

## Site Safety Information

The following documents must be submitted to Bremik Construction prior to beginning work. For additional information please refer to the attached examples or contact Bremik's main office at 503.688.1000.

**Hazard Communication (MSDS)** – Material Safety Data Sheets (MSDS) should outline all hazardous material (chemicals) that will be used for your scope of work. MSDS sheets are to be submitted to Bremik Construction prior to beginning your work. Please see MSDS example attached to this document.

**Job Hazard Analysis** – Bremik Construction will provide a Job Hazard Analysis (JHA) for you to fill out and complete on a weekly basis or as your daily job tasks change. Subcontractors may use their own JHA but this document must provide the same or similar information as shown on the attached document. All JHA's will be completed on a weekly basis and submitted to Bremik's site supervisor upon completion.

**Site Specific Safety Plan Guideline** – This document outlines the basic Site Specific Safety Plan requirements for each jobsite. The Site Specific Safety Plan should identify all hazards associated with your scope of work and provide safe work practices and personnel protection methods. Please see Site Specific Safety Plan example attached to this document.

## Site Specific Safety Plan Contents Guideline

The Site Specific Safety Plan should be a review of all work tasks and expected hazards associated with the project. The contractor should review all tasks and hazards and provide a brief analysis on how the contractor will address each hazard in a safe and timely manner. Contractors are required to submit Site Specific Safety Plans to the General Contractor prior to beginning work and shall update the Site Specific Safety Plan as drawings and work scopes develop throughout the entire duration of the project.

Note: Contractors must include and address all checklist items in writing prior to performing work onsite. **See Site Specific Safety Plan Checklist Below**

### Site Specific Safety Plan Checklist

- Contractors Name
- Brief description of Subcontractors Safety Policy
- General description of the objective of this document
- Site Information (Project Address)
- Project Duration
- Key Personnel (Project Manager, Project Engineer, Superintendent, Safety Officer, Forman, Etc)
- Project Specifics (Scope of Work, Site Conditions, Site Surroundings, Etc)
- Health and Safety Responsibilities (Project Manager, Superintendent, Safety Officer, Forman, Employees, Etc)
- Brief description of subcontractors Safety Standards. Items should include but is not limited to: Safety Meetings, New Hire Orientation, Drug and Alcohol Policy, PPE, Housekeeping, Assured Grounding Program, JHA, Hot Work, Hazard Communication
- Job Hazard Analysis for the work being performed
- Resources (Medical, Fire, Chemical, Administration)
- Traffic Control (General Traffic Provisions, Public Right-Away)
- Emergency (Emergency Protocol, Emergency Map, Emergency Numbers)
- Nearest Fire Department
- Fall Protection Plan
- Employee Training
- MSDS Inventory



## Site Specific Safety Plan

### Project Name

#### **1.0 General Information**

##### **1.1 Bremik's Policy:**

The safety and well being of each employee and customer is Bremik's number one priority and we are committed to providing a safe and healthful work environment.

##### **1.2 Objective:**

The objective of this document is to establish a plan for implementing the company safety program at the \_\_\_\_\_ project. This plan is intended to minimize losses, meet regulatory compliance requirements and implement site safety regulations established by Bremik Construction along with OSHA standards.

##### **1.3 Site Information:**

Project Name

##### **1.4 Duration:**

Duration of Project

##### **1.5 Key Personnel:**

- ◆ Project Manager:
- ◆ Superintendent:
- ◆ Foreman:
- ◆ Project Engineer:
- ◆ Safety Officer:

#### **2.0 Project Specifics**

## **2.1 Scope of Project:**

Remodel of an existing 4 story, 113,000 SF high school to commercial use. Includes demolition of some interior elements, new MEPFS systems, new elevator, new hardscape and parking lot, and new interior finishes.

## **2.2 Site Conditions:**

Site work includes a new hardscapes between the building and public sidewalk on the north and east elevations. New hardscape between the building and existing plaza on the west side. The south side includes a new sidewalks and new parking lot.

## **2.3 Site Surroundings:**

The construction site is located within a mix use neighborhood so special considerations must be taken. Public safety is first priority and the perimeter of the site is fenced off to ensure this. Noise, dust and trash pollution will be kept to a minimum by working designated hours (7:00am-6:00pm), implementing dust control and maintaining good housekeeping on and around site. Construction parking will be in issue as there will be no onsite parking and street parking is already tight in this area. It is important to encourage crews to carpool to reduce parking impact to the neighborhood.

