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# Safety Policy

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*February 2020*



428 California Road  
Morgantown, PA 19543

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## Berg Safety Policy

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## **Berg Safety Policy**

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### **Safety Responsibilities**

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#### **General Supervisor's Leadership:**

1. Fully support safety efforts from a financial standpoint and by setting the example for all employees to follow.
2. Ensure that a "Competent Person" is available at all times on site.
3. Continuously evaluate safety policies and procedures to make sure they are adequate for the exposures present.
4. Inform all Berg employees, subcontractors and suppliers of Berg's safety policies and uniformly enforce all such safety policies.
5. Identify and promote the safety education program for all Berg employees.
6. Inform Berg employees of regulatory changes that affect our business.
7. Insure that provisions required in local, state and federal regulations are complied with.
8. Ensure that Berg's Safety Program is being effectively implemented throughout the organizations.
9. Complete Accident Investigation forms and report incidents to Human Resources and Director of Finance.
10. Review all accident reports and accident investigation reports. Look for trends.
11. Report any incidents of potential major impact, in accordance with the "Major Accident Procedures", See Exhibit "A", as soon as the situation is under control, but in no event later than four (4) hours after you first become aware of the incident.
12. Attend structured safety training when scheduled.
13. Be properly trained to facilitate OSHA inspections.

#### **Site Supervisor's Leadership:**

Plan and execute all work in his/her area so that it complies with the law, Berg's Safety Program and jobsite safety requirements. Hold employees accountable by addressing all unsafe acts and conditions immediately.

1. Ensure that a "Competent Person" is available at all times on site.
2. Inform all Berg employees, subcontractors and suppliers of Berg's safety policies and uniformly enforce all such safety policies.
3. Inspect his/her work area several times daily.
4. Ensure all field employees have necessary safety equipment.
5. Perform a formal weekly inspection of his/her project.

6. Ensure that any visible or reported unsafe conditions, hazards or potential hazards are corrected if it is within Berg's scope of work or reported to Berg's Site Supervisor if it's outside of Berg's scope of work.
7. Care for any injuries immediately.
8. Complete accident investigation forms and report incidents to Human Resources and Director of Finance.
9. Report immediately to the Site Supervisor all accidents involving property damage, injuries requiring professional medical services, and injuries resulting in loss of time. Report any incidents of potentially major impact in accordance with the "Major Accident Procedures", see Exhibit "A".
10. Perform a job orientation with employee prior to start of work on a job.
11. Conduct a daily safety huddle with the work crew prior to the start of work or as the scope of work changes.

### **Employees:**

1. Each employee is responsible for his or her own safety. Remember that you have more control over your own safety than anyone else.
2. Comply with the provisions of the law, the Berg Safety Program and the project safety requirements.
3. Report any unsafe conditions or acts immediately to your coordinator.
4. Report any accidents involving personal injury (either to you or to others) or property damage immediately, no matter how small to your supervisor.
5. Wear proper work clothing.
6. Wear proper personal protective equipment for the exposures present.
7. Know who your competent person is on site.

### **General Safety Requirements**

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In addition to all federal, state and local regulations, all employees of Berg shall abide by the following minimal safety requirements.

1. Report an unsafe conditions or acts to your immediate coordinator.
2. Report all injuries to your immediate coordinator immediately.
3. Use eye and face protection where there is danger from flying objects or particles, such as when grinding, chipping, cutting, hammering, concrete placement, burning, working above your head and welding. Must use chaps whenever operating a chain saw.
4. Gloves are to be worn when handling sharp objects. Hearing protection will be worn whenever working around excessive noise levels.

5. Firm sole leather work shoes, long pants and shirts are to be worn by all employees when on the jobsite. Special safety equipment is to be worn whenever required by particular hazardous conditions.
6. Hard hats are required on pipe crews, concrete projects, county or state paving projects, when working on the ground near heavy equipment and any other time that an overhead or electrical exposure exists.
7. Physical violence and threats of physical violence against another person will not be tolerated.
8. Properly care for, and be responsible for all Personal Protective Equipment (PPE). Wear your PPE when hazards are present and as required by OSHA standards.
9. Never operate any machine unless all guards and safety devices are in place and in proper operating condition.
10. Keep all tools in safe working condition. Never use defective tools or equipment. Inspect all tools and equipment prior to use.
11. Be aware of work conditions around you. Be alert and keep out from under overhead loads.
12. Maintain housekeeping in work area. Do not leave materials in aisles, walkways, stairwells, roads, etc., which present a possible tripping hazard. Waste materials are to be disposed of on a daily basis.
13. All equipment used on site will be inspected daily prior to use. Any maintenance necessary should be reported to the job foreperson immediately. The job foreperson is then responsible for arranging for maintenance to be performed. Equipment logs must be completed daily and submitted to the office weekly.
14. Seat belts must be worn at all times when operating equipment or vehicles if the seat belt is present on the equipment (unless equipment is not equipped with a roll over protection system).
15. Riding on equipment is only permitted if a seat is provided.
16. Place ladders on a substantial base and do not use ladders with broken, improperly spaced, split or missing rungs or rails. Extend straight ladders 36 inches above the landing platform or step off point and secure in place. Face the ladder and keep hands free of tools and materials.
17. Store and transport gasoline in an approved metal safety cans only, no plastic cans.
18. Shut off all engines prior to refueling and no smoking is permitted near flammable liquids. When shut down, all buckets will be placed on the ground.
19. Compressed gas cylinders must be secured in an upright position and protective caps must be in place during storage, and oxygen cylinders must be kept separate from acetylene and fuel gas cylinders.
20. All stored chemicals and materials should be properly labeled.
21. A fire extinguisher must be available in the area where burning or welding is taking place. Fire extinguishers also are to be carried in all company vehicles and office trailers. Do not tamper with fire protection or remove it from the assigned area unless it is to be used.

22. All electrical equipment shall be properly grounded. Damaged extension cords will be removed from service. No flat extension cords should be used.
23. Obey all caution and danger signs, barricades and safety permit tags posted in the work area.
24. Return all fall protection (guardrail systems, floor covers, etc.) to its original position if taken down to perform work prior to leaving the work area.
25. All mobile heavy equipment used on jobsites must have functioning backup alarms. It is the operator's responsibility to check the backup alarm prior to use of the equipment daily. If the backup alarm is not functioning, the equipment shall not be used for any purpose.
26. All employees must be trained in, and comply with, the OSHA Hazard Communication Standard or "Right to Know" laws governing the use and exposure to hazardous or toxic chemicals on the job.
27. No confined space will be entered by any employee without a proper entrance permit issued by a competent person.
28. All trenches will be properly shored or sloped/benched in accordance with OSHA regulations. Trenching logs must be completed daily by the competent person or any operator excavating a trench greater than 5' in depth.
29. Only authorized drivers with a valid driver's license are permitted to operate company owned vehicles.
30. All employees working within our office/shop locations are to be familiar with and follow the set of guidelines as outlined in our Emergency Response Plan for employees to follow during an emergency.

### ***Procedure for Reporting All Accidents/Incidents***

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#### **Thefts:**

1. IMMEDIATELY report to the police. Do not wait until you come to work. As soon as discovered, CONTACT POLICE. While advising the police of items that are missing, compile a list for Berg.
2. If possible, secure the area that was broken into.
3. Report the theft to Berg's Director of Finance and Site Supervisor. When giving list to Director of Finance, along with a copy to your supervisor, advise make, model, serial number, when and where purchased if known. Also, advise if equipment is rented, owned or leased. Accident investigation report is to be completed.
4. When speaking to police, advise the police that Berg will need a copy of the report as soon as possible. (It should not take longer than a week to obtain the report). Pick up report if you can.

#### **Auto Accidents:**

1. Contact Police immediately.
2. Complete and follow the instructions on the “Incident/Injury Report”.
3. Bring the completed Incident/Injury Report packet to Berg Human Resources ASAP.
4. If you have a camera in your vehicle, take pictures of the vehicle’s damage (or lack of), and also the road. If no camera is available, a diagram would help.
5. Estimates will be needed in ALL accidents. Call Berg’s General Supervisor and advise them of the damage. They will advise to bring into shop or go to a third party for an estimate.
6. Accident Investigation Report is also to be completed.

### **Incidents / Accidents Involving Equipment:**

1. If vandalism is involved, contact police immediately.
2. Incident Investigation Form is to be completed and returned to Berg’s Human Resources immediately.
3. Please note on your report if equipment is rental, leased or owned.
4. If incident report is warranted, that is to be attached to accident investigation report.
5. Berg’s General Supervisor is to be notified of any damage, so estimate and repairs can be determined. This is to be done on ALL damage.

Notify Berg’s Human Resources immediately of any and all losses. All the above paperwork is to be given to Human Resources ASAP after a loss is determined. Do not hold onto any paperwork. The information must be given to the insurance company immediately, so they can conduct their investigation. Any delay in reporting a loss to the insurance company, could result in no coverage for the loss. Any additional questions, please contact Human Resources.

### **Fire Prevention**

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- Only containers approved by Underwriters Laboratories or DOT, and clearly labeled to identify contents shall be used for transporting and storing flammable or combustible liquids. Safety cans with self-closing spouts and flash arresters are required for the handling, storing and transporting of gasoline.
- Open fires are prohibited.
- Flammable or combustible liquids or gases shall not be stored inside of structures unless approved by management. We will only maintain quantities within the work area that can be used in the course of normal work during the intended shift.
- Vessels or tanks containing flammable or combustible liquids or gases shall be replaced in a fuel storage area. These will be located a minimum of 75 feet from buildings, construction equipment, parking lots, etc. to minimize their exposure to a fire involving the tank.

- Containers shall be placed in dikes or recesses area to retain spills equivalent to the capacity of the containers. These areas shall be stoned or otherwise treated to prevent the growth of easily ignitable undergrowth.
- Storage tanks shall be equipped with self-closing dispensing nozzles and shall be provided with atmospheric and emergency relief vents equipped with flame arresters.
- Tanks or drums from which flammable liquids are dispensed shall be electrically grounded and shall be equipped with bonding wire to complete the grounding with the vessel into which the liquid is dispensed.
- There shall be no smoking or open flame in flammable or combustible liquid or gas storage areas. We will post conspicuous and legible signs prohibiting smoking.
- We will provide portable, dry chemical fire extinguishers for the fuel storage areas, and areas where flammable and combustible materials are stored.
- Portable fire extinguishers suitable for the potential hazard shall be provided on each jobsite and office location.

