1 Status

1.1 Update of existing policy, effective 06/03/11.

2 Purpose

2.1 To eliminate hand and finger injuries by a thorough identification of the hazards and providing an adequate level of protection.

3 Applicability

3.1 This policy applies to all subsidiary companies and departments of The Cianbro Companies.

3.2 All organizations are required to comply with the provisions of this policy and procedure. Any deviation, unless spelled out specifically in the policy, requires the permission of the Corporate Safety Officer or designee.

4 Definitions

4.1 None

5 Policy

5.1 Appropriate gloves are required to be worn whenever hard hat, hard toed boots and safety glasses are required. We will use effective engineering and administrative controls to prevent injury.

6 Responsibilities

6.1 The Corporate Safety Officer or designee is responsible for providing approval for any deviations from the requirements contained in this policy.

6.2 The top Cianbro manager on the job site is responsible for the implementation of this policy on the project.

6.3 The corporate safety department is responsible for maintaining this document.
7 Hand and Finger Protection Index

7.1 Your hands are one of the most complex parts of your body. These valuable servants are extremely vulnerable to injuries and account for 35% of our total injuries. Simply by using appropriate work gloves, hand and finger cuts and punctures can be reduced dramatically. Ironically, gloves are the easiest, most effective means of protection. However, the most effective prevention of hand and finger injury is awareness and planning.

7.2 Protective Hand Wear

7.2.1 Standard work gloves do not always provide adequate or appropriate protection for all jobs. A variety of special purpose gloves are made to provide protection from specific hazards such as intense heat, electrical shock, chemicals, tying rebar, steel rework, etc. In some cases, gloves should not be worn for close work around saws, lathes, drill presses or similar machinery where there is exposure for entanglement.

7.2.2 When planning work, each Activity Plan should address the need for hand protection. Cianbro has evaluated our recommended leather gloves, which have proven to be versatile even in some of the most demanding and sensitive functions from tying rebar to using small hand tools. However, hand protection must be selected appropriate for the hazards of the specific activity.

7.3 Hand and Finger Hazards

The following are common hand and finger hazards that contribute to injuries on Cianbro projects:

7.3.1 Mechanical hazards are equipment that shear, spin, pound, crush, pinch, puncture and cut.
- Pinch Points - avoid placing your hand between moving objects.
- Automated Machine - relays, remote controllers, delay timers and robotics can cause machinery to start up suddenly.
- Rotating Machine - rotating devices such as drill bits, saw blades and milling cutters can be very hazardous.
- Machine Guards - use, do not remove machine guards or shields.

7.3.2 Contact hazards like chemicals, cleaners, poisonous plants and bacteria may damage the skin. Also, many chemicals can be absorbed through the skin. Rubber or impermeable gloves should always be used when handling chemicals. “Rubber” gloves can be made of natural rubber, butyl rubber, neoprene or other materials like nitrile, poly-vinyl alcohol (PVA), poly-vinyl chloride (PVC), or viton and the right glove material needs to be used for each chemical. Refer to the chemical MSDS or contact the glove manufacturer to determine the proper glove material for the hazard.

7.3.3 Environmental hazards like heat, vibration, sparks, cold, rough materials, electricity and heavy or sharp objects may present a problem in any work activity. Appropriate hand protection must always be identified prior to starting any activity.
- Cut resistant gloves and sleeves are available and should be used for tasks requiring hand cutting or trimming with sharp blades. They should also be used when working around sharp-edged steel pieces, etc.
Anti-vibration gloves offer the best protection when using vibrating tools like the 9000 chipping hammer. If there is 30 minutes of vibration exposure in an hours’ time, team members are required to wear anti-vibratory gloves from the onset of activity.

7.3.4 Housekeeping hazards contribute to falls, and hand injuries usually result from using your hands to break a fall.

7.3.5 Loose clothing and jewelry can easily get caught in moving machinery. Always remove all jewelry and roll up shirtsleeves before beginning work around moving machinery.

7.4 Hand Tools

7.4.1 Inspect all hand tools before using and remove from service any damaged or defective tool. Select the right tools for the right job and never apply unnecessary pressure.

Inspect your hand tool power cord - is it damaged? Does it have the right color tape?

- When possible, use a box end wrench and pull against it. Never push against the wrench.
- When using a screwdriver, place object in solid position. Never hold object in your hand and screw. Be aware of the stabbing potential.
- In most operations, the blades of knives should be kept sharp and always cut away from your body. Store knives separately from other tools. Do not use a knife as a screwdriver and if possible use retractable blades.

NOTE: A small cut can have serious consequences. Please clean wounds and protect from infection regardless how small it may be.

7.5 Machine Safeguards

7.5.1 Most machines have built-in safeguards in order to protect your hands and other parts of your body from hazards.

- Never operate a machine or power tool that has had its guards or safety features removed.
- Never remove a safeguard.
- Install guards or other safety devices to equipment, where practical for safety protection.

7.6 Hidden Hazards and Disorders

7.6.1 Repetition - some activities like painting, key punching and hammering require wrists, hands and fingers to repeat rapid, twisting motions many times per day.

7.6.2 Strain - awkward postures and bent wrists are often maintained for long periods in activities like hammering, typing, driving and scrubbing.

7.6.3 Pressure - when using hand tools like pliers, screwdrivers, scrapers and scissors, tendons and blood vessels can be pinched if tool handles have sharp edges, grooves for fingers, or are the wrong size.

7.6.4 Vibration - injury can occur from improper use of tools such as sanders, grinders, pavement breakers, drills and chain saws.

7.6.5 Some examples of Cumulative Trauma Disorders

- Tendonitis - tendons can be inflamed from repetitive motion and bent wrists causing friction of tendons against carpal bones and ligaments.
- Tenosynovitis - a tendon and its protective sheath can swell from repetitive motion, pinching, pressure of tool handle and bent wrists.
- White Finger - circulation in fingers or hands can be damaged after using vibrating tools especially in cold environments.
• Carpal Tunnel Syndrome (CTS) - major nerves inside ligaments and carpal bones of the wrist are subject to damage when forceful, repetitive motion occurs during bending and twisting the wrist.

7.7 What Do We Do To Minimize Hidden Hazards and Disorders?

7.7.1 The facts are clear. If we would just wear gloves 100% of the time, our number of hand and finger injuries would reduce dramatically.
• Work with your wrists in a neutral or nearly straight position as much as possible.
• Whenever possible, alternate forceful or repetitive hand tasks from hand to hand.
• Avoid prolonged or unprotected vibration exposure to your hands from tools or other sources.
• Break hourly for brief hand stretches and to "shake out" your hands when doing work requiring forceful grasp.
• Do your regular stretches and do them correctly - before, during and after work.

7.8 Safety At Home
Make sure you are using the proper PPE for at home use. Hands are your most critical tool. Make sure you are protecting them at home as much as you are at work. Don't put your hands where they could get injured.

8 Budget / Approval Process

8.1 It is the responsibility of each jobsite to procure and provide all materials and PPE required and provide necessary training.

9 Related Documents

9.1 Not applicable.