## **3.0 Health and Safety Responsibilities**

### **3.1 Bremik Team:**

#### **Project Manager –**

- ◆ Coordinate pre-planning meetings for project safety.
- ◆ To ensure that Safety and Health issues are managed with the same priority as production and quality and when they conflict, safety will take priority.
- ◆ Dedicate project resources for safety.

#### **Superintendent-**

- ◆ Implement Bremik's safety program and policy.
- ◆ Promote accident prevention through constant communication and leading by example.
- ◆ Conduct weekly safety meetings.
- ◆ Provide and maintain all safety meeting minutes.
- ◆ Identify hazards and advise on proper and approved safety guards and PPE.
- ◆ Conduct new employee safety orientation.
- ◆ Aid in scheduling/coordinating pre-planning meetings for the projects.
- ◆ Require, maintain and review all subcontractor JHA's for completeness and knowledge.
- ◆ Require all subcontractors/employees to comply with health and safety regulations.
- ◆ Maintain copies of Bremik's safety manual, OSHA book/forms and other applicable programs on site.

#### **Foreman –**

- ◆ Implement Bremik's safety program and policy.
- ◆ Identify and correct hazards.
- ◆ Aid in conducting weekly safety meetings.
- ◆ Notify superintendent of any and all safety concerns in timely fashion.

### **Project Engineer –**

- ◆ Assist in coordinating pre-planning meetings for project safety.
- ◆ Implement Bremik's safety program and policy.
- ◆ Conduct weekly safety meetings.
- ◆ Monitor safety performance on the project through observation, inspection, corrective action and documentation.
- ◆ Participate in post-accident investigations.
- ◆ Maintain copies of Bremik's safety manual, OSHA book/forms and other applicable programs on site.

### **Safety Officer –**

- ◆ Act as a resource to the company for safety issues.
- ◆ Develop and maintain the safety training program.
- ◆ Assist in project safety planning.
- ◆ Conduct routine inspections of job sites.

### **3.2 Employees:**

- ◆ Attend new hire orientation and complete safety/orientation checklists.
- ◆ To work in a safe manner at all times and comply with all safety rules, procedures and requirements.
- ◆ To report all accidents, near misses and unsafe conditions, no matter the severity.
- ◆ Attend safety meetings.

### **3.3 Subcontractors:**

- ◆ Provide a site specific plan prior to any work commencing.
- ◆ To work in a safe manner at all times and comply with all safety rules, procedures and requirements.
- ◆ To report all accidents, near misses and unsafe conditions, no matter the severity.
- ◆ Provide MSDS for ALL chemicals brought on site.
- ◆ Attend weekly safety meetings.
- ◆ Provide weekly JHA's on a timely basis.

## **4.0 Bremik Safety Standards**

- ◆ **Safety Meetings** – Project team will hold a weekly safety every Monday morning at 7:00am. Attendance of all persons on site is mandatory. The meeting topics, discussion and attendees will be documented and kept in the Bremik Job Office trailer.
- ◆ **New Hire Orientation** - Each new hire will be required to attend a new hire orientation prior to being assigned to work so they are aware of the job specifics and safety guidelines. Subcontractors shall orient each new individual who works onsite.

- ◆ **Drug and Alcohol Policy** - All employees are required to be pre screened and subject to random drug testing. Alcohol or drugs are not to be consumed on premises before or during work hours. No smoking or tobacco is allowed on this project.
- ◆ **PPE** - All persons onsite must wear appropriate attire which includes hard hat, high visibility vest or shirt, eye protection, pants and work boots at all times. Other PPE including gloves, ear plugs, respirators, face shields, and Tyvek suits shall be used as appropriate for the tasks being performed.
- ◆ **Housekeeping-** Housekeeping is the responsibility of all subcontractors and personnel and must be done on a daily basis. Construction debris poses tripping hazards and fire potential so it is vital that all access and egress be maintained at all times.
- ◆ **Assured Grounding Program** – An individual is assigned to check power cords, spider boxes, light cords and extension cords on a daily basis to ensure they are in good working condition eliminating the possibility of electrocution or fire. Bremik’s Assured Grounding Check Sheet must be filled out and initialed each day.
- ◆ **JHA’s** - Job Hazard Analysis (JHA) will be required to be completed by each on site subcontractor for them to identify hazards associated and surrounding their work. JHA’s are to be turned into superintendent no later than 3:30pm each Thursday. The superintendent will review and incorporate and discuss at the following Monday morning safety meeting.
- ◆ **Hazard Communication** – Every container brought onsite must be properly labeled and each product shall have a corresponding MSDS sheet provided prior to use. MSDS sheets are saved digitally on Bremik’s computer server and can be printed upon request.