### ***Flame Cutting and Welding***

Each employee shall be responsible for ensuring the removal of all combustible or flammable materials in the area, and shall provide appropriate fire extinguishers and fire watch as required by the work. Fire watch for all projects shall be for Y2 hour after completion of work in a certain area unless otherwise specified by the Owner.

Welding flash screens shall be provided, placed and moved as necessary to reduce potential for injury to personnel performing welding in a stationary position.

#### **Additional Precautions**

- Hoses/leads shall not be routed through doorways unless the door is propped open and the hoses/leads protected from damage.
- Hoses/leads must be bridged-over or supported a minimum of seven (7) feet above passageways and shall not be supported from active conduit, process or sprinkler lines.
- Hoses/leads are not permitted to cross stair treads.
- Hoses/leads shall be approximately routed or protected to prevent their damage from slag or sparks.
- Hoses, leads, torches, gauges, cylinder valves and welding machines shall be inspected daily by the user for leaks and proper condition. Leaking or malfunctioning equipment shall be repaired or replaced prior to use.
- Compressed gas cylinders shall be shut-off at the valve and capped when not in actual use, and secured in an upright position during storage, transit and use.
- Fuel gases shall be separated from oxygen except during use. The cylinders shall be separated by 20 feet or a 5-foot partition with a Y2 hour fire rating.

- Oil and grease must be kept away from oxygen regulators, hose and fittings. Do not store wrenches, dies, cutters, or other grease-covered tools, clothing, gloves or rags in the same compartment with oxygen equipment.
- Torches and/or hoses must never be left in vessels, tanks or other enclosed containers because of the potential hazard of explosion from their leakage.
- Compressed gas cylinders shall not be hoisted using slings or by the valve protection cap. Use only carts or racks approved for hoisting.
- Oxygen shall not be used as a substitute for compressed air or other gases (i.e. to operate pneumatic tools, blowout lines, pressurizing vessels, etc.).
- All oxy-acetylene assemblies must have flash arresters installed at the regulators and check valves at the torch handle prior to use.
- All work during electric welding must be grounded.
- Stingers must not be laid on conductive materials.
- Spent rods shall be discharged in non-combustible containers.
- Electric welders shall be shut off at the end of the shift or when not in use for extended periods.
- Fire watch personnel shall be assigned as necessary. Any spark producing work requires a fire extinguisher to be in the immediate work area.

### ***Trenching and Excavation***

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It is the responsibility of each site supervisor to implement and maintain the procedures and steps set forth in this program. Each employee involved with excavation and trenching work is responsible to comply with all applicable safety procedures and requirements of this program.

#### **Hazard Controls**

Before any work is performed and before any employees enter the excavation, a number of items must be checked and insured:

- Before any excavation, underground installations must be determined. PA One Call must be notified 3-10 days prior to the start of work. All underground utility locations must be documented. All overhead hazards (surface encumbrances) that create a hazard to employees must be removed or supported to eliminate the hazard.
- Hard hats are to be worn in any area where there is a possible danger of head injury from impact, or from falling or flying objects. This includes trenches and around all overhead hazards.
- If the excavation is to be over 20 feet deep, the shoring system must be designed by a registered professional engineer, who is registered in the state where work will be performed.

- Adequate protective systems will be utilized to protect employees. This can be accomplished through sloping, shoring or shielding. All trenches five (5) feet or greater in depth will be sloped, benched, shored or shielded.
- All spoil piles will be stored a minimum of two (2) feet from the sides of the excavation. The spoil pile must not block the safe means of egress.

If a trench or excavation is 4 feet or deeper, stairways, ramps or ladders will be used as a safe means of access and egress. For trenches, the employee must not have to travel any more than 25 feet of lateral travel to reach the stairway, ramp or ladder.

No employee will work in an excavation where water is accumulating unless adequate measures are used to protect the employees.

A competent person will inspect all excavations and trenches daily, prior to employee exposure or entry, and after any rainfall, soil change, or any other time needed during the shift. Trenching logs must be completed on a daily basis. The competent person must take prompt measures to eliminate any and all hazards.

### ***Competent Person and Responsibilities***

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The OSHA Standards require that the competent person must be capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and have authorization to take prompt corrective measures to eliminate them and, if necessary, to stop the work.

A competent person is required to:

- Have a complete understanding of the applicable safety standards and any other data provided.
- Assure the proper locations of underground installations or utilities, and that the proper utility companies have been contacted.
- Conduct soil classification tests and reclassify soil after any condition changes.
- Determine adequate protective systems (sloping, shoring, or shielding systems) for employee protection.
- Conduct all air monitoring for potential hazardous atmospheres.
- Conduct daily and periodic inspections of excavations and trenches.
- Approve design of structural ramps, if used.
- In the event of an OSHA job site inspection, greet and be courteous to the OSHA inspector, request that the OSHA inspector wait by the job trailer or a secure place, immediately contact the site coordinator and BC safety consultant to facilitate the OSHA inspect.



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## Soil Classification and Identification

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The OSHA Standards define soil classifications within the Simplified Soil Classifications Systems, which consist of four categories:

1. Stable rock
2. Type A
3. Type B
4. Type C

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

Type A soil is defined as:

- Cohesive soils with an unconfined compressive strength of 1.5 tons per square foot (PSF) or greater.
  - Cemented soils like caliche and hardpan are considered Type A.

Soil is NOT Type A *if*:

- It is fissured.
- The soil is subject to vibration from heavy traffic, pile driving or similar effects.
- The soil has been previously disturbed.
- The material is subject to other factors that would require it to be classified as a less stable material.
- The exclusions for Type A most generally eliminate it from most situations.

Type B soil is defined as:

- Cohesive soil with an unconfirmed compressive strength greater than .5 TSF, but less than 1.5 TSF.
- Granular cohesion less soil including angular gravel, silt, silt loam and sandy loam
- The soil has been previously disturbed except that soil classified as Type C soil
- Soil that meets the unconfined compressive strength requirements of Type A soil, but is fissured or subject to vibration
- Dry rock that is unstable

Type C soil is defined as:

- Cohesive soil with an unconfined compressive strength of 5 TSF or less
- Granular soils including gravel, sand and loamy sand
- Submerged soil or soil from which water is freely seeping

- Submerged rock that is not stable.

### Soil Test & Identification

Methods of testing soils:

- Visual test: If the excavated soil is in clumps, it is cohesive. If it breaks up easily, not staying in clumps, it is granular.
- Thumb penetration test: The competent person attempts to penetrate a fresh sample with thumb pressure. If the sample can be dented, but penetrated only with great effort, it is Type A. If it can be penetrated several inches and molded by light pressure, it is Type C. Type B can be penetrated with effort and molded.

## Excavation Protection Systems

### Sloping and Benching Systems

Sloping and benching systems for excavations five (5) to twenty (20) feet in depth must be constructed under the instruction of a designated competent person.

Sloping and benching systems for excavations greater than twenty (20) feet must be designed and stamped by a registered professional engineer.

Sloping and benching specifications can be found below:

### Maximum Allowable Slopes

SOIL OR ROCK TYPE	MAX ALLOWABLE SLOPES FOR EXCAV. >20 FEET DEPTH
STABLE ROCK	VERTICAL
TYPE A	¾:1
TYPE B	1:1
TYPE C	1 ½:

NOTE: SLOPING AND BENCHING FOR EXCAV. > 20 FEET DEEP SHALL BE DESIGNED BY A REGISTERED PROF. ENG.

### Shoring Systems

Shoring is another protective system or support system. Shoring utilizes a framework of vertical members (uprights), horizontal members (whales), and cross braces to support the sides of the

excavation to prevent a cave-in. Metal hydraulic, mechanical, or timber shoring are common examples. Berg does not use shoring systems very often. When we use Aluminum Hydraulic Shoring for Trenches Appendix D in the OSHA Trenching & Excavation Standard will be complied with. The Pipe Crew Coordinator will make sure that this is complied with.

### **Shield Systems (Trench Boxes)**

Shielding is the third method of providing a safe workplace. Unlike sloping and shoring, shielding does not prevent a cave-in. Shields are designed to withstand the soil forces caused by a cave-in and protect the employees inside the structure. Most shields consist of two flat, parallel metal walls that are held apart by metal cross braces.

Shielding design and construction is not covered in the OSHA Standards. Shields must be certified in design by a registered professional engineer and must have either a registration plate on the shield or registration papers from the manufacturer on file at the job site office. **THE MANUFACTURER MUST APPROVE ANY REPAIRS OR MODIFICATIONS.**

### **Safety Precautions for Shield Systems**

- Shields must not have any lateral movement when installed.
- Employees will be protected from cave-ins when entering and exiting the shield (examples ladder within the shield or a properly sloped ramp at the end).
- Employees are not allowed in the shield during installation, removal, or during any vertical movement.
- Shields can be 2 ft. above the bottom of an excavation if they are designed to resist loads at the fill depth and if there are no indications of caving under or behind the shield.
- The shield must extend at least 18 inches above the point where proper sloping begins (the height of the shield must be greater than the depth of the excavation).
- The open end of the shield must be protected from the exposed excavation wall. The wall must be sloped, shored, or shielded. Engineer designed end plates can be mounted on the ends of the shield to prevent cave-ins.

### **Inspections**

Daily inspection of excavations, the adjacent areas and protective systems shall be made by the competent person for evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions.

- All inspections shall be conducted by the competent person prior to the start of work and as needed throughout the shift.
- Inspections will be made after every rainstorm or any other increasing hazard or change in conditions.
- The foreperson should log the inspection of the trench or excavation into his/her foreperson's logbook.

**Training**

All other employees work in and around the excavation must be trained in the recognition of hazards associated with trenching and excavating.

**Working Around Overhead and Underground Utility Lines**

As a contractor performing site excavation work we are exposed to both above ground and below ground utility lines. The estimated location of above ground utilities should be easy to determine. This can usually be done by a visual analysis of the site. Below ground utility installations-such as sewer, telephone, fuel, electric, water lines, or any other installations that reasonably may be expected to be encountered during excavation work are a little harder to identify, but must be determined prior to opening an excavation.

