RIC-MAN CONST. FL, INC.

DEERFIELD BEACH, FLORIDA

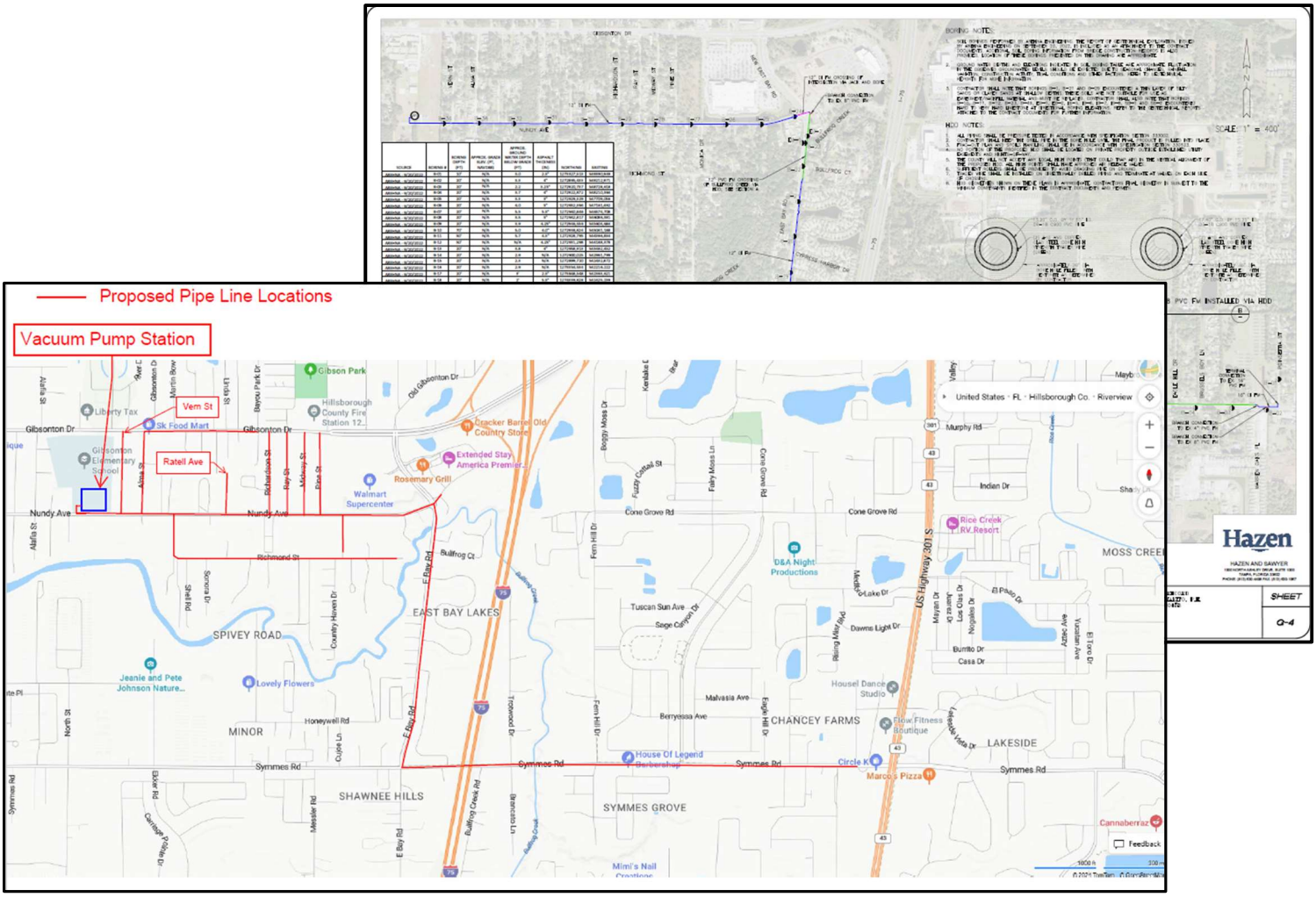
GENERAL HEALTH AND SAFETY PLAN 2024

RIC-MAN CONST. FL, INC.
DEERFIELD BEACH, FLORIDA

Site Specific Health & Safety Plan

For

GIBSONTON SEPTIC TO SEWER CONVERSION
RFP 24-24363



Scope of Work

The scope of the project includes the design, construction, and implementation of a new vacuum sewer pump station, installation of vacuum sewer mains, vacuum collection pits, sewer force mains, replacement of existing water mains, and associated roadway restoration throughout the project area. The project will be executed in multiple phases, ensuring minimal disruption to residents and businesses while maximizing project efficiency.

Project Owner

Hillsborough County
Tampa, Fl 33601

General Contractor

Ric-Man Construction Florida, Inc
3100 SW 15th Street
Deerfield Beach, FL 33442

Engineer of Record

Wade Trim
201 North Franklin Street Suite 1350
Tampa, FL 33602

Hazen and Sawyer
1000 N Ashley Drive, Suite 1000
Tampa, FL 33602

Important Contacts

Name	Title	Phone
Ric-Man Construction Florida, Inc	General Contractor	954-426-1221
Chris Mancini	Project Manager	954-809-8031
Roderick Barnes	Construction Manager	770-733-3819
Brian Baribeault	General Superintendent	954-495-7820
Steve Pecaut	Safety Manager	757-777-6630
Emergency, Police and Fire Department		911
Florida Department of Environmental Protection		800-320-0519
Water Resources		813-307-1000
AT&T Distribution		888-357-1922
Spectrum Cable		877-377-6918
TECO Gas		977-832-6747
TECO Electric		877-588-1010

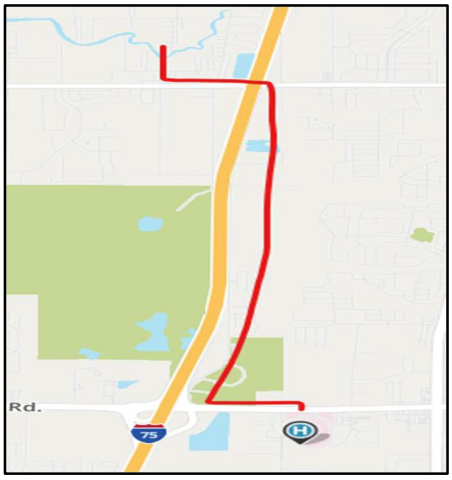
In the event of an emergency

1. Cease all operations
2. Evacuate all personnel
3. Secure area
4. Call 911 if needed
5. Attend to injuries
6. Contact property owners

NEAR BY MEDICAL FACILITIES

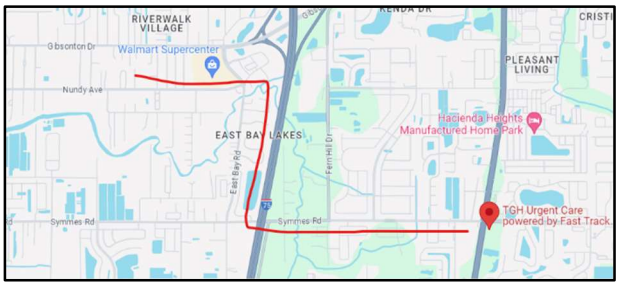
HOSPITAL

St Joesphs Hospital South
6901 Simmon Loop
Riverview, FL
813-302-800

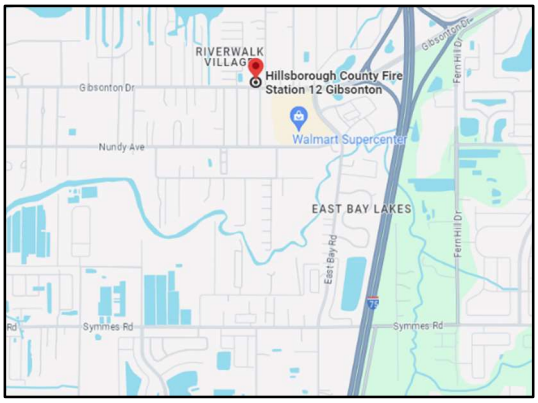


WALK IN CLINIC

Urgent Care
11406 U.S. 301 S.
Riverview, FL 33578
813-925-1903



Hillsborough County Fire
Station 12
8612 Gibsonton Dr
Gibsonton, FL 33534



Key Safety items for Gibsonton Septic to Sewer Conversion Project

1. Trenching excavation pg. 69
   RMCF will trench over 25,000 feet

2. Removing Asbestos pg. 102
   RMCF has identified sections of pipe with Asbestos covering

3. Cranes pg. 26
   RMCF will hoisting large pieces of material and equipment

4. Slings and Rigging pg. 67
   RMCF will be moving and lifting machinery and piping

5. Confined Space Permitting pg. 18
   RMCF will be operating in areas of confinement as defined by OSHA

6. Maintenance of Traffic pg. 100
   Over 75% of RMCF activities will be conducted next to active travel lanes and pedestrian foot traffic

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PREFACE

The intent of Ric-Man Construction FL, Inc. is to provide a consistent framework of communication regarding our expectations to perform our work safely. Further, to facilitate continuous safety performance improvement on our projects while continuing the journey towards achievement of the goal of, “ZERO”, incidents and injuries. It is our belief that a systems approach is required. To reach the level of sustainability required to continuously build projects without injuring any of our personnel.
The framework described in the following pages of this Safety Plan applies to Ric-Man Construction FL, Inc. Company Construction Projects including its sub-contractors. The management system elements contained in this document are meant to guide Contractors/Subcontractors in development of our safety management system (plan). Under each element are specific practices that Ric- Man Construction FL, Inc. believes are associated with quality project safety performances. Ric-Man Construction FL, Inc. is further required to hold sub- contractors accountable for implementing the same management system requirements as detailed in this document. Most of the specific practices under each element noted in this document are associated with construction industry best performances and OSHA standards. These are found in all projects to a certain extent. It is the intent of this document to collectively implement as many as possible in pursuit of continuous Improvement towards our goal of ZERO.

These fundamental Program elements must be followed:

- Management will provide a safe and healthy work environment.
- Foreman/General Foreman will receive Safety Training.
- Monthly Supervisor’s Safety Meetings will be conducted by the Safety Manager.
- New Employees’ Orientation will be conducted by Ric-Man Construction FL, Inc.
- A Task Analysis or JSA will be developed for each task daily by the Foreman/Crew.
- Formal Accident Investigation will be conducted for all incidents to help prevent recurrence by the Safety Manager or designate.
- Daily job-site observations will be conducted by the Foreman Site audits will be documented.

POLICY

This Plan will provide for communicating the policies and demonstrating Ric-Man Construction FL, Inc. commitment to a safety culture that drives towards Zero accidents and incidents.
This document will apply internally and externally as appropriate to other stakeholders of the construction

project. A means of confirming that the policies are accessible, communicated, understood, and implemented shall be included in our system.

Ric-Man Construction FL, Inc. is fully committed to this program of responsible management in all areas including health, safety, and the environment. During the Project, every employee is encouraged and expected to be a top performer in these areas in addition to safety, production, quality of work, meeting the work schedule plan, and employee job knowledge and skills.

All Contractor employees and subcontractors are essential to the team effort and must be committed to conduct themselves in a safe and responsible manner. Every employee has the responsibility to follow established safety rules and instructions as well as enforcing accident prevention procedures within our operating functions and responsibility.

It is the Policy of Ric-Man Construction FL, Inc. to always assure the safety of all personnel, the integrity and reliability of all installations, and the protection of the environment.

Our Policy is based on the concept that –
“Our work is never too urgent or important that we cannot take the time to do it safely.”

As such, Ric-Man Construction FL, Inc. recognizes its responsibilities.
and accountability for the protection of each employee and the preservation of project’s property and equipment. Each employee and subcontractor are responsible for providing and maintaining a safe and healthful work environment where all hazards and unsafe acts must be identified, analyzed, and controlled or eliminated and documented in a mandatory proactive and aggressive safety and health program. Each employee is expected to comply with established safe rules, practices, and procedures, use the safety equipment, proper tools and devices provided, and act in a manner which assures their safety and that of their fellow employees.
All personnel are responsible for assisting in the job-site safety & health program by participating in training activities and reporting any unsafe act, practice, procedure, or condition observed to their superior.

If you should determine that a situation will cause harm to personnel or a loss of property, you are authorized to stop the work and ask your immediate supervisor for directions.
Ric-Man Construction FL, Inc. will participate and will have an active role in this site safety management program. This will include reviews of subcontractor’s safety plan and procedures to ensure conformance to the site project requirements, safety meeting attendance and participation, site safety auditing and, sharing of safety learning’s and incidents, and regular site safety leadership meetings of project managers/construction managers/safety personnel.

Risk Management
Documented processes or procedures should be implemented and maintained to identify, assess, and manage existing and/or potential health, safety, environmental or other impacts over which the construction project can be expected to have influence. The scope of assessment(s) should include activities, operations, project, and products from the inception of the design, construction, through project execution, through hand-over, commissioning, and start-up. The assessment should consider normal, abnormal, and emergency operating. conditions. Assessment results and resulting action plans should be documented. A process is in place to periodically review and, if necessary, update risk assessments.

Work Planning
As individual hazardous tasks, that have not previously been identified, are identified during a supervisor’s weekly planning, safe procedures are developed to address these hazards. These procedures will be discussed in periodic communication meetings.

Task Specific Safety Planning is a review of general categories of typical tasks, conditions, equipment needs, materials, etc., for which there are special requirements, known hazards or special equipment required to perform the work safely.

The intent of a Task Analysis is to identify those categories using a list of known items as a guide, for a review of the planned installation of the design, environmental conditions, etc., which could exist onsite and to prepare to avoid accidents, injury, work stoppages, delays and other forms of loss caused by inadequate planning. Periodically, thereafter the analysis shall be reviewed and updated based on availability of more detailed information and future activities.
Job Hazard Analysis (JHA)/ Pre-Task Planning (PTP)/ Toolbox Talks (TBT)
A daily task analysis shall be conducted by supervision with employees prior to beginning the day’s work assignments. Additionally, employees shall conduct a task analysis at their respective work areas prior to beginning each new task to identify potential hazards relating to their task and work area. Each hazard identified

shall be satisfactorily addressed prior to beginning work. The purpose of the Job Hazard Analysis (JHA)/ (AHA) is designed to protect the health and safety of all our employees and sub-contractors. The JHA/AHA is considered an important accident prevention tool that works by finding hazards and eliminating them before the job is performed.

The contractor field supervisor shall initiate and complete the JHA/AHA for his/her crew. Upon completion of the JHA/AHA, all employees assigned to the task, prior to work beginning, shall review and sign it. After a review of the JHA/AHA, employees are encouraged to offer any input they may have to ensure a safer working environment. Every week, a safety meeting with all workers shall be performed (TBT) on a subject pertinent to the task at hand.

Substance Abuse Program
Contractors and their Sub-contractors shall comply with the requirements of the Drug and alcohol testing program. No non-prescribed drugs or alcohol are allowed on the project site, including in private vehicles parked in the contractor parking lot.

Drug/Alcohol Screens (Pre-employment, post-accident, for cause, random) will be conducted for each employee, subcontractors, and their employees to also include third tier contractors.

STRUCTURE AND RESPONSIBILITY

The RMCF will facilitate the safety roles, responsibilities, accountabilities, and interrelations necessary to implement and maintain the safety system. RMCF will provide resources essential for implementation of the system and foster employee ownership at all levels of the project/construction organization including subcontractors. Management and supervision at each level of activity will be accountable for specifying & implement the safety standards with close support from the safety organization. Though levels of accountability differ and though there are overlapping areas of responsibility, everyone from the RMCF to the construction worker is considered responsible for completing tasks safely

RMCF is responsible for implementing the construction contractor’s safety program, providing technical safety expertise, gathering, and publishing project safety statistics, auditing contractor safety, recommending changes/improvements to safety procedures and plans.

Ric-Man Construction FL, Inc. will participate and will have an active role in this site safety management program. This will include reviews of subcontractor’s safety plan and procedures to ensure conformance to the site project requirements, safety meeting attendance and participation, site safety auditing and, sharing of safety learning’s and incidents, and regular site safety leadership meetings of project managers/construction managers/safety personnel.

ORIENTATION

A safety orientation will be conducted for every employee working on the jobsite. The Ric-Man Construction FL, Inc. Safety Manager or another appropriate individual will conduct orientation to ensure that every employee has a basic understanding of the jobsite safety requirements, hazards particular to the site, the Job Hazard Analysis, the Emergency Action Plan, and the discipline program. All Contractor & subcontractor employees are required to attend a formal safety orientation from Ric-Man Construction FL, Inc. In addition, Orientations for visitors and vendors shall be conducted accordingly. Each new employee shall receive

an introduction and safety orientation. This includes all staff personnel and subcontract personnel, regardless of the number of years worked in the industry.
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The safety orientation is presented as part of the overall project orientation. Information and training that should be given includes the following:

- Introduction to the Project
- Safety Policy/Goals & Objectives
- Incident/Injury prevention
- Cultural Safety management system alignment
- Associated Hazards
- Reporting of Hazards
- Basic personal protective equipment required and their usefulness.
- Code of Safe Practices
- Job-site rules of personal safety and conduct
- Project safety rules and regulations, including smoking regulations.
- Fire prevention
- Confined Space Entry procedures
- Lock-out/Tag-out Procedure
- First-aid and follow-up care procedures
- Toolbox safety meetings
- Employee disciplinary practices
- Education Training
- Substance Abuse Policy
- Safety recognition program
- Hazard Communication
- Records shall be kept of all employees who receive the project orientation.

AIR COMPRESSORS

SCOPE
This procedure provides minimum requirements for inspecting and operating portable air compressors.

DEFINITIONS
Qualified Inspector - An experienced craftsperson or engineer who has demonstrated his or her ability or competency to inspect equipment.

EQUIPMENT INSPECTION
A qualified inspector must inspect all air compressors prior to their use on site
Records of all inspections and maintenance shall be completed and maintained for review by the Safety Representative.

MODIFICATIONS
Do not modify or alter an air compressor without prior written permission from the manufacturer.

A.) COUPLINGS

Check coupling daily before use.
Use only couplings designed for compressed air services.
Provide all couplings with a positive locking device.

B.) HOSES

- Check hoses daily before use.
- Use only hoses designed for compressed air services.
- Air hose and hose connections used with pneumatic tools shall be designed for the pressure and service to which they are subjected. Before assembling the system, check all hoses for cuts, breaks, and loose connections daily and prior to use for defects.
- Hose fittings must be properly fastened onto the hose using manufacturer-approved hose clamps. Wire, rope, twine, etc. ARE NOT to be used for this application.
- Disconnect source and “bleed” hose before breaking the connection on any hose or tool. Never crimp, couple, or uncouple a pressurized hose. Unless the equipment has quick change connectors (with internal check valves), shut off the air at the air supply valve before adjusting or changing air tools.
- Bleed the hose at the tools before breaking the connection.

- All hoses exceeding 1/2 inch (1.3 centimeters) inner diameter must have a safety device (an excess flow valve) at the source of supply or branch line to reduce pressure in case of hose failure.
- All connections must be equipped with safety chains that must be pinned or chained to prevent whipping should disconnection occur.
- Hoses equipped with special connections require special tightening techniques or methods. Do not tighten these connections by hand.
- Air hose connections that are designed to accept manufactured clamps/clips or tie wire must be fitted with the clamps/clips or tie wire in the holes provided to prevent disconnections.
- When hanging an air hose in the vertical position, hose connections must be supported above and below the connections to prevent the weight of the hose pulling the connection apart or pulling the connection out of the hose.

Do not use compressed air to clean people.

C) RELIEF VALVE
Each compressor must be equipped with a properly sized relief valve.

D.) REFUELING.
All engines of compressors must be turned off during refueling operations.

E.) ENVIRONMENTAL CONSIDERATIONS
Hydraulic systems must be maintained to prevent leakage.
If a leak or spill occurs in a hydraulic system, the spill must be cleaned up immediately in accordance with governmental regulations. Appropriate-sized spill kits will be placed and maintained on site.

AERIAL WORK PLATFORMS

SCOPE
This procedure establishes guidelines for inspecting and safely operating boom-supported elevating work platforms. It also outlines the qualifications for boom-supported elevating work platform operators.

A.) INSPECTION

- All Lifts must be inspected by a competent person upon arrival at the job site,
- If a Boom-Supported Elevating Work Platform is removed from site and then returned, it shall be re-inspected prior to its use on site.
- A qualified operator must inspect and document all controls and safety devices each day and prior to use.
- If controls or safety devices are not functioning as designed, equipment will be Locked out/Tagged out until repairs are made by a qualified person(s) Daily inspection must be documented.
- A preventative maintenance program should be established to ensure that the manufacturer maintenance requirements are being met. All Aerial Lifts shall be equipped with back up/motion alarms.

B.) OPERATOR QUALIFICATIONS

- All lift operators shall be trained by a designated competent person.
- All operators must meet the following minimum requirements:
- They must pass a written/oral test on the general Boom-Supported Elevating Work Platform. Only operators trained, qualified and authorized employees are to operate lift.
- Lift operators must be re-qualified every Five year

C.) OPERATION

A Boom-Supported Elevating Work Platform operator must always observe the following minimum safety precautions:

- Employees must wear a safety harness with a lanyard attached to the manufacturer's supplied platform anchorage point. If no anchorage point is supplied, seek guidance from the manufacturer.
- The lift is not to be used until it is equipped with properly manufactured tie off points.
- Employees must work while standing on the platform floor, never on the top rail, mid rail, or toe board. When backing all Aerial Lift equipment first walk path to ensure drivability. Employ one spotter to direct the operator. Discuss hand signals prior to backing operations.
- They may not climb out of the platform to an elevated work platform.

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- Small tools and materials must be kept in buckets or containers that are secured to the platform to keep the containers from tipping over.
- Supporting equipment, material, or rigging loads from the boom, handrails, or platform is prohibited.
- Rigging is not allowed from the platform or boom.
- Prior to moving a Boom-Supported Elevating Work Platform into an area, evaluate underground conditions for stability, the possibility of damage to the underground facilities or injury to personnel.
- Do not move a Boom-Supported Elevating Work Platform onto unstable footing.
- Do not operate a Boom- Supported Elevating Work Platform in a way that may cause injury to yourself or others.
- The basket may remain in the raised position to continue the work in progress while the equipment is moving only if the equipment is traveling at low speed on a firm and level surface.
- All body parts must be kept inside the confines of the basket while the platform is in motion.
- While traveling, the operator shall be “behind” the lift.
- Counterweights that rotate and extend beyond the undercarriage must be barricaded. Follow the manufacturer’s recommendations for maximum allowable loads and maximum loads and maximum boom lengths.

Make sure that the equipment is shut down and a fire extinguisher is available during refueling.

C.) ENVIRONMENTAL CONSIDERATIONS

- Hydraulic systems must be maintained to prevent leakage.
- If a leak or spill occurs in a hydraulic system, the spill must be reported and cleaned up immediately in accordance with governmental regulations.
- Appropriate-sized spill kits will be placed and maintained on site.
- Wind speed shall not exceed 28 mph.- or manufacturers recommended safe wind speed operation.
- Aerial Lifts are not to be operated within 10’ of live power lines.

A hole cover conforming to the following is acceptable:

CONFINED SPACE

SCOPE

This procedure outlines the minimum requirements for work inside a Confined Space (CONFINED SPACE) as specified in /OSHA 29 CFR 1910.146. and 29 CFR 1926. 21 This procedure also lists requirements for protecting individuals in a CONFINED SPACE from hazards such as oxygen deficiency, hazardous materials, moving parts, and blocked escape routes.

DEFINITIONS
Attendant – A person who must be in continual visual or hearing contact with personnel inside the CONFINED SPACE. An attendant must be adequately trained to monitor the activities of personnel inside the CONFINED SPACE and who performs all attendants' duties assigned in Contractor's Permit Space Program.
Back-up Attendant – An employee whose primary responsibility is to provide immediate assistance to the attendant. The back-up attendant must remain in contact by verbal contact, two-way radio, or PA system to help the attendant in an emergency.
Entrant – An employee who has been authorized to enter a CONFINED SPACE to perform any activity. The entrant shall be able to demonstrate an understanding of the identified training requirements and proper use of personal protective equipment indicated on the Contractor's entry permit.
Entry – Breaking the plane of the opening with any part of the body.
Entry Supervisor – An employee responsible for:
Determining if acceptable entry conditions are present at a CONFINED SPACE where entry is planned, authorizing entry and overseeing entry operations, and
Terminating entry
Confined Space – Confined space means a space that:
Is large enough and configured that an employee can bodily enter and perform assigned work,
AND has limited or restricted means for entry or exit,
AND is not designed for continuous occupancy.
Permit-Required CONFINED SPACE program is required for control of potential hazards and for regulating employee entry when one or more of the following characteristics exist:
Contains or has the potential to contain a hazardous atmosphere.
Contains a material that has the potential for engulfment.
Has an internal configuration such that an entrant could be trapped or asphyxiated or that tapers downward to a smaller cross section. Contains job-introduced hazards:
Welding, cutting, grinding, hot riveting, burning, heating, or the introduction or sources of ignition within the Confined Space.