The standards listed above are guidelines Bremik has set forth as a minimum for every project. At the Superintendent’s discretion the guidelines may be more stringent.

## **5.0 Job Hazard Analysis**

Below is a Jobsite Hazard Analysis for the Project team. The team established the tasks, discussed the hazards and determined how they would be prevented or controlled. While this assessment is a good summary it is not all inclusive. Having subcontractors fill out and provide their JHA’s in a timely manner will present even more safety awareness and prevention.

Only competent persons shall be allowed to complete specific tasks. According to OSHA a “*competent person* is a one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt correct measures to eliminate them.”

## **5.1 Demolition**

<b>Hazards</b>	<b>Controls</b>
Asbestos	Abated by IRS Environmental ahead of time. If new asbestos is discovered do not disturb and notify Superintendent.
Collapsing Structure	Trace and understand load paths prior to demolition, majority of project is non-structural demolition.
Lead Paint	Use engineering controls and water controls, do lead monitoring at initiation of project to confirm demolition methods keep lead below action levels.
Dust & Flying Debris	Use water control, exhaust fans, vacuums, floor sweep, and good housekeeping to control.
Pits, Holes, leading edges	Barricade off area, cover, warning signs, temp rail
Overhead work	Use goggles or face shield.
Existing Utilities	Order locate and safe off prior to start
Overhead Power Lines	Identify and mark

## **5.2 Earthwork**

<b>Hazards</b>	<b>Controls</b>
Active Utility Lines	Order locates and use spotter when digging.
Excavation	Proper shoring and sloping Areas taped/barricaded off
Moving Equipment	Equipment shall have backup alarms Keep safe distance of 20 ft Make eye contact with operator
Vehicle Fires	Fire extinguishers readily available

## **5.3 Site Utilities**

<b>Hazards:</b>	<b>Controls:</b>
Trenching	Proper shoring Barricades, warning signs
Moving Equipment	Equipment shall have backup alarms Keep safe distance of 20 ft Make eye contact with operator
Utility Lines	Order locate prior to any work

## **5.4 Concrete**

<b>Hazards</b>	<b>Controls</b>
Concrete burns	Wear gloves and safety glasses
Rebar Impalement	Cap all rebar
Pouring	Be aware of trucks, pump Wear eye protection
Tripping Hazards	Keep materials & debris picked up

### **5.5 Masonry & Terra Cotta**

<b>Hazards</b>	<b>Controls</b>
Back injuries	Use proper lifting technique for lifting heavy objects
Falls	Use properly installed scaffold & ladders, use harness and lanyard in boom lift, follow proper safety procedures with swing stage.
Eye, hand, foot injuries	Wear proper PPE
Dust	Dust control; respiratory protection

### **5.6 Steel Erection**

<b>Hazards</b>	<b>Controls</b>
Falls	Provide fall protection plan and follow it, watch for moving loads
Hoisting Loads	Properly rigged equipment No work under loads Awareness of hoisting operations
Welding	Fire extinguisher; gloves; eye protection Fire watch

### **5.8 Carpentry**

<b>Hazards</b>	<b>Controls</b>
Eye injuries	Eye protection
Power tool injuries	Tools in good repair; use blade guards. Don't defeat safety devices on tools Check power cords.
Falls	Make sure ladders and scaffold are properly used and erected. Use handrails & barriers where required
Hand injuries	Use gloves when handling material.