**Above Ground Utility Lines**

1. Site Supervisors must identify all above ground utility lines and communicate their presence to all supervisors and employees on site.
2. If an employee is to work within the vicinity of any above ground utility lines, the following clearances must be maintained.

SAFE WORKING DISTANCE FROM ABOVE GROUND POWER LINES	
VOLTAGE	WORKING DISTANCE
LESS THAN 50 kV	10 FEET
GREATER THAN 50 kV	10 FEET AND 4 INCHES FOR EVERY 10 kV OVER 50 kV

It is Berg's policy to contact the utility company responsible for the above ground lines for any lines greater than 50 kV in order to ask them the safe working distance.

3. If a Berg employee is to work near above ground power lines, the site coordinator will be responsible for contacting the utility company and requesting that they deenergize and ground the above ground electrical lines.
4. If the utility company cannot de-energize, we will request that they place insulated rubber sleeves on the above ground electrical lines. If the utility company places insulated rubber sleeves on the electrical lines the operator must still operate with extreme caution because contact with electrical lines protected by insulated rubber sleeves can still damage the lines.
5. Berg will also position a spotter in all areas where semi-stationary equipment is operating near utility lines.
6. When equipment is moving under overhead power lines, the operator shall regularly check to verify clearance.
7. The electrical company shall be contacted to flag electrical lines if our equipment is to operate under them.
8. Ground markers will also be used to identify above ground power lines.
9. If a utility line is contacted, the operator shall try to remain in the cab of the truck or equipment and call for help. He should warn others not to come in contact with the truck or equipment.
10. If the truck or equipment operator cannot remain in the cab, he/she must exit the cab in the following manner:
  - a. *Exit cab without contacting sides of the equipment.*
  - b. *Jump out and away from the cab with both feet together.*
  - c. *Shuffle feet slowly to get away from the truck or equipment. Do not take large steps.*

### **Below Ground Utilities**

- PA One Call will be notified 3-10 working days prior to the start of work. They will be advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of actual excavation.
- PA One Call will not locate lines on private property. If a project is on private property then the site supervisor must arrange for a private locator to identify all lines in the area where work will take place.
- Supervisor will verify that utility lines are marked prior to beginning excavation. This will be done by visually observing the site.
- If the general supervisor identifies utilities that have not been marked/identified, he/she will contact PA One Call to come out and remark lines. If PA One Call comes out and they cannot identify the exact location of lines, the general supervisor may proceed provided they do so with caution, and provided detection equipment or other acceptable means to locate utility installations are used.
- Utility markings shall be updated every 10 days or as needed.

- If Berg leaves the site entirely for more than 2 consecutive work days, excluding weekends & holidays, PA One Call will be notified to come back out and mark utility lines again.
- When excavation operations approach the estimated location of underground installations, the exact location of the installations must be determined by safe and acceptable means. This involved hand digging. PA One Call states that there is an 18" tolerance on either side of the line.
- If Berg is excavating in any area and observes an AT&T sign, work will cease immediately and AT&T will be notified. Work will not proceed until AT&T gives the go ahead.
- While the excavation is open, underground installations must be protected, supported, or removed, as necessary, to safeguard employees.
- If a utility line is struck, the area around the lines must be blocked off. No one is to enter the area until the utility company arrives on site.

Site Supervisor must report the utility strike immediately and work with the office to complete a detailed accident investigation report. This will include photographs with a tape measure, number of utility company vehicles; number of utility company personnel, etc. during utility strikes.

### ***Procedure for PA One Call***

1. Estimator gives General Supervisor the information for PA One Call. (General Supervisor then relies on estimator to give field the 3-day ok to start).
2. General Supervisor calls it in to the PA One Call System.
3. At that point One Call System issues an **ID number** for the mark out.
4. The **ID number** is used in the future for updates once the site has been unoccupied.
5. General Supervisor will put copy of the One Call in supervisor's bins.

#### **If There Is a Hit:**

1. Supervisor calls General Supervisor to let him know there is a problem.
2. General Supervisor calls PA One Call using the **ID number** and lets them know what lines were hit.
3. One Call notifies the owner of the hit. Sometimes General Supervisor also notifies the owner of the hit.
4. Take photographs of both the hit and all One Call markings at or near the site.
5. Repair crew is dispatched.
6. Owner determines if there was a good One Call for the dig.

#### **After The Hit:**

1. Supervisor fills out accident report and turns into Berg's Director of Finance within 24 hours.
2. Berg Director of Finance gets together with the General Supervisor to get all the PA One Call information.
3. From the information and pictures taken at the time of the hit, a determination is made if we are at fault or not.

**If our fault:**

1. Determine the amount of damage
2. Notify our insurance company
3. Contact owner and start negotiations for amount to be pair on claim. Often you get a percentage off the total bill.
4. If fault is questionable we would sit and wait for the invoice. Sometimes an invoice doesn't come in. We do not go after any questionable hits.

**If NOT Our Fault:**

1. Berg Director of Finance gathers pertinent information, completes the investigation and holds until owner would notify us.
2. If owner tries to claim our fault, we share all the information and photos (if we have) and tell them we are not responsible. Photos are the best source if we deny a claim.
3. Owners have the right to accept our denial, file suit and sometimes we might compromise.
4. If proper documentation is available, Berg Director of Finance will submit claim to the utilities for our time.

Send digital camera photos to Berg Director of Finance with report\*\*\*\*\*

**General Supervisor Needs:**

Correct information to make the call:

North, south, east, west distances, street names, intersections, county, municipality, borough, or township.

**Site Supervisor Needs:**

Date One Call was made, where it was called in. (Can get from General Supervisor) what lines are in the area.

- Excavations and trenches 4 feet or deeper that have the potential for toxic substances or hazardous atmospheres will be tested at least daily.
- If work is in or around traffic, employees must be supplied with and wear orange or yellow/green, class 2 or 3 reflective vests. Signs and barricades must be utilized to ensure the safety of employees, vehicular traffic, and pedestrians.

### **Berg Director of Finance Needs:**

- Good information at the One Call.
- Good information on the accident call.

\*Good detailed pictures that would have been taken at the time of the hit.

If there is any additional information that would be helpful, please contact the General Supervisor or Berg's Director of Finance.

## **Confined Space Program**

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### **The three conditions below must be present for a confined space to be present:**

1. Is large enough or so configured that an employee can bodily enter and perform work.
2. Has limited or restricted means for entry or exit (i.e. tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
3. Is not designed for continuous employee occupancy.

### **Permit required confined space (permit space), is a confined space that has one or more of the following characteristics:**

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

### **Permit Required Confined Space Entry General Guidelines**

During all Confined Space Entries, the following Safety Guidelines must be strictly enforced:

- Only Authorized and Trained Employees may enter a Confined Space or act as Safety Watchmen.



- No Smoking is permitted in a Confined Space or near entrance/exit area.
- During Confined Space Entries, a Watchman must be present at all times.
- Constant visual or voice communication will be maintained between the Safety Watchmen and Employees entering a Confined Space.
- No bottom or side entry will be made or work conducted below the level any hanging material or material which could cause engulfment.
- Air and Oxygen Monitoring is required before entering any Permit-Required Confined Space. Oxygen levels in a Confined Space must be between 19.5 and 23.5 percent. Levels above or below will require the use of an SCBA or other approved air supplied respirator. Additional ventilation and Oxygen Level Monitoring is required when welding is performed. The monitoring will check Oxygen Levels, Explosive Gas Levels, and Carbon Monoxide Levels. Entry will not be permitted if explosive gas is detected above one-half the Lower Explosive Limit (LEL).
- To prevent injuries to others, all openings to Confined Spaces will be protected by a barricade when covers are removed.

### **Confined Space Entry Procedures**

Each employee who enters or is involved in the entry must:

- Understand the procedures for confined Space Entry
- Know the Hazards of the specific space
- Review the specific procedures for each entry
- Understand how to use entry and rescue equipment

### **Confined Space Entry Permits**

Confined Space Entry Permits must be completed before any Employee enter a Permit Required Confined Space. The Permit must be completed and signed by the General Supervisor before entry; it must be posted near point of entry.

Permits will expire before the completion of the shift or if any pre-entry conditions change. Permits will be maintained on file for 12 months.

### **Training**

Training for all employees involved with Confined Space Entries includes:

- Confined Space Entry training
- Confined Space Entry permits
- Hazard of Confined Spaces
- Use of Air Monitoring Equipment

- First Aid and CPR Training
- Emergency Action & Rescue Equipment
- Rescue training, including entry and removal from representative spaces

## **Emergency Rescue**

The Site Supervisor or General Supervisor will make sure that trained rescue personnel with appropriate equipment are available for emergency rescue, either through a local fire company or other institution.

## **Work Zone Safety**

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All construction projects should have a Traffic Control Plan (TCP). These plans may range in scope from a very detailed TCP designed solely for a specific project, to a reference to standard plans, a section of PA DOT Publication 203 or the Manual on Uniform Traffic Control Devices (MUTCD). The degree of detail in the TCP will depend on the complexity of the project and the interaction of traffic needs and construction activities.

### **Traffic Control Plans**

Traffic Control Plans and devices will change from site to site. Below are examples of minimum TCP requirements usually implemented:

#### **Work Entirely Beyond Shoulder or Parking Lane**

Traffic control depends primarily on devices such as advance warning signs, flashing vehicle lights, and flags. An advance warning sign should be used when any of the following conditions occur:

- Work will be performed immediately adjacent to the roadway at certain stages
- Equipment may be moved along or across the highway, and
- Motorist may be distracted by the work activity.

A typical sign for this situation could be "Work Area Ahead". If the equipment travels on or crosses the roadway, it should be equipped with appropriate flags, flashing lights, and/or slow moving vehicle signs.

#### **Work On or Over Shoulder or Parking Lane**

No Encroachment in Traveled Lane

There is no direct interference with traffic. When the shoulder is occupied or closed, the motorist should be advised and the workers should be protected. Usually, the single warning sign "Shoulder Work" is adequate.