The use of Flammable or toxic cleaning solutions. Or contains any other recognized serious safety or health hazard.

Non-permit required confined space is defined as a confined space that does not contain or with respect to atmospheric hazards have the potential to contain any hazard capable of causing death or serious physical harm. Ric-Man Construction Florida, Inc. will deem all spaces as Permit-Required unless Non-Permit Required has written approval from Safety Manager. If atmospheric conditions are within acceptable limits or if they can be brought within limits by ventilation, the space can be reclassified as non-permit required confined space, provided there are no other potential or actual hazards such as mechanical, electrical, pneumatic, hydraulic, thermal, fluid, gaseous energy, the energy of gravity, or other hazards, including engulfment or entrapment hazards. These hazards must be dealt with by lockout tagout procedures. Isolate by blinding, line breaking, double block and bleed, or lockout tagout of all energy sources.

If inert gases are used to lower L.E.L., the oxygen deficient atmosphere created may pose every bit as much hazard as the original L.E.L. problem. All confined spaces need to be ventilated if normal ventilation cannot produce an atmosphere that is free of hazards.

A non-permit confined space certification must be posted at the site of entry.
If hazards arise within a non-permit space each employee shall leave the space. The space will then be evaluated to determine if it needs to be reclassified a as a permit required space.
If all hazards cannot be eliminated, you are now facing a permit required confined space.

A.) GENERAL

Prior to allowing employees to enter CONFINED SPACE, contractor/subcontractor will adhere to this written CONFINED SPACE program.

The following elements shall be part this written program:

- Use locking, chaining, or other physical barriers or barricades as necessary to prevent. unauthorized entry of personnel.

- As a minimum the use of barricade tape will be acceptable.
- Review the work area and CONFINED SPACE identification list prior to working in or around CONFINED SPACES to determine potential hazards and isolation requirements.

If the space is a CONFINED SPACE, implement the following controls:

Specifying acceptable entry conditions, explosive gases, toxic levels, physical isolation, etc.
Isolating the CONFINED SPACE.

Identify all disconnect points of process lines, lockout points for additional services, and other requirements.

Complete CONFINED SPACE isolation prior to authorizing CONFINED SPACE entry.

Purging, inserting, flushing, ventilating, or other decontamination to eliminate or minimize hazards.
Provide pedestrian, vehicle, or other barriers to protect entrants from external hazards (barricading and posting.)

Monitoring of CONFINED SPACES shall be performed prior to initial entry and shall.be repeated as necessary to demonstrate continued compliance with acceptable entry conditions.

Confined space monitoring shall always measure in this sequence: oxygen content, presence of explosive gases, toxic hazards, and other hazards anticipated in the CONFINED SPACE. (O2, H2S, CO, LEL/UEL) require monitoring.

Working in a caisson or shaft CO2 shall also be monitored.

Regular documentation of monitoring readings shall be taken.

Continuous monitoring WILL BE USED FOR ALL CONFINED SPACE entry.

Supplied Air Escape packs are required whenever a confined space permit is

recommended. The confined space permit shall comply with all OSHA regulations in

General Industry.

Required Equipment:

- Testing and monitoring equipment
- Escape air packs – 1 per entrant.
- Ventilating equipment
- Communications equipment
- Personal protective equipment where engineering controls are not adequate.
- Lighting equipment (12 volt recommended)
- Physical access barriers and shielding to entry point.
- Appropriate access/ egress equipment
- Rescue and emergency equipment
- SCBA Air Packs, extra air packs
- Porta Power Extrication Tools
- Fire Extinguishers
- LOTO Kit

B.) PERMIT REQUIREMENTS

The permit shall document the completion of required protective measures prior to authorizing entry.
The completed permit will be made available to all authorized entrants.

Limit the duration of the CONFINED SPACE permits an effective time necessary to complete the assigned task.

The entry supervisor shall terminate the entry and cancel the permit when the task is complete Or, a condition that is not allowed arises near or in the CONFINED SPACE, or When an unauthorized entry of the CONFINED SPACE occurs or When conditions change

The location or site responsible for the initial workplace survey for CONFINED SPACES shall maintain these canceled permits and make them available for review.

C.) TRAINING

The Contractor/Subcontractor shall identify the training required to comply with this procedure and provide training to ensure employees have the necessary understanding, knowledge, and skills to safely perform CONFINED SPACE duties.

Ric-Man Construction FL, Inc. shall certify that the training has been accomplished. This shall be accomplished by maintaining training records that include:

- Employee's name
- Trainer's name or initials
- Date of training
- Provide certification upon request.

D.) DUTIES OF ATTENDANTS OR TOP MAN (PERSON)

Attendants perform no duties, which will interfere with attendants' primary duty to monitor and protect authorized entrants.

Each Attendant:

- Knows the potential hazards of the CONFINED SPACE
- Is aware of any behavioral symptoms indicating changes in entry conditions. (Review work-generated hazards)
- Continuously maintains accurate count of authorized entrants.
- Remains outside at the point of CONFINED SPACE during entry operations until properly relieved by a replacement attendant
- Communicates with authorized entrants as necessary and alerts entrants of a need to evacuate.
- Monitors activity inside and outside CONFINED SPACE to determine safe conditions exist for authorized entrants.
- Orders entrants to evacuate when.
- Detecting a prohibited condition.
- Detecting the behavioral effect of a hazard.
- Detecting a situation outside the CONFINED SPACE that may endanger the authorized entrants.
- Shall summon rescue or emergency services as needed for assistance to escape CONFINED SPACE (but shall not lose visual or verbal contact with entrants in doing so Shall take the following actions when necessary, toward unauthorized person in or near a CONFINED SPACE:
- Warn away unauthorized personnel.
- Direct the unauthorized persons to immediately exit the CONFINED SPACE
- Inform authorized entrants and entry supervisor of unauthorized entrant to CONFINED SPACE.
- Performs non-entry rescues as trained and specified.

RESCUE AND EMERGENCY SERVICES

The Ric-Man Construction Florida and its contractor/subcontractor who works in confined spaces shall ensure this plan is in place for the rescue of those employees from the confined spaces.
Each crew shall have an individual who is trained in basic first aid and cardiopulmonary resuscitation (CPR)

ON-SITE RESCUE PROCEDURES

Prior to entry and/or work in the confined space:

The entry supervisor will ensure that an adequate number of appropriately trained persons (as documented in the attached “on-site rescue plan”) are available for immediate implementation of these on-site rescue procedures that apply to the confined space.

The entry supervisor will review all emergency procedures, including procedures relating to emergencies outside (below) the confined space with all entrants and other related personnel.

The attendant establishes communication with all workers, using the means described in Permit.

The attendant who is stationed outside and near the entrance to the confined space as described remains in constant communication with all workers inside the confined space.

The attendant must be notified immediately if an entrant recognizes: - unusual action/ behavior - an unexpected hazard - an unsafe act or - detects a condition prohibited by the permit.

Entrants must exit the confined space as quickly as possible, when:

- an order to evacuate is given by the attendant or entry supervisor - an entrant recognizes a sign or symptom of over-exposure.
- an unacceptable condition arises or - an evacuation alarm is activated. In the event of a confined space rescue:
- Inform closest Department of Activities.
- Provide rescue services Confine Space Permit upon arrival
- Provide rescue services access to CONFINED SPACE area
- Provide each Entrant with a full body harness.
- Provide a lifting device and entry point.
- Ensure Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS) are available as required.
- or other information shall be immediately available to rescue services.

The attendant does not enter the confined space but immediately summons a rescue response.

CONTINUOUS FALL PROTECTION SCOPE

This procedure describes a three-step, systematic approach that must be used to protect employees from falls when they are working at heights or near leading edges.
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100% Fall Protection is the requirement. Employees shall use fall protection whenever.
They are exposed to a fall over 6 feet or within 6 feet of a leading edge provided there are no guardrails or equivalent protection. 100% fall protection must be used when there is a potential for falls into hazardous environments (running equipment, mixers, gears etc.) In most cases, this requires the use of a “double lanyard” system.

A.) DEFINITIONS

Anchorage - A secure point of attachment, not part of the work surface, to which lifelines, retractable lifelines, droplines, or lanyards are affixed. An anchorage must be capable of supporting a minimum dead weight of 5,000 pounds (2,270 kilograms) for every person attached to it. An anchorage is often a pipeline, beam, girder, column, or floor.
Anchorage Connector - A component or device that is installed on an anchorage and is specifically intended for attaching a fall-arrest system to the anchorage. An anchorage connector must be capable of supporting a minimum dead weight of 5,000 pounds (2,270 kilograms).

Energy Shock Absorber - A device that limits shock-load forces on the body.

Fall-Arrest System - A system specifically designed to secure, suspend, or assist in retrieving a worker in or from a hazardous work area. A fall-arrest system does not prevent a fall, but rather minimizes the fall distance to prevent or reduce injury. The basic components of a fall- arrest system include an anchorage, anchorage connector, lanyard, shock absorber, harness, and self-locking snap hook.

Fall Elimination - A process for eliminating fall hazards during all phases of work at heights, including access and egress. Examples of fall prevention measures include using complete scaffolds, aerial lifts, and secured ladders.

Full-Body Harness System - A full-body harness system consists of a full-body harness, lanyard, energy shock absorber, and self-locking snap hook.

Harness (Full-body) - A device with straps that can be attached to a fall-arrest system. The straps are fastened around a person’s body to contain the torso and distribute fall-arrest forces over at least the upper thighs, pelvis, chest, and shoulders.

Horizontal Lifelines - allow horizontal movement while providing protection against falls, provided the equipment is properly installed and used. A horizontal lifeline may serve a mobile fixed point for the attachment of lanyards, lifelines, or retractable lifelines.

Lanyard - A flexible line that secures a person wearing a harness to an anchorage, anchorage connector, lifeline, or dropline. A lanyard must have a nominal breaking strength of 5,000 pounds (2,270 kilograms).

Lifeline - A flexible vertical or horizontal line, secured to an anchorage or between two anchorages, to which a lanyard or harness may be attached. A catenary lifeline is a lifeline used in a horizontal position that is secured between two anchorages.

Positioning Device System - Equipment that allows a person to work with both hands free while standing in such a way that a fall could result.

Positioning device systems are often used on framework construction and concrete rebar placement.

Retractable Lifeline - A fall-arrest device that allows free travel without slack rope but locks instantly when a fall begins.

Rope Grabs (Fall-Arrester) - Automatic lifeline devices that act by inertia to grab the lifeline if a fall occurs.

B.) SYSTEMATIC APPROACH TO CONTINUOUS FALL PROTECTION

Contractor/subcontractors must achieve fall prevention through eliminating fall hazards, minimizing fall exposure, and controlling falls. Eliminating fall hazards is the most desirable of these four, but it is also the most difficult. If fall hazards cannot be eliminated, potential falls must be controlled by using fall arrest systems. Take a four-step systematic approach to protecting employees from falls.

1.) Eliminate Fall Hazards - The first step in this approach is to carefully assess the workplace and the work itself in the earliest engineering and planning stages of the project. The objective is to eliminate all fall hazards. This assessment of the site and the work not only helps eliminate hazards, but also identifies alternative approaches to the work that can measurably enhance productivity. Addressing fall protection in the early phases of a project means that safety can be designed into the work process, not added as an afterthought to an inherently unsafe work procedure. For example, the project can be designed.
so that the anchorages for securing fall-arrest systems can be provided at strategic locations throughout the plant, thus improving safety and lowering costs.

2.) Minimize Fall Exposure - The second step in continuous fall protection also requires assessing the workplace and work processes. If fall hazards cannot be eliminated during the first step, try to prevent falls by improving the workplace. Avoid relying on a worker’s behavior or fall-arresting equipment to prevent injuries. Early installation of stairs, guardrails, barriers, and travel restriction systems can ensure a safe work environment. Establish proper workplace positioning and help eliminate the fall.

3.) Use the Proper Fall-Arrest Equipment - The third step, the last line of defense against falls, is to use fall-arrest equipment. Use fall-arrest equipment, however, ONLY after determining that potential falls cannot be eliminated by changing work procedures or the workplace. Whether is it a near miss or actual incident a formal report must be made. Equipment such as harnesses, lanyards, shock absorbers, fall arresters, lifelines, anchorages, and safety nets can reduce the risk of injury if a fall occurs. Carefully assess the workplace and work processes to select the most appropriate equipment and to install and use it correctly.

4.) After incident
Whether it is a near miss or actual incident a formal report must be made as soon as the scene is safe and secure. The report must contain the following:

- Type of incident (injury, near miss, property damage, or theft)
- Location (Address)
- Date/time of incident
- Name
- Name of supervisor
- Description of the incident, including specific job site location, the sequence of the events and the results.
- Whether or not proper PPE was being used

- The root cause(s) of the incident
- Associated hazards were raised and resolved following the event.
- The affected individual's version of the events
- Actions taken by concerned individuals after the incident.
- Description of injuries
- How the decision was made to call (or not to call) emergency services
- Treatment required.
- Witness name(s)
- Witness statements
- Photographs of the scene
- From this point, a review committee will determine root cause(s) and policy changes if needed.
-

C.) DAILY WRITTEN FALL -PROTECTION PLANS-

Complete JSA for elevated work if fall hazards exist.

D.) TRAINING EMPLOYEES

Contractors/subcontractors will provide training for all employees who will be exposed to fall hazards. Employees must be trained to (1) recognize the hazards of falling from heights and (2) to avoid falls to lower levels through holes or openings in walking/working surfaces and walls. Training shall include prevention, control, and fall-arrest systems.

Contractors shall ensure that appropriate fall-arrest systems are installed and that employees know how to use them before beginning any work that requires fall control.

Training will be conducted every 5 years or sooner if. unsafe behaviors are exhibited. a near-miss is reported. an incident of any kind is reported, equipment is outdated.

E.) ELIMINATING FALL HAZARDS AND PREVENTING FALLS –

When planning work at heights, contractors/subcontractors shall, as a minimum:

Prior to each phase of work, site supervision is responsible for planning fall prevention and fall protection measures to protect employees from fall exposure. They can recommend appropriate fall-protection measures and equipment.

Prepare written fall-protection and rescue plans. Especially when roofing, constructing towers, shafts, erecting steel structures, or erecting/fabricating tanks and boilers.

Has the free-fall distance been considered so that a worker will not strike a lower surface or object before the fall is arrested?

Have pendulum-swing fall hazards been eliminated?

Site management must ensure that personnel can be promptly rescued or self-rescue themselves, should a fall occur.

Have the full-body harness and all its components been inspected both before each use determine the general appearance and condition of the sewn -rings, hooks, latches, lanyards, and

straps for damage such as cuts, broken threads, rotting, burns, etc., and equipped with the metal inspection tag?

Is any of the equipment, including lanyards, connectors, and lifelines, subject to such problems as welding damage? Chemical corrosion or sandblasts. Shall be immediately removed

CRANES

SCOPE
This procedure establishes guidelines for inspecting and safely operating cranes, including tower cranes and boom trucks. It also outlines the qualifications for crane operators and describes how to assemble and remove lattice booms.

DEFINITIONS
Anti-two-blocking Device - An attachment to a crane that prevents the load block or hook assembly from being drawn tightly to the boom point.

Boom Angle - The angle above true horizontal of a line drawn through the boom hinge pin and the centerline of the shaft of the main boom tip sheave.

Operating Radius - The horizontal distance from the axis of rotation to the center of gravity of the freely suspended load.

Qualified Inspector - An experienced craftsperson or engineer who demonstrated his or her ability or competency to install and inspect equipment.

Qualified Signalperson - A person who is proficient in the use of hand signals for a specific crane.

A.) INSPECTION

A qualified inspector must inspect all cranes prior to their use on site. All cranes must be inspected annually by an independent agency. If a crane is removed from site and then returned it shall be re-inspected prior to its use on site
.
Crane operators must inspect and document the crane, all controls and safety devices each day before beginning work. If any of the controls do not operate properly, they must be repaired before the crane is operated.

Before using any crane, the operator must also visually inspect the work location for any unsafe conditions. Unsafe conditions must be reported to supervision and shall be corrected before the crane work is begun.
All mechanical and control repairs made to a crane must be performed according to the manufacturer’s recommendations and approvals. When a mobile crane is relocated from one point to another within a site, the crane set-up in the new location will be inspected by a Qualified/Competent Inspector before the crane is operated.

B.) ENVIRONMENTAL CONSIDERATIONS

Hydraulic systems must be maintained to prevent leakage.
If a leak or spill occurs in a hydraulic system, the spill must be reported, cleaned up immediately in accordance with governmental regulations.
Site supervision must be contacted as soon as a leak or spill occurs.
Appropriate-sized spill kits will be place and maintained on site.

C.) OPERATOR QUALIFICATIONS

All operators must meet the NCCCO certification for the crane they will operate.
Site Safety Representative must review proof of qualification to each operator.
Operators must always have this proof of qualification with them while operating that equipment.

D.) EQUIPMENT REQUIREMENTS

- Every crane must be equipped with a legible, durable load chart that shows the manufacturer's recommended load configurations and maximum load weights..
- A class BC fire extinguisher (of a minimum size of 5 pounds, 2.3 kilograms) must be kept in the crane's cab.
- Cranes shall be equipped with an anti-two-blocking device. On cranes that are completely hydraulic-driven, the anti-two-blocking device shall function to shut down the mechanical operation of the crane when activated. On cranes that are friction- driven, the anti-two-blocking device may be of the warning type.

All Crane will be set/installed on ground/areas capable of supporting the Crane and Load.
Crane swing radius will be visually noted with cones, banners, or spotters.

NOTE: All cranes, regardless of type, that are used to suspend work platforms must be equipped with anti-two-blocking devices that shut down the mechanical operation of the crane when activated.

Every crane should be provided with a means by which the operator can determine current wind speed.

A mast-tip anemometer, installed so that its read-out is easily visible to the crane operator, should be used when other reliable means of assessing wind speed are not available. Manufactures maximum wind guidelines must be followed. NOTE: Building- mounted instrumentation may not provide reliable wind speed indication for lattice boom cranes, especially those exceeding 150 feet of boom length.

When working near power lines where a potential of encroachment occurs, contact the local electrical provider to

- de-energize all lines in the area.
- blanket all lines in the area.
- install a signal alarm.
- utilized a trained spotter.

E.) OPERATION

A crane operator must always observe the following minimum safety precautions:

- Maintain continuous contact, either visual or vocal, with a qualified signal person. (If for any reason that contact is lost, the crane operator must stop all operations until full contact is restored).

- Store items such as tool, lubrication cans, and waste materials in a toolbox. (Do not leave any loose items in cab.)
- Be constantly alert to the effects of dynamic loading when swinging, hoisting, and lowering the load or when moving the crane.

- Prior to moving a crane into an area, evaluate soil conditions for crane stability and the possibility of damage to the underground facilities or injury to personnel.

- Barricade the swing radius of the counterweight.
- Always know the radius of the load.
- Know the soil capacity.
- Always keep the load directly under the trolley.
- Make sure the crane hooks' safety latches are in good working order and are used properly.
- Follow the manufacturer's instructions for entering and exiting the cab. The only acceptable alternative is using a straight ladder that has been affixed to the crane.
- Seat belts shall be worn by operators when seated at the controls.
- Under normal circumstances, telescoping boom cranes must be retracted and lowered when not in use. Unless lattice-boom cranes can safely be left unattended to weather- vane, the booms should be pointed downwind according to the prevailing. Wind direction with the load block or headache ball lowered to grade and tied off to restrict weather-veining.
- Do not operate cranes when sustained wind speeds (as measured by the mast tip anemometer) exceed 35 mph (56 kph), or less as specified by the manufacturer.
- Do not operate cranes when wind gusts exceed 35 mph (56 kph), as measured by the mast tip anemometer, or less as specified by the manufacture.
- Lower booms when storms or winds exceed the limits in the manufacturer's recommendations.
- Always use tag lines to control load.
- Make sure the crane is level to within 1% of grade before operations begin.
- Make sure that when the crane is loading or unloading trucks, the truck's cab is unoccupied.
- Do not leave the controls when the load is suspended.
- Make sure that no one works, or walks under a suspended crane load, and that no one rides the ball or load.
- Do not allow anyone else on the crane when it is in use.
- Keep the loading/unloading areas clear of personnel.
- .
- Keep the swing path clear.
- Follow the manufacturer's recommendations for maximum allowable loads and maximum loads and maximum boom lengths.
- Make sure that the equipment is shut down and a fire extinguisher is available during refueling.

- When moving a tracked crane, make sure that everyone not directly participating in the move stays far enough away from the base of the crane to avoid contact with moving parts or with debris thrown out by the tracks.

- Stop lift if Operator feel unsafe conditions exist or may exist throughout the lift.

F.) PICK AND CARRY LOADS

If it becomes necessary to operate using pick and carry techniques:

- Use rough terrain cranes or crawlers.

- Observe the following minimum safety precautions:

- Use the load chart designated for “on rubber”.

- Investigate the route to locate solid and level ground.

- Restrict travel speeds to maintain control of the load.

- Tie the load to the frame of the crane.

A tag line or lines is required to control all loads. Under no circumstances should anyone touch the load or wrap tag lines around any part of his or her body.

Be constantly alert for the effects of the dynamic loading created when moving a crane with a load.

G.) INSTALLING AND CHANGING BOOMS

Always follow the manufacturer’s instructions and recommendations when assembling, changing, or removing l booms. Minimum requirements for assembling or removing a lattice boom include the following:

- A qualified/competent person(s) must supervise the installation or removing of Crane components (tracks, booms, wire, drums etc.)
- Visually inspect each section of the boom for bent lacing and chords, cracked or broken welds, fatigue cracking, or heavily rusted areas.

- Inspect the boom hoist drum for proper cable alignment after any slack rope conditions.

- Inspect the boom to make sure all pins and cotter pins are properly installed.

- Use a ladder to access the top of the boom.

- When doing any work from the top of the boom, like removing pins, work from a minimum of two scaffold boards that have been fastened across the top of the boom near the pins.

- Use continuous fall protection, such as a safety harness and tie-off, while on top of the boom.

- Note: It is recommended that rotating elevated work platforms (e.g., JLG lifts) be used when performing work on lattice booms, rather than standing on top of the booms to do the work.

- Follow the manufacturer's recommendations for lifting cantilevered boom sections.

- No lifting should be done "over" high voltage power lines (220V or greater) regardless of distance. Workers are not allowed under the boom when removing pins.

Use hooks that can be closed and locked (locking hooks or safety latches) for "headache" ball assemblies, lower-load blocks, and other attachment assemblies. These latches eliminate the hook throat opening.
When a wire rope bridle connects the platform to the load hook, connect the bridle to the master link or shackle so that the load is evenly divided among the bridle legs. Make sure the wire rope, shackles, rings, master links, and other rigging hardware can support at least five times their maximum intended loads. Do not use wire rope clips, wedge sockets, knots, or chains. Slings shall be manufacturer certified. Make sure all eyes in wire rope slings are made with thimbles. Rigging and work platforms used for hoisting personnel shall not be used for any other purpose.

A.) TRIAL LIFTS, PROOF TESTS, AND INSPECTIONS

Immediately before placing personnel in a platform (at the beginning of a new shift or for the first time at a new location), the operator must perform a trial lift of the unoccupied platform to each location to which the platform will be hoisted and positioned. If the platform remains on site, a test lift shall be performed daily and documented.

In addition, before hoisting personnel on the platform, the operator must proof test the platform to 125 percent of its rated capacity by holding it, with the test load evenly distributed on the platform, in a suspended position for two minutes at each location to which the platform will be hoisted. Be sure to follow the intended lift route. (This testing can be done concurrent with the trial lift. During the trial lift, the operator must determine that all systems, controls, and safety devices are activated and functioning properly, that no interferences exist, and that the equipment can remain under the 50-percent limit of the crane's rated capacity in all configurations necessary to reach the work locations. If any deficiencies are detected, they must be corrected, and then another test performed. Personnel may not be hoisted until the testing requirements are satisfied.

A trial lift must be performed after each repositioning of the crane and prior to hoisting personnel. A trial lift must be performed when: Whenever the crane is moved to a new location. Whenever the crane is returned to a previous location. Each time the lift route is changed.

At the beginning of each new shift. Before hoisting personnel, the platform must be hoisted just a few inches and a qualified inspector must ensure that it is secure and properly balanced. He or she must visually inspect the crane, rigging, personnel platform, and the crane base support or ground to determine if the trail lift has exposed any defect or produced any adverse effect on any component or structure. The operator shall make sure the following conditions exist before hoisting any employees on a platform: The hoist lines must be free of kinks. Multiple-part lines must not be twisted around each other. The primary attachment must be centered over the platform.
All hoist lines must be properly seated on drums and in sheaves.

