8,0001	19.3-19.5.

1Above 8,000 feet the exception does not apply. Oxygen-enriched breathing air must be supplied above 14,000 feet.

23.4 Fit Testing

Before an employee is required to use any respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used.

Detroit Spectrum Painters requires all employees using a tight-fitting facepiece respirator to pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT).

Detroit Spectrum Painters requires that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.

Detroit Spectrum Painters shall conduct an additional fit test whenever the employee reports, or a Physician or other Licensed Health Care Professional, supervisor, or Detroit Spectrum Painters program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing a QLFT or QNFT, the employee subsequently notifies Detroit Spectrum

Painters program administrator, and Physician or other licensed health care professional that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator facepiece and to be retested.

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of this manual.

QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less.

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half facepieces, or equal to or greater than 500 for tight-fitting full facepieces, the QNFT has been passed with that respirator.

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual facepiece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator facepiece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator facepiece.

Quantitative fit testing of these respirators shall be accomplished by modifying the facepiece to allow sampling inside the facepiece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate facepiece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the facepiece.

Any modifications to the respirator facepiece for fit testing shall be completely removed, and the facepiece restored to NIOSH-approved configuration, before that facepiece can be used in the workplace.

23.5 Facepiece Seal Protection

Detroit Spectrum Painters shall not permit respirators with tight-fitting facepieces to be worn by employees who have:

- Facial hair that comes between the sealing surface of the facepiece and the

face or that interferes with valve function; or
- Any condition that interferes with the face-to-facepiece seal or valve function.

If an employee wears corrective glasses or goggles or other personal protective equipment, Detroit Spectrum Painters shall ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

For all tight-fitting respirators, Detroit Spectrum Painters shall ensure that employees perform a user seal check **each time** they put on the respirator using 1910.134 Respiratory Appendix B-1: User Seal Check Procedures, or the procedures recommended by the respirator manufacturer were that Detroit Spectrum Painters can demonstrates that they are as effective.

Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the employer shall reevaluate the continued effectiveness of the respirator.

The employer shall ensure that employees leave the respirator use area:

To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or if they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or to replace the respirator or the filter, cartridge, or canister elements.

If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, the employer must replace or repair the respirator before allowing the employee to return to the work area.

23.6 Maintenance and Care

23.6.a Responsibility

Detroit Spectrum Painters will provide for the cleaning and disinfecting, storage, inspection, and repair of respirators used by employees. The Safety Director or the Responsible Safety Officer, Dave Durocher shall be the person in charge of the maintenance, care and sanitation of the Respirators. These procedures will be followed to meet the requirements of the manufacturer’s procedures or from Appendix B.

23.6.b Cleaning and Disinfecting

Detroit Spectrum Painters will provide each respirator user with a respirator that is clean, sanitary, and in good working order. Detroit Spectrum Painters shall ensure that respirators are cleaned and disinfected using the procedures recommended by the

respirator manufacturer, provided that such procedures are of equivalent effectiveness.

The respirators shall be cleaned and disinfected at the following intervals:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition;
- Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals;
- Respirators maintained for emergency use shall be cleaned and disinfected after each use; and
- Respirators used in fit testing and training shall be cleaned and disinfected after each use.

23.7 Storage

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

In addition to the requirements of the above section, emergency respirators shall be:

- Kept accessible to the work area;
- Stored in compartments or in covers that are clearly marked as containing emergency respirators; and
- Stored in accordance with any applicable manufacturer instructions.

23.8 Inspection

Detroit Spectrum Painters shall ensure that respirators are inspected as follows:

- All respirators used in routine situations shall be inspected before each use and during cleaning;
- All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and
- Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

Detroit Spectrum Painters shall ensure that respirator inspections include the following:

- A check of respirator function, tightness of connections, and the condition of

the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
- A check of elastomeric parts for pliability and signs of deterioration.

Self-contained breathing apparatus shall be inspected monthly. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. Detroit Spectrum Painters shall determine that the regulator and warning devices function properly.