#### Minor Encroachment in Traveled Lane

When work is on the shoulder and takes up portion of the lane, traffic volumes, types, speed, and capacity should be analyzed to determine whether the affected lane should be closed. Conflicts with traffic will be reduced and additional protection provided by using portable concrete barriers along the work area. For high-speed traffic conditions, a lane closure should be considered.

#### Work on Two-Lane Roadway

When one lane is closed on a two-lane, two-way road, the remaining lane must be used by traffic traveling in both directions. The short two-way traffic taper (50' minimum) is used to slow traffic as it approaches the workspace.

Alternate one-way traffic control may be affected by the following:

- Two flaggers, one at each end of the work area;
- One flagger can assign right-of-way at a short work area with low volumes;
- A pilot car or two-way radios; and
- Temporary traffic signals for long-duration projects.

On curved roadways and hills, a flagger should be positioned at each end of the work area. The transition area should be adjusted so the flagger and the entire taper will be visible before the curve or hill for an adequate stopping sight distance.

#### Moving Operations

Moving operations are work activities where workers and equipment move along the road without stopping, usually at low speeds. The advance warning area moves with the work area. Traffic should be directed to pass safely. Where feasible, warning signs should be placed and moved as work progresses. Vehicles involved in this type of work should be equipped with flashing lights, flags, and appropriate signs.

#### Pedestrians

The following principles should be considered in designing or constructing pedestrian facilities:

- Pedestrians and vehicles should be physically separated (i.e. by barrier, barricade, etc.).
- Maintain pedestrian walkways free of obstructions such as holes, debris, mud, stored material, and construction equipment.
- Temporary lighting should be considered on all walkways that are used at night.
- Walkways should be at least 4-5 feet wide.
- All hazards (ditches, trenches, excavations, etc.) near or adjacent to walkways should be clearly delineated.
- Covered walkways may be necessary on walkways under bridges or retaining walls.
- Use traffic control devices to direct pedestrians to the other side of the Street if safe access cannot be provided.
- Do not create a greater hazard with signs and barricades.
- Signs located near or adjacent to a sidewalk should have at least 7-foot clearance.
- Stage work so sidewalks on both sides of a street are not out of service at the same time.
- If sidewalks on both side of the street must be closed, guide pedestrians around work areas.
- Use warning lights to delineate pedestrian walkways and to mark hazards as appropriate.

### **Pavement Drop-offs**

During construction and maintenance activities involving pavement surface work, it often becomes necessary to maintain traffic along side or near lanes and shoulders having different elevations. Special traffic control devices are needed to safely guide traffic through such areas, and the traffic control requirements are described in these guidelines.

#### **Drop Off of 2 Inches or Less**

Pavement elevation differences of 2 inches or less may be freely crossed by traffic. Drop-offs of 2 inches or less shall be indicated to traffic through the use of the UNEVEN PAVEMENT WARNING SIGN, either the word message sign or the symbol sign.

The uneven pavement warning sign is to be placed supplemental to other work zone traffic control devices and shall provide advance warning along the approach to the area of uneven pavement, and be repeated within such area.

#### **Drop Off > 2 Inches or Less**

Mark with drums or other suitable channelizing devices so as to prevent traffic from crossing from one area to the other.

While it is intended that traffic traveling in the same direction drive to one side of the drop-off or the other, such traffic may be permitted to drive along both sides under properly controlled conditions, but such traffic may not be permitted to freely cross.

Drop-offs exceeding 2 inches but not 5 inches may be provided with an abutted wedge with a minimum slope of 3:1. Pavement drop-offs not exceeding 5 inches that are provided with wedges may be freely crossed by traffic. The standard word message or symbol UNEVEN PAVEMENT WARNING sign shall be used where traffic is allowed to cross.

If traffic passes drop-offs in opposite directions, the drop-off shall be marked with drums or other suitable channelizing devices and traffic shall not be permitted to cross.

### **Drop Off Exceeding 5 Inches**

Refer to Penn Dot requirements.

### **Installation, Maintenance, and Inspection**

Before the work is scheduled to begin, the foreperson and/or the inspector should check all signs, pavement marking material and channelizing devices that are to be used. All devices should be:

- Standard in size, shape, color, or message;
- In good condition, not needing repair;
- Reflectorized.

Additional devices should be available to replace any stolen or damaged while work is in progress. Existing signs that do not apply to construction should be covered or removed.

Work area signs that are installed before the traffic patterns are changed should be covered, rotated, or folded in half so drivers cannot read the message.

### **Installation and Removal**

Place in the order that drivers will see them, starting with the sign or device that is farthest from the work area and place the others as the work area is approached. If traffic in both directions will be affected, such as with work in the center lane, the devices can be placed in both directions at the same time, starting at each end farthest from the work area.

When one direction of traffic is to be directed into Opposing traffic lanes, the signs, devices, and pavement markings for the opposing traffic should be placed first. When the signs and devices are across from or at the work area, the devices for the oncoming direction can then be set up.

When signs and channelizing devices are to be installed and removed several times during the work operation, a spot should be painted where the devices are to be located, so that the installation can be repeated quickly and so that proper placement is assured. The devices should be stored off the roadway, out of sight, or transported to another location.

Motorists do not expect to encounter workers in the roadway setting up a traffic control zone. Since the goal is to make the entire operation safe, high level warning devices, flaggers, or flashing lights on vehicles should be used to warn motorist. Flashing arrow panels are valuable to assist the workers during placement or removal of channelizing devices for lane closures.

### **Removal of Devices**

Remove traffic control devices as soon as work is completed and they are no longer needed. Devices should be removed in the opposite order of installation by starting with the devices closest to the work area and continuing away from the work area. At a minimum, the vehicle used to remove these devices should have a flashing light.

### **Pavement Markings**

Temporary pavement markings, such as pressure-sensitive traffic tape or raised pavement markings can be used with other devices in a traffic control zone. Any pavement markings that are no longer applicable or may confuse drivers should be removed as soon as possible.

### **Inspection and Maintenance Program**

On many of our projects, the installation and maintenance of the traffic control zone is our responsibility. It is important that we inspect the traffic control zone daily for liability purposes.

Our comprehensive inspection and maintenance program shall include the following elements:

1. A formalized TCP and inspection schedule;
2. A form on which the findings of the inspection are recorded;
3. A repair program;
4. Check procedure to make sure that specific repair are made;
5. Adequate inventory of devices for emergency replacement and repair;

6. A review to make sure that travel paths are clearly marked through the entire work zone, both day and night.

### **Responsibility**

For each project, an individual should be assigned the responsibility for traffic control. Routine daily inspections of the traffic control installation should be carried out by this individual.

Periodic inspections should also be performed by the General Supervisor and office staff.

### **Recordkeeping**

Good recordkeeping procedures suggest that the time and location of the installation or removal of traffic control devices be noted. Although this can be time consuming, it is important that significant traffic control actions taken by the field crew be recorded. The documentation should include:

1. Starting and ending time for work;
2. Location of work;
3. Type, condition and position of traffic control devices; Names of personnel;
4. Type of equipment used; and
5. Any change in temporary or permanent regulatory devices.

Daily diary entries should be used to record the above on smaller projects. On larger projects, a formal traffic control inspection report form will be utilized.

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## **Flagger Safety**

### **General Requirements**

Flagger shall be completely covered (clothed) from neck to feet (shirts may not be removed). Our flaggers are required to wear long pants, shirts, work shoes, and an orange or yellow/green reflective vest and hard hats.

Flaggers are required to use Stop/Slow (S/S) paddles. Flags are generally only allowed for emergencies. S/S paddles are required to meet all MUTCD requirements (shall be octagonal in shape, round not allowed; any border around the slow side shall be black, blue not allowed). S/S paddles shall be a minimum of 24" x 24" at all times with minimum 8" high letters and are required to have encapsulated sheering at all times (both day and night). A rigid handle should be provided.

Flag use should be limited to emergency situations and at low-speed and for low-volume locations, which can best be controlled by single Baggers. Flags used for signaling shall be a minimum of 24" square, made of a good grade of red material, and securely fastened to a staff about 3 feet long. The free end shall be weighted so the flag will hang vertically, even in high winds. When used at night, flags shall be retro reflective red.

Flaggers shall be allowed to have a break to be able to maintain the high concentration level needed to provide a safe work area. We suggest that the required break should be a minimum of 15 minutes every 2 hours or alternate personnel in and out of the flagging position every hour.

Flaggers observed not performing their job properly shall be subject to retraining, company disciplinary procedures, or both.

### **Hand-Signaling Procedures**

The following method of signaling with a Stop/Slow paddle shall be used:

1. To Stop Traffic – The flagger shall face traffic and extend the stop sign paddle in a stationary position with the arm extended horizontally away from the body. The free arm should be raised with the palm toward approaching traffic.
2. To Direct Traffic to Proceed – The flagger shall face traffic with the slow paddle held in a stationary position with the arm extended horizontally away from the body. The flagger should motion with the free hand for traffic to proceed.
3. To Alert or Slow Traffic – The flagger shall face traffic with the Slow sign paddle held in a stationary position with the arm extended horizontally away from the body. The flagger may motion up and down with the free hand, palm down, indicating that the vehicle should slow down.

### **Flagger Stations**

Flagger stations shall be located far enough ahead of the work space so that approaching-traffic has sufficient distance to stop before entering the work space. This distance is related to approach speeds, friction factors, and pavement and tire conditions. These distances may be increased for downgrades.

Flaggers should stand either on the shoulder adjacent to the traffic being controlled or in the barricaded lane. At a "spot" obstruction, a position may have to be taken on the shoulder opposite the barricaded section to operate effectively. Flaggers should stand only in the lane being used by moving traffic after traffic has stopped, and the flagger needs to be visible to other traffic or to communicate with drivers. Because of the various roadway geometries, flaggers should be clearly visible to approaching traffic at all times. For this reason the flagger



should stand alone. Other workers are not permitted to congregate around the flagger station. Flagger stations shall be preceded by the proper advance warning signs. At night, flagger stations shall be illuminated.