B.) PRE-LIFT MEETING AND PERMITTING

Before each trial lift, the crane operator, the signal person(s) (if needed for the lift), personnel to be lifted, and any other personnel responsible for the task, including supervision, must meet to review the requirements of this procedure. They must also meet each time new personnel are assigned to the operation.

C.) LOADING A PLATFORM

Observe the following minimum safety precautions when loading platforms: Do not load the platform more than its rated load capacity. Secure materials and equipment on the platform, making sure their weight is evenly distributed. Load the platform only with the personnel, tools and material required to perform the task.
Do not use personnel platforms as material-hoisting platforms.

D.) SIGNALING AND COMMUNICATIONS

The signalman must be either in the platform or in a position so that he or she can always see the platform and communicate with the operator.
If visual hand signals are not possible, other means of positive communication must be used.

E.) WORKING IN THE PLATFORM

Personnel working crane-suspended work platforms must observe the following minimum safety precautions: Except over water, always use a body harness system with the lanyard attached to the platform. Wear appropriate PPE. Remain in the platform to work. Never stand on or work from the top rail, midrails, or toe board. Allow only the number of people in the platform that are needed from the work and that the platform design permits. Keep all extremities within the platform when it is being raised, lowered, or positioned.

F.) INSPECTING THE CRANE

CRITICAL LIFTS

SCOPE
This procedure outlines the specific planning and execution requirements for lifting critical loads.

This Critical Lift Plan will be returned to the contractor accepted, accepted with comments, or not accepted within one (1) working day of the lift.

A.) REQUIRED CRITICAL LIFT PLANS
Critical Lift Plans are required for all lifts with a mobile crane, where one or more of the following conditions are present:

- Special hoisting/rigging equipment will be utilized.
- The total load to be lifted exceeds 75% of the chart for the lift configuration of the crane.
- Two or more cranes are used for the lift.
- Any other lift that is deemed as a “critical lift” by the Site Safety Representative.

CRITICAL LIFT PLAN COMPONENTS

- The Critical Lift Plan shall include, as a minimum, the following:

- The make and model of the crane with boom, boom length, radius and crane capacity for the configuration used.

- Rigging accessory information to identify and show capacity of sling, shackles, spreader beams, blocks, etc.

- Tabulation of weights of all items that constitute load on the crane boom, lifted load, load lines, load blocks, spreaders, slings, shackles, jib, headache ball, etc.

- Lifted equipment information to include weight, height, and diameter, point of support, center of gravity and degree of dress-out.

- Calculation of tailing load. A horizontal loading diagram will be drawn to show the initial tailing crane load on the elevation view.

- The equipment center of gravity is to be obtained from the vendor.

- Any obstructions or interferences to the lift from existing equipment, structure, etc.

- Details of the supporting mats or foundation under the lifting crane and tailing crane with notation indication of the bearing capacity of the sub soil and the calculated applied load.

- Ratio of the lifted load of each crane's chart capacity as configured.

- Crane boom to load clearances.

- Note: Crane mats are required whenever the crane outrigger or crawler tracks soil bearing pressure 2,000 pound/square foot (lb./ft2).

ELECTRICAL SAFETY

SCOPE

All employees on the Ric-Man Construction FL, Inc. project who work with electricity, electrical conductors and associated equipment are to be trained in safe work practices relative to their job assignment. Refer to the Lockout/Tagout section for additional information on electrical safety policies and training.

WORKING ON ENERGIZED CONDUCTORS

All work on or near energized equipment requires only qualified employees may work on or near energized conductors. Unqualified employees (inexperienced, untrained employees, helpers) are not to work on or near exposed energized conductors. If exposed energized conductors cannot be de-energized, other safe work practices are to be used to protect exposed employees. If employees must work on or near energized conductors, training by the contractor will include safe work practices to be used to protect the employee from exposure to electrical hazards. Only trained, qualified employees are to work on or near energized electrical conductors.

In some cases, de-energizing may be infeasible due to design or operational limitations. If employees must work on or near energized conductors, training by the contractor will include safe work practices to be used to protect the employee from exposure to electrical hazards. Only trained, qualified employees are to work on or near energized electrical conductors. Training for employees shall include:

TRAINING

Ric-Man Construction Florida and its Contractors are required to instruct employees that are working on

energized conductors that it is not to be permitted, unless de- energizing introduces a greater hazard than working on the energized conductors. In some cases, de-energizing may be infeasible due to design or operational limitations. If employees must work on or near energized conductors, training by the contractor will include safe work practices to be used to protect the employee from exposure to electrical hazards. Only trained, qualified employees are to work on or near energized electrical conductors.

Lockout/Tagout Program

This will include grounding, insulation, isolation, and additional PPE – Arc clothing requirements.

The Lockout/Tagout program is to be always adhered to. Conductors not locked and tagged out are to be treated and worked as energized. Overhead Lines- If work is to be performed near overhead lines, the lines are to be de-energized and grounded, or other protective measures taken. Protective measures include grounding, isolating, and insulating to prevent employees from contacting overhead lines directly with any part of their body or indirectly through conductive materials, tools, or equipment. Mechanical equipment and vehicles. Any vehicle or mechanical equipment capable of having parts of its structure near overhead lines is to be operated to ensure a grounding program.

Exceptions to the standard are to be coordinated with the Ric-Man Construction FL, Inc. project Safety Representative. Portable ladders, when used in an area with exposed energized conductors, shall have non-conductive side rails. Employees are not to perform housekeeping duties close to exposed energized conductors unless specific safe work practices have been implemented to prevent employee contact with the hazard. Electrical safety interlocks are only to be bypassed by a qualified employee with written authorization from their project manager, and then only temporarily while the qualified employee is working on the equipment. The interlock system is to be returned to the operable safe condition when the work is complete.

SAFEGUARDS AND PERSONAL PROTECTION

Employees working in areas where there is a potential exposure to electrical hazards must be qualified and shall use non-conductive tools, handling equipment and additional personal protective equipment. Non-conductive protective equipment is to be maintained in a safe, reliable condition and inspected prior to each use. Certain specific insulating and isolating equipment, such as hot gloves and insulating blankets, must be dielectrically tested to industry regulation and Regulatory standards. Only non-conductive apparel shall be worn, if conductive apparel cannot remove it must be insulated/isolated as not to be conductive. The following is a list of some common non-conductive protective devices and equipment, which will depend on the requirements of each case, insulating wearing apparel such as rubber gloves, rubber sleeves and headgear.

Ric-Man Construction FL, Inc. requires strict adherence to NFPA 70E.

- Insulating shields, covers, mats and platforms.
- Insulated tools for handling or testing energized equipment or lines.
- Protective goggles or face shields
- Employees at work tags, portable danger signs, traffic cones and Flashers
- Fall protection, if applicable.
- Fire extinguishing equipment designed for safe use on energized parts.
- Protective grounding materials and devices
- Portable lighting equipment
- All Protective devices and equipment shall be inspected or tested to ensure that.
- they are in safe working condition.

F.) SIGNS AND BARRICADES
Employees are to be alerted to electrical hazards using signs and tags. In locations where it is necessary to prevent or limit employee access to work area, barricades are to be used.

ENERGY ISOLATION PROCEDURE LOTO

Scope

This Procedure outlines the minimum training requirements to all Employees and Contractor for locking, tagging, testing, and clearing equipment and systems to allow work without injuring employees or damaging property.

OSHA Lockout/Tagout (LOTO) devices and procedures are used to prevent the unexpected release of energy or hazardous substances while installing, repairing, maintaining, or servicing equipment. The intent is to control potentially hazardous energy sources to assure the safety and health of persons when they are servicing or performing maintenance on machines or equipment in which the unexpected energizing or start-up of the machines or equipment, or release of stored energy could cause injury.

The key LOTO principle is that a worker must maintain individual control over the energy isolation devices affecting a process or equipment that the worker is performing maintenance, etc. on.
This procedure shall apply to all company and contractor personnel working in Technology work areas and Technology-managed construction sites.
This program/procedure will be reviewed annually.

DEFINITIONS

Affected Employee – A person whose job requires him/her to operate or use a machine or equipment on which servicing, or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized Employee – A person who affixes his/her lock or tag, per this LOTO procedure, on machines or equipment so that construction, servicing, or maintenance on that machine or
equipment may be performed by him/her. An “authorized person” and an “affected person” may be the same person when the affected person’s duties also include performing construction, maintenance or service on a machine or equipment which must be locked out or have a tagout system implemented.

Blind Flange –A solid Flange manufactured according to the current issue of ANSI/ASME Standard
Blind Flanges may require material matching the piping system or equipment base material. In some cases, carbon steel blind Flanges may be clad with the pipe or equipment base metal.

Craft Superintendent – The senior craft site representative who is responsible for all activity performed by the identified craft.

Line Blank – A slip blank installed between two Flanges. All line blanks must consider the following: the base material, the operating pressure and temperature, and the length of time the isolation blank will be required in service. Carbon steel line blanks may not be suitable for isolation in many cases. Line blanks must be controlled by number and location.

Primary Authorized Person – The person who is accountable for the LOTO devices when other personnel are covered by a group lockout. This should be a person knowledgeable of the energy sources associated with the job to be performed. On construction sites, the General Foreman/Superintendent (the person over multiple foremen) normally fills the role as “Primary Authorized Person.”

Qualified Employee – One who is thoroughly knowledgeable in the construction and operation of specific equipment, or a specific task and the hazards associated with that equipment or task. Employees and/or contractors who are hired as electricians will be considered “qualified” if they:
have received the training required under /OSHA 29 CFR 1910.332(b)(3),
have demonstrated that they understood and can apply the training, and
are (1) journeymen, (2) licensed or certified, or (3) have demonstrated to the Technology Contractors Coordinator by other means that they are qualified.

Energy Source – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, potential, or other energy.

Lockout Device – A device that uses a positive means such as a lock, to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment, or the unexpected release of energy or chemicals.

Energy Isolation Device – A mechanical device that physically prevents the transmission or release of energy, such as a circuit breaker, valve, disconnect switch, blind Flange, slip blind, cap, or plug.
Push buttons, selector switches, control circuits, and other control devices are not energy isolating devices.

Personal Lock – Lock specified as a lockout device that is keyed differently from any other lock. Each lock will have only one key. Both the key and lock will remain in the control of the authorized person performing the work while the lock is serving as a lockout device. Each lock shall have a unique identifying number placed on it and on its key. Only locks marked with the issuing organization’s identification (e.g., Contractor’s name, Contractor’s logo) be used as a LOTO lock.

EXCEPTION: In certain specific applications, multiple locks set for only one key (“keyed alike”) may be used. There can be only one key for the series. All locked in a “keyed alike” series shall be identified with the same identifying number.
Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.
Tagout Device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with a specific established procedure.
Energized - Connected to an energy source or containing residual or stored energy.
Group Lockout Box - A specially designed lockout box that accepts the application of multiple personal locks.

REQUIREMENTS FOR EMPLOYEES
The Employees and subcontractor are responsible for the overall coordination of the LOTO program for his/her work.

The contractor/subcontractor must ensure that the lockout is performed in accordance with the LOTO program and any specific equipment LOTO plan, and that no employees work beyond the protection of locks and tags.
Training – The contractor/subcontractor shall establish a program for training his/her employees on how to lock, tag, and try according to this procedure (see Section 12 of this procedure). The training should include information about the types and degrees of hazards the employee will be exposed to at work.
The contractor/subcontractor must maintain training records that include at least the trainee’s name, date, and training content.

GENERAL
Hazardous energy may exist as stored energy in several circumstances. Stored energy must be relieved prior to blocking and installing lockout devices. The energy generating mechanism must be defeated to remove the possibility of regeneration. Examples of stored energy are springs, elevated components, capacitors, contained pressure, and Flywheels.
NOTE: Capacitors must be discharged, shorted, and grounded in addition to lockout of the source of energy by a qualified person.

Use lockout locks and LOTO danger tags only to prohibit operation of process and electrical equipment when personal injury or property damage could result from operation. LOTO Danger tags shall be used for no other purpose!

Devices with locks or LOTO Danger tags must NOT be operated.
Any person who operates a switch or other device that has a LOTO Danger tag and/or LOTO lock attached will be subject to removal from site.

EXCEPTION: The authorized person who attaches the LOTO lock and tag can “Try” the switch or device to verify that the energy isolation (LOTO) is effective.
Any device capable of being locked requires both a lock and a tag.

All new equipment used for energy isolation must be capable of accepting a lock to prevent operation of the disconnected device.

ENERGY ISOLATION PROCEDURE
Process equipment/systems shall be shut down and prepared for mechanical work by the authorized person(s) who has the responsibility for operating that equipment. All energy sources must be identified, and energy isolation devices installed.
When work is to be performed inside of equipment such as cooling tower bays, fin- fan coolers, tanks with power mixers, filters, etc., the electrical circuit to the power equipment shall be verified by a properly trained employee to be de-energized at the breaker, a lock and tag shall be installed on the breaker, and the wiring shall be. disconnected locally at the motor. The properly trained employee’s lock and tag shall stay on the breaker if the equipment stays out of service. After achieving isolation, the authorized persons in conjunction with the affected person who shut down the equipment/system shall install a locking device and tag (DO NOT OPERATE/DO NOT REMOVE) on each energy isolation device. Each locking device shall be recorded in the energy isolation logbook (Appendix B). In the event a blind, cap, or plug, etc. is used as the isolation device and the addition of a lockout device is not possible, the authorized person(s) shall attach a personal numbered tag and record the “tagout” in the energy isolation logbook. Isolation shall be verified by means such as opening of bleeder valves inside the isolation points and/or trying of local start/stop stations on electrical systems.
When work is to be performed on electrical equipment which has no provisions to accept
a lock, the circuit shall be physically disconnected at the breaker and a (DO NOT
OPERATE/DO NOT REMOVE) tag shall be securely affixed and shall remain until the circuit is reconnected.

A.) APPLICATION OF LOCKOUT/TAGOUT DEVICES
The authorized person must identify the energy sources associated with and the isolation devices/techniques required to achieve isolation for his/her job.

B.) LOCK & TAG OUT
Before starting work on isolated equipment/systems, each authorized person (unless utilizing GROUP LOTO) shall install his/her personal lock and/or tag (“DO NOT OPERATE / DO NOT REMOVE”, signed and dated) on each isolation device or lockout device which pertains to his/ her job. An operator should be made available to help locate all the isolation points. The authorized employee shall:
Date and sign every tag in use he/she uses, showing his/her employee identification number and (if applicable) Contractor Company name.

Securely attach the tag to the equipment LOTO device.
State the reason for the lockout in the comment section of the tag.
Protect the tag if it is located where weather or chemicals might damage it.

The tag must remain legible and must remain in place through the duration of the lockout.

The authorized person must document each LOTO lockout or tagout device (tagout when used with blinds, caps, plugs, etc.) in the isolation logbook. (If more than one location has LOTO)
Prior to starting any work on the equipment/system, the authorized person(s) shall verify.
that isolation and de-energization has been accomplished.

The locks and tags which an authorized person installs shall stay in place for the duration of that job or until that authorized person is removed from that job, at which time the authorized person shall remove only the locks and tags that he/she installed.

If the job extends beyond a single shift, the authorized person must verify that LOTO is in place and effective at the beginning of each shift. If work is to continue into another shift and involves the employment of another authorized person, the lock of the new authorized person must be on before removing the lock of the relieved authorized person. As an alternative, an authorized person may transfer ownership of a lock to the relief worker. The relieved authorized person signs the lock “back in” without removing the lock from the locked-out equipment. The new authorized person immediately signs the lock “out”.
The relieved authorized person personally gives the key to the new authorized person.
Both authorized persons go to the lock together where the relieved authorized person removes (Single line drawn through name) his/her name from the lockout tag and the new authorized person puts his/her name on the lockout tag. No one may install or remove another authorized person’s lock or tag. If for any reason an authorized person’s lock or tag must be removed in his/her absence, the procedure outlined In an EMERGENCY LOTO REMOVAL shall be followed.

RELEASE FROM LOTO
Each authorized person shall remove only the lockout\tagout devices which he/she installed and document its removal in the isolation logbook.
An affected person may not remove any lockout/tagout devices. The only exception is for a group lockout.

GROUP LOCKOUT/TAGOUT (COMPLEX LOTO)
Elements – The Group LOTO Plan (complex lockout procedure) must include all the following:
Manager/Director approval of the specific energy isolation plan (for contracted operations, this would be the Contractor’s top site management (or designee)
Names of those persons responsible for coordinating the overall lockout (primary authorized employee)

A written, complete lockout plan identifying each lockout point for each specific unit and piece of equipment.
The opportunity for each employee to observe the lockout and agree or disagree with the lockout strategy.
Measure to control locks and keys.
A system to account for all personnel at the beginning and the end of shifts.
Joint removal of the locks when the work is complete.

ISOLATION FOR GROUP LOTO
If more than one person is working on the same job, a group LOTO system can be used instead of everyone placing a personal lock or tag on each isolation device.

APPLICATION OF GROUP LOCKOUT/TAGOUT DEVICES
Before work is started on isolated equipment/systems, a designated PRIMARY AUTHORIZED PERSON must identify the energy sources associated with the job and the isolation devices/techniques required to achieve isolation for that job.

The Primary Authorized Person shall install a lock and tag (DO NOT OPERATE / DO NOT REMOVE), signed and dated, on each isolation device needed to perform the job safely. For non-lockable isolation devices, a special two-part group lockout tag shall be used instead of the standard DO NOT OPERATE / DO NOT REMOVE tag. Both parts of this tag will be printed with the same unique identifying number. The Primary Authorized Person must document each LOTO lockout or tagout device in the isolation logbook. An operator should be made available to help locate all isolation.
points.

LOTO locks already installed on isolation devices by an authorized person may be transferred to the Primary Authorized Person the Primary Authorized Person must verify that isolation and de-energization has been accomplished. The Primary Authorized Person then puts the keys to all the locks and the bottom portion of any special group lockout tags pertaining to the job into a “group lockout box”.

The Primary Authorized Person then attaches a generic tag to identify the lockout box with the job. If the Primary Authorized Person will be doing work on the “group” lockout system, then he/she must also apply his/her personal lock to the group box in addition to the box’s identifying tag. Prior to starting any work on the equipment/system, each authorized person must apply his/her own personal LOTO lock to the “group lockout box”. Each authorized person must maintain personal control over all the lockout devices. Each authorized person is encouraged to personally verify that isolation and de-energization has been accomplished. Each authorized person must remove his/her lock from the “group lockout box” after finishing his/her job. If the job is not completed at the end of a shift, the authorized person may:

Elect to leave the lock on if he/she intends to finish the job on a subsequent day.
Transfer his/her personal lock to a “relief” authorized person. Remove the personal lock if he/she will not be returning to complete the job. (Another authorized person will complete the job on another shift.)

RELEASE FROM GROUP LOTO
After verification that the job was completed and all personal locks have been removed from the “group lockout box”, the Primary Authorized Person and/or the affected person operating the unit may then remove all the LOTO locks and tags from the isolation devices and document the removal in the isolation logbook.

EMERGENCY LOTO REMOVAL AUTHORIZATION
Locks left past the specified time or left unattended after shift change may be cut off in the event of an emergency. Such removal shall require that the operation’s director, Ric-Man Construction FL, Inc. safety and at least two people knowledgeable in the operation of the equipment be present during the removal (for electrical equipment, this requires at least one person be a “qualified person”).
The operation’s director shall personally cut the lock. If the lock to be cut belongs to a Contractor’s employee, the Contractor’s Safety representative and the Company’s Safety representative must agree to the removal before the Contractor’s Job Superintendent may cut the lock. (Note: two appropriate craft employees are required to witness and concur with the lock removal.)
The lock must be cut off and returned to the authorized person who applied the lock. “Notification of Removal” forms shall be posted both at the isolation device where the lock was removed and at the work area protected by the isolation device. A name and phone number to contact must be listed on each posting. (This will usually be the
name and phone number of the person cutting the lock.) An entry shall be made in the isolation logbook that the lock was cut off. E.g., Entry = “Cut” by ...
The “Notification” shall not be removed until the authorized person has been made aware of the lock removal and has initialed the notification. If a permit was issued in conjunction with the lockout, all persons listed on the permit must be made aware of the lock removal and initial the Notification. Only the person who cut the lock may remove the notification forms. The removed notification form is then sent to the
appropriate manager (for Construction, this is the Ric-Man Construction FL, Inc. Project Manager, or his designee). “Notification of Removal” forms are available in the safety department.

An authorized person may cut off his/her own personal lock if he/she loses the key. The appropriate manager shall be notified of the removal. An entry shall be made in the isolation logbook that the lock was cut off.

LOCKOUT/TAGOUT EQUIPMENT

Each construction site shall provide a system for having lockout and tag out devices available for the work expected to be performed in that area.
Locks and tags used for the purpose of LOTO shall not be used for other purposes.

Locks shall be individually keyed, marked “LOTO” and have only one key available for each lock. Locks shall be one brand of the same size and shape. Locks shall be sequentially numbered without the numbers being repeated. An adequate supply of locks will be maintained in each area. Tags shall be common to the Energy Lockout/Tagout system and shall be of the same print, format, and material and capable of being dated and signed by the installer. Tags shall be capable of withstanding the environment to which they are exposed for the maximum period that exposure is expected.
Special tags shall be used with non-lockable isolation devices.
Tags that have been written on shall not be reused. Destroy them after removing them from the lock and/or equipment.
Energy Isolation Logbooks shall be commonly formatted and applied uniformly throughout the organization.
Blinds used for isolating process lines (streams) shall be individually marked and identified so that they may be recorded in the Energy Isolation Logbook. Identification should be such that it is obvious which part of the operation (or which Contractor) placed the blinds.

When the work is completed, locks and tags are removed in reverse order with the qualified employee removing his or her lock before returning the equipment to service.
Electrical equipment such as 120-volt lighting panels and similar equipment must be locked as well as tagged. Some manufacturers currently do not make locking components in this class of equipment. In such instances, when available from the manufacturer or by site fabrication, a locking mechanism shall be installed.
When a locking mechanism is not available, danger tags shall be clearly and firmly attached to the disconnecting device.

L.) LOCKOUT OF TEMPORARY CONSTRUCTION SYSTEMS – ELECTRICAL
Only qualified electricians may perform work on temporary construction power. A qualified employee verifies that the correct disconnecting device has been opened by reviewing drawings and identification and/or by visually tracing the power source.
The qualified employee dons the appropriate F Lash and electrical shock PPE for testing 600-volt class equipment and opens the door to the disconnect supplying power to the identified unit.
The qualified employee immediately tests for voltage. The volt tester must be a single function device that has been verified on a known source before and after the tests are conducted.
The qualified employee must visually observe a physical break in the power conductors. If unable to observe a visible gap, the fuses are pulled or disconnected, and the power conductors taped.
Circuits must be tested “dead” prior to pulling fuses or disconnecting wiring. The qualified employee places his or her lock and tag. Other employees place their locks and tags as appropriate.
The person responsible for operating the equipment (or qualified employee) tries the system by operating the control devices, paying particular attention to any potential interlock circuits. Interlocks must be satisfied when trying equipment.
When the work is completed, locks and tags are removed in reverse order with the qualified employee removing his or her lock before returning the equipment to service continues to be implemented properly and that the persons involved are familiar with their responsibilities under this procedure. The audit must be documented using the periodic lockout audit form or its equivalent.

FIRE EXTINGUISHERS

This procedure outlines the minimum requirements for selecting, placing, and inspecting portable fire extinguishers for protection during construction operations.
This procedure does not cover fire extinguishers installed as part of the finished project.

REQUIREMENTS
The Ric-Man Construction FL, Inc. shall plan for and supply adequate fire extinguishers for all work areas, spaces, Floors, and buildings where burning, welding, cutting. or open-Flame equipment is used or where smoking is allowed. Contractors/ subcontractors are responsible for their own fire extinguishers during hot work. Each welder, burner, or operator of open-Flame equipment shall have an individual fire extinguisher within the immediate reach 25 feet.

Fire extinguishers for work on scaffolds shall be readily available (within reach) to the workers.
Fire extinguishers are also required for fueling operations.

Each piece of motorized equipment shall be equipped with a fire extinguisher.

INSPECTION
Fire extinguishers must be routinely inspected at least monthly by a competent person. Each extinguisher must have a durable tag securely attached, showing the date of the last thorough inspection, maintenance or recharge date and the initials or signature of the person who performs this service.
Fire extinguishers must be routinely inspected annually by a competent person. Each extinguisher must have a durable tag securely attached, showing the date of the last thorough inspection, maintenance or recharge date and the initials or signature of the person who performs this service.

Employees using fire extinguishers must ensure the marking system remains legible between inspections.
Fire extinguishers with illegible marking systems shall be considered unsafe and shall be removed from service.