### **5.10 Roofing**

<b>Hazards</b>	<b>Controls</b>
Falls	Stay within bump line, use fall personal fall arrest system or safety monitor if outside the bump line.
Falling loads	Properly barricade off area
Foot and hand injuries	Gloves, safety shoes
Hot Work	Fire watch, extinguisher, hose within 10' Be aware of kettle
Holes	Label "HOLE" Secure to Roof

### **5.11 Sheet Metal**

<b>Hazards</b>	<b>Controls</b>
Falls	Personal Fall Arrest System.
Falling loads	Properly rigged equipment no work under suspended loads
Foot and hand injuries	Gloves, safety shoes

### **5.12 Doors & Frames**

<b>Hazards</b>	<b>Controls</b>
Back Strains & Injuries	Proper lifting Not overexertion

### **5.14 Windows, Repair and New**

<b>Hazards</b>	<b>Controls</b>
Eye protection	Eye protection for breaking glass
Cuts	Watch for broken glass, sharp edges, & corners
Back Strains	Proper Lifting
Lead Paint	Proper engineering controls and PPE.

### **5.15 Metal Stud Framing**

<b>Hazards</b>	<b>Controls</b>
Powder actuated guns	Only certified operator can use equipment. Eye protection Use proper loads

	Secure gun in case when not in use.
Cuts	Gloves; watch for sharp edges, burrs on studs
Tripping	Stockpile studs away from work area
Cutting Metal	Fire extinguisher, gloves, safety glasses

### **5.16 Gypsum Board**

<b>Hazards</b>	<b>Controls</b>
Lifting injuries	Use proper lifting methods, use help when necessary.
Dust	Use dust masks; sweep floors frequently
Falls	Proper setup and use of ladders, baker scaffolds, and scissor lifts

### **5.17 Tape & Paint**

<b>Hazards</b>	<b>Controls</b>
Paint fumes	Use adequate ventilation, respirators if required Proper storage of soiled rags MSDS on hand
Fire	Have proper fire extinguishers on hand
Falls	Proper setup and use of ladders & scaffolds Use guard rails and toe boards on scaffolds
Silica/Dust	Proper PPE when sanding, use engineering controls and floor sweep for dust.

### **5.18 Floor Coverings**

<b>Hazards</b>	<b>Controls</b>
Adhesive fumes	Use adequate ventilation Use respirators if required Work when other trades are not in immediate area MSDS on hand
Back Injuries	Proper lifting

### **5.19 Acoustical Ceilings**

<b>Hazards</b>	<b>Controls</b>
Eye injuries	Eye protection

Falls	Proper setup and use of ladders & scaffolds and stilts
Puncture wounds	Watch for wire

### **5.20 Specialties**

<b>Hazards</b>	<b>Controls</b>
Eye injuries	Eye protection
Falls	Proper setup and use of ladders & scaffolds
Adhesives	Ventilation MSDS on hand

### **5.21 Casework & Counters**

<b>Hazards</b>	<b>Controls</b>
Eye injuries	Eye protection
Falls	Proper setup and use of ladders
Lifting	Proper lifting
Adhesives	Proper storage of soiled rags Proper ventilation MSDS on hand

### **5.22 Elevators**

<b>Hazards</b>	<b>Controls</b>
Eye injuries	Eye protection
Falls	Proper setup and use of ladders & scaffolds
Electrocution	Lock panel, only authorized access
Back Injuries	Proper lifting
Open Pit	Guardrails in place and maintained

### **5.23 Fire Sprinklers**

<b>Hazards</b>	<b>Controls</b>
Eye injuries	Eye protection
Falls	Proper setup and use of ladders & scaffolds
Cutting Pipe	Safety glasses, gloves

### **5.24 Plumbing**

<b>Hazards</b>	<b>Controls</b>
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Burns	Gloves
Lifting injuries	Use proper lifting methods
Cutting Pipe	Safety Glasses, gloves
Open Trenches	Barricade off area
Soldering	Fire extinguishers; gloves, eye protection

### **5.25 HVAC**

<b>Hazards</b>	<b>Controls</b>
Falls	Proper setup & use of ladders & scaffold
Cuts	Watch for burrs, sharp edges on duct
Falling loads	Proper rigging. Don't work under suspended load
Electrocution	Lock panel boards. Check to see if starter motors are hot with voltmeter before working; tag & tape circuit breakers
Duct insulation	Use dust mask/respirator if required
Hand injuries	Gloves