### **Qualification for Flaggers**

Because flaggers are responsible for public safety and make the greatest number of public contacts of all highway workers, they shall have the following minimum qualifications:

1. Sense of responsibility for the safety of the public and workers.
2. Training in safe traffic control practices.
3. Average intelligence.
4. Good physical condition, including sight and hearing.
5. Mental alertness and the ability to react in an emergency.
6. A courteous but firm manner.

### **Common Flagger Problems**

1. Flaggers are not dressed properly.
2. Workers are congregating around the flagger station.
3. Flagger standing in front of approaching traffic.
4. Flaggers are using flags. Flags are to be used in emergency situations.
5. Approaching motorist notices a glare off the flagger station during night operations.
6. Vehicles located near the flagger station.

## **Scaffolding**

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### **General Requirements**

The scaffolding requirements contained within this program are general in nature. All scaffolding used on this project shall be erected, used, and maintained in accordance with requirements of the Subpart L-Scaffolding.

### **Scaffolding Requirements**

1. The footings and anchorage for scaffold shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks, shall not be used to support scaffolds or planks.

2. A safe means of access to and egress from the work level must be provided. Ladders used for access/egress must be secured at top and bottom. Ladder frame scaffolds must not be offset or used with other scaffold frames.
3. No scaffold shall be erected, moved, dismantled, or altered except under the supervision of competent persons. A competent person shall inspect the scaffolding daily prior to usage and as it is moved to assure it is setup properly. The foreperson shall observe the scaffolding as it is being erected or moved in order to verify that it is being properly erected.
4. Any scaffold including accessories such as braces, brackets, trusses, screw legs, ladders, etc. damaged or weakened from any cause shall be immediately repaired or replaced. Finding a damaged section before it is erected will save time and money.
5. All load-carrying timber members of scaffold framing shall be a minimum of 1,500 fiber (Stress Grade) construction grade lumber. All dimensions are nominal sizes as provided in the American Lumber Standards, except that where rough sizes are noted, only rough or undressed lumber of the size specified will satisfy minimum requirements. All planking shall be Scaffold Grades, or equivalent, as recognized by approved grading guidelines for the species of wood used.
6. All planking of platforms shall be overlapped (minimum 12 inches), or secured from movement.
7. All scaffold shall be erected plumb. The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement. Periodically use a level to check if a scaffold is plumb. Even if it is plumb after it has been erected, settling may cause it to shift. Especially when loads are added Scaffolds and their components shall be capable of supporting without failure at least four times their maximum intended load. This intended load shall not be exceeded. Subpart L of the OSHA Standard contains information on minimum sizes of the various scaffold components based on light, medium and heavy-duty use.
8. Guardrails and toeboards shall be securely installed on all open sites and ends of platforms more than six (6) feet above the ground or floor. Guardrails shall be 2 x 4 inches, or the equivalent, approximately 42 inches high, with a mid-rail, when required. Supports shall be at intervals not to exceed 8 feet. Toeboards shall be a minimum of 4 inches in height.
9. Where persons are required to work or pass under the scaffolds, scaffolds shall be provided with a screen (of the equivalent) between the toeboard and the guardrail, extending along the entire opening.
10. Scaffolds shall be tied into the structure, guyed or have outriggers whenever their height exceeds four (4)
11. times the minimum base dimension, and/or their length exceeds twenty (20) feet.
12. Personnel are not permitted to ride rolling scaffolds. Equipment or material on the scaffold deck must either be removed or secured.

13. Rolling scaffolds must only be used on smooth, level surfaces; otherwise the wheels shall be contained in
14. wooden or iron channels, which are level and stabilized.
15. No rigging from scaffold members unless catheads or well wheels designed for such use are utilized. Whenever such systems are used, the personnel performing the work shall ensure that no personnel are exposed to falling material or equipment.
16. Overhead protection shall be provided for men on a scaffold exposed to overhead hazards. A competent person
17. shall review any scaffolding near overhead exposures before it is erected.
18. Slippery conditions on scaffolds shall be eliminated as soon as possible after they occur. If the crew is working with a slippery material that could spill on the scaffold, an absorbing material should be available in the area to immediately correct the problem. If the material is not on hand, chances are the slip hazard will go uncorrected.
19. No welding, burning, riveting, or open flame work shall be performed on any staging suspended by means of fiber or synthetic rope. Only treated or protected fiber or synthetic ropes shall be used for or near any work involving the use of corrosive substances or chemicals.
20. Wire, synthetic, or fiber rope used for scaffold suspension shall be capable of supporting at least 6 times the rated load.
21. The use of shore or lean-to scaffolds is prohibited.
22. Materials being hoisted onto a scaffold shall have a tag line.
23. Employees shall not work on scaffolds during storms or high winds.
24. Aerial lifts shall be used per Manufacturer and OSHA Regulations. All manufacturer operation and maintenance specifications also apply.

### **Training Requirements**

1. All employees using scaffolding shall be trained by their employer in order to recognize the hazards associated with the type of scaffold being used.
2. All employees shall be trained on electrical hazards and falling object hazards.
3. All employees shall be trained on proper handling of materials on scaffolding.
4. All employees should know the maximum intended load and the load-carrying capacities of the scaffolds used.
5. Employees erecting and disassembling scaffolding shall be trained to recognize hazards for this type of work.
6. Retraining shall be performed per OSHA Regulations.

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## **Ladders**

### **Ladder Hazards**

Falls from ladders can result in broken bones and death. Ladder safety is a lifesaving program at our company.

### **Hazards Include**

- Ladders with missing or broken parts.
- Using a ladder with too low a weight rating
- Using a ladder that is too short for purpose.
- Using metal ladders near electrical wires.
- Using ladders as a working platform
- Objects falling from ladders

### **Ladder Inspection**

Inspect ladders before each use.

- All rungs and steps are free of oil, grease, dirt, etc.
- All fittings are tight.
- Spreaders or other locking devices are in place.
- Non-skid safety feet are in place.
- No structural defects, all support braces intact.

Do not use broken ladders. Most ladders cannot be repaired to manufacturer specifications. Throw away all broken ladders.

### **Ladder Storage**

Store ladders on sturdy hooks in areas where they cannot be damaged. Store to prevent warping or sagging. Do not hang anything on ladders that are in a stored condition.

### **Ladder Weight Ratings**

- I-A 300 pounds (heavy duty)
- I 250 pounds (heavy duty)
- II 225 pounds (medium duty)
- III 200 pounds (light duty)

Berg will only use ladders with a heavy duty and heavy rating.

## Limits on Ladder Length

- A stepladder should be no more than 20 feet high
- A one-section ladder should be no more than 30 feet
- An extension ladder can go to 60 feet, but the sections must overlap.

## Ladder Setup

The following procedure must be followed to prevent ladder accidents:

- Place ladder on a clean slip free level surface.
- Extend the ladder to have about 3 feet above the top support or work area.
- Anchor the top and bottom of the ladder
- Place the ladder base 1/4 the height, of the ladder, from the wall when using an extension ladder.
- Never allow more than one person on a ladder
- Use carriers and tool belts to carry objects up a ladder
- Do not lean out from the ladder in any direction
- If you have a fear of heights-don't climb a ladder
- Do not allow others to work under a ladder in use.

## Ladder Maintenance

- Keep ladders clean
- Never replace broken parts unless provided by the original manufacturer
- Do not attempt to repair broken side rails
- Keep all threaded fasteners properly adjusted
- Replace worn steps with parts from manufacturer

## **Fall Protection Criteria and Practices**

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Berg has adopted a program of 100% Fall Management to eliminate fall accidents in our operations. All levels of management and supervision will be responsible and accountable for ensuring the success of the program by integrating this program into the company's safety culture.

## Employee Training

Pre-task safety instruction must be given to each person assigned to work in elevated areas prior to commencing work activities.

Training with all new hires must be conducted on the site immediately upon hire. The orientation shall include the fall management program policy, procedures, and work guidelines.

All subcontractors will be responsible for training their employees on fall hazards on the site. Written documentation of all employee training shall be kept on file.

## **Procedures**

Our fall management program parallels the requirements in Subpart M - Fall Protection, found in the Code of Federal Regulations 29-Part 26.

Our company and its subcontractors are responsible for making sure that the employees on the site are provided with fall protection systems. Site management and site subcontractors are responsible for determining if the walking/working surfaces on which its employees are to work have the strength and structural integrity to support employee's safety. No work is to be performed in any area where the strength and structural integrity is in question until a qualified person inspects the area.

The provisions in our fall management program pertain to employees working 6 feet or more above a lower level. The following must be complied with in order to reduce our falls from heights exposure:

1. Prior to Berg getting up onto an elevated deck, we require the general contractor to install perimeter fall protection and interior shaft protection. We will not pour a deck without fall protection being in place.
2. Reinforcing steel for walls may be climbed up to a height of 24 feet. However, once our employee becomes stationary, he/she must tie into the reinforcing steel with ironworker hook.
3. Employees are not permitted to free-climb the face of wall forms. We will provide work platforms on forms. Work platforms will have proper guardrails in place. Ladder access will be provided to work platforms.
4. If work platforms cannot be provided then a combination of personal fall arrest system (full body harness and rebar hooks) and retractable lanyards secured to the forms set in place will be used by employees.
5. Berg will supply a fall protection plan for any cast-in-place concrete work involving leading edge work. This will be site specific if this type of work is performed.
6. Any remotely located trench or excavation that is not easily visible will be fenced. Our goal is to not leave any trench open overnight.

## **Guardrail System**

The toprail of all guardrail systems shall be 42 inches plus or minus 3 inches above the walking/working level. When conditions warrant (such as when stilts are used for drywall work in shaft areas), the height of the top edge may exceed the 45-inch height, provided that all over guardrail system criteria are met. The toprail shall be capable of withstanding a force of at least 200 pounds applied within 2 inches of the top edge, in an outward and downward direction. There shall be no more than 3-inch deflection when this outward and downward force is applied. If a wooden toprail is used, it shall be a minimum of a 2 x 4 spaced not more than 8 feet center.

Midrails, screens, mesh, intermediate members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches high. If screens or mesh are used it shall extend from the toprail to the walking/working level and along the entire opening between the toprail supports. The midrail shall be capable of withstanding a force of at least 150 pounds applied in an outward and downward direction. If a wooden midrail is used, it shall be a minimum of a 1 x 6 spaced not more than 8 feet on center. A 2 x 4 spaced not more than 8 feet on center may also be used as a midrail.