TRAINING
Ric-Man Construction FL, Inc. /Subcontractor shall train employees annually in the proper use of fire extinguishers. All Firewatch personnel shall be provided with training for the fire extinguishers they might be expected to use. Training may consist of a video, lecture and demonstration, documentation of training. Training in orientation will constitute compliance.

FLAMMABLE AND HAZARDOUS STORAGE

SCOPE
This procedure provides guidelines for storage of Flammable and hazardous materials.

DEFINITIONS
Flash Point – The minimum temperature of a liquid at which it gives off vapors sufficient to form an ignitable mixture with the air near the surface of the liquid.
Flammable Liquid - A Fluid with a Flash point below 100 degrees F (37.8 C.). Combustible Liquid - A Fluid with Flash point at or above 100 degrees F (37.8 C.).
Hazardous Material - (As defined by DOT 49 CFR Part 172) Any material appearing on the DOT tables and requiring classification and placarding for transport.
Portable Tank - Tanks with a capacity of 60-600 gallons or more not intended for fixed installation.

CLASSIFICATION OF MATERIALS
The “class” of a liquid defines both its storage and handling requirements.
NFPA designates Flammable liquids as Class I and further categorized them as follows: Class IA - Flash point below 73 degrees F (22.8 C.), Boiling point below 100 degrees F (37.8 C.).
Class IB - Flash point below 73 degrees F (22.8 C.), Boiling point at or above 100 degrees F (37.8 C.).
Class IC - Flash point at or above 73 degrees F (22.8 C.), and below 100 degrees F (37.8 C.).
NFPA designates combustible liquids as either:
Class II - Flash point at or above 100 degrees F (37.8 C) and below 140 degrees F (60 C.); or Class III - Flash point at or above 140 degrees F (60 C.).

GLOBAL HARMONIZATION SYSTEM (GHS) AND SAFETY DATA SHEETS (SDS) ALSO KNOWN AS MSDS INFORMATION

The Physical Data section of the Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS) are available as required.
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The Fire and Explosions Data Section notes the Upper Explosive Limit (UEL) and the Lower Explosive Limit (LEL), between which points the danger of explosion is real. Flash point information will also help define the Flammability and combustibility classification.

All contractors on site are required to turn in a copy of Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS) are available as required.

LABELING
All containers holding Flammable liquids must be marked with the contents.
Labeling shall comply with US-OSHA Hazards Communication Standard unless superseded by local law or regulation.

STORAGE OF CONTAINERS
The maximum numbers of containers that can be stored in one area, both outside and inside are no more than 25 gallons of Flammable or combustible liquid will be stored in a room outside of an approved storage cabinet.

Inside Storage

Storage of Flammable or combustible liquids inside structures under construction
(includes structures completed but not yet turned over to the owner) is prohibited.
Since most coatings and many other Flammable materials emit vapors heavier than air, forced or gravity ventilation is required to remove vapors. The ventilation exhaust should be placed near the Floor level at each end of the trailer. All aerosols should be stored in a closed metal industrial-type cabinet separated from other Flammable liquids since these can explode and spread a fire: At least one multi-purpose dry chemical hand-held portable fire extinguisher must be placed inside the trailer door and another outside the trailer, approximately 10 feet from the door. An extinguisher of the same size must also be located no closer than 25 feet and no further than 75 feet from any outside area or where Flammable materials are stored.
Such storage trailers should be located at least 50 feet from any important building or property line.

If electrical lines, receptacles, switches, lighting, etc., are installed in such trailers, they must be rated for Class I Division 1 service. Electrical installations and devices within ten feet of the exhaust ventilation discharge from a Flammable/combustible liquids storage area must be rated for Class 1 Division 1 service. Electrical installations and devices within ten feet of openings in the trailer wall shall be rated for at least Class 1 Division 2 service. Placarding or warning signs must be posted on the side of the trailer. All storage areas must be conspicuously marked inside and out with signs: “Flammable--Keep Away-- No Smoking”.
The entire storage area shall be kept free from accumulation of unnecessary combustible materials. Weeds and grass shall be kept down, and a regular clean-up procedure provided for the inside and outside areas.

Outside Storage
All aerosols should be stored in a closed metal industrial-type cabinet separated from other Flammable liquids since these can explode and spread a fire.
At least one multi-purpose dry chemical hand-held portable fire extinguisher (20 lb.) must be located no closer than 25 feet and no further than 75 feet from any outside area where Flammable materials are stored.
Such storage areas should be located at least 50 feet (15.2 meters) from any important building or property line.
A rain shield should be provided to eliminate the accumulation of rainwater within the containment area.
Storage areas must be conspicuously marked inside and out with signs:
“Flammable--Keep Away--No Smoking Within 50 Feet.” Outside Flammable/combustible liquids storage areas and a strip ten feet wide around each storage area are designated as Class 1 Division 2 per NEC (NFPA-70).

The entire storage area shall be kept free from accumulation of unnecessary combustible materials. Weeds and grass shall be kept down, and a regular clean-up procedure provided for the inside and outside areas.

PORTABLE TANK STORAGE

Portable Tanks used to store Flammable or combustible liquids must be kept at least 25 feet from any building. Tanks with a combined capacity of more than 2,200 gallons must be separated by a 5-foot-clear (1.5 meter) area. All portable tanks shall be provided with emergency venting. The tanks (s) shall have a spill containment system of sufficient capacity to contain 110% of the total volume of the tank(s).
Portable fuel storage tanks shall be manufactured with an outer lining capable of holding 125% of the tank’s volume. Appropriate-sized 48s will be placed and maintained on site.

HANDLING OF FLAMMABLE AND COMBUSTIBLE MATERIALS

Drawing off such materials from a larger to a smaller container can generate static electricity. A bond must be established between the two, the larger container being always grounded. The carrying equipment must also be grounded when proximal to power lines. Use #10 AWG two-wire cord or #6 Super-service welding cable with neoprene jacket and appropriate clamps for both bond and ground.
Screw clamps with sharp points are preferred to spring clamps, which can lose their ability to firmly contact the container over time. Grounding shall be provided by using an 8’-long x 5/8” diameter copper rod driven vertically into the ground so that at least seven feet of the rod’s length is buried. Alternate grounding methods that are equivalent to this copper rod are acceptable.

Due to the danger of static electricity buildup, plastic funnels, pails, etc., must not be used when pouring from one metal container to another. It is essential that the metal funnel be in direct contact with the bonded container. Only an UL-listed metal safety can, complete with Flame arrestor and self-closing spout, clearly labeled as to contents and Flammability, may be used to transport Flammable liquids on-site.
Consult the Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS) to determine appropriate personal protective equipment.
(PPE - goggles, face shield, gloves, respirator, etc.) when dispensing liquids covered by this procedure.

FORKLIFTS AND POWERED INDUSTRIAL TRUCKS

Scope
This procedure applies to all forklifts, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines. Where the term “forklift” is used in this procedure, it is to be understood to mean the broad range of powered industrial trucks.

Forklifts are used in various locations on the site. These are used to handle heavy or bulky materials in various operations. This procedure specifies the expectations around safe forklift operation.

OPERATOR QUALIFICATION and CERTIFICATION

Only authorized operators can operate forklifts on this site.
The Forklift Operator’s Card will show which Type(s) of forklift and which.
Attachment(s) the person is certified to use in the work Areas.
The operator must carry his/her Forklift Operator’s Card whenever operating a forklift.

TRAINING

All employees who are expected to operate a forklift must first receive the appropriate training and become certified. Training will include both classroom and hands-on operation of the forklift and attachments the operator will be using.

Trainees may only operate a forklift for training purposes under the direct supervision of the trainer and then only in an environment which does not endanger any employee. The following topics are included in the training: Operating instructions, warnings, and precautions for the type(s) of forklift(s) the operator will be authorized to operate. Differences between the forklift and the automobile.

Forklift controls and instrumentation: where they are located, what they do, and how they work.
Engine or motor operation. Steering and maneuvering.

Visibility (including restrictions due to loading).
Fork and attachment adaptation, operation, and use limitations.

Vehicle stability & Vehicle capacity.

Any vehicle inspection and maintenance that the operator will be required to perform.
Refueling and/or charging and recharging of batteries.

Operating limitations.

Any other operating instructions, warnings, or precautions listed in the operator’s manual for the types of vehicle that the employee is being trained to operate.

Workplace-related topics:
Surface conditions where the vehicle will be operated.

Composition of loads to be carried and load stability.
Load manipulation, stacking, and unstacking
.
Pedestrian traffic in areas where the vehicle will be operated.

Narrow aisles and other restricted places where the vehicle will be operated.

Hazardous (classified) locations where the vehicle will be operated.
Ramps and other sloped surfaces that could affect the vehicle's stability.

FUELING AND RECHARGING

The storage and handling of liquid fuels such as gasoline and diesel fuel shall be in accordance with NFPA Flammable and Combustible Liquids Code (NFPA 30). 10.1.2 The storage and handling of liquefied petroleum gas fuel shall be in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA 58.)
Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.

MARKINGS AND LABELS
All Markings, Labels, and Nameplates shall be kept clean, in place, and easily readable.

MODIFICATIONS
Modifications or additions which affect capacity and safe operation of the forklift shall not be performed without the manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly following the modification.

INSPECTIONS
Forklifts will be inspected and documented prior to use.
Forklifts used for day-shift-only operations will be inspected before use on that day.
Forklifts used during shift operations will be inspected at the beginning of each shift prior to use.
A defective forklift shall be tagged out and reported to your supervisor. It shall not be used until it is repaired.

MAINTENANCE AND REPAIR
All repairs shall be made by authorized personnel.
No repairs shall be made in Class I, II, and III locations.
Those repairs to the fuel and ignition systems of forklifts that involve fire hazards shall be conducted only in locations designated for such repairs.

Forklifts in need of repairs to the electrical system shall have the battery.
disconnected prior to such repairs.
parts of any forklift requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design. Forklifts shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer.
Forklifts shall not be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts unless approved in writing by the manufacturer.
Additional counter weighting of fork forklifts shall not be done unless approved in writing by the forklift manufacturer. When the temperature of any part of any forklift is found to be more than its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
Forklifts shall be kept in a clean condition, free of lint, excess oil, and grease.

GROUND FAULT CIRCUIT INTERRUPTERS

SCOPE
This Procedure provides guidelines for using ground fault circuit interrupters in 15- and 20- amp single phase circuits at construction sites.

DEFINITIONS
Ground Fault Circuit Interrupter - An electrical device that compares the amount of current Flow between the supply and return conductors. When an imbalance of current flow is measured (by comparison) greater than the design intent, the device removes voltage from the tool.

EQUIPMENT
GFCIs function only on AC voltage. GFCI devices shall not be used on DC circuits.
Types of GFCIs
Receptacle type GFCIs protect only the receptacle and equipment plugged directly into the receptacle.
Panel circuit-breaker type GFCIs protect an entire circuit. They are installed in the circuit-breaker panel.
Protected receptacles should be identified as protected by a GFCI.
Cord-connected type GFCIs contain several receptacles, each protected by a GFCI.
In-line GFCIs are molded into extension cords.
Plug-in model GFCIs can be inserted into normal receptacles, and they protect all equipment plugged into the device.

Any repair or modification to a GFCI must be performed by a trained electrician.
Ground fault circuit protection must be used on all electrical systems, 120 volts receptacle outlets, extension cords and equipment connected by electrical cords and plugs.
Distribution panels supplied at the site should incorporate GFCIs for 120-volt usage.
GFCI is required for all portable tools for all construction activities.
GFCIs must be listed by Underwriters Laboratory (UL) and bear the UL mark or the mark of another government-approved agency.
GFCIs should be inserted in the circuit as close to the electrical source as practical.
Portable GFCIs should be kept weatherproof to eliminate nuisance tripping of the circuit.

TESTING
All GFCIs have a test button. Every GFCI should be tested, using the test button, every time the GFCI is used.

HAND AND PORTABLE POWER TOOLS

SCOPE
This procedure establishes minimum guidelines necessary to ensure that these tools are serviceable, properly evaluated in accordance with manufacturer’s instructions, and are safe for use.

INSPECTION

Daily – Tools shall be inspected daily and prior to each use by the user to ensure that they are in proper working order. The tool check must certify the tool meets appropriate manufacturing standards. Tools requiring guards must have properly placed guards according to OEM manufacturing requirements. All electrical power tools must not have damaged cords or cables and MUST have a ground fault circuit. All tools used for the project must be manufactured tools and used for the purposes in which they were designed.

PERSONAL PROTECTIVE EQUIPMENT

When using tools listed below, each employee must use the additional personal protective equipment specified.

- Jackhammer, Tampers
- Eye Protection
- Hearing Protection
- Face Protection
- Hand Protection
- Foot Protection including metatarsal guards.
- Respiratory Protection – if needed
- Chipping Hammers, Impact Wrenches, Reamers
- Eye Protection
- Face Protection
- Hearing Protection
- Hand Protection
- Respiratory Protection – if needed
- Powder- Actuated Tools, Grinders
- Eye Protection
- Hearing Protection
- Face Protection
- Hand Protection
- Respiratory Protection – if needed
- Cutting Torches, Arc Welders
- Eye Protection
- Hand Protection
- Face Protection
- Respiratory Protection – if needed

ELECTRICAL TOOLS
All portable electric tools must be grounded or double insulated.
All electric cords and cables must be covered or elevated (minimum elevation = 7’ (2.2 meters) to protect them from damage and to eliminate tripping hazards wherever possible.
Power saws, grinders and other power tools must always have proper guards in place.
Power tools are always hoisted or lowered by a hand line, never by the cord or hose.
Cords and hoses must be kept out of walkways and off stairs and ladders. They must be placed so as not to create a tripping hazard for employees or to be subject to damage from equipment or materials.
Only qualified electricians shall repair the electrical components of construction tools and electrical equipment.
When not in use, electric tools shall be unplugged.
Protective guards shall not be removed or altered.

PNEUMATIC TOOLS
An approved safety cutoff valve (excess flow shut-off valve) must be installed at the manifold outlet of each supply line for hand-held pneumatic tools.
All Hose connections must be secured to the hose with factory-equivalent bands. “Radiator hose clamps” are not acceptable.

All pneumatic hose connections must be secured positively (safety wired or whip checks).
Defective air hoses shall be removed from service immediately and shall not be returned to service until the defects have been properly repaired.
Safety clips or retainers must be installed on all pneumatic tools to prevent the accidental expulsion of the tool from the barrel.
Protective guards shall not be removed or altered.

POWDER-ACTUATED HAND TOOLS
Refer to “Powder-Actuated Hand Tools” for these requirements.

FUEL-POWERED TOOLS
All fuel-powered tools must be shut down while being refueled.
Smoking is prohibited during refueling operations. Other sources of ignition, such as burning and welding, also must be halted during refueling operations.
Protective guards shall not be removed or altered.

HAND TOOLS
Impact tools such as chisels, drift pins, and hammer wrenches with mushroomed striking surfaces shall be removed from service until the mushroomed surfaces can be dressed down.
Wooden handles of tools such as hammers, picks, etc., shall not be taped or covered in such a way as to hide damage or defects. Cracked or damaged wooden handles of tools shall be replaced immediately upon discovery of the damage.
Hand tools shall be used only for their designed purpose.

HAZARD COMMUNICATION PROGRAM

Purpose
This document serves as Ric-Man Construction FL, Inc. Hazard Communication Program. It provides detailed safety guidelines and instructions for receipt, use and storage of chemicals at our jobsites by employees and subcontractors. Our goal is to provide all employees and affected personnel with the tools, knowledge, and information necessary to protect themselves and co-workers from hazards encountered in the workplace.

Scope
In general, employees do not handle hazardous chemicals as part of their normal work routine; however, employees have the potential to work with and in facilities that manufacture, transport, and store hazardous chemicals. Thus, management has included a Hazard Communication and Chemical Safety Program for the purpose of employee awareness. Employees are instructed not to handle potentially hazardous chemicals and to alert proper facility officials if a substance of unknown origin is spotted. In addition to hazardous substance training and “right to know” training, employees receive specific awareness training for Asbestos, Cadmium, Chromium VI, and Lead exposure.

Regulatory References
This Hazard Communication and Chemical Safety Program is intended to comply with the following OSHA requirements 29 CFR 1910.1200 and subpart Z.

POLICY
This written Hazard Communication Program shall be implemented and maintained at each work site. Ric-Man Construction FL, Inc. Site Safety Representative shall have full authority and responsibility for implementation and execution throughout operations.

Project managers shall have full authority and responsibility for implementation and execution within their areas of control.

All employees and affected personnel shall receive Hazard Communication and Chemical Safety Program training. In addition, employees and affected personnel shall receive training and information regarding hazardous chemicals and safety precautions specific to their assigned work sites.

Employees shall not handle potentially hazardous chemicals unless they have been properly trained and instructed to do so.

Employees shall immediately alert proper facility officials if a substance of unknown origin is spotted.

Employees shall immediately report all chemical spills, releases or exposures to their immediate supervisor or proper facility official.

All containers shall have the appropriate label, tag or marking prominently displayed that indicates the identity, safety, and health hazards.

Each jobsite shall have a copy of the Ensure Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS) are available as required. This will include ALL Contractors/Subcontractors.

RESPONSIBILITIES

Project Management
Managers have full authority and responsibility for the implementation and execution of this Hazard Communication and Chemical Safety Program, within his/her area of control.
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 or their designated representative.

Safety Manager
Ric-Man Construction FL, Inc. Manager/Site Safety Representative have full authority and responsibility for the implementation and execution of this Hazard Communication and Chemical Safety Program, project wide.
Develop and maintain a list of hazardous chemicals using the identity that is referenced on the Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS).

- Monitor the effectiveness of the program.
- Conduct annual audit of the inventory of all Chemicals as defined within
- Monitor employee training to ensure effectiveness.
- Keep management informed of necessary changes.
- Ensure Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS) are available as required.
- Monitor jobsites for proper use, storage and labeling of chemicals.
- Supervisors
- The senior site supervisor has full authority and responsibility for the implementation and execution of this Hazard Communication and Chemical Safety Program, within his/her area of control.
- Comply with all specific requirements of the program.
- Provide specific chemical safety training for assigned employees.
- Ensure chemicals are properly used stored & labeled.
- Ensure only the minimum amount necessary is kept at workstations.

- Ensure up to date Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (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 of 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.

Subcontractors
Comply with all aspects of this program.
Coordinate information with the Project Supervisor.
Ensure Subcontractor employees are properly trained.
Notify the Project Supervisor before bringing any chemicals into client's property of facilities.
Monitor and ensure proper storage and use of chemicals by subcontractor employees.

DEFINITIONS

Chemical - any element, chemical compound, or mixture of elements and/or compounds.
Combustible liquid - means any liquid having a Flash point at or above 100 deg. F (37.8 deg. C), but below 200 deg. F (93.3 deg. C), except any mixture having components with Flash points of 200 deg. F (93.3 deg. C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Compressed gas - any compound that exhibits:
A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 deg. F.
A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 deg. F. regardless of the pressure at 70 deg. F.
A liquid having a vapor pressure exceeding 40 psi at 100 deg. F.

Container - any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

Employee - a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies.

Explosive - a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.
Exposure or exposed - an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g., incidental, or possible) exposure. Subjected in terms of health hazards includes any route of entry (e.g., inhalation, ingestion, skin contact or absorption.)

Flammable - a chemical that falls into one of the following categories:
"Aerosol, Flammable" means an aerosol that yields a Flame projection exceeding 18 inches at full valve opening, or a Flashback (a flame extending back to the valve) at any degree of valve opening.
"Gas, Flammable" means:
A gas that, at ambient temperature and pressure, forms a Flammable mixture with air at a concentration of thirteen (13) percent by volume or less; or (B) A gas that, at ambient temperature and pressure, forms a range

of Flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit; (iii) "Liquid, Flammable" means any liquid having a Flash point below 100 deg. F., except any mixture having components with Flash points of 100 deg. F. or higher, the total of which make up 99 percent or more of the

total volume of the mixture.
(iv) “Solid, Flammable” means a solid, other than a blasting agent or explosive as defined in 1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be a Flammable solid if it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.
Flash point - the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite.

Hazardous chemical - any chemical which is a physical hazard or a health hazard.

Hazard warning - any words, pictures, symbols, or combination appearing on a label or other appropriate form of warning which conveys the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). (See the definitions for “physical hazard” and “health hazard” to determine the hazards which must be covered.)

Health hazard - a chemical for which there is evidence that acute or chronic health effects may occur in exposed employees. The term “health hazard” includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, neurotoxins, and agents which damage the lungs, skin, eyes, or mucous membranes.

Identity - any chemical or common name which is indicated on the Global Harmonization System (GHS) or Safety Data Sheets (SDS) also known as Material Safety Data Sheets (MSDS)
Immediate use - the hazardous chemical shall be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.
Label - any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

Material safety data sheet (MSDS) - written or printed material concerning a hazardous chemical which is prepared in accordance with OSHA Standards.
Mixture - any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.
Oxidizer - means a chemical other than a blasting agent or explosive as defined in 1910.109(a) that initiates or promotes combustion in other materials thereby causing fire either of itself or through the release of oxygen or other gases.
Physical hazard - a chemical that it is a combustible liquid, a compressed gas, explosive, Flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

Pyrophoric - a chemical that will ignite spontaneously in air at a temperature of 130 deg. F. or below.

Safety Data Sheets (SDS) – system used to catalog information on chemicals, compounds, and instructions for the safe handling of such. This replaces the older MSDS system.

Specific chemical identity - the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.
Unstable (reactive) - a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure, or temperature.
Use - to package, handle, react, emit, extract, generate as a byproduct, or transfer.

Water-reactive - a chemical that reacts with water to release a gas that is either Flammable or presents a health hazard.

Work area - a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

Workplace - an establishment, job site, or project, at one geographical location containing one or more work areas.

HAZARD RECOGNITION

As part of the worker orientation program all workers will be trained when a new chemical is inventoried. This Hazard Communication and Chemical Safety Program is primarily a hazard recognition program. Elements such as Product Warning Labels and Material Safety Data Sheets, detailed in the sections that follow provide useful tools and knowledge enabling employees to identify hazardous chemicals in the workplace.

Beryllium Exposure Control Plan
Beryllium is a metal that is found in nature, especially in beryl and bertrandite rock. It is extremely lightweight and hard, is a good conductor of electricity and heat, and is.
nonmagnetic. These properties make beryllium suitable for many industrial uses, including: metal working (pure beryllium, copper and aluminum alloys, jet brake pads, aerospace components); ceramic manufacturing (semi-conductor chips, ignition modules, crucibles, jet engine blades, rocket covers); electronic applications (transistors, heat sinks, x-ray windows); atomic energy applications (heat shields, nuclear reactors, nuclear weapons); laboratory work (research and development, metallurgy, chemistry); extraction
(ore and scrap metal); and dental alloys (crowns, bridges, dental plates); and sporting goods (golf clubs, bicycle frames).

Potential Adverse Health Effects from Beryllium Exposure
Chronic beryllium disease (CBD) primarily affects the lungs. CBD may occur among people who are exposed to the dust or fumes from beryllium metal, metal oxides, alloys, ceramics, or salts. It occurs when people inhale beryllium in these forms. CBD usually has a very slow onset, and even very small amounts of exposure to beryllium can cause the disease in some people. In some cases, CBD develops while workers are still on the job, but in others it may not develop until many years after a person has stopped working in the beryllium industry or has been transferred to a job that does not involve beryllium exposure. The amount or length of exposure to beryllium necessary to cause a specific individual to develop CBD is not known, but recent information suggests that exposure below OSHA’s 2 micrograms/m3 TWA PEL over a very short time (weeks or months) can lead to CBD in some workers.
Signs and Symptoms of Chronic Beryllium Disease
Workers with advanced CBD may have one or more of the following symptoms: unexplained cough; shortness of breath, especially with activity; fatigue; weight loss or loss of appetite; fever; or night sweats. However, because the disease may develop slowly over a period of many years, workers may have the disease for a long time without knowing it.

Beryllium Sensitization
CBD only develops in workers who have become sensitized to beryllium. A sensitized worker is one who has developed an allergic reaction to beryllium. A worker may become sensitized at any point during job exposure, or in some cases may not become sensitized until after leaving a job where there has been beryllium exposure. Beryllium sensitization can be detected using a blood test called the BeLPT, which stands for beryllium lymphocyte proliferation test. This test measures how specific white blood cells called lymphocytes react to beryllium. A positive test result means that a worker is sensitized.

Acute Beryllium Disease
Acute beryllium disease usually has a quick onset and has symptoms that resemble those of pneumonia or bronchitis. The acute form of the disease is believed to occur because of exposures well above the current PEL. This form of beryllium disease is now rare.

Cancer
Studies of workers exposed to beryllium have demonstrated significantly elevated risks of lung cancer. The International Agency for Research on Cancer (IARC), the expert cancer agency of the World Health Organization, has concluded that exposure to beryllium can cause lung cancer in humans.