For respirators maintained for emergency use, Detroit Spectrum Painters shall:

- Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator; and
- Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.

23.9 Breathing Air Quality and Use

Detroit Spectrum Painters to provide employees using atmosphere-supplying respirators (supplied-air and SCBA) with breathing gases of high purity.

Detroit Spectrum Painters shall ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

- Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and

- Compressed breathing air shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:

    - Oxygen content (v/v) of 19.5-23.5%;
    - Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
    - Carbon monoxide (CO) content of 10 ppm or less;
    - Carbon dioxide content of 1,000 ppm or less; and

23.10 Program Evaluation

Detroit Spectrum Painters will conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult employees to ensure that they are using the respirators properly.

Conduct evaluations of the workplace will be performed by Dave Durocher – Foreman ,as necessary but not less than Monthly, to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

Detroit Spectrum Painters shall regularly consult employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);
- Appropriate respirator selection for the hazards to which the employee is exposed;
- Proper respirator use under the workplace conditions the employee encounters; and
- Proper respirator maintenance.

Chapter 24 - PPE Assessments / Personal Protective Equipment

24.1 Training

Detroit Spectrum Painters shall provide training to each employee who is required to use the Personal Protective Equipment - which will be referred to as 'PPE'. Each employee will be trained to know at minimum the following:

PPE Training List 1

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, doff, adjust, and wear PPE;
- The limitations of the PPE; and,
- The proper care, maintenance, useful life and disposal of the PPE.

Each affected employee shall demonstrate an understanding of the training specified in the list above and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

When Detroit Spectrum Painters has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by PPE Training List 1, Detroit Spectrum Painters will retrain each such employee. Circumstances where retraining of an employee is required include, but are not limited to, the following:

PPE Training List 2

- Changes in the workplace render previous training obsolete; or
- Changes in the types of PPE to be used render previous training obsolete; or
- Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

Detroit Spectrum Painters shall verify that each affected employee has received and understood the required training program through a written certification that will include:

1. Name of each employee trained;
2. The date(s) of training;
3. List the Division / Branch / Location / Section etc; and
4. Identifies the subject of the certification.

24.2 Application

Protective equipment for Detroit Spectrum Painters's employees includes personal protective equipment for:

- eyes,
- face,
- head,
- extremities,
- protective clothing,
- respiratory devices,
- protective shields and barriers,

are and will be provided, used, and maintained in a sanitary and reliable working condition wherever it is necessary by reason of:

- hazards of processes or environment,
- chemical hazards,
- radiological hazards, or
- mechanical irritants

encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

24.3 Employee-owned Equipment

Where employees provide their own protective equipment, Detroit Spectrum Painters will continue to be responsible to assure its adequacy, including proper maintenance and sanitation of such equipment.

24.4 Hazard Assessment and Equipment Selection

Detroit Spectrum Painters shall assess the workplace by doing a "Hazard Assessment" to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE).

Detroit Spectrum Painters will verify that the required workplace hazard assessment has been performed through a written certification that will:

1. Identifies the workplace evaluated; determination if hazards are present or are likely to be present, which necessitate the use of PPE.

2. The person certifying that the evaluation has been performed;
3. The date(s) of the hazard assessment; and,
4. Identifies the document as a certification of hazard assessment.

If such hazards are present, or are likely to be present, Detroit Spectrum Painters will:

1. Communicate selection decisions to each affected employee;
2. Select the types of PPE that will best protect the affected employee from the hazards identified in the hazard assessment; and
3. Select PPE that properly fits each affected employee.

24.5 Defective and Damaged Equipment

Defective or damaged personal protective equipment shall not be used.

24.6 Proper PPE Selection and Fitting

If hazards are present or likely to be present, has the PPE that has been properly selected for each affected employee. The selection and reasons for selection should be given to the employee.

All PPE must be fitted to each affected employee and proper fitting, including proper donning, doffing, cleaning, and maintenance shall be performed and documented.