The surface of the guardrail shall be so surfaced as to prevent injury due to puncture or lacerations, and to prevent snagging of clothes. The ends of all toprails and midrails shall not overhang the terminal post. Steel and plastic banding is not to be used in our fall protection systems.

If a wire rope is used as a toprail and midrail it shall be at least ¼ inch nominal diameter or thickness. The wire rope must be flagged at 6 foot intervals with high visibility material. The wire rope fall protection shall not have more than 3 inch deflection.

When guardrail systems are used eat hoisting areas, a chain, gate, or removable guardrail section shall be placed across the opening when the hoisting operation is not taking place.

When guardrail systems are used around holes, they shall be erected around all open sides or edges of the hole. When guardrail systems are used around holes used for the passage of materials, the hole shall have not more than 2 sides provide with removable sections. When guardrail systems are used around points of access (such as ladder ways), they shall be offset so that a person cannot directly walk into the hole.

Guardrail systems used on ramps or runways shall be erected on both sides or edge.

## **Personal Fall Arrest System**

Effective January 1, 1998 body belts used as a part of a personal fall arrest system will not be permitted on a job site.

All connectors shall be drop forged steel, or made of equivalent materials. Connectors shall have a corrosion resistant finish, and all surfaces and edges shall be smooth to prevent damage.

Dee-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds. Snap hooks shall be sized to be compatible with the members to which they are connected in order to reduce the potential for unintentional disengagement or shall be of the locking type snap hook. After January 1, 1998 only locking snap hooks will be permitted on our sites.

Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Each employee shall be attached to a separate lifeline. Exception: during the construction of elevator shafts, 2 employees may be attached to the same lifeline is 10,000 pounds (5,000 pounds per employee attached) and all other criteria pertaining to lifelines in Subpart M are met. Lifelines shall be protected against being cut or abraded.

Anchorage used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and be capable of supporting at least 5,000 pounds per employee attached.

Personal fall arrest systems shall be rigged so employees can neither free fall 6 feet nor contact a lower level. They should bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.

Body belts are not to be used to hoist material.

Any personal fall arrest system subjected to impact shall be removed from service and not used again until inspected and determined to be suitable for use by a competent person.

Personal fall arrest systems shall be inspected prior to each day's use.

No personal fall arrest system shall be attached to a guardrail system. Personal fall arrest system used in hoist areas shall be rigged to only allow the employee access the edge.

Employers shall make provisions for employee emergency rescue.

## **Covers**



Covers shall be capable of supporting twice the weight of the anticipated load. All covers will be secured against displacement. If a cover is removed, the subcontractor will be responsible for its replacement.

All covers will be color coded or have the word “Hole” or “Cover” printed on them.

### **Safety Monitoring Systems**

All safety monitors must be capable of identifying fall hazards. They are to warn employees working near the edge of potential fall exposures.

The safety monitor shall be on the same walking/working surface and within the visual sighting distance and close enough to communicate verbally with the employees working near the edge.

The safety monitor shall have no other responsibilities that take his attention away from his safety monitoring responsibility.

Note that safety monitors are only applicable to work within a controlled access zone for our type of work. They are only to be used in a Controlled Access Zone (CAZ) for leading edge work.

### **Warning Line Systems**

Warning line systems shall be placed not less than 15 feet from the edge of a roof for our type of work. Anyone working between the warning line and the edge of the roof must tie-off.

The warning line shall be flagged at 6 foot intervals.

The warning line shall be between 34-39 inches from the roof surface and the stanchion posts must be capable of withstanding 16 pounds of tipping force.

### **Controlled Access Zones**

When a controlled access zone is used for leading edge work, it shall be erected not less than 6 feet nor more than 25 feet from the unprotected or leading edge. The control lines shall be erected along the entire exposed or leading edge. It shall be secured to a wall or guardrail. Each line shall be clearly marked at not more than 6 feet intervals. The line shall be at least 39 inches above the walking/working surface. Each line shall have a minimum breaking strength of 200 pounds.

### **Enforcement**

100% fall management requires zero tolerance enforcement. Site coordinators must hold employees accountable for failure to comply with our fall protection policy. The company's consequences program and warning notices must be utilized when violations are observed.

## **Tool Safety**

Use of tools makes many tasks easier. However, the same tools that assist us, if improperly used or maintained, can create significant hazards in our work areas. Employees who use tools must be properly trained to use, adjust, store and maintain tools properly. This program covers hand, electrical, pneumatic, powder driven, and hydraulic tool safety.

### **General Safety Precautions**

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

All hazards involved in the use of tools can be prevented by following six basic safety guidelines:

1. Keep all tools in good condition with regular maintenance.
2. Use the right tool for the job.
3. Read and follow all operating instructions.
4. Examine each tool for damage before use.
5. Operate according to the manufacturer's instructions.
6. Provide and use the proper protective equipment.

### **Hand Tools**

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

Appropriate personal protective equipment, e.g., safety goggles, gloves, etc., should be worn due to hazards that may be encountered while using portable power tools and hand tools.

Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source. Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum, or wood will provide for safety.

## Power Tool Precautions

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use: electric, pneumatic, liquid fuel, hydraulic, and powder-actuated.

The following general precautions should be observed by power tool users:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle. Keep cords and hoses away from the heat, oil, and sharp edges.
- Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits and cutters.
- All observers should be kept at a safe distance away from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool
- Avoid accidental starting. The worker should not hold a finger on the switch button while carrying a plugged-in tool.
- Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel should be worn. Loose clothing, ties, or jewelry can become caught in moving parts. Chaps must be worn at all times when operating a chain saw.
- All portable electric tools that are damaged shall be removed from use and tagged "Do Not Use."

## Guards

Hazardous moving parts of a power tool need to be safeguarded. For example, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded.

Guards, as necessary, should be provided to protect the operator and others from the following:

- Point of operation
- In-running nip points
- Rotating parts
- Flying chips and sparks

Safety guards must never be removed when a tool is being used. For example, portable circular saws must be equipped with guards. An upper guard must cover the entire blade of the saw. A retractable lower guard must cover the teeth of the saw, except when it makes contact with the work material. The lower guard must automatically return to the covering position when the tool is withdrawn from the work.

## **Safety Switches**

The following hand-held powered tools are to be equipped with a momentary contact “on-off” control switch: drills, tappers, fastener drivers, horizontal, vertical and angle grinders with wheels larger than 2 inches in diameter, disc and belt sanders, reciprocating saws, saber saws, and other similar tools. These tools also may be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.

The following hand-held powered tools may be equipped with only a positive “on-off” control switch: platen sanders, disc sanders with discs 2 inches or less in diameter; grinders with wheels 2 inches or less in diameter; routers, planers, laminate trimmers, nibblers, shears, scroll saws and jigsaws with blade shanks ¼ inch wide or less.

Other hand-held powered tools such as circular saws having a blade diameter greater than 2 inches, chain saws, and percussion tools without positive accessory holding means must be equipped with a constant pressure switch that will shut off the power when the pressure is released.

## **Electrical Safety**

Among the chief hazards of electric-powered tools are burns and slight shocks, which can lead to injuries or even heart failure. Under certain conditions, even a small amount of current can result in severe injury and eventual death. A shock also can cause the user to fall off a ladder or other elevated work surface.

To protect the user from shock, tools must either have a three-wire cord with ground and be grounded, be double insulated, or be powered by a low-voltage isolation transformer. Three-wire cords contain two current-carrying conductors and a grounding conductor. One end of the grounding conductor connects to the tool's metal housing. The other end is grounded through a prong on the plug. Anytime an adapter is used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong should never be removed from the plug.

Double insulation is more convenient. The user and the tools are protected in two ways: by normal insulation on the wires inside, and by a housing that cannot conduct electricity to the operator in the event of a malfunction.

## **Electric Power Tool General Safety Practices**

- Electric tools should be operated within their design limitations.
- Gloves and safety footwear are recommended during use of electric tools.
- When not in use, tools should be stored in a dry place.
- Electric tools should not be used in damp or wet locations.
- Work areas should be well lighted.

## **Powered Abrasive Wheel Tools**

Powered abrasive grinding, cutting, polishing, and wire buffing wheels create special safety problems because they may throw off flying fragments.

Before an abrasive wheel is mounted, it should be inspected closely and sound- or ring-tested to be sure that it is free from cracks or defects. To test, wheels should be tapped gently with a light non-metallic instrument. If they sound cracked or dead, they could be apart in operation and so must not be used. A sound and undamaged wheel will give a clear metallic tone or "ring."

To prevent the wheel from cracking, the user should be sure it fits freely on the spindle. The spindle nut must be tightened enough to hold the wheel in place, without distorting the flange. Follow the manufacturer's recommendations. Care must be taken to assure that the spindle wheel will not exceed the abrasive wheel specifications.

Due to the possibility of a wheel disintegrating (exploding) during start-up, the employee should never stand directly in front of the wheel as it accelerates to full operating speed.

Portable grinding tools need to be equipped with safety guards to protect workers not only from the moving wheel surface, but also from flying fragments in case of breakage.

## **Powered Grinder Safety Precautions**

- Always use eye protection.
- Turn off the power when not in use.
- Never clamp a hand-held grinder in a vise.

## **Pneumatic Tools**

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders. There are several dangers encountered in the use of pneumatic tools. The main one is the danger of getting hit by one of the tool's attachments or by some kind of fastener the worker is using with the tool. Eye protection is required and face protection is recommended

for employees working with pneumatic tools. Working with noisy tools such as jack- hammers requires proper, effective use of hearing protection.

When using pneumatic tools, employees are to check to see that they are fastened securely to the hose to prevent them from becoming disconnected. A short wire or positive locking device attaching the air hose to the tool will serve as an added safeguard.

A safety clip or retainer must be installed to prevent attachments, such as chisels on a chipping hammer, from being unintentionally shot from the barrel.

Screens must be set up to protect nearby workers from being struck by flying fragments around chippers, riveting guns, staplers, or air drills.

Compressed air guns should never be pointed toward anyone. Users should never “dead end” it against themselves or anyone else.