Skin disease
A skin disease, which is characterized by poor wound healing and rash or wart-like bumps, can occur because of the skin being exposed to beryllium dust.
Current Regulations
According to 29 CFR 1910 Subpart Z, Table Z2 Worker exposure is limited to 2 micrograms per cubic meter airborne exposure for an 8-hour Time-weighted average with a ceiling of 5.
micrograms/cubic meter and a maximum 30-minute exposure of 25 micrograms/cubic meter of air.
Hazard Assessment
To minimize contact with Beryllium an exposure assessment will be performed prior to beginning work. Representative bulk samples from the work area will be analyzed to determine the presence of beryllium. The expectation is that Beryllium levels will be low or below detection levels in our work area. If beryllium is present airborne exposure monitoring will take place during work operations to identify employee exposure levels. During initial assessment employees will be equipped with appropriate PPE to ensure they are not exposed above the exposure limit.
Engineering Controls
The primary method to eliminate/minimize employee exposure is using engineer controls. The primary goal is to control dust on the site as well as direct contact with the soil.
Examples are.
Keep the work area damp.
Use fill or cover material to protect the existing soil.
Minimize soil disturbance through work practices.
Tarp loads being hauled on site.
Tarp/cover spoil piles
Demarcate work areas, and or areas with beryllium levels to control employee access.
Personal Protective Equipment

In accordance with the written respirator program, as well as protective clothing such as disposable coveralls, gloves, boot covers and goggles.

Employee Education
As part of the worker orientation program all workers will be trained on beryllium if there is a potential for exposure. Training will include information on beryllium and its effects on the body, where beryllium may exist on site, ways to protect you against beryllium exposure (including hygiene procedures) and where to get additional information.

Assume all chemicals are hazardous - The number of hazardous chemicals and the number of reactions between them is so large that prior knowledge of all potential hazards cannot be assumed. Use chemicals in as small quantities as possible to minimize exposure and reduce possible harmful effects.
The following general safety rules 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 fewer 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.
Task Evaluation
Each task that requires the use of chemicals should be evaluated to determine the potential hazards associated with the work. This hazard evaluation or JSA must include the chemical or combination of chemicals that will be used in the work, as well as other materials that will be used near the work.

Chemical Storage
The separation of chemicals (solids or liquids) during storage is necessary to reduce the possibility of unwanted chemical reactions caused by incidental 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.
Restraints and Containment - Lips, strips, or bars are to be installed across the width of storage shelves to restrain the chemicals in case of earthquake or unexpected shock.
Chemicals shall not be stored in the same refrigerator used for food storage. Refrigerators used for storing chemicals must be appropriately identified by a label on the door.

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 shall have the appropriate label, tag or marking prominently displayed that indicates the identity, safety, and health hazards. The name and address of the manufacturer or importer must also be provided.
Portable containers which contain a small amount of chemical need not be labeled if they are used immediately in 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 or removed. Facility weekly supervisor inspections shall check for compliance of this rule.
Incoming chemicals are to be checked for proper labeling. The symbol below is an example of labeling utilized to rate the hazard of products in storage tanks. It is a National Fire Protection Association (NFPA) standard. Each square contains a number based upon the accompanying table.

Rating Summary NFPA Diamond

Chemical (Blue)
4 Danger May be fatal on short exposure. Specialized protective equipment required.
3 Warning Corrosive or toxic. Avoid skin contact or inhalation.
2 Warning May be harmful if inhaled or absorbed.
1 Caution May be irritating.
0 No unusual hazard

Flammability (Red)
4 Danger Flammable gas or extremely Flammable liquid
3 Warning Flammable liquid Flash point below 100° F
2 Caution Combustible liquid Flash point of 100° to 200° F
1 Combustible if heated.
0 Not combustible

Reactivity (Yellow)
4 Danger Explosive material at room temperature
3 Danger May be explosive if shocked, heated under confinement or mixed with water.
2 Warning Unstable or may react violently if mixed with water.
1 Caution May react if heated or mixed with water but not violently.
0 Stable Not reactive when mixed with water.

Special Notice Key (White)
W Water Reactive

EMERGENCIES AND SPILLS
Each operation and job site shall establish emergency response and evacuation plans per company Emergency Preparedness Program. The required emergency response and evacuation plans shall include the following elements:

Environmental Response Plan

Each location shall have an Environmental Response Plan that includes the following:
Instructions on how to report an environmental spill.
Location and phone number of the local company approved spill response contractor. 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.

Emergency Evacuation Plan (Fires & Other Emergencies) Each location where personnel occupy a building shall have a Building Emergency Evacuation Plan that indicates the following:

Instructions on how to report a fire or other emergency.
A floor plan indicting each room, the available exits, fire extinguisher locations, fire alarms, (if inside) evacuation route(s)
A designated assembly point.
Main electrical disconnects, main gas supply and water shut off valves, and hazardous material storage locations (e.g., solvents, paints, fuels, pesticides - indicate quantities).

Each location where personnel are assigned to a client’s facility shall have a Job Site Evacuation Plan that includes the following:
Instructions on how to report a fire or other emergency.
The alarm signal(s) and all clear signal for the facility and the immediate work area.
A site plan that indicates a primary and a secondary evacuation route, an assembly point, the location of fire alarms, fire extinguishers, and safety showers
Communication network to keep employees and supervising business unit appraised of job site status.

HOUSEKEEPING

Housekeeping is a fundamental part of all safety programs, but caution must be exercised not to create additional or more serious hazards by improperly handling, storing, and disposing of chemicals in the interest of housekeeping. The following housekeeping rules shall apply about hazardous chemicals: · 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 incidental spills.
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.

INJURY, ILLNESS, AND INCIDENT REPORTING REQUIREMENTS

SCOPE
This procedure establishes the requirements for reporting injuries, illnesses and incidents to Ric-Man Construction FL, Inc. These guidelines address actual and “near miss” incidents. Investigations, reporting, and recording of all accidents, incidents, and illnesses is a key step in detecting trends and establishing measures to prevent recurrence.

Ric-Man Construction FL, Inc. is responsible for establishing an injury, illness, and incident reporting process to address any internal reporting requirements required, including those of their subcontractors.
The contractor/subcontractor employees shall report to their immediate supervisor any incident that interferes with (or might have interfered with) the orderly progress of work and causes (or might have caused) one or more of the following:

An adverse effect on the safety or health of personnel, e.g., injury or illness.
Property damage or work interruption.
An adverse environmental impact or potential regulatory violation.
A situation which does or could have an adverse impact on the public.

INITIATING THE PROCESS
The contractor/subcontractor shall notify the Safety Manager, Project Manager immediately, by radio or telephone of any injury, illness, environmental release, or public impact.
Once an incident occurs, the INCIDENT (ACCIDENT) REPORT must be completed by the employee and supervisor as soon as possible, the report will be sent to Ric-Man Construction FL, Inc. within 24 hours. Verbal report of incident MUST be reported to Ric-Man Construction FL, Inc. main office within 4 hours of the incident.

INVESTIGATING TEAM ORGANIZATION
Should a more detailed investigation be warranted, Ric-Man Construction FL, Inc. will appoint an Incident Investigation Team. The function of this team shall be to determine the facts surrounding the subject incident. Incident Investigation Team members shall be selected based upon their ability to contribute to the investigation in a positive fashion. Team members should have demonstrated thoroughness in their approach to technical problems and can maintain perspective and independence.

Ric-Man Construction FL, Inc. shall appoint a representative from their Safety Group to serve as a resource. A

member of the Ric-Man Construction FL, Inc. Management team shall be appointed as chairperson. Writing of the report shall be the team leaders' responsibility. Ric-Man Construction FL, Inc. shall supply typing and/or reproduction resources as required.

REPORT FORMAT
The standard format for all investigation reports shall be:
Location:
Date and Time of Incident:
Date Investigation Began:
Names and affiliation of team members
General Nature of the Incident:
Complete description of the Incident:
Facts Brought Out During the Investigation:
Cause(s) of the Incident and Important Contributing Factors:
Recommendation for Corrective and Preventive Action:
Lessons Learned

DISTRIBUTION OF INFORMATION

Ric-Man Construction FL, Inc. will distribute Investigation Reports within the company as appropriate. When key learning is identified that may impact other Contractors/
subcontractors, Ric-Man Construction FL, Inc. will also inform the site of any corrective actions to be taken.

Any inquiries from media to Ric-Man Construction FL, Inc. shall be directed to the main office.
Unless prior approval has been made no one is to talk to the media.

REPORTING AND RECORD-KEEPING

Training - All training shall be recorded.

Reports – All exposure incidents shall be reported.

Incident/Accident Report - All exposure events resulting in injury, illness, or loss of consciousness of an employee shall be recorded as Incidents on an Incident/Accident Report.

Control & Retention – Records associated with this program shall be handled in the following manner:

Incident/Accident - shall be handled per the Incident Reporting and Record Keeping Program.

FAILURE TO COMPLY
Should the contractor/subcontractor fail to comply with the requirements of this Section and related writings, Ric-Man Construction FL, Inc. shall notify Contractor verbally and/or in writing. The Contractor shall, upon being advised of its non-compliance, immediately take all corrective action to comply. In the event the contractor/subcontractor fails to initiate prompt corrective action, Ric-Man Construction FL, Inc. may take all actions provided for in the contract terms and conditions necessary to achieve compliance. The Ric-Man Construction FL, Inc. Company representative may implement disciplinary action as appropriate up to and including removal of any individual or contact THE OWNER who fails to comply with safety requirements.

NEAR MISS PROGRAM
Employees must report near misses when they occur. Regardless of how minor they may appear; they should be reported immediately (prior to the end of the shift of occurrence) so that corrective action can be taken and the hazard safe-guarded. The Ric-Man Construction FL, Inc. Management team encourages employee participation in safety & health and views a quality near miss as a positive contribution to the health and safety

of the project. A simple written near miss form is available within this manual. Near miss analysis are not meant to place blame but by using the information gained and lessons learned can possibly prevent a more disastrous accident from occurring. Ric-Man Construction FL, Inc. expects the employee, or the immediate supervisor of the employee, to ensure closure of a reported near miss as soon as possible and where practical. Lessons learned should be shared at the safety meetings.

WEEKLY TOOLBOX SAFETY MEETING
Good Loss Prevention requires that we establish frequent employee safety education and training programs. The method of complying with this requirement is to conduct a toolbox safety meeting with all employees at least every week. This provides a written communication tool to disseminate information such as safety trends & upcoming tasks to all project personnel. Employee involvement (suggestions and discussions) in these meetings is a must and should be encouraged. Tool-box safety meetings:
All crews shall hold a weekly safety meeting for each employee work group; this meeting shall be at least 5-10 minutes in duration. The Toolbox safety meeting DOES NOT constitute a pre task plan. A record of each Toolbox safety meeting should be kept and retained in the job-site safety files. Ric-Man Construction FL, Inc. should receive a form that shows the attendance, subjects discussed, recommendations, and remarks during the meeting.

DISCIPLINARY PROCEDURES

SCOPE
The following Inviolable Rules are presented as guidance for employee behavior. Conformance to the letter and the spirit of these rules will enable us to maintain a safe, orderly, efficient, and enjoyable place to work. Willful or negligent violation of these (inviolable) rules will result in the removal of any contractor/subcontract employee on the first occurrence.

The following rules are considered cardinal (inviolable) rules.

- Fall Protection Rules
- Energy Conversion, Gas and Power Lock Out Rules
- Confined Space Procedures
- Trench and Excavation Safety

First Offence - Documented Verbal Warning Second
Second Offense - Written Violation
Third Offense Removal from site for 1 – 3 day
Fourth Offense - Terminations

Not all consequences will follow this format. The severity of the discipline will be decided between safety and project management.

Further, the following are considered companywide safety rules; noncompliance of these rules can result in the employees being reprimanded, suspended, up to and including termination:

- Permit Procedures
- Personal Protective Equipment
- Possession of firearms on company property
- Possession of intoxicants on company proper

DRUGS AND ALCOHOL (INTOXICANTS)
The abuse and/or use of drugs, alcohol and improper use of certain prescription medicines are a special subset of our safety rules. In alignment with company policy and DOT regulations:
The use, possession, or distribution of prohibited substances or of drug paraphernalia on company property is not allowed. Being at work under the influence of prohibited substances is not allowed.
Positive “random” or “for-cause” tests are violations.

Consequences: Employees can expect that violations will result in discipline up to and including removal from the job site.

The following are violations of INVIOLABLE RULES:

- A positive “random” test.
- Refusing or evading a drug test.
- Positive “for-cause” or “post-accident” tests.
- Use, possession or distribution on company premises.
- Theft of Ric-Man Construction FL, Inc. or from others.

Consequences: Employees can expect that violations will result in discipline up to and including removal from the job site.

VALUING ALL PEOPLE

Treating all people with whom we have business contact, including fellow employees, vendors, customers, etc. in a respectful manner is a Ric-Man Construction FL, Inc. core value.
The contractor/subcontractor shall maintain a workplace free of abusive, degrading, malicious, violent, discriminatory, or harassing (including sexual harassment) behavior and the like, so that everyone is able to concentrate on their work and contribute to their full potential.

PERSONAL PROTECTIVE EQUIPMENT

SCOPE
This procedure establishes training guidelines pertaining to the selection, use, maintenance, and storage of personal protective equipment (PPE), including, but not limited to safety shoes, hard hats, gloves, hearing protection, and eye protection. Retraining of PPE selection, use, maintenance, and storage will be done if PPE is 1) involved in a near-miss or incident 2) new PPE is introduced 3) unsafe use is observed.

EYE PROTECTION
Ric-Man Construction FL, Inc. requires 100% eye protection for all employees on the construction site. Except during breaks if there is no work being performed in the area. As a minimum, safety glasses must be worn in all areas except completed office facilities, compounds, and parking lots.

- All safety glasses must have side shields and comply with the current issue of ANSI Z87.1.
- Lenses of all safety glasses must be marked with the manufacturer’s trademark. Frames must have “Z87” stamped on the front and both temple pieces.

Prescription Glasses
All prescription glasses worn in lieu of safety glasses must comply with ANSI Z87.1 and must have rigid side shields or the use of over glasses will be required. Side shields may be fixed or detachable.

FACE PROTECTION

All personnel must be equipped with face protection appropriate for the task being performed.

Face Shields - Required to be worn with the hardhat when performing activities such as the following:

- Using powder-actuated tools
- Handling chemicals, corrosives, or molten materials*
- Concrete chipping, grinding, abrasive cutting, etc.
- Always wear safety glasses under the face shield. Face shields protect only the face and do not meet ANSI Z87.1 requirement for eye protection. Face Shields are required to be worn with the hardhat.

Mono Goggles - Required when performing activities such as the following:

Handling chemicals, corrosives, or molten materials*

*NOTE: For activities like those with asterisks, BOTH mono-goggles and face shield are required to be used together.

Welding Shields
Use an approved welding shield with no less than a #10
filter plate and safety lenses on both sides during all welding operations. Welding shields are required to be worn with the hardhat.

Burning Goggles
ANZI-Z87.1 designed burning goggles shall be worn to provide employee protection from injurious light radiations. A number 6 lens shade is considered adequate for routine torch cutting activities.

HEAD PROTECTION
An approved hard hat shall be worn in all Hard Hat Areas.

EXCEPTION: Hard hats are not required when operating mobile equipment, such as when the operator is in a FULLY closed cab. Overhead protection will also require the wearing of hard hats.
Hard hats must be worn with a brim in the front. No employee shall wear hard-hats backwards. Unless hard hat suspension is turned reversed.

EXCEPTION: Hard hats may be worn with the brim in back to accommodate a welding helmet or a face shield or when operating a surveying instrument.
Hardhat suspension shall always be mounted with the adjustment (knob) in the back.
Employees are required to inspect head protection prior to use, and ensure the equipment is in safe condition. Equipment that is defective or damaged shall not be used and immediately replaced. Inspect for: Dents, Cracks, Torn, Loose or worn suspension straps.

HAND PROTECTION
Gloves must be always worn when working with tools, carrying out manual work, etc. for protection against cuts and abrasions. Gloves must not be worn when performing tasks where glove use would increase the possibility of injury, such as working on rotating equipment.

FOOT PROTECTION
As a minimum, substantial leatherwork boots with safety toes (steel or polycarbonic) are required to be worn by all personnel on the Project. Except completed office facilities, compounds, and parking lots.
Special purpose (crush resistant, chemical, and die-electric) footwear shall be used to provide protection from such hazards.

HEARING PROTECTION
Hearing Protection shall be worn by employees exposed to noise levels that exceed 85 dB, 8-hour time-weighted average. Hearing Protection shall be worn by employees performing designated high noise level tasks or activities.

CLOTHING
High Visibility Clothing (orange/lime green) vest is required to be always worn in the construction site.

OTHER PROTECTIVE EQUIPMENT
Personal Fall Arrest System equipment must be used where specified in
“Continuous Fall Protection.” Fall protection must be inspected prior to use and inspected for any cracks, burns, tears or other forms of deterioration. In the event anything is discovered it shall be removed from service and replaced.

Respirators must be used where specified in “Respiratory Protection.” Other Personal Protective Equipment shall be used where specified by supervision/management.

LADDERS

SCOPE
This procedure outlines general information on specifications, inspections, care, and use of portable ladders. Metal ladders are prohibited on this project. All ladders must meet Federal, State and Local guidelines including but not limited to OSHA, NIOHS and ANSI regulations.

DEFINITIONS
Extension Trestle Ladder - A self-supporting portable ladder, adjustable in length, consisting of a trestle ladder base and a vertically adjustable extensions section, with a suitable means of locking the sections together
.
Ladder, Type I - Portable ladder that supports at least 250 pounds (113 kilograms) of weight.
Ladder, Type IA - Portable ladder that supports at least 300 pounds (135 kilograms) of weight. Trestle Ladder - A self-supporting portable ladder, non-adjustable in length, consisting of two sections hinged at the top to form angles with the base.

INSPECTION
All ladders shall be visually inspected before use and to identify signs of wear, misuse, abuse, deterioration, etc. Any signs of such, the ladder shall be immediately removed from the job site(s)
The use of ladders with broken or missing rungs, broken or split side rails, or other faulty or defective construction is prohibited.

EQUIPMENT
All ladders must be of Type IA construction, 250-pound (113kg) capacity.
Purchased ladders must meet the requirements set forth in the following ANSI or equivalent local standards.
Do not use metal ladders around electrical services or welding. (see also ANSI Standard A14.2). Only non-conductive ladders (wood, fiberglass) may be used near energized electrical lines or equipment.
The use of job-made ladders is discouraged. However, if there is a practical need for a job-made ladder, follow the provisions of MIOSHA and OSHA CFR 1926.450.

Stepladders shall not be used as straight ladders.
Ladders & ladder sections shall never be tied or fastened together to provide.
additional length unless designed to do so. Short ladders must not be spliced together to make longer ladders. Sections of extension ladders shall not be taken apart and used separately. All straight and extension must be equipped with non-skid safety feet. Where ladders are to be used on grating (decks), the ladders shall be equipped with extra-wide non-skid safety feet that cannot slip through the spaces in the grating.

Always open stepladders fully, set ladder level on all four feet, and lock spreaders in place.
Ladders shall not be used horizontally or as makeshift scaffolds.

USAGE
Two or more employees shall not work from the same ladder unless it is.
specifically designed for that purpose.
All straight and extension ladders must be secured (tied off to a secure anchorage).
The ladder must be held while being erected until it is securely tied off.
Never lean a ladder against unsafe backing such as loose boxes or barrels.
Ladders shall be placed so the distance from the foot of the ladder to the base of the wall or other support is approximately one fourth of the working length of the ladder or at a 4:1 slope/angle.
Portable ladders shall be placed on a substantial level base, and the area around the top and bottom of the ladder shall be kept clear.
The top of the ladder must extend at least three feet beyond the transfer point or platform if used to access an elevated work area, or a grab rail must be provided.
Portable ladders shall be placed on a substantial level base, and the area around the top and bottom of the ladder shall be kept clear of trash, tools, and equipment.
If a ladder is to be placed where the opening of the door may be displaced, the door shall be locked or guarded using a barricade.
While ascending, descending a ladder, face the ladder and always maintain three points of contact, e.g., two feet and one hand. Do not reach any farther than one arm's length from the ladder.
Never lean from side to side or away from the ladder. Always keep both feet and at least one shoulder within the rails of the ladder. Move the ladder as work progresses to avoid overreaching.
Keep both feet on the ladder rungs or steps. Do not place one foot on a line or piece of equipment and the other on a ladder rung or step. Keep ladders free of grease, oil, mud, and similar substances that can create a hazard to users. Do not carry anything that will prevent holding on to both hands. Use a hand line, ½ inch or greater in diameter to raise and lower tools or equipment. Employees shall not work higher than the third rung from the top on a straight or extension ladder. Do not place tools or material on steps. Use a tool container.
The following steps are required for work from portable ladders when the worker's feet will be more than twenty-four (24') above the deck on which the ladder stands. (This does not consider working above the guardrail or the ladder close to the edge of the building. Where the employee could fall to a lower level six (6) feet or greater fall protection should be used.
The worker, wearing personal fall protection, climbs the ladder to the point at which the ladder is to be tied off.

NOTE: Until the ladder has been tied off, a second worker holding the ladder must brace the ladder securely.
Upon reaching the ladder tie-off point, the worker shall secure the lanyard from his/her personal fall arrest system to a suitable anchorage.

NOTE: NEVER secure a personal fall arrest system to a portable ladder.
Next, the worker ties off the ladder.
Next, the worker hoists up any tools and equipment needed for the job, using a lift (hoist) line.
When the work has been completed return the ladder to proper storage area.
Steps are repeated IN REVERSE ORDER to remove the ladder. NOTE: The worker's lanyard is the last item to be released before the worker climbs down from the ladder.

POWDER-ACTUATED AND PNEUMATIC FASTENING TOOLS

SCOPE
This procedure outlines the safety requirements for operating, inspecting, and storing both powder-actuated and pneumatic fastening tools.

DEFINITIONS
Indirect-Acting Tool - A type of powder-actuated fastening tool that uses the
expanding gas of the powder cartridge to trigger a captive piston that drives the fastener into the material. The fastener is driven by piston inertia. Once free of the piston, the fastener alone has insufficient inertia to produce free flight.

Live Rock - Rock or stone in its natural state, unwrought and unaltered.

Low-Velocity Tool - A type of powder-actuated fastening tool in which the velocity of the fastener is less than 328 feet (100 meters) per second at 6.5 feet (2 meters) from the muzzle. Powder-Actuated Fastening Tool - A tool that uses an explosive powder charge (load) to drive fasteners into various materials; also known as a stud gun
.
POWDER-ACTUATED TOOLS
Use only indirect-acting, low velocity tools. The use of powder-actuated fastening tools must meet ANSI 10.3-1985.

Training
Operators must be thoroughly trained in operating, maintaining, and selecting fasteners for powder-actuated fastening tools. No one is permitted to use any powder actuated tool unless they have a current operator's license issued by a licensed instructor. When operating the tools, operators must carry a card or license stating that they have successfully completed the training course. The card or license must specify the model(s) they are qualified to operate.

Operations
Use only fasteners and cartridges in the powder-actuated fastening tools for which they are manufactured.
Use only tools with all the built-in safety features including shields or guards that cannot be removed without making the tool inoperative.
The operator and workers must wear safety glasses with side shields, full-face shields, and hearing protection.
The operator must also wear foot guards if driving fasteners into material that might fall and strike his or her feet. Do not use powder-actuated fastening tools to drive fasteners into surface- hardened steel, cast iron, glazed brick, hollow tile, cinder block, marble, granite, live rock, or similar extra hard, brittle, or fragile materials.
Do not store or use tools and cartridges in or around explosive or Flammable atmospheres.
Do not load powder-actuated fastening tools until just prior to the intended firing time.
When not in use, all powder activated tools must be properly stored, in their carrying case. A tool shall never be left unattended in a place where it would be available to unauthorized persons. Never point powder-actuated fastening tools at anyone. Operators should always know what is on the other side of the materials being fastened, particularly if they are driving fasteners near holes or if they might miss the target.
When blind spots exist, Operators should consider posting warning signs on the opposite side of the material.

Maintenance

In accordance with the manufacturer's recommended procedure, test the tools each day prior to use to see that the safety devices are in proper working condition.
Follow the manufacturer's recommendations concerning maintaining and inspecting powder- actuated fastening tools, including how to replace parts. Storage
Store tools in a safe place, away from flame or heat, and where they are accessible only to authorized personnel.
Keep cartridges of different power levels in separate compartments or containers.

PNEUMATIC TOOLS AND EQUIPMENT

Training
Employees who will use pneumatic tools as part of their task shall receive training in the proper use of that specific tool.

Operation
Employees must follow safe practices for operating pneumatic tools, including the following:
Before assembling the system check all hoses for cuts, breaks, and loose connections.
Blow out all hoses before hooking up the equipment. If the connector has a rubber seal, remove it before (and replace it after) blowing.