### **5.26 Electrical & Low Voltage**

<b>Hazards</b>	<b>Controls</b>
Electrocution	Lock panel boards, tape & tag circuit breakers; check work with voltmeter before proceeding; use insulating mats
Falls	Proper setup of ladders
Hand injuries	Gloves

### **5.27 Landscaping**

<b>Hazards</b>	<b>Controls</b>
Moving Equipment	Backup alarms, Keep safe distance
Fertilizer and chemicals	Face masks, breathing protection MSDS on hand

### **5.27 Paving & Sitework**

<b>Hazards</b>	<b>Controls</b>
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Moving Equipment	Backup alarms, Keep safe distance
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## **6.0 Resources:**

### **6.1 Medical:**

- ◆ First Aid Kit – located in Bremik Job Trailer.
- ◆ Nearest Hospital – Portland Providence Medical Center - Directions posted in Bremik Job Trailer.
- ◆ Emergency Contact Poster – Posted in Bremik Job Trailer. (Appendix B)

### **6.2 Fire:**

- ◆ Fire Extinguishers – Located Bremik Job Trailer and in building. (Appendix C)
- ◆ Emergency Contact Poster – Posted Bremik Job Trailer

### **6.3 Chemical:**

- ◆ MSDS – scanned to server. Bremik personnel can download applicable sheets.
- ◆ Emergency Contact Poster – Posted Bremik Job Trailer

### **6.4 Administration:**

- ◆ OSHA Construction Standards – Located in Superintendents Safety Tote.
- ◆ Bremik Safety Manual – Located in Superintendents Safety Tote.
- ◆ OSHA Workplace Forms – Posted in Bremik Job Trailer.
- ◆ OSHA 300 Log (see Workplace Compliance Poster) – Posted in Bremik Job Trailer. (Feb 1<sup>st</sup> – April 30<sup>th</sup>)
- ◆ Blank Accident Forms – Located in front cover of Superintendents Safety Tote.
- ◆ Safety Committee Meeting Minutes – Posted in Bremik Job Trailer.

## **7.0 Traffic Control**

### **General Traffic Provisions:**

Any activity that changes sidewalks, affects pedestrian or vehicular traffic will require one or more of the following to be implemented.

- ◆ Flagging will be utilized as needed.
- ◆ Traffic control shall be set up and taken down as needed.
- ◆ Channeling and barricading must be used to separate pedestrians from traffic.
- ◆ Safe, clearly marked routes shall be maintained through or around the activity at all times.

### **Public Right-Away:**

The majority of work in the public right-away will be performed by subcontractors and they have to provide their traffic control plan.

## **8.0 Emergencies**

### **8.1 Emergency Protocol:**

#### **Senior person on-site shall:**

- ◆ Call 911 and establish a command center.
- ◆ Contact Mike Greenslade or Bob Trapa (Crisis Management Team Leaders).
- ◆ Initiate site control and account for all employees.
- ◆ If site will be shut down tell workers when to report back to work. Have them contact families to let them know they are ok. Direct any information requests from outside groups to senior person.
- ◆ Keep selected individuals on-site to help with incident.
- ◆ Do not move anything that could be classified as evidence.
- ◆ Ensure telephone coverage at the site and restrict use of two-way radios.
- ◆ Post workers to restrict entry to the site. Only those authorized are permitted entry and must show identification.
- ◆ Notify owner/developer of the project.
- ◆ Select a temporary spokesperson to issue a buy-time statement if media arrives.

**8.2 Emergency Map** – The south parking lot in front of the Bremik job trailers has been designated as the Assembly Area for this project. Please refer to Appendix C - Emergency Map for gathering area, exit routes and fire extinguisher locations- this map will be posted throughout the building and job trailers.

**8.3 Emergency Numbers** – The attached emergency contact poster will be posted in the Bremik Job Trailer for readily available access for all on persons on site.

An emergency can strike at any moment and it is imperative that access and egress areas remain clear and marked in the event of an emergency. There will be daily patrol of the stairwells and entrances to ensure they remain unobstructed.

## **9.0 Accident Reporting & Investigation**

ALL accidents, incidents or “near-misses” must be properly reported and documented. Superintendent will fill out the appropriate incident paperwork.

## **10.0 Fire Prevention Plan**

### **10.1 General Fire Safety Measures:**

- ◆ No smoking allowed
- ◆ Stairway access and egress shall be illuminated during work hours.