### **Powder-Actuated Tools**

Powder-actuated tools operate like a loaded gun and should be treated with the same respect and precautions. In fact, they are so dangerous that they must be operated only by specially trained employees.

#### **Powder-Actuated Tool Safety:**

- These tools should not be used in an explosive or flammable atmosphere.
- Before using the tool, the worker should inspect it to determine that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions
- The tool should never be pointed at anybody.
- The tool should not be loaded unless it is to be used immediately. A loaded tool should not be left unattended, especially where it would be available to unauthorized persons.
- Hands should be kept clear of the barrel end. To prevent the tool from firing accidentally, two separate motions are required for firing: one to bring the tool into position, and another to pull the trigger. The tools must not be able to operate until they are pressed against the work surface with a force of at least 5 pounds greater than the total weight of the tool.

If a powder-actuated tool misfires, the employee should wait at least 30 seconds, then try firing it again. If it still will not fire, the user should wait another 30 seconds so that the faulty cartridge is less likely to explode, than carefully remove the load. The bad cartridge should be put in water.

Suitable eye and face protection are essential when using a powder-actuated tool.

The muzzle end of the tool must have a protective shield or guard centered perpendicularly on the barrel to confine any flying fragments or particles that might otherwise create a hazard when the tool is fired. The tool must be designed so that it will not fire unless it has this kind of safety device.

All powder-actuated tools must be designed for varying powder charges so that the user can select a powder level necessary to do the work without excessive force.

If the tool develops a defect during use it should be tagged and taken out of service immediately until it is properly repaired.

### **Powder-Actuated Tool Fasteners**

When using powder-actuated tools to apply fasteners, there are some precautions to consider. Fasteners must not be fired into material that would let them pass through to the other side. The fastener must not be driven into materials like brick or concrete any closer than 3 inches to an edge or corner. In steel, the fastener must not come any closer than one-half inch from a corner or edge. Fasteners must not be driven into very hard or brittle materials which might chip or splatter, or make the fastener ricochet.

An alignment guide must be used when shooting a fastener into an existing hole. A fastener must not be driven into a spalled area caused by an unsatisfactory fastening.

### **Hydraulic Power Tools**

The fluid used in hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded.

### **Jacks**

All jacks – lever and ratchet jacks, screw jacks, and hydraulic jacks – must have a device that stops them from jacking up too high. Also, the manufacturer's load limit must be permanently marked in a prominent place on the jack and should not be exceeded.

A jack should never be used to support a lifted load. Once the load has been lifted, it must immediately be blocked up.

Use wooden blocking under the base if necessary to make the jack level and secure. If the lift surface is metal, place a 1-inch-thick hardwood block or equivalent between it and the metal jack head to reduce the danger of slippage.

To set up a jack, make certain of the following:

- The base rests on a firm level surface,
- The jack is correctly centered,
- The jack head bears against a level surface, and
- The lift force is applied evenly.

Proper maintenance of jacks is essential for safety. All jacks must be inspected before each use and lubricated regularly. If a jack is subjected to an abnormal load or shock, it should be thoroughly examined to make sure it has not been damaged.

Hydraulic jacks exposed to freezing temperatures must be filled with an adequate antifreeze liquid.

## **Equipment & Vehicle Safety**

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The following guidelines are designed to ensure our fleet success:

### **Operator and Driver Section:**

The section of perspective operators and drivers will require the following:

1. The Person & Team Relations Coordinator will photocopy the new employee's driver's license and social security card. A valid driver's license for the class of vehicle to be operated is required. If a new hire does not have a valid driver's license, he/she will not be permitted to drive a company vehicle.
2. A completed application for employment is required. We will check to make sure that previous employees have been filled in. Reference checks will be completed as necessary at the time of hire. A satisfactory response from previous employers on work history is required for all employees.



3. All new employees will have a Motor Vehicle Records (MVR) report pulled at the time of hire. No employee permitted to drive a company owned vehicle until a MVR is obtained.
4. Human Resources along with the General Supervisor will evaluate each new employee's MVR on a case by case basis. A satisfactory MVR is required to be able to drive a company owned vehicle.
5. Each driver with a CDL will have a DOT Driver Qualification Files established for them. This file will be maintained in the office.
6. Drivers with a CDL will have a MVR pulled annually. The MVR will be evaluated and will be placed in the DOT Driver Qualification File.
7. Only authorized employees are permitted to drive a company vehicle. Authorized employees are defined as employees of Berg with a valid driver's license for the type of vehicle onto company property or onto a job site, are not to drive between job sites during the workday, and are not to drive any permitted construction equipment over a public roadway.

Further, employees without a valid driver's license are not to transport other employees at any time during the workday. Our company position is that we do not condone illegal activity at any time. Spouses, children, neighbors, friends, etc. are not permitted to operate company owned vehicle unless a member of the General Supervisor gives written permission. Unauthorized use of company vehicles could result in consequences, up to and including termination of employment.

Berg places a lot of trust in our employees. We expect our employees to report any violation (even if it occurred during non-work hours) involving a company vehicle of the following type(s) to their Site Supervisor immediately. Violations which should be reported include, but are not limited to, the following:

- DUI of alcohol
- Driving under the influence of a controlled substance
- Failure to Report an Accident
- Leaving the scene of an accident
- Refusing a drug or alcohol test
- Homicide, manslaughter or assault
- A crime involving the use of a weapon
- Driving while license is suspended or revoked
- Attempting to elude a police officer
- A violation, arising in connection with a fatal accident, of state or local law relating to motor vehicle traffic control
- Speeding
- Reckless driving a motor vehicle

It is the responsibility of the Employee or Site Supervisor to report such incidents to Human Resources or General Supervisor. Based on our reasonable suspicion or based on a tip by another person an MVR can be pulled at any time on a current employee.

### **Operator and Driver Responsibility:**

Fortunately, driving is a risk we can control with defensive driving and safety awareness. Here is what we expect from everyone who drives a company vehicle.

1. Company vehicles are for company business only. A quick stop on our way to and from work is permitted. However, company vehicles shall not be used for personal business after work hours. No family or personal use (even as a passenger) is permitted.
2. Larger vehicles such as the dump trucks may not be used to run errands such as picking up food, drinks or going to the bank. Larger trucks pose a greater accident potential in small parking lots.
3. Do not drive unsafe vehicles. We have an extensive preventive maintenance program on our vehicles, and all you have to do is report an unsafe vehicle and it will be taken care off. We expect you to perform a daily visual and operation check of your vehicle to be sure it is clean, orderly and in safe operating condition. Schedule whatever maintenance and repairs are needed through your mechanic in the shop.
4. Each truck should be equipped with a fully charged fire extinguisher. Each foreman's truck should also have a first aid kit, which the driver will be responsible for maintaining.
5. Larger vehicles with obstructed rear views should also have properly functioning backup alarms.
6. Verify that your truck is properly loaded. Check the height, weight, width, load capacity, load distribution, etc. Any trucks with debris in the rear should have their load tarped.
7. Seat belts must be worn whenever the vehicle or equipment is moving unless equipment is not equipped with a roll over protection system. Employees are not permitted to ride in vehicles or on equipment if a seat is not provided. Anyone riding in the rear of the vehicle will be subject to appropriate disciplinary action. Note, seat belts must be worn in both front and also passengers in back seats of vehicles when moving.
8. Drivers are required to obey traffic regulations and to drive in a safe, courteous manner. Dangerous habits such as speeding, tailgating, weaving in and out of traffic cause a great deal of accidents. Remember to drive defensively. Here are a few driving requirements:
  - a. Maintain a safe following distance so you don't rear-end another vehicle.
  - b. Check carefully by performing a walk around inspection before backing up (25% of all accidents happen when backing).
  - c. Always back into the parking space when possible so you can pull out.

- d. Make sure your side view mirrors are properly adjusted and always check your mirrors before changing lanes.
  - e. When stopped behind a vehicle at a stop sign or stop light, leave one car length of space for adequate space between you and the vehicle in front in the event of a problem.
  - f. Always stop one car length before the white line at intersections.
  - g. Practice good judgment when using cell phones and driving.
  - h. Do not use computers while the vehicle is moving.
  - i. Expect the worse and be prepared to handle whatever happens.
  - j. Drivers are required to do walk around inspections on their vehicles before moving the vehicle to see potential hazards.
  - k. Safe following distances are as follows, 4 second during normal driving conditions for vehicles, 5 second or greater for inclement weather and 7 to 10 seconds all CDL trucks during all CDL trucks during good conditions.
  - l. In regards to backing, think about your departure upon arrival. If no pull through spaces are available, then back into parking space right away as information and your surroundings are fresh to you. Use curbside parking as an alternative to backing.
9. Don't walk away from your vehicle with the engine running or the keys in the ignition. This includes short stops at convenience stores. Remove keys from the ignition when the engine is shut off and no one is in the vehicle.
  10. You are responsible for keeping your vehicle under control at all times regardless of the road, traffic, weather, mechanical, or other conditions which may develop. Vehicles are to be operated at speeds specified or expected for the weather conditions.
  11. Housekeeping in all vehicles should be maintained by the driver responsible for the vehicle.
  12. No vehicle or equipment shall be stopped, parked, or left unattended on any road or in any location in such a manner that it endangers personnel or property. The engine must be shut off if left unattended.
  13. Equipment left unattended at night shall be parked near a roadway or in a location designated for this purpose.
  14. Employees using their own personal vehicles on company business are required to carry appropriate automobile insurance in amounts equal to or greater than the state statutory limit, currently \$15,000. We recommend that employees carry liability coverage equal to or greater than \$100,000 per accident for their own and Berg's protection. Please report any changes in the status of your insurance coverage to our Director of Finance.
  15. Employees driving DOT regulated vehicles must be familiar with and follow all DOT requirements.

### **Preventive Maintenance Program:**

A sound maintenance program is extremely important. Reduced operational costs and down time, reduced accident frequency, and improved public opinion are the direct results of a well implemented safety program.