When possible, run air lines through areas with little traffic. If possible, avoid laying lines across roads. Protect airlines or hoses against trucks and pedestrians either by building runways over the hose or suspending the hose overhead with the lowest part of the hose at least 7 feet (2 meters) above the ground.
Tighten hammer-joint connections with a hammer. Do not tighten them by hand. Hoses equipped with special connections require special tightening techniques or equipment. One example is hammer-union connections, which must be tightened with a hammer. Another example is spanner-wrench connections, which must be tightened with a spanner wrench. Do not tighten these connections by hand.
Do not turn on air valves until the hose connections are secure.
Do not point an open-air hose at anyone.

Compressed air shall not be used for cleaning purposes except were reduced to less than 30 psi, and then only with effective chip guarding and proper personal protective equipment. It shall never be blown against clothing, and any part of the body or used to clean/dust off personnel.
Unless the equipment has quick-change connectors (with internal check valves), shut off the air at the air supply valve ahead of the hose before breaking the connection.

Equipment

At a minimum, pneumatic tools must meet the following standards:
Hand-held pneumatic tools greater than 1/2 inch (1.3 centimeters) interior diameter must have an approved safety check valve or an excess flow valve installed at the manifold outlet of each supply line.
All air hose connections over 1 inch (2.5 centimeters) in diameter must be equipped with safety chains that must be secured when the connection is made.
All connections must be pinned or chained to prevent whipping should a disconnection occur.
Safety clips or retainers must be installed on all pneumatic tools to prevent the tool's accessory from accidentally discharging from the barrel.
All pneumatically driven Nailers, staplers, and other similar equipment provided with automatic fastener feed, operating at greater than 100 psi pressure at the tool must have a safety device at the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.
An internal check valve must be on the regulator side of the pneumatic system to avoid creating a live hose when the regulator is quickly disconnected from the hose. Check for the recheck valve.
For installing air couplings on tools, an 18-inch to 24-inch (45 to 60 centimeter) section of hose should be

permanently coupled to the tool. The quick-disconnecting coupling should be installed on the opposite end, creating a permanent hose whip that is attached to the tool.
The use of pneumatic hoses for hoisting or lowering tools is not permitted.

SAFETY AUDITS

SCOPE
This procedure outlines the requirements necessary for effectively auditing a site's safety processes and practices In order to use audits to their full potential, written reports from contractors' audits need to contain some common information. The objective of this procedure is to spell out what common information needs to be contained in audit reports. It also contains a few principles and some recommendations, which should be considered by all groups performing audits.

REQUIRED AUDITS
Each contractor/subcontractor personnel will audit their worksite area at least monthly and document results. Audit forms to be kept by the contractor/subcontractor for review.

DESIGNING THE AUDIT
Design each audit to look at people; what they are doing and how they are doing it, and what they are not doing that they should be doing; observe the activities of people first and then the work conditions.
Give each audit a focus. While all activities are subject to an audit, there should be one item that is given an in-depth review. The focus should be chosen from the items that are causing the most incidents on the given job site. Choosing a focus also helps avoid the natural inclination to focus on the first violation observed. Discuss the focus with the audit team as part of the audit design. A briefing sheet or checklist may be helpful.
Plan the areas to be audited and assign responsibilities to the team members. Each audit team should have a designated leader and a scribe. Limit the number of members conducting the audit. Team members should include:

- Site Safety Representative
- Site Supervisor
- SUBCONTRACTOR(S) representative
- Hourly field employee

Site Safety Representative shall analyze audit reports to detect trends, shifts or failures in the Safety Management System. Leading indicators are defined as follows:

- Compliance with site procedural requirements
- Orientation
- JHA process
- Compliance with site safety requirements in the following key areas:
- Fall Protection/Ladder Safety
- Mobile elevated work platforms
- Control of Hazardous Energy
- Scaffolding
- Excavation/Trenching
- Project specific PPE requirements
- Project specific health requirements
- Leading indicators will be evaluated and documented regarding safe and unsafe behaviors. Trends will be identified and where needed; changes implemented to address negative trends.
- Trailing Indicators
- Trailing indicators will include:
- Near Hit reports

- Injury statistics include first aid, recordable and lost time injuries.

SCAFFOLDING

SCOPE
This procedure establishes guidelines for the erection, inspection, and use of scaffolds.

DEFINITIONS
Competent Person - An experienced contractor craftsperson or engineer, who has demonstrated his or her ability or competency to erect and inspect scaffolding.

ERECTING, MODIFYING AND DISMANTLING SCAFFOLDS
Only trained workers under the supervision of a competent person may erect, modify, or dismantle scaffolds.
Unauthorized workmen are subject to disciplinary action for modifying scaffolding.
A registered professional engineer must design any scaffolding exceeding 125 feet (38 meters) in height.
Fall arrest systems shall be used while erecting, modifying, or dismantling scaffolds. Tie off points are the scaffolding being built.

Before erecting and during dismantling, trained scaffold craftsmen shall inspect all scaffold components.
Scaffold components shall be straight and free from bends, kinks, dents, and severe rusting.
Components found with defects will be discarded and replaced immediately.
The footing or anchorage for all scaffolds shall be sound, rigid, and capable of supporting the loaded scaffold without settling or displacement. Unstable objects such as barrels, boxes, loose bricks, or concrete blocks will not be used to support scaffolds. The total load on a scaffold base consists of the sum of the weight of the workers, tools, equipment, and materials on a scaffold plus the weight of the scaffold.
All welded tubular frame scaffolds must be equipped with 6 x 6-inch minimum steel base plates with an internal fixing spigot. Barrels, boxes, kegs, and similar unstable objects must never be used as work platforms or to support scaffolds. Install adjusting screws only between the baseplate and the vertical frame section.
Do not extend adjustment screws beyond 12 inches (30 centimeters). Never use cross braces as substitutes for handrails or midrails. When the height of a scaffold exceeds three times the smallest width of the base, secure it to the building or structure at every other lift and every 30 feet (9 meters) horizontally.

Equip scaffold-working platforms with 42-inch (1 meter) high handrails, midrails, and toe boards, all secured rigidly. Working platforms should be completely decked with safety planks, manufactured scaffold decking, or laminated wooden planks.

All scaffolds must be at least two planks wide.
All scaffolds require 100% planking between support posts.
No employee may work from a single plank.
Scaffold planks must be properly secured from movement.
Access ladders must be provided for each scaffold.
Climbing off the end frames is prohibited unless their design incorporates an approved ladder. To allow access to the working platform in this manner, the ladder built into the end frames may be used if uniform rung spacing between frames can be achieved.
Tube frames that do not provide uniform rung spacing must be equipped with offset ladders for platform access.
When portable straight or extension ladders are used for access to tube-and-coupler scaffolds, the proper 4-to-1 slope shall be maintained to avoid a horizontal tube interfering with the use of the ladder.
Ladders used for access to a scaffold must also extend at least three feet above the landing.
Scaffold users should be able to step off the scaffold access ladder directly onto the working platform.
Provide entry gates for scaffolds to eliminate the need for users to climb over handrails.

If scaffolds are incomplete, a handhold above the platform elevation.
must be provided to allow a safe transition from the access ladder to the working platform. Toe-boards do not satisfy this requirement.
Do not overload scaffolds. Materials should be brought up as needed.
Scaffolds must not be loaded more than their rated capacity.

ROLLING SCAFFOLDS

ALL caster brakes must be locked when the scaffold is not in motion.
Remove all loose materials and equipment from the deck before moving scaffold.
When moving rolling scaffolds:

Get help. Make certain that the route is clear; and watch for holes and overhead obstructions,
No one can ride rolling scaffolds-level scaffold after each move.

SUSPENDED SCAFFOLDS
Approved personal fall protection is required for all occupants of a suspended scaffold and shall be anchored to a fixed safe point of anchorage, which shall be independent of the scaffold and shall be protected against sharp edges and abrasion. All suspended scaffolds or platforms must be equipped with a separate vertical lifeline anchored independent of the scaffold system. Workers must tie off onto this lifeline.

OVERHEAD PROTECTION
Overhead protection is required if employees working on scaffolds are exposed to overhead hazards.

SCAFFOLD INSPECTION
Scaffolding shall be inspected after erection or modification by a Competent Person and tagged per the guidelines below.
Scaffolding also must be inspected at the beginning of each shift either by the craft supervisor using the scaffolding or by a designated Competent Person.
Both the competent person inspection and the daily inspection shall be documented by signing in the spaces provided on the back of the scaffold tag.
Inspect, as a minimum, these components:
Foundation or mudsill for stability
Check for missing and/or damaged handrails, midrails, cross bracing, and steel tubing.
Check weld zones on the scaffold frame for cracks.
Check the ends of tubing for splits or cracks.
Manufactured decks for loose bolts or rivet connections and bent, kinked, or dented frames.
Check plywood surfaces for softening due to rot or wear and for peeling at the edges.
Safety planks for rot, cracks, cuts, and other external damage.
Tie rods or bolts and angle iron cleats
Cams, springs, threaded connections, toggle pins, or other quick-connecting devices.
Casters for rough rolling surfaces, “sticky” swivels, and defective locking
mechanisms.
Cups/rings/rosettes, wedge-pins, and other system-scaffold components.

IDENTIFICATION TAGGING
All scaffolds shall be tagged to properly identify their usage and in accordance with the following:
Green Tag – Signifies the scaffold was built to meet scaffolding regulations and is complete and safe to use.
Inspection Tag – Signifies the scaffold has been inspected daily and meets scaffolding standards. If deficiencies are found, fall protection may be required. Deficiencies and controls will be noted on the tag.
Red Tag - Signifies the scaffolding is incomplete and/or unsafe. It shall not be used except by scaffold erect/modify/dismantle personnel under the supervision of a Competent Person.

No Tag - Signifies the scaffolding is incomplete and/or unsafe. It shall not be used except by scaffold erect/modify/dismantle personnel under the supervision of a Competent Person.

SLINGS AND RIGGING EQUIPMENT

SCOPE
This procedure provides minimum requirements for slings and rigging equipment used for hoisting and material handling.

INSPECTIONS
Daily - Slings and rigging equipment shall be inspected daily and prior to each use by the user to ensure that they are in proper working order.
Damaged or defective slings must be destroyed.
Damaged or defective rigging equipment must be tagged (do not use) and the supervisor notified to replace.
Under no circumstances may slings and rigging equipment in need of inspection or repair remain in service.
Any red or green thread showing the sling shall be put out of service and destroyed.
All Hooks must not be twisted so as not allow latch to operate as designed.
All Hook openings shall be as designed. Any hooks exhibiting failure, stress cracks, elongated openings shall be immediately removed from service/project.

SAFETY FACTOR
Slings and manufactured rigging equipment shall not be loaded more than their rated capacities.
Slings, shackles, and other similar equipment must have a safety factor of five (5). Safety Factor = “Nominal failure load” / “Rated working load”

APPROVAL AND STAMPS
All spreader bars, eye pads, and other custom lifting devices must be engineered, and the design stamped by a Registered Professional Engineer.
No makeshift devices are to be used.

GENERAL REQUIREMENTS
Slings shall not be shortened with knots, bolts, or other makeshift devices.
Sling legs shall not be kinked.
Slings used in a basket hitch shall have the loads balanced to prevent slippage.
Slings shall be securely attached to their loads.
Slings shall be padded or protected from the sharp edges of their loads.
Suspended loads shall be kept clear of all obstruction.
All employees shall be kept clear of loads about to be lifted and clear of suspended loads.
Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.
Shock loading is prohibited.
A sling shall not be pulled from under a load when the load is resting on the sling.
Slings with Flemish eye splices with pressed on fittings are preferred.
Slings that are damaged or defective shall not be used.

TEMPORARY ELECTRICAL INSTALLATION REQUIREMENTS

SCOPE
This procedure outlines the requirements necessary to install and maintain temporary electrical facilities.
All National Electric Code (NEC) regulations pertaining to permanent wiring also pertain to temporary wiring, except as altered or modified by Article 305 of the NEC.

Temporary electrical power and lighting installations are permitted during construction.
The temporary wiring must be removed immediately upon completion of the construction or of the purpose for which the wiring was installed.
The following general precautions apply to the use of temporary wiring:
Install temporary electrical systems so that they are not subject to physical damage. Do not use equipment in poor condition for temporary electrical systems.
Protect flexible cords and cables from accidental damage; avoid sharp corners and projections.
When suspending temporary wiring use non-conductive material.
Protect temporary wiring from overcurrent according to the requirements of Article 240 of the NEC or other recognized code.

SERVICES
Install electrical services according to the requirements of Article 230 of the NEC or other recognized code.

EQUIPMENT
All temporary electrical equipment on the jobsite must be Underwriters Laboratories Listed or approved by an internationally recognized testing laboratory for site application.
Distribution panels must be dead-front type with covered hot terminals properly constructed and grounded.
Before any work is started, establish fuses and breakers capacity, voltage, and frequency of circuits.
Use only explosion proof electrical equipment in Flammable or potentially explosive atmospheres such as confined spaces

INSPECTION
All activities associated with electrical equipment, cables, panels, grounding, tests, etc. must be inspected by a qualified inspector.
Only qualified electricians are authorized to issue permits, repair electrical equipment, make electrical connections, etc. Field repairs or tampering with electrical equipment by unauthorized persons will not be tolerated.
All electrically operated equipment must be visually checked by the user daily and before each use.
All electrical equipment should be formally inspected by a qualified electrician at least monthly or more often if conditions found during inspections warrant it.
Such inspection includes a continuity test of the grounding conductor (as applicable) and completes examination of the equipment/system to assure good and safe operating conditions.

No electrically operated equipment is to be used unless it is in proper and safe operating order.
Check all cords to all electrical tools and all cords to electrical equipment to ensure they are serviceable and properly grounded.

ELECTRICAL WORK
Do not work on electrical equipment if clothing is wet or any part of the body is in contact with water.
Water must not be used on electrical equipment fires. Whenever possible, de-energize electrical equipment before fighting fire.
Notify all affected personnel when the power is turned off, and again before it is turned on.

LIGHTING
Adequate lighting is required for any work after dark. No Lighting, No Work.
5 Foot Candles -General construction area lighting.
5 Foot Candles - Indoors: warehouses, corridors, hallways, and exit ways.
5 Foot Candles - Tunnels, shafts, and general underground work areas: (Exception: minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of Mines approved cap lights shall be acceptable for use in the tunnel heading)
10 Foot Candles - General construction plant and shops (e.g., batch plants, screening plants, mechanical and

electrical equipment rooms, carpenter shops, rigging lofts and active storerooms, barracks or living quarters, locker or dressing rooms, mess halls, and indoor toilets and workrooms).
30 Foot Candles - First aid stations, infirmaries, and offices.
Temporary portable lighting used in damp and/or hazardous locations and confined areas with low ground resistance must be operated at a maximum of 12 volts, unless protected with Ground Fault Circuit Interrupters.
Bulbs or lamps must not exceed the allotted wattage for that fixture.
Ensure that bulbs are screwed firmly into their sockets.
Convenience outlets shall not be installed on any temporary lighting circuits.
Temporary lighting must have guards over bulbs.

GROUNDING
Grounding devices should be engineered and installed for each site.
Any equipment or structure on which electric charges may accumulate, such as portable generators or storage tanks, must be grounded.

CABLES
Enclose and protect all uninsulated conductors.
High voltage (600 volts or more) must be properly protected and identified using approved signs.
Cord sets must have heavy duty insulation, weather, and sun resistance with a ground conductor.
Cord sets must be free of splices.

TRENCHING AND EXCAVATIONS

SCOPE
This policy and procedures apply to all excavation, trench or earthwork that takes place within various locations of the Project.

DEFINITION OF EXCAVATION
Within the scope and applications of this policy and procedure (and because of environmental issues), the definitions apply to excavations made in the earth’s surface more than 5 feet in depth or 1 cubic yard of soil. Excavations are defined to include a trench.

EXCAVATION PERMIT
The contractor/subcontractor shall properly complete, sign, date and distribute the Excavation and Trenching Daily Inspection Report prior to the start of work. The contractor/subcontractor may not begin the excavation without a completed permit. Permits will be supplied by Ric-Man Construction FL, Inc.
NOTIFICATIONS
Notify required personnel and utilities prior to excavating.

SAFETY
Contractors shall identify special precautions for employees that are required to work within an excavation or trench, 5 feet or greater in depth, when there is evidence of soil contamination, or a potential exists for this type of hazard.

Excavation, trench, or earthwork requires compliance with OSHA. A competent person shall be utilized for this type of work within the Project.
When oxygen deficiency or a hazardous atmosphere exists in an excavation or trench (or could reasonably be expected to exist) which is greater than 5 feet in depth,
no employee shall enter without proper personal protective equipment specifically for protecting the person from atmospheric hazard (see Personal Protective Equipment).
An excavation, trench or earthwork may meet the definition of a Confined Space. Should this be the case, an Entry Permit will be required.

COMPETENT PERSON
An excavation, trench, or earthwork greater than 5 feet in depth shall have a competent person assigned to the job who shall be provided by the excavation contractor.
This person shall control the excavation work and be capable of identifying existing and predictable hazards in the surrounding or work area and have the authorization to take prompt corrective measures to eliminate them.

PROTECTIVE SYSTEMS
An excavation, trench, or earthwork of 5 feet deep and greater shall have a protective system capable of protecting employees from cave-ins from material that could fall or roll from an excavation face or into the excavation, or from the collapse of an adjacent structure.
Note: This protective system shall meet the requirements of OSHA and shall be provided by the excavation contractor.

SLOPING, BENCHING OR SHORING
Sloping, benching, or shoring for excavations greater than 20 feet deep shall be designed by a Professional Engineer.
Sloping or benching for excavation less than 20 feet deep shall meet the MIOSHA standards.
Timber shoring for trenches less than 20 feet deep shall meet the requirements of OSHA.
Aluminum hydraulic shoring for trenches less than 20 feet deep shall meet the requirement of OSHA.

SOIL CLASSIFICATION
Soil classification for excavations shall be classified by a competent person assigned to the job. When soil conditions change, the soil classification shall be reevaluated.
The soil shall be classified as Type A, Type B, or Type C in accordance with OSHA.
Where there is a potential for cave-in, the excavation contractor shall provide adequate protective systems to prevent a cave-in.

COMPETENT PERSONS RESPONSIBILITY
The contractor/subcontractor competent person is the person assigned to control the work as the competent person for an excavation, trench, or earthwork.
Posting the permit at the job site for the duration of the work for an excavation or trench that is 5 feet or greater in depth into which an employee shall enter.
Controlling the work and identifying existing and predictable hazards in the surrounding work area associated with the work. Taking prompt corrective measures to eliminate any hazards Controlling only authorized persons to enter the excavation or trench. Complying with the requirements of OSHA for excavation, trenches, and earthwork, including (but not limited to): Protecting open excavations to safeguard employees from falling into an opening. Providing access and egress ladders, ramps, or stairways in trench excavations that are 5 feet or more in depth, and no more than 25 feet of lateral travel for an employee. Daily inspections of excavations by a competent person prior to the start of work and as needed throughout the shift. Providing fall protection were employees or equipment are required to cross over excavations, walkways, or bridges with standard guardrail. Providing adequate barrier physical protection. Providing protective systems for employees in excavations for cave-ins by an adequate protective system designed in accordance with MIOSHA (except when excavations are made entirely in stable rock), or excavations are less than 5 feet in depth, and examination of the ground by a competent person provides no indication of a potential cave-in. Determining soil classification for sloping or benching systems and timber or aluminum hydraulic shoring when used in accordance with the requirements of MIOSHA as a method to protect employees from cave-in.
Ensuring no employee enters an excavation or trench greater than 5 feet in depth until an Excavation, Trench and Earthwork Permit is issued to the Contractor Representative the Operations Representative according to this Policy and Procedure.
Removing (pumping) any water from the excavation before entering.

DEFINITIONS

Aluminum Hydraulic Shoring means a pre-engineered shoring system comprised of aluminum hydraulic cylinders used in conjunction with vertical rails.

Bank means a mass of soil rising above a digging level.

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

.

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

.

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

Competent Person means one who can identify existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. Cross braces mean the horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or walls.

Excavation means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal. Faces or Sides means the vertical or inclined earth surfaces formed because of excavation work.

Failure means the breakage, displacement, or permanent deformation of a structural member or connection to reduce it structural integrity and its supportive capabilities. Hard Compact means all earth material not classified as running soil.

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

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

Lagging means boards which are joined, side-by-side, lining an excavation.

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

Ramp means an inclined walking or working surface that is used to gain access to one point from another and is constructed from earth or from structural materials such as steel or wood. Registered Professional Engineer means a person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer, registered in any state is deemed to be a “registered professional engineer” within the meaning of this standard when approving designs for “manufactured protective systems” or “tabulated data” to be used in interstate commerce.

Running Space means earth material where the angle of repose is approximately zero, as in the case of soil in a nearly liquid state, or dry, unpacked sand which flows freely under slight pressure. Running material also includes loose or disturbed earth that can only be contained with solid sheeting.

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

Shield (Shield System) means a structure that can withstand the forces imposed on it by cave-in and, thereby, protect employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, shields can be either per-manufactured or job-built in accordance with MIOSHA. Shields used in trenches are usually referred to as “trench boxes” or “trench shields”.

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

Sides (see Faces).

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

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

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

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

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

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

Trench Box (see “Shield”) Trench Shield (see “Shield”)
Uprights means the vertical members of a trench shoring system placed in contact with the earth and usual positions so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called “sheeting”.
Wales means horizontal members of a shoring system placed parallel to the excavation face whose sides bear against the vertical members of the shoring system or earth.

BARRICADES

SCOPE
This procedure establishes guidelines for the use and installation of protective and warning barricades. All excavations shall have “protective barriers” instead of barrier tape or snow fencing.

A.) BARRICADES
Barricades are required around excavations, openings in floors, walls, or roof areas, edges of platforms and certain types of overhead work. Three types of barricades to be used will be the following:

Warning Barricades
These offer no physical protection but serve to alert personnel in the area that a hazard is present. The following are suggested hazard warnings that should be utilized such as signs, tags, permits, tape, etc.
Warning barricades must be set back 6 feet minimum from the hazard.
If 6 feet is not available, a protective barricade must be used.

Protective Barricades
These not only warn of a hazard but, provide physical isolation or protection from the hazard. Examples include guardrails or cables set at the proper height around an opening, jersey barriers etc.
Barricade tape will not be used in place of guard rails.

Hole Covers
A hole cover conforming to the following is acceptable:

WELDING AND BURNING

SCOPE
This procedure provides basic guidelines for electrical welding operations and oxyfuel burning. Only certified/qualified Welders will operate welders. Before cutting metals, employees must at the end of training.
DEFINITIONS
Flame-Resistant Material - A material that burns slowly or is self-extinguishing after the external source of ignition is removed.
Hot work permit- Required for all welding, cutting, grinding, open flames, sparking devices etc. They can be obtained from the Ric-Man Construction FL, Inc. initiating work or from the area Maintenance Supervisor, Safety Manager, or designee.
QUALIFIED OPERATORS
If welding or cutting is done in an area where sparks or molten metal has the possibility of contacting ignitable materials, a fire-watch shall be posted to watch for any problems with the welding.
The fire-watch shall be equipped with at least one 20-pound ABC fire extinguisher.
The fire-watch shall be trained in the use of the fire extinguisher.
The fire-watch shall remain on post for at least 30 minutes after the welding/cutting is completed.
Welding or burning in a hazardous area shall only be done if an appropriate Permit has been issued for the work.
The Site Safety Representative will be notified by the contractor/subcontractor.
when working in a hazardous area where a Hot Work Permit procedure is in place and is enforced for all welding or burning.
Employees engaged in welding or burning shall have access to at least one 20-pound ABC fire extinguisher within no more than 25 feet of the operation.
Every employee who is expected to be able use a fire extinguisher shall be trained in the use of the fire extinguisher. Training can be conducted in orientation.

WELDING OPERATIONS

Leads

Inspect welding leads prior to use to ensure that the insulation is not damaged, and that the conductor is not exposed.
Repair or discard damaged cord sets.
Repairs shall be made by a qualified person, using only correct repair materials.
Only cable free from repair or splices for a minimum distance of 10 feet from the cable end to which the electrode holder is connected shall be used.
To eliminate the possibility of partially exposing a connection while installing the leads, male and female connectors may need to be taped or otherwise restrained from separating.
Welding leads shall not be tied in a knot.
Welding leads shall not be secured to supports with conductive ties (wire, welding rod, etc.)
Leads must be removed from vessels and other confined spaces anytime they are not actively used.

Grounding

Install two leads to the work location, supporting them with non-conductive materials. Ground leads for electric arc welding shall be located as close to the welding area as possible to minimize secondary arcs.