- ◆ All access routes shall be unobstructed and maintained.
- ◆ Exit signs shall be posted in vicinity of exits. See Appendix C-Emergency Maps for egress and locations

#### **10.2 Fire Hydrant:**

- ◆ Located on North side along Stark Street.

#### **10.3 Class ABC Fire Extinguishers:**

- ◆ Locations: See Appendix C – Emergency Maps for extinguisher locations .
- ◆ They will be located at each stairway.
- ◆ Monthly inspections will be performed on fire extinguishers to ensure they are properly charged and accessible.

#### **10.4 Housekeeping:**

- ◆ Wood, cardboard, packing material, form lumber and similar combustible debris pose a hazard for ignition and must be removed on a consistent basis.
- ◆ All stairwells, exits and egress paths must be kept clean and free of debris and tripping hazards.

**10.5 Hot Work** - includes any work involving operations capable of initiating fires or explosions, including cutting, welding, brazing, soldering, grinding, thermal spraying, thawing pipe, torch applied roofing, or any other similar activity. The use of hot work equipment shall be in accordance with the following requirements, including a pre site inspection, fire watch and post inspection procedures.

##### **Pre-Site Inspection:**

- ◆ Ensure the hot work site is clear of combustibles or combustibles are protected along with openings and other materials within close in proximity.
- ◆ Ensure there are no exposed combustibles on the opposite side of partitions, walls, ceiling, floors etc.
- ◆ Fire extinguisher fully charged, operable and readily available.

##### **Fire Watch:**

- ◆ The sole duty of the fire watch personnel shall be to watch for occurrence of fire during and after hot work operations.
- ◆ Individuals designated to fire watch duty shall have fire extinguishing equipment readily available and shall be trained in the use of such equipment.
- ◆ Personnel assigned to fire watch shall be responsible for extinguishing spot fires and communication an alarm.

##### **Post-Work Inspection:**

- ◆ The fire watch shall be maintained a minimum of 30 minutes after the conclusion of the work to look out for leftover sparks, slag or smoldering combustibles.
- ◆ Hot work shall cease 2 hours prior to end of day.

## 10.7 Nearest Fire Department:

Portland Fire Department Station 21  
5 SE MADISON ST  
Portland, OR  
(503) 823-3700 [Request Station 21]

## 11.0 Fall Protection Plan

### 11.1 General Fall Protection Information

- ◆ Fall Protection will be used to protect workers exposed to a fall hazard of 6' high or higher.
- ◆ When possible fall prevention methods (guardrails, warning lines, hole covers) will be used eliminate fall hazards, when the site conditions and work process make this impracticable, fall restraint systems will be used. Personal fall arrest systems will be utilized when neither fall prevention nor fall arrest systems can be used.

### 11.2 Guardrails

- ◆ Guardrails are used to prevent exposure to fall hazards by barricading the exposed edge and preventing workers from falling.
- ◆ Guardrails will have top rails at 42" plus or minus 3", mid rails at half of the height between the top rail and walking/working surface.
- ◆ Top Rails must withstand a force of 200lbs at any point in the outward and downward directions, Mid Rails must withstand a forces of 150 lbs in an outward or down ward directions.
- ◆ Toe boards should be used for falling object protection when applicable; toe board should be a minimum of 3-1/2" high and have a maximum gap of 1/4" between the working surface and the bottom of the toe board.
- ◆ When guardrails are constructed of steel or synthetic rope they must be 1/4" nominal diameter and flagged every 6'.
- ◆ If ladders, stilts, baker scaffolds, or other means to elevate employees are used near guardrails the height needs to be increased to keep workers from falling over top of guardrail.

### 11.3 Warning Line System

- ◆ The warning line system can be used to provide fall protection on roofs with a sloop of 4-in-12 or less. The warning line system must be erected on all open sides of the work area and consist of stanchion posts with flagged wire, rope, or chain.
- ◆ The warning line must be a minimum of 6' from the fall hazard and a minimum of 10' from the fall hazard if mechanical equipment is being used inside the warning line area.
- ◆ Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines. The access paths should be barricaded with a rope when not in use or the path shall be offset such that a person cannot walk directly into the work area.
- ◆ The warning line rope must have a tensile strength of 500lbs, be flagged every 6', be mounted at 39" above the working surface with sags no lower than 34".