The following procedures are the basis of our preventive maintenance program:

1. Daily maintenance, fluid checks, lubrication and visual inspection by the operator/driver prior to use is required. The daily logbooks are to be used to document these inspections. CDL drivers must submit their Pre-Trip Inspection sheet daily. Operators of equipment are to turn their Equipment Inspection log sheets weekly.
2. All DOT regulated vehicles will have their Pre-Trip Inspection forms turned into the shop daily. Equipment logbooks are to be turned in weekly to the foreman with starting and ending hours or mileage for the week. Vehicles or equipment found to be in unsafe operating condition shall be immediately removed from service until repaired, and shall be re-inspected prior to being put back into service.
3. Routine maintenance on all pieces of equipment/vehicles will be scheduled by service personnel. Equipment for the most part will be serviced in the field, unless the equipment or vehicle regularly comes to the yard where service can be performed in the shops. Oil sampling will be done at each oil change. Records of maintenance performed will be maintained by shop personnel.
4. Service personnel and/or outside service companies will determine periodic requirements for complete evaluation based on shop records or operator reports. If equipment is to be removed from service for repairs, service personnel shall make arrangements to replace the equipment.
5. A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires installed on split rims or rims equipped with locking rims or similar devices.
6. Vehicle, heavy equipment or machinery which is suspended or held aloft by the use of slings, ropes, hoists, or jacks, shall be blocked or cribbed to prevent falling or shifting prior to permitting employees to work under or between them. Dozer and scraper blades, end-loader buckets, dump bodies, and similar equipment shall be fully lowered or blocked when not in use and when being repaired.

### **Audible Alarms:**

All vehicles and mobile equipment including rollers, compactors, loaders, scrapers, dozers, etc. shall be equipped with a horn, distinguishable from the surrounding noise level.

Reverse signal alarms or a signalman must be in place on all equipment and vehicles with obstructed rear views. The reverse signal alarm must be checked daily by the operator and foreman. It should be loud enough to be heard and be distinguishable from the surrounding noise level.

## **Material Handling & Rigging**

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### **Storage of Materials**

1. Keep aisles and passageways clear
2. Do not store material inside the building within 6-foot of any hoist way, floor opening or within 10-feet of an open-sided floor.
3. Make sure that materials, lumber, equipment, etc. are secure if it's likely to blow from a roof or high place during a windstorm.
4. Always block or chuck cylinder-shaped items to prevent rolling.

### **Material Handling-Manual: Protect Your Back**

Follow good lifting practices:

1. Bend at the knees to grasp the weight.
2. Keep the back straight.
3. Get a firm hold.
4. Lift gradually by straightening legs.
5. Reverse the procedure when setting the load down.
6. If the weight is too heavy or bulky for you to lift comfortably, get help!

### **Material Handling – Rigging**

1. Before using, inspect all rigging equipment such as slings, chains, shackles, chain falls, come-a-longs, etc. Remove defective rigging equipment from service immediately.
2. Determine the weight of the material being handled and select the appropriate rigging equipment. It is better to over-rig a load to provide an added safety factor.
3. When lashing is used to temper secure loads in place:
  - a. Lashing should be capable of supporting the intended load.
  - b. Softeners are recommended on sharp edges.
4. Make sure that special or custom hooks, grabs or other lifting devices are marked to indicate the safe working load. The special accessories should be proof that it was tested prior to use to 125% of rated load.

5. Install all wire rope clips with the “U-bolt” on the dead or short end of the cable. Remember, “Never saddle a dead horse”. This means never out the saddle part of the clamp on the short end. Never alternate clamps.
6. Wire rope is never secured by knots tied in the rope.
7. Use tag lines to control suspended loads.
8. Remove rigging equipment from the work area when it is not in use and store it properly. Slings and wire rope create tripping hazards.

## **Hazardous Communication & Chemical Safety**

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### **Responsibilities**

- Ensure compliance with this program
- Conduct immediate corrective action for deficiencies found in the program
- Maintain an effective Hazard Communication training program
- Make this plan available to employees
- Ensure all received containers are properly labeled and that labels are not removed or defaced
- Ensure all shipped containers are properly labeled
- Ensure shipping department employees are properly trained in spill response
- Ensure received Material Safety Data Sheets (MSDS) are properly distributed
- Obtain, from the manufacturer, MSDS for chemicals purchased from retail sources

### **General Supervisor**

- Maintain a list of hazardous chemicals using the identity that is referenced on the MSDS
- Monitor the effectiveness of the program
- Conduct annual audit of the program
- Monitor employee training to ensure effectiveness
- Keep management informed of necessary changes
- Ensure MSDS’s are available as required
- Monitor facility for proper use, storage and labeling of chemicals

### **Site Supervisor**

- Comply with all specific requirements of the program
- Provide specific chemical safety training for assigned employees
- Ensure chemicals are properly used stored and labeled
- Ensure only the minimum amount necessary is kept at work stations
- Ensure up to date MSDS are readily accessible to all employees on all shifts

## Employees

- Comply with chemical safety requirements of this program
- Report any problems with storage or use of chemicals
- Immediately report spills or suspected spills of chemicals
- Use only those chemicals for which they have been trained
- Use chemicals only for specific assigned tasks in the proper manner

### General Program Information:

This written Hazard Communication Plan (HAZCOM) has been developed based on OSHA Hazard Communication Standard and consists of the following elements:

- Identification of Hazardous Materials
- Product Warning Labels
- Material Safety Data Sheets (MSDS)
- Written Hazard Communication Program
- Effective Employee Training

Some chemicals are explosive, corrosive, flammable, or toxic. Other chemicals are relatively safe to use and store but may become dangerous when they interact with other substances. 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. Before using a specific chemical, safe handling methods and health hazards must always be reviewed. Coordinators are responsible for ensuring that the equipment needed to work safely with chemicals is accessible and maintained for all employees on all shifts.

### Employee Training:

#### Initial Orientation Training

All new employees shall receive safety orientation training covering the elements of the HAZCOM and Right to Know Program. This training will consist of general training covering:

- Location and availability of the written Hazard Communication Program
- Location and availability of the list of chemicals used in the workplace
- Methods and observation used to detect the presence or release of a hazardous chemical in the workplace.
- The specific physical and health hazard of all chemicals in the workplace
- Specific control measures for protection from physical or health hazards
- Explanation of the chemical labeling system
- Location and use of MSDS

### **Job Specific Training**

Employees will receive on the job training from their foreperson. This training will cover the proper use, inspection and storage of necessary personal protective equipment and chemical safety training for the specific chemicals they will be using or will be working around.

### **Annual Refresher Training**

Annual Hazard Communication refresher training will be conducted as part of Berg's continuing safety training program.

### **Immediate On-the-Spot Training**

Coordinators will conduct this training for any employee that requests additional information or exhibits a lack of understanding of the safety requirements.

### **General Chemical Safety:**

Assume all chemicals are hazardous. The number of hazardous chemicals and the number of reactions between them are so large that prior knowledge of all potential hazards cannot be assumed. Use chemicals in as small quantities as possible to minimize exposure and reduce possible harmful effects.

The following general safety guidelines shall be observed when working with chemicals:

- Read and understand the Material Safety Data Sheets.
- 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.

### **Chemical Storage:**

The separation of chemicals (solids or liquids) during storage is necessary to reduce the possibility of unwanted chemical reactions caused by accidental mixing. Explosives should be



stored separately outdoors. Use either distance or barriers (e.g., trays) to isolate chemicals into the following groups:

- Flammable liquids: store in approved flammable storage lockers.
- Acids: treat as flammable liquids
- Bases: do not store bases with acids or any other material
- Other liquids: ensure other liquids are not incompatible with any other chemical in the same storage location.
- Lips, strips, or bars are to be installed across the width of storage shelves to restrain the chemicals in case of earthquake.
- Chemicals will not be stored in the same refrigerator used for food storage. A label on the door must appropriately identify refrigerators used for storing chemicals.

### **Container Labels:**

It is extremely important that all containers of chemicals are properly labeled. This includes every type of container from a 5000-gallon storage tank to a spray bottle of degreaser. The following requirements apply:

- All containers will have the appropriate label, tag or marking prominently displayed that indicates the identity, safety and health hazards.
- Portable containers that contain a small amount of chemical need not be labeled if they are used immediately that shift, but must be under the strict control of the employee using the product.
- All warning labels, tags, etc., must be maintained in a legible condition and not be defaced. Weekly facility inspections by Coordinators will check for compliance of this rule.
- Incoming chemicals are to be checked for proper labeling.

### **Emergencies and Spills:**

In case of an emergency, implement the proper Emergency Action Plan

- Evacuate people from the area.
- Isolate the area.
- If the material is flammable, turn off ignition and heat sources.
- Only personnel specifically trained in emergency response are permitted to participate in chemical emergency procedures beyond those required to evacuate the area.
- Call for Emergency Response Team assistance if required.
- Maintain the smallest possible inventory of chemicals to meet immediate needs.
- Periodically review 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.
- DO NOT pour chemicals onto the ground.
- DO NOT Dispose of chemicals through the storm drain system.
- DO NOT Dispose of highly toxic, malodorous chemicals down sinks or sewer drains.

### **Alcohol & Drug Policy**

Please refer to Section 5.

### **Exhibit "A"**

#### **Major Accident Procedures**

This memo outlines recommended procedures in the event of a major accident. While each accident needs to be evaluated independently, examples of major accidents are, as follows:

- Death or serious injury
- Fires I explosions
- OSHA inspection with alleged violation
- Trenching failure/incident
- Possible product or mechanical failure
- Overhead or underground power line hits with a power outage
- Alleged negligent acts with considerable potential liability to other parties
- Other major accidents which are unusual in nature

In event of a major accident, deal with the immediate dangers such as medical care for injury. After contacting the appropriate emergency medical systems and securing the site, please immediately notify the General Supervisor and your Site Supervisor for support and notify a third party if there is an immediate issue (ex. The power line company in the case of an overhead power line accident for immediate repairs).

In the event the press arrives on the site and requests a comment. You should respond as follows: "We are in the process of gathering all the information and a company spokesperson will respond when we have more information."

The Director of Finance and the General Supervisor will jointly coordinate the accident investigation. The Site Supervisor, General Supervisor and everyone involved with or witnessing

the accident will also participate in the process and should not leave the site (exception – one person should accompany a Berg employee being transported to a hospital and should obtain the name, location and phone number of the hospital and notify the investigation team).