Portable Welding Machines

Welding machines shall be shut down any time the job is left unattended.
Welding machines shall be shut down when they are being refueled.
When a portable welding machine includes a receptacle for convenience power:
If the voltage is alternating current, the receptacle must be replaced with a ground fault interrupter (GFCI).
If the voltage is direct current, the receptacle must be removed or otherwise disabled.

Personal Protective Equipment

The arms and shoulders of welders and welders' helpers shall be protected against sparks and molten metal.
Gloves appropriate for the work shall be worn.
"Soft-Cap" welding is not allowed. Hard hats with welding hoods are required.
Welding hoods shall be equipped with appropriately shaded filter lenses. #10 shade or darker is required.
Safety glasses shall be worn under all welding hoods.

BURNING OPERATIONS

When removing regulators from or attaching regulators to oxygen cylinders, keep all sources of oil and grease (e.g., dirty gloves) away.
Check Valves and flame Arresters are required.
Directly attach reverse-flow check valves and flame arresters to the torch and the regulator.
Oxygen and acetylene bottles valves must be closed any time the equipment is not actively used.
Bleed off pressure from torch hoses when the torch is not actively used.
Gas hoses must be removed from vessels and other confined spaces anytime the equipment is not actively used. At the end of the shift, or when the work is complete, remove the regulator from the cylinders, replace the protective cylinder caps, and cap the regulator threaded compression nipples to prevent dirt and foreign material from entering the system.
Store the torch, hoses, and regulators in a clean, dry, oil-free area and in a manner to protect them from physical damage.

The operator must inspect the equipment prior to each use. In particular, the operator should look for leaks, burns, worn areas, and other defects.

STORAGE AND HANDLING OF COMPRESSED GAS CYLINDERS

The valve protective caps must be kept on all cylinders not in actual use.
Move or transport cylinders in the upright position.
Use racks or cradles to prevent them from tipping, falling, or dropping.

Use enclosed cages or carrying cradles to lift cylinders from one level to another.

Do not use ropes or slings.
All cylinders must be stored and used in an upright position and adequately secured to prevent tipping.
Oxygen and acetylene (or other fuel gas) cylinders in storage must be separated from each other by 20 feet (6.1 meters) or by a five-foot (1.5 meter) high barrier which has a one-hour fire rating.
Cylinders must not be taken into confined spaces.

SMOKING
Smoking, spark-producing work, and open flame activities are not allowed within 20 feet (6 meters) of any cylinder storage area containing cylinders of Flammable gas.
Post signs prohibiting these activities in cylinder storage areas.

VENTILATION AND PROTECTION
Employees welding, cutting, or heating metals of toxic significance shall use airline or other approved filter-type respiratory protection.
Welding, burning, and heating performed in confined spaces requires general mechanical or local exhaust ventilation to reduce the concentrations of smoke and fumes to acceptable levels.
If adequate ventilation cannot be provided, employees must be provided with and required to use proper respiratory protective equipment.
When sufficient ventilation cannot be obtained without blocking the means of
access, employees must be provided with adequate respiratory protective equipment.
Each material's Material Safety Data Sheet shall be reviewed to determine the appropriate ventilation and respiratory protection required.

ADDITIONAL REQUIREMENTS
When arc-welding is being done near other workmen, they must be protected from the arc rays by noncombustible screens or they must wear proper eye protection.
Make sure that the equipment is shut down and a fire extinguisher is available during refueling.
Do not use matches or cigarette lighters to light torches. Spark igniters must be used.
Torches must not be used to light smoking materials.
Appropriate fire-resistant gloves must be worn when burning or welding.
When a crescent or special wrench is required to operate the acetylene cylinder valve, the wrench must be kept in position on the valve.
Keep all welding leads and burning hoses up off floors, walkways, and stairways.
The use of rebar tie-wire (16 gage) to support leads, hoses and cords is prohibited.
Use of rope will prevent damaging the leads or hoses.

WORKING ON OR NEAR WATER

Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard-approved life jacket or buoyant work vests.
Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.
Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations.
Distance between ring buoys shall not exceed 200 feet.
At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

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EMERGENCY PREPAREDNESS

Emergency Procedures and Job-site Emergency Plan
For ALL Emergencies, the number shall be posted at the job-site office and bulletin boards.

At the time of announcement, all non-emergency personnel should proceed to their appropriate field office(s) or Foreman's truck. All employees should be familiar with the location of all emergency equipment and the nearest evacuation route. The evacuation areas are dependent upon where the emergency is and the wind condition. In the event one of the field offices is impacted by the emergency, the Project Manager will provide clear instructions as to where to respond safely. A repeated announcement will identify safe field office(s) to report. As with any emergency, stay upwind and crosswind of the emergency. Once everyone has evacuated, then accountability of all personnel shall be initiated by their immediate supervisor.

Medical Incidents:
All injuries regardless of how small must be reported immediately to Ric-Man Construction FL, Inc. Company/Site Safety Representative. If the injury is serious, activate the emergency notification system by calling and reporting a medical emergency to 911. While emergency personnel are responding, have someone stay with the injured and ensure the surrounding area is safe.

RETURN TO WORK

Safety Management will address procedures for implementing worker Early Return to Work following work-related injuries. Project management is committed in bringing injured employees back to work quickly and safely to meaningful work that will not aggravate the injury or illness. This improves and shortens the healing process and reduces the financial burdens during the recovery period. Contractors will attempt to accommodate all temporary work restrictions.

This program is designed to return all employees to work as soon as they are physically able following a work-related injury or illness. It is designed for temporary transitional placement of employees.

Generally
Employees must immediately report all work-related accidents and injuries to their supervisor.
Safety Superintendents must complete and submit an accident investigation within 24 hours of the accident.
Employees who receive medical treatment for a work-related injury must initiate treatment at the company-specified clinic. Following the clinic appointment physician restrictions must immediately be reported to the Safety Superintendent.
When the physician recommends specific temporary restrictions in physical exertions more than 7 days, the employee will participate in the company Transitional Return to Work Program, with transitional duties beginning on the eighth day.

The treating physician determines what duty is appropriate for the restrictions. The physician should be contacted for clarification if the employee believes the work to be beyond restrictions. Failure to report for transition return to work duty may terminate disability benefits.

Employees should schedule follow up physician appointments and clinic visits outside of regular work hours. Failure to attend and participate in physician-ordered medical appointments without notice is a violation of a work rule (i.e., no call/no show Transitional work assignments are temporary and are intended to progress the employee's return to full duty status. Transitional assignments will be reviewed monthly with respect to employee's progress and continued participation in the Transitional Program.

If an employee is notified of job availability and fails to report for it, the employee may jeopardize their benefits under worker's compensation as well as their employment as a no call/no show.

ENVIRONMENTAL MANAGEMENT

Our Obligations to teach and train all aspects of environmental management associated with the construction works shall be the responsibility of Ric-Man Construction Florida, Inc., its employees, associates, and subcontractors. This encompasses all stages of construction from pre-construction planning through to the construction works, commissioning and final hand-over to the Client. This includes ensuring that all necessary licenses and/or consents are obtained for the construction works from the relevant authorities, including those for temporary activities and discharges. Construction works shall be conducted in such a way as to minimize any adverse environmental impacts of those works throughout their duration. The following sections represent the minimum requirements and procedures required of all during the construction process.

Ric-Man Construction Florida, Inc. shall comply with all relevant Laws, environmental legislations, regulations and employer policies and procedures, aspects and impacts for the project have been defined; these shall be reviewed at the Pre-construction meeting

Environmental Control and Monitoring There are several specific environmental issues to be considered prior to, during and after the Project:

- Noise and Vibrations
- Pollution
- Emissions and Discharges
- Fuel and Chemical Management
- Control of potential spills
- Waste Management
- Storm Water Pollution Prevention Plan (SWPPP)
- National Polluant Discharge Elimination System (NPDES)
- Recycle and reuse materials as legally allowed.

Atmospheric Pollution
During construction activities the principal considerations in respect of atmospheric pollution involve potential dust nuisance and the release of other air pollutants associated with aerial emissions. The general objective for the management of potential impacts in respect of atmospheric pollution shall be to carry out the works, so far as is reasonably practicable, to minimize emissions to air of dust and other pollutants, including odor, in accordance with appropriate legislation and Ric-Man Construction Florida, Inc. guidelines.

DUST CONTROL

The following is a brief list of example control measures and design criteria:

Sprinkling/irrigation. Sprinkling the ground surface with water until it is moist is an effective dust control method for most sites, particularly on haul roads and other traffic routes where other dust control methods may not be possible.

Vegetative cover. In areas that construction staff do not designate for vehicle traffic, vegetative cover reduces wind velocity at the ground surface, thus reducing the potential for dust to become airborne.

Mulching can be a quick and effective dust control method for a recently disturbed area.
Wind breaks. Wind breaks are barriers (either natural or constructed) that reduce the velocity of wind through a site, thereby reducing the number of particles the wind suspends. Wind breaks can be trees or shrubs that construction staff leave in place during site clearing or constructed barriers such as wind fences, snow fences, tarp curtains, hay bales, crate walls or sediment walls.

Deep tillage in large open areas brings soil clods to the surface where they rest on top of dust, preventing it from becoming airborne. ν Stone. Stone can be an effective dust deterrent for construction roads and entrances or serve as mulch in areas that cannot establish vegetation.

Chemical soil stabilization (palliatives). There are several different categories of chemical soil treatments: water absorbing, organic non-petroleum, organic petroleum, synthetic polymer emulsion, concentrated liquid stabilizer and clay additive. Factors to consider when selecting a chemical application for dust suppression include biodegradability, soil suitability, and impacts to wildlife and environmentally sensitive areas.
Stone. Gravel can reduce soil losses by 95 percent compared to stabilized soils (MPCA, 2019).
Spray-on chemical soil treatments (palliatives). The effectiveness of polymer stabilization methods is highly variable and depends on site characteristics, climate and the specific chemical soil treatment. Sites should follow manufacturer specifications to achieve maximum effectiveness.

RUBBISH CONTROL

Keeping the Project clean and healthy is a priority job.
Install and maintain all waste containers. Put appropriate trash in allocated wasted bins.
Sweep streets and control litter.
Coordinate daily, weekly, and monthly clean-ups.

SANITATION

Toilets shall be provided for employees according to the following table:

Number of employees	Minimum number of facilities
20 or less	1.
20 or more	1 toilet seat and 1 urinal per 40 workers.
200 or more	1 toilet seat and 1 urinal per 50 workers.

Hand soap or similar cleansing agents shall be provided.
No employee shall be allowed to consume food or beverages in a toilet room nor in any area exposed to a toxic material.

NOISE CONTROL

Ric-Man Construction Florida will abide by all local and contractual noise control measures.
Ensure all manufacturers' exhausts system are in working order.
Maintain "soft" closure on dump truck gates.
Wherever it is not feasible to reduce the noise levels or duration of exposures to those protective devices shall be provided and used.

Employees shall take all reasonable steps to avoid the creation of dust nuisance by making provision for; The screening, enclosure and spraying of stockpiles of soil, rubble, and construction materials, especially in dry, windy conditions.

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BLOOD BORNE PATHOGENS

This Blood borne program is implemented and maintained at each work site. Ric-Man Construction FL, Inc. Safety Representative shall have full authority and responsibility for implementation and execution throughout operations. Project managers shall have full authority and responsibility for implementation and execution within their areas/Projects of control.
All employees will have access to this Exposure Plan.
All employees and affected personnel shall receive blood borne exposure Safety Program training. In addition, employees and affected personnel shall receive appropriate PPE specific to their assigned work sites.
All training records will be kept for a period of 3 years.
All employees shall be trained to realize that exposure to bodily fluids (Blood, Saliva, etc.) may infect their own bodily fluids.
All universal precautions (properly worn PPE) will be used to eliminate possible infection.
If consent is given by the employee Hepatitis B vaccinations will be made available
All medical records will be maintained for 30 years.
All training records will be kept for a period of 3 years.

Employees shall not handle potentially hazardous chemicals unless they have been properly trained and instructed to do so.
Employees shall immediately alert proper facility officials if a substance of unknown origin is spotted.

Documentation of the route of exposure and the circumstances related to the incident.
If possible, the identification of the source individual, and, if possible, the status of the source individual. The blood of the source individual will be tested (after consent) for HIV/HBV infectivity.
Results of the testing of the source individual will be made available to the exposed employee.
Ric-Man Construction Florida will provide HBV and HIV serological counseling, and safe and effective post-exposure prophylaxis following the current recommendations of the U.S. Public Health Service.
Thoroughly clean all areas that were/may been affected by bodily fluids.
Remove all clothing/PPE into a plastic trash bag that is placed in another plastic bag that was/may have been exposed to bodily fluids and disposed of.

Employees shall immediately report all blood borne releases or exposures to their immediate supervisor or proper facility official.
Each company operation and jobsite shall establish emergency response and evacuation plans per company

Emergency Preparedness Program.
All containers shall have the appropriate label, tag or marking prominently displayed that indicates the identity, safety, and health hazards.
Each jobsite shall have a copy of the Safety Data Sheet (SDS) and Globally Harmonize Systems (GHS) for each hazardous chemical present. This will include Subcontractors.
All sites with more than 5 people will be provided handwashing facilities to include anti-bacterial cleaners.
All Foreman vehicles will have soap/Sanitizer gel/towelettes available for crews.

DRIVER SAFETY PROGRAM

SCOPE
Ric-Man Construction Florida's vehicle program describes our guidelines for using company.
vehicles. A "company vehicle" is any type of vehicle our company assigns to employees to support their needs for their jobs. Company vehicles belong to our company, and we want to make sure our employees use them properly.
This program refers to all our employees who are eligible to receive a company vehicle and those who drive one as part of their daily job duties.
Policy elements
Employees who may be assigned a company vehicle.
Employees who are eligible to be assigned a company vehicle fall into three categories:
Employees who use company vehicles as an indispensable part of their jobs (e.g., truck drivers and Foremen, etc.).
Employees who are given a company vehicle as a benefit attached to their jobs.
In most cases, we will determine which employees will be assigned company vehicles. Employees who are not assigned company vehicles but believe they need one may discuss this with their supervisor or consult with our Chief Operation Officer
We retain the right to revoke or assign company vehicles at our discretion. Prerequisites to drive a company vehicle.
Our employees are only allowed to drive a company vehicle if they:
Have a valid driver's license.
Have a clean driving record for at least 3 years. This means they must not have been held at fault for a vehicle accident or arrested on charges of violating vehicle and traffic laws e.g., driving under the influence of drugs or alcohol).
Employees will need to complete a form and submit a copy of their driver's license to be eligible for a company vehicle.

Driver's obligations
We expect employees who drive company vehicles to follow the rules. They should:
Drive safely and sober.
Respect traffic laws and fellow drivers.
If applicable, wear glasses or contacts when driving.
Document any driving-related expenses, like fuels and tolls.
Check their vehicle regularly to ensure gas, tire pressure and all vehicle fluids are at appropriate levels.
Report any damage or problems with their assigned vehicles to HR as soon as possible.
Avoid double-parking, blocking entrances, and engaging in other traffic violations that may result in fines.
Bring the vehicle to scheduled maintenance appointments.
All occupants must always wear seat belts.
Secure all loads internally and externally.

If employees have their driver’s licenses suspended or revoked, they must inform our HR representative. We have the option to reassign their company vehicle until they become eligible to drive in accordance with our policies.

Employees who are fatigued and/or sick should avoid driving if they feel their driving ability is impaired. If sickness occurs during a business trip that requires the use of a company vehicle, employees should take regular breaks while driving or ask HR for overnight accommodation, if needed.
Employees are not allowed to:
Smoke inside of a company vehicle.
Lease, sell or lend a company vehicle.
Violate distracted driving laws by using a phone or texting while driving.
Use a company vehicle to teach someone how to drive.
Leave the company vehicle unlocked, unattended or parked in dangerous areas.
Allow unauthorized people to drive a company vehicle unless an emergency mandates it.
Do not drive while intoxicated, fatigued, or on medication that affects your driving ability.

Accidents
If employees are involved in an accident with a company vehicle, they should contact our Safety Department immediately, so we can get in touch with our insurance provider. Employees should not accept responsibility or guarantee payment to another party in an accident without company authorization.
Employees should follow legal guidelines for exchanging information with other drivers and call local police if accidents are serious.

Disciplinary Consequences
Employees will face disciplinary consequences if they do not follow this policy’s rules. For minor offenses, like allowing unauthorized people to drive a company vehicle or receiving more than [two] fines, we may issue reprimands and ultimately revoke the company vehicle.
We may terminate an employee and/or take legal action as needed for more serious offenses. That can include leasing out a company vehicle for personal financial gain or causing an accident while driving intoxicated.

HEARING LOSS PREVENTION PROGRAM

This Hearing Loss Prevention Program encourages all Ric-Man Construction Florida, Inc. (RMCF) employees and subcontractors to minimize the risk of noise-induced hearing loss to employees. Essential parts of the program are to Identify and assess areas and activities where employees may be exposed to:

- high noise levels that may exceed 85 decibels (dBA) averaged over an eight-hour period. extreme noise levels of 115 dBA at any time (greater than one second) extreme impact noise levels of 140 dB (less than one second) Reduce or control noise using engineering and administrative controls, where feasible.
- Post signs at noisy areas and require hearing protectors. Identify employees who need hearing protection.
- Provide hearing protectors to employees and train them in their use.

- Provide baseline and annual audiometric hearing exams to employees.

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- If employees are exposed to noise above 90 dBA averaged over the work shift, implement engineering or administrative controls. See Reducing Hazards from noise (OSHA).
- Ensure individuals exposed to noise levels at or above 85 dBA averaged over an 8-hour work shift are enrolled in the Hearing Loss Prevention Program, receive training and medical surveillance annually.

Assist employees and supervisors in selecting proper hearing protection devices and provide annual training on use.
Assist with proper area signage.
Provide audiometric hearing tests within 90 days of PEL exposure(s) and annually thereafter.
Provide information and training on noise hazards and hearing conservation.

Maintain records as required.

INCLEMENT WEATHER

Storm Hazard Awareness
When warned by the Weather Forecast, the Project Safety Manager/Field Construction Manager will designate an observer to monitor real time weather radar and warn the site when appropriate.
www.noaa.gov will be utilized for primary weather information.

THUNDERSTORMS
Thunderstorms are almost a daily occurrence in the summer but may occur anytime of the year. High winds and lightning are a certainty. Project personnel will monitor the storm progress toward the vicinity of the site. Personnel will be informed by the Project Superintendent to abandon scaffolding, formwork, cranes, and other areas where lightning may likely strike when the storm is approximately 2 miles from the site. The Field Construction Manager will inform line managers when they may return to work.
Daily clean-up and proper bundling and stabilization of stored material must be maintained to minimize the possibility of debris and materials becoming airborne.

TORNADO
Take refuge in the designated sheltering structure on the site. Avoid window and door openings.

DO NOT SEEK SHELTER IN VEHICLES, CONEXES OR TRAILERS

Operations of mobile cranes are to be suspended. Booms should be laid down if time permits or the load line hooked to the structure at some low point. The equipment should be left, and refuge taken in a shelter.
If the site is hit by a tornado, the Damage Survey Crew members listed in the Hurricane Plan will survey the site for damage before authorization to return to work is given. The area Superintendent will determine how and who will initiate repairs before the general workforce returns to their stations.
When returning to workstations, all personnel should proceed with caution and inform their supervisors of downed power lines, washed out scaffold mudsills, and other storm damage they may encounter.

HURRICANE PREPARATION AND REACTION PLAN.
The Project Manager is responsible for these preparations and implementation of these plans. All the line managers will assist the Superintendent as directed. The site will not be occupied during the storm if it is in the hurricane path. Preparations will be made in time for personnel to prepare for the storm at their homes.
Preparations. Prepare a system to inform employees of when to return to work. (A company website with a bulletin or discussion board, etc.)

TUNNELS, SHAFTS, CAISSONS, AND COFFERDAMS

Scope

This part applies to the construction, modification, and major repair of tunnels, shafts, caissons, chambers, passageways, and cofferdams, any other aspect of tunnel construction, and the use and maintenance of equipment. This part does not apply to routine maintenance of an existing structure; excavation and trenching operations This section also applies to
cut-and-cover excavations which are both physically connected to ongoing underground construction operations within the scope of this section and covered in such a manner as to create conditions characteristic of underground construction.

Definitions:

Atmospheric pressure means the pressure of air at sea level, usually 14.7 p.s.i. (1 atmosphere) or zero p.s.i.
Auger tunnel means a tunnel that is excavated by use of a continuous flight auger system, with or without a sleeve or other type of liner.
Bulkhead means an airtight structure separating the working chamber from free air or from another chamber under a lesser pressure than the working pressure.
Caisson means either a generally vertical foundation unit below grade or a chamber placed in the ground or water for excavating earth and in which it is possible for a person to work under air pressure greater than atmospheric pressure to excavate material below water level.
Cofferdam means a temporary structure used to control the flow of water and other material during construction operations.
Competent person means a person who is experienced and capable of identifying existing and predictable hazards in the surroundings or under working conditions which are hazardous or dangerous to an employee, and who has the authority and knowledge to take prompt corrective measures to eliminate hazards.
•**Compressed air** means an environment that has a pressure greater than atmospheric pressure.
Decanting means a method used for decompressing under emergency circumstances. In this procedure, the employees are brought to atmospheric pressure with a very high gas tension in the tissues and then immediately recompressed in a second and separate chamber or lock.
Emergency lock means a lock designed to hold and permit the quick passage of an entire shift of employees.
Escape-only respirator means a respirator intended to be used only for emergency exit.
High air means air pressure used to supply power to pneumatic tools and devices.
Man lock means a chamber through which employees pass from 1 air pressure environment into another.

Materials lock means a chamber through which materials and equipment pass from 1 air pressure environment into another.

Occupied tunnel means any tunnel entered by 1 or more employees.

Pressure means a force acting on a unit area, usually shown as pounds per square inch (p.s.i.). **Qualified person** means a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

Safety screen means an airtight and watertight diaphragm placed vertically across the upper part of a compressed air tunnel between the face and bulkhead to restrain sudden flooding of the crown of the tunnel between the safety screen and the bulkhead, thus providing a means of refuge and exit from a flooding or flooded tunnel.

Shaft means a vertical or inclined opening excavated below ground level, that is for the purpose of tunnel operations.

Tunnel means a generally horizontal excavation or facility more than l4 inches in diameter, width, or height and more than 6 feet in length below ground or water. Facilities used for the acquisition of minerals, ores, and fossil fuels, which are commonly known as mines, are excluded from this definition.

Working chamber means the space or compartment under air pressure in which the work is being done.

General Safety

- The employer shall inform oncoming shifts of any hazardous occurrences or conditions that have affected or might affect employee safety, including liberation of gas, equipment failures, earth or rockslides, cave-ins, flooding, fires, or explosions.
- A safe means of egress and access to all work areas shall be provided and maintained free of hazards.
- Form scrap material, lumber that has protruding nails, and all other debris shall be kept cleared from the work areas, passageways, stairs, locks, and change houses.
- Combustible debris shall be removed daily during construction.
- If a haulage roadbed consists of track and ties, a walkway shall be made. The walkway shall be a minimum of 2 2-inch planks, side by side, abutted, joined, and secured to a tie or other equivalent means. If space is not adequate for 2 2-inch by 10-inch planks, then the walkway shall be as wide as space permits.
- When work is not being performed, access to an underground opening shall be covered, bulkheaded, fenced off, or restricted by gates or doors and appropriately posted.
- Any section of the tunnel that is not in use shall be barricaded to prevent ingress by an unauthorized employee.
- The power source to a tunneling machine shall be disconnected or locked out when an employee is working in the cutting head or performing maintenance work on the tunneling machine where motion could cause an injury.
- An area subject to subsidence that is hazardous to an employee shall be fenced and appropriately posted.
- Each operation shall have a check-in and check-out system that will provide positive identification of an employee by number or name and will identify the location of each employee who is underground. An accurate record shall be kept on the surface.
- Any time an employee is working underground and least one designated person will be on duty above ground
- Tunnel/Shaft illumination to be provided by explosion -proof electrical cords, receptacles and bulbs at 20-foot intervals
- Air monitoring systems will be placed at intervals within audibled distance of all workers

All employees shall be instructed in the recognition and avoidance of hazards that are

associated with all the following underground construction activities:

- Air monitoring.
- Ventilation.
- Illumination.
- Communications.
- Flood control.
- Mechanical equipment.
- Personal protective equipment.
- Explosives.
- Fire prevention and protection.
- Emergency procedures, including evacuation plans and check-in and check-out systems.

ENTERING THE WORK AREA

- Before an employee enters a tunnel or shaft, a Confine Space Permit must be completed, and the results shall be recorded. The records shall be maintained at the jobsite. If the atmosphere is hazardous, either sufficient ventilation to eliminate the hazard shall be provided or respiratory equipment shall be worn.
- If an atmosphere is found to be explosive, then sparks, flames, and other sources of ignition shall be prohibited, and ventilation shall be provided until the hazard has been reduced and maintained at or below the maximum allowable limits. An occupied auger or pipe jacking tunnel shall be monitored for air quality immediately before entering the tunnel and during the period of occupancy in the tunnel.