- ◆ Stanchions shall resist a tipping over force of 16lb and the rope shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over

**11.4 Hole Covers**

- ◆ Are used to cover holes, skylights, hatches, etc. that are 2” in diameter or bigger and are 6’ or higher to a lower level.
- ◆ Be able to support twice the weight of the employees and equipment that would be on it at the same time.
- ◆ Be secured to prevent accidental displacement.
- ◆ Be marked with the word “hole”.

**11.5 Fall Restraint System**

- ◆ System is used to restrain the worker before he is able to get to the fall hazard and thus prevents a fall from occurring and consists of an anchor point, connecting device, and harness.
- ◆ The anchor point shall be capable of supporting 3000lb, the competent person should select that anchor point. When using engineered anchor points (beaver tails, etc.) follow owner’s manual on size and number of fasteners to use.
- ◆ Connecting devices include rope grabs and lanyards. They must be positioned to stop the worker before they can fall off the edge. Connecting devices should be inspected monthly by a competent person and before each person by the employee using the gear. When inspecting look for damage to the connectors, webbing, shock pack (if applicable), and make sure labels are legible and intact.
- ◆ Full body harness should be used in fall restraint, ensure that the harness is tightly fitted to the body so that is snug but still allows a wide range of mobility. The D-ring on the back should be between the shoulder blades and all loose ends should be secured.

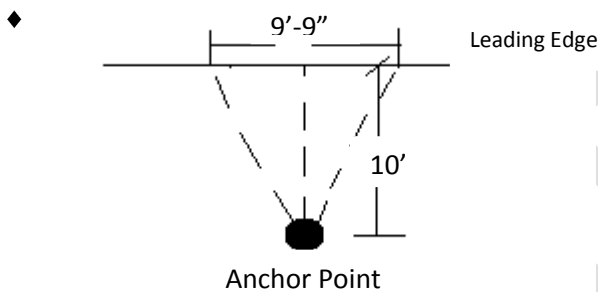
**11.6 Fall Arrest System**

- ◆ System is used to arrest a fall once it has occurred and consists of an anchor point, connecting device, and harness.
- ◆ The anchor point shall be capable of supporting 5000lb, the competent person should select that anchor point. When using engineered anchor points (beaver tails, etc.) follow owner’s manual on size and number of fasteners to use.
- ◆ Connecting devices include rope grabs, lanyards, retractables (yo-yos), and horizontal/vertical lifelines. They must be positioned to stop a worker from free falling more than 6’ and from hitting a lower level. Connecting devices should be inspected monthly by a competent person and before each person by the employee using the gear. When inspecting look for damage to the connectors, webbing, shock pack (if applicable), and make sure labels are legible and intact.
- ◆ A full body harness should be used in fall arrest, ensure that the harness is tightly fitted to the body so that is snug but still allows a wide range of mobility. The D-ring on the back should be between the shoulder blades and all loose ends should be secured.
- ◆ A rescue plan that will result in a prompt rescue of employees must be in place.
- ◆ Swing falls will be limited by the following chart.

Anchor Distance from	Working distance along
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leading edge	leading edge
6'	8'
10'	9'-9"
15'	11'-7"
20'	13'-3"
25'	14'-8"
30'	16'
35'	17'-2"
40'	18'-3"
45'	19'-4"
50'	19'-10"

◆ **Example from chart above:**



### 11.7 Fall Protection – Site Specific

General Location	Fall Protection Method
Existing and new shaft penetrations	Hole covers, temp guardrails
Roof work	Warning line system, use fall restraint or personal fall arrest systems beyond. Roofers can utilize safety monitor system.
West side façade repair	Temp guard rail, fall restrain or personal fall arrest system if need to be beyond.
Exterior Elevations – Brick and Window Repair and Installation.	Access via scissor lifts, boom lifts, scaffolds.

### 11.8 Fall Protection – Rescue

- ◆ This plan is to ensure prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
- ◆ Hole covers, temp guardrails, warning line systems, and personal fall restraint systems are the preferred method of fall restraint system. If a fall occurs on a personal fall arrest system rescue shall be performed with a boom lift, scissor lift, or ladder.