EMERGENCY PROVISIONS; plans; equipment; rescue crews.

- An audible alarm that will notify workers to evacuate the tunnel in an emergency. The evacuation procedures are to be covered in orientation.
- The contractor or subcontractor shall ensure that rescue teams are familiar with conditions at the jobsite.
- On jobsites where 25 or more employees work underground at one time, there shall be or provide, or decide in advance with locally available rescue services.
  to provide, not less than 2 5-person rescue teams. One of the teams shall be on the jobsite or within ½ hour of travel time from the entry point and the other team shall be within 2 hours of travel time from the entry point.
- On jobsites where less than 25 employees work underground at one time, there shall be or provide, or decide in advance with locally available rescue services to provide, at least 1 5-person rescue team. The team shall either be on the jobsite or be within ½ hour of travel time from the entry point.
- On jobsites where flammable or noxious gases are encountered or anticipated in hazardous quantities, rescue team members shall practice donning and using self-contained breathing apparatus.
- An emergency hoisting facility, such as crane or similar, shall be readily available at a shaft that is used as a means of egress, unless a hoisting means is provided that is independent of an electrical power failure. The hoisting means shall be designed so that the load hoist drum is powered in both directions of rotation and so that the brake is automatically applied upon power release or failure.

- An employer shall provide an escape-only respirator that is a self-contained breathing apparatus with a minimum of a 5-minute air supply. Respirators shall be approved. by the National Institute for Occupational Safety and Health as prescribed in the provisions of 42 C.F.R. Part 84, Public Health Service, revised October 1, 2001. Escape-only respirators shall be immediately available for each employee at workstations in underground areas where employees might be trapped by smoke or gas.
- There shall be a rescue crew for each shift of all underground operations. The rescue crew shall be trained in rescue procedures, the use and limitations of a breathing apparatus, and the use of firefighting equipment.
- The crews shall be retrained at least once each year. Local fire and police personnel may be used as rescue teams for tunnel operations. If local personnel are to be used, then the employer shall arrange for assistance before the start of the project.

- The following minimum rescue equipment shall be provided at the top of the shaft:
    - self-contained breathing apparatus.
    - Explosions proof flashlights or lanterns with additional batteries for each light.
    - Two 2A-10BC fire extinguishers.
    - One stretcher, wire basket type or equivalent with slings attached.
    - One fire blanket.
    - One first aid kit

At least 1 employee shall be on duty above ground when an employee is working underground. The primary duty of the employee who is above ground shall be to secure immediate aid for an employee who is underground in case of an emergency.

COMMUNICATION SYSTEM; location; signals

- In a tunnel that is more than 225 feet long, a communication system shall be provided at all the following locations:
- The working face.
- The top of the shaft.
- The bottom of the shaft.
- The hoisting station, if provided.
- Each 1,000 feet of tunnel.
- A public telephone, cell phone or other communication system shall be provided or available to each tunnel project to secure outside emergency help.
- Hoist operators shall be provided with a closed-circuit voice communication system to each landing station. The system shall have speaker microphones located so that the operator can communicate with individual landing stations during hoist use.
- An employer shall establish and maintain direct communications for coordination of activities with other employers whose operations at the jobsite affect or may affect the safety of employees who are underground. If a tunnel is pressurized, then all the following additional locations shall also be provided with a communication system:
- The working chamber side of the man lock near the door.

- The interior of all locks.
- The lock attendant's station.
- The compressor plants.
- The first aid station.
- Communication systems shall be tested upon initial entry of each shift to the underground, and as often as necessary thereafter, to ensure that they are in working order. An employee who works alone underground in a hazardous location and who is both out of the range of natural unassisted voice communication and not under observation by other persons shall be provided with an effective means of obtaining assistance in an emergency.
- When a hoist house is provided, there shall be a second independent method of signaling, either audibly or visibly, to the hoist engineer from all landings in the shaft or slope.
- If a gassy condition exists, then all phones that are located within the tunnel shall conform to the United States Bureau of Mines Schedule 9b, Part 23 of the provisions of 30 C.F.R. Parts 1-199, Mineral Resources, http://www.msha.gov/30cfr/23.0.htm
- The telephone or other signal communication systems shall be independent of the tunnel power supply and shall be installed so that the use or disruption of any one phone or signal location will not disrupt the operation of the system from any other location.

PROTECTIVE CLOTHING OR EQUIPMENT

- An employee working in a wet shaft, tunnel, or caisson shall wear safety toe rubber boots which have flat gripper-type soles. An employee working in a shaft, tunnel, or caisson shall wear a protective helmet.

ELECTRICAL REQUIREMENTS

- A powerline shall be well separated or insulated from water lines, telephone lines, and air lines.
- Lighting circuits should be located so that the movement of personnel or equipment will not damage the circuits or disrupt service.
- Temporary electrical power and lighting installations shall be permitted during the period of construction, remodeling, maintenance, repair, or demolition of buildings, structures, equipment, or similar activities which are located at ground level, and which are part of facilities used for the construction of tunnels, shafts, and cofferdams.
- Power cable shall have a loose connector emergency shutdown ability.
- Power cable shall have a ground fault emergency shutdown ability.
- The power cable shall have an arc between phases emergency shutdown ability.
- Oil filled transformers shall not be used underground unless they are in a fire- resistant enclosure suitably vented to the outside and surrounded by a dike to retain the contents of the transformer in the event of rupture.
- All electrical power circuits that supply portable or hand-held tools, lights, or equipment shall be protected by approved ground-fault interrupters.
- The regular system of illumination shall be supplemented by lighting that can be activated upon the failure of the regular system. Supplemental lighting, such as approved flashlights or lanterns, shall be sufficient to allow all employees to evacuate the tunnel.

- Smoking and open flames are prohibited. An employer is responsible for collecting all personal sources of ignition, such as matches and lighters, from all persons.
- Not more than a 1-day supply of diesel fuel shall be stored in a tunnel or shaft. Gasoline
- or liquefied petroleum gas shall not be taken in a tunnel or shaft. Acetylene or methylacetylene propidine stabilized gas may be used underground solely for welding, cutting, and other hot work.
- The piping of diesel fuel from the surface to an underground location is permitted only if all the following provisions are complied with:
- Diesel fuel is contained at the surface in a tank with a maximum capacity that is not more than the amount of fuel required to supply, for a 24-hour period, the equipment that is serviced by the underground fueling station.
    - The surface tank is connected to the underground fueling station of an acceptable pipe or hose system that is controlled at the surface by a valve and at the shaft bottom by a hose nozzle.
    - The pipe is always empty, except when transferring diesel fuel from the surface tank to a piece of equipment in use underground.
    - Hoisting operations in the shaft are suspended during refueling operations if the supply piping in the shaft is not protected from damage.
- Acetylene, liquefied petroleum gas, and methylacetylene propidine stabilized gas may be used underground only for welding, cutting, and other hot work.
- Not more than the amount of fuel gas and oxygen cylinders necessary to perform welding, cutting, or other hot work during the next 24-hour period shall be permitted underground.
- Not more than the amount of fuel gas and oxygen cylinders necessary to perform welding, cutting, or other hot work during the next 24-hour period shall be permitted underground.
- Leaks and spills of flammable or combustible fluids should be cleaned up immediately.

- Oil, grease, or diesel fuel that is stored in a tunnel or shaft shall be kept in tightly sealed containers in fire-resistant areas at safe distances from explosives, magazines, electrical installations, and shaft stations. Electrical installations in underground areas where oil, grease, or diesel fuel are stored shall be used only for lighting fixtures. Lighting fixtures in storage areas, or within 25 feet (7.62 meters) of underground areas where oil, grease, or diesel fuel are stored, shall be approved for class I, division 2 locations.
- Fire-resistant hydraulic fluids shall be used in hydraulically actuated underground machinery and equipment. To this requirement, a fire-resistant hydraulic fluid means any liquid which has a flash point above 200 degrees Fahrenheit and which has a vapor pressure of not more than 40 p.s.i. (absolute) at 100 degrees Fahrenheit.
- An approved 4A:40B:C rating fire extinguisher or equivalent protection shall be provided at the drive pulley of an underground conveyor and at 300-foot intervals along the belt. A minimum of 2 2A-10BC approved fire extinguishers shall be provided at the tunneling machine.

- A pressurized tunnel in which combustible materials are stored or used shall be equipped with a 2-inch minimum diameter water line with an outlet that is connected to a 1 ½-inch nominal diameter fire hose which can reach the combustible materials. The water supply shall be of sufficient volume and pressure to efficiently operate the type of nozzle used on the fire hose for a minimum of 1 minute. Fire extinguishers may be substituted for the water and fire hose if they meet the requirements for the water service.
- All the following are additional requirements for gassy operations:
    - Only acceptable equipment, maintained in suitable condition, shall be used in gassy operations.
    - Mobile diesel-powered equipment used in gassy operations shall be either.
    - approved as prescribed in the requirements of 30 C.F.R. Part 36, Mineral
    - Resources, revised July 1, 2000, which is adopted by reference in R408.41410 or shall be demonstrated by the employer to be fully equivalent to the Mine Safety and Health Administration approved equipment and shall be operated in accordance.

    - Each entrance to a gassy operation shall be prominently posted with signs notifying all entrants of the gassy classification.
      • A minimum of 1 approved 2A-10BC fire extinguisher shall be provided for each electrical, diesel, or hydraulic powered machine used in a tunnel or shaft.
    - A noncombustible barrier shall be installed below welding or burning operations.
    - In an underground operation, local gas checks shall be made before and during a welding or cutting operation and during a drilling operation that would penetrate the tunnel.
    - If more than .25% of methane by volume or 5% of the LEL, lower explosive limit of a flammable gas or petroleum vapor is detected, then the welding, cutting, heating, or drilling operation shall cease until the hazard has been eliminated.
    - A fire watch shall be maintained around welding and cutting operations until all possibility of fire is eliminated. The fire watch shall be provided with a minimum of 1 approved 2A-10BC fire extinguisher.
    - Flammable materials or supplies, other than those used during 1 shift, shall not be stored within 100 feet (30.48 meters) of any tunnel or shaft opening. If this is not feasible because of space limitations on the jobsite, then such materials may be located within the 100-foot limit, if both of the following provisions are complied with:
        (a) The materials are located as far as practicable from the opening.
        (b) A fire-resistant barrier of not less than a 1-hour rating is placed between the stored material and the opening or additional precautions are taken that will protect the materials from ignition sources.
    - A head frame shall be constructed of steel or other fire-resistant material. A hoist house and other temporary surface building or structures within 100 feet of the shaft, caisson, or tunnel opening shall be built of fire-resistant materials that have a fire resistance rating of not less than 1 hour.

- Ground support; inspections; repairs.
- A qualified employee shall inspect the roof, face, and walls of portals, work areas, and haulage ways, or travel-ways at the start of each shift and frequently thereafter as needed. If loose soil or rock or fractured material is encountered, then it shall be scaled or protected and supported. The employee conducting the inspections shall be protected from lose ground by location, ground support, or equivalent means. Suitable protection shall be provided for employees exposed to the hazard of loose ground while installing ground support systems. Support sets shall be installed so that the bottoms have sufficient anchorage to prevent ground pressures from dislodging the support base of the sets. Lateral bracing (collar bracing, tie rods, or spreaders) shall be provided between immediately adjacent sets to ensure added stability. Damaged or dislodged ground supports that create a hazardous condition shall be promptly repaired or replaced. When replacing supports, the new supports shall be installed before the damaged supports are removed. A shield or other type of support shall be used to maintain a safe travel way for employees working in dead-end areas ahead of any support replacement operation.
- A scaling bar shall be in good condition. A blunted or severely worn bar shall not be used.
- A torque meter and a torque wrench shall be available where rock bolts are used for ground support. Frequent tests shall be made to determine if the bolts are tight. The test frequency shall be determined by rock conditions and distance from vibration sources.
- A damaged or dislodged tunnel support shall be repaired or replaced when structural integrity is impaired. A new support shall be installed if possible before removing damaged supports.
- Tunnel supports shall be designed and installed to prevent pressure from pushing them inward into the excavation.
- Roof supports shall be used where ground conditions are such that there could be a ground failure ahead of tunnel sets.
- A tunnel that is to be occupied by employees shall be provided with a steel casing, concrete pipe, timber, or other material of required strength to support the surrounding earth.
- If an employee is required to enter a tunnel less than 3 feet in diameter, then a lifeline for instant rescue shall be securely fastened to his or her ankles. Another employee shall be stationed at the tunnel entrance to operate the lifeline. In addition, ventilation shall be provided by an airline.

Shafts; supports; inspections; lifelines.

A shaft that an employee is required to enter shall be provided with steel casing, concrete pipe, timber, or other material that is strong enough to support the surrounding earth.

For rescue operations, a lifeline shall be securely fastened to a safety harness on each employee who enters a shaft that is less than 4 feet in diameter.

A shaft that is more than 5 feet in depth shall be braced to support the surrounding earth. The bracing shall be provided to the full depth of the shaft, or, if rock is encountered, to not less than 5 feet into solid rock, and shall extend not less than 1 foot above the ground level. After a blasting operation, the bracing shall be inspected. If the bracing is found to be unsafe, then corrections shall be made before the shift operations are continued.

A shaft or caisson shall be protected with a guardrail system, fall protection, or barricaded. A gate opening into the shaft shall be provided and shall be always closed, except when necessary to enter or leave the shaft or caisson.

Drilling; inspection

- Drilling equipment that is to be used during a shift shall be inspected each shift by a
- qualified employee. Equipment defects affecting safety shall be corrected before the equipment is used.
- The drilling area shall be inspected for hazards before starting the drilling operation.
- An employee shall not be allowed on a drill mast while the drill is in operation.
- When a drill is moved from one area to another, drill steel, tools, and other equipment shall be secured, and the mast shall be placed in a safe position.
- Drills on columns or stiff legs shall be anchored firmly before drilling is started and they shall be retightened frequently thereafter.
- Drilling zones shall be protected with fall protection.
    - Harness System
    - Caisson 48” above ground at drill point.

Haulage; inspection; braking; riding.

- Haulage equipment that is to be used during a shift shall be inspected by a qualified person before the start of the shift. Known defects that affect the safety of employees shall be corrected before the equipment is used.
- The roadbed, rails, joints, switches, frogs, and other elements of the track of a haulage road shall be constructed, installed, and maintained in a manner that is consistent with the speed and type of the haulage operations to be conducted.
- A track switch shall be provided with a locking or spring-loaded thrown bridle bar and guardrail. The switch throw, where possible, shall be placed on the clearance side, and the switch throw shall operate parallel to the haulage road.
- A powered locomotive or other mobile equipment shall be provided with suitable brakes, an audible warning device for use by the operator as needed, and lights at both ends.
- Powered mobile haulage equipment that is subject to falling materials shall be equipped with a cab, canopy, or other protective device that can protect the operator from shifting or falling materials. For cabs where glazing is used, the glass shall be safety glass, or its equivalent, and shall be maintained and cleaned so that vision is not obstructed.
- Powered mobile equipment shall not be left unattended unless the power is off, all operating controls are in the neutral position, and the brakes are set, or other equivalent precautions are taken to prevent rolling. The operating controls shall be designed to automatically return to a neutral position or shall be equipped with a Deadman control.
- A trolley wire shall be protected from contact with employees. Energized rails shall not be used, except when used as a ground return for a trolley wire. If rails serve as a return for a trolley circuit, then both rails shall be bonded at every joint and cross bonded every 200 feet.
- Backstops or automatic braking shall be installed on an inclined conveyor to prevent the conveyor from running out of control and creating a hazard for the employee. An employee shall not ride on any of the following unless specifically designed or adapted for transporting employees:
    - A power-driven chain, belt, or bucket conveyor.
    - A dipper.
    - Shovel buckets.
    - Forks.
    - A clamshell.
    - The bed of a dump truck.

- Haulage equipment.

- An employee shall not ride haulage equipment unless it is equipped with seating for each passenger and protects passengers from being struck, crushed, or caught between other equipment or surfaces.
- An employer shall not use an endless belt-type man lift in underground construction.
- Cars that are dumped by hand shall be provided with tie-down chains or dumper blocks to prevent the cars from overturning.
- A rocker bottom or bottom-dump car shall be equipped with positive-locking devices.
- Equipment that is to be hauled shall be loaded or protected to prevent sliding or spillage.
- Parked rail haulage equipment shall be chocked or chained if subject to accidental movement.
- Berms, bumper blocks, safety hooks, or similar means shall be provided to prevent overtravel or overturning at dumping locations and, where necessary, at track dead ends.
- Supplies, materials, and tools, other than small hand tools shall not be transported with employees in the same car and shall not be transported on top of a locomotive.
- A refuge station shall be provided not more than every 300 feet where a clearance of 2 feet from moving equipment cannot be provided for employees unless the employees are. prohibited from walking the haulage route during movement of a haulage train along the route.
- A train that is used on an incline which would cause the cars to run out of control shall, in addition to couplings, have safety chains, or the equivalent, to connect the cars and the power haulage equipment in a train. The safety chains or other connections shall be capable of maintaining connection between cars in the event of either coupler disconnect, failure, or breakage.
- When an employee is being transported in a train, the operator shall have clear vision beyond the forward end of the train for safe operation.
- Mobile equipment, including rail-mounted equipment, shall be stopped for manual connecting or service work.
- Employees shall not reach between moving cars during coupling operations.
- Couplings shall not be aligned, shifted, or cleaned when cars or locomotives are moving.
- Where switching facilities are available, occupied personnel cars shall be pulled, not pushed. If occupied personnel cars must be pushed and the visibility of the track is hampered, then a qualified person shall be stationed in the lead car to give signals to the locomotive operator.

PROTECTION FROM FALLING MATERIAL GUIDELINE

SCOPE

This procedure addresses the minimum requirements to protect employees from material falling from height.

HAZARD ELIMINATION

- Only as a last resort should employees work under other employees in elevated locations.
- Positive steps such as those listed below shall be taken to protect those employees working below employees in elevated locations.

TECHNIQUES TO MINIMIZE EXPOSURE

- Limit what is taken to elevated locations.
- Minimize the handling of material by using hand lines, well wheels, cranes, etc. to hoist material to elevated locations versus hand carrying or “handing from employee to employee”.
- Use plywood, chicken wire, orange fencing or similar material along platform or elevated floor railing where material is stored or “staged”.
- The material chosen must be strong enough to withstand the force of the piled material falling against it.
- Secure/contain tools and material that can fall through grating or off platforms or floors.
- Use welding blankets below work areas where small objects are being handled.
- Where possible, barricade the area below elevated work and keep employees out of the barricaded area.
- Use flag- persons / ground-persons when barricading the area below is not practical.
- Band/tie/secure material being stored at heights, which can be blown by winds.
- Use “lanyards” on tools being used over the sides of platforms or floors or over unprotected elevated areas.
- Do not store/place material on beams or pipes unless it is secured.
- Use tool belts to hold tools when climbing heights. Tools should fit securely in the tool belt. Tools must not be field modified, even to keep them from falling.

REQUIRED TRAINING

- All personnel working in elevated locations must be educated in the above techniques.
- All personnel working in elevated locations must be trained to recognize and respond to the hazards associated with the handling of tools and materials in elevated locations.

RESPIRATORY PROTECTION

PURPOSE

This section covers the requirements for the selection, use, training, and maintenance of respirators in use at the project.

RESPONSIBILITIES

Ric-Man Construction Florida and contractors shall administer, train, and evaluate their programs to make sure they are being followed:

PROGRAM REQUIREMENTS

The following topics must be included in all training programs.

- Use of equipment approved by Federal, State, and local regulations.
- Employee health evaluation
- Training workers in the use care and limitations of respirators, including instructions on how to fit and test the respirators.
- Written procedures governing selection and use.
- Monitoring of the overall program to assure respirators are used safely.
- Respirators must be worn in areas where the atmosphere is contaminated or oxygen deficient that may pose an immediate danger to life and health (IDLH)
- Appropriate tests/evaluations must be conducted when such conditions are suspected, especially if condition will have an immediate effect to the employee life and health (IDLH)
- All Respiratory equipment will be handled and stored in compliance to manufacturers recommendations.
- Employees are to use the appropriate type of respiratory protection provided in accordance with instructions and training. All equipment will be inspected prior to use.
- Employees will not be assigned to a task requiring the use of a respirator unless it has been determined that they are physically able to perform the work while using the equipment.

Respirator Selection

The following factors will be considered in selecting a respirator.

- Nature of the hazard
- Extent of the hazard
- Contaminants present.
- Warning properties of the contaminant
- Concentration of the contaminant
- Characteristics and limitations of the available respirators
- Expected activity of the worker.

EMERGENCY USE

In general employees will not use respirators in emergency situations except for escape. If an emergency arises all employees will immediately evacuate the area and report to a safe rally point. Respirators will not be used for emergencies without prior approval of your safety department.

TRAINING

All employees that may be required to wear a respirator must be trained in the proper selection, use and maintenance of respiratory protective equipment. A record of training must be maintained on the site.

FIT TEST

- If Ric-Man Construction FL, Inc. requires the usage of a specific respirator, a fit test on that model will be required.
- Fit testing required all employees to be clean shaven.
- If an employee chooses to utilize a specific respirator, no fit test is required.

OVERHEAD PROTECTION

- Overhead protection is required if employees working on scaffolds are exposed to overhead hazards.
- Such protection must be a two-inch (5 cm) plank or the equivalent.

SUSPENDED WORK PLATFORMS

SCOPE
This procedure establishes guidelines for the use of Crane-Suspended Work Platforms. The use of Crane Suspended Work Platforms will not be allowed without the consent of the Ric- Man Construction FL, Inc. Safety Representative.

DEFINITIONS
Basket – Another term for a crane-suspended work platform.
Controlled Load Lowering - A system or device on the power train of a crane, other than the load hoist brake, that regulates the lowering speed of the hoist mechanism.

Live Boom – A boom in which the lowering of the boom is controlled by a brake, without aid from other lowering-retarding devices.

Qualified Inspector - An experienced craftsperson or engineer who has demonstrated his or her ability or competency to inspect equipment.

Two-blocking - The condition in which the load block or hook assembly is drawn tight to the boom point.

DESIGNING AND CONSTRUCTING A PLATFORM

- A crane-suspended work platform must have the following minimum safety features. An access gate that swings inward and is equipped with a positive latch.
- A grab rail around the entire perimeter.
- The capability of supporting its own weight and at least five times its maximum intended load.
- An enclosed top that is high enough to allow workers to stand upright, protects them from overhead hazards, and inhibits them from climbing out. Perimeter protection consisting of a top rail approximately 42 inches (1 meter) high, a toe board at least 4 inches (10 centimeters) high, and a midrails located approximately halfway between the two.
- The personnel basket must have a guardrail system meeting OSHA requirement and shall be enclosed from the toe board to at least the midrails with either solid material or expanded metal having openings no greater than ½ inch.
- Provisions for tying off body harness lanyards inside the protected perimeter. A rigid suspension system that minimizes tipping when personnel move. The capacity of suspension systems that use four or more legs must be based on any three of the load-bearing legs.
- A conspicuous plate or other permanent marking that shows the weight of the empty platform and its rated capacity.

DIVING

Ric-Man Construction Florida abide by the OSHA standard in 1910.401(a)(2)
This standard applies to diving and related support operations conducted in connection with all types of work and employment, including general industry, construction, ship repairing, shipbuilding, shipbreaking and longshoring.

Our Diving safety plan includes at a minimum: Procedures covering all diving operations specific to the site; procedures for emergency care, including recompression and evacuation; and criteria for diver training and certification.

WORKING IN CONTAMINATED AREAS

RIC-MAN CONSTRUCTION FLORIDA, INC.(RMCF)
provides procedures for site personnel working in and around contaminated and/or potentially contaminated soil and water during the excavation works.
The procedures have been developed to provide a framework for managing the contamination areas on site.
Sub-contractors engaged in Contaminated areas are required to provide their own Health and Safety Plan for their equipment and workers Daily toolbox meetings are to be undertaken and documented.

General safety requirements and training

All relevant personnel shall be required to participate in site orientation and handling of contaminated soil. An appropriately Competent person will be appointed for the duration of the works so that where contamination area is being managed, in addition to the other site-specific health and safety requirements.

The Competent person shall ensure that all relevant personnel are familiar with the application and use of required PPE and procedures specified within
Hazards encountered and not identified during the site induction/toolbox shall be reported to the designated Competent person; Any incidents shall be reported to the Competent Person.
Site personnel shall avoid unnecessary contact with documented and potentially contaminated soil and groundwater; and Site personnel who may encounter contaminated soil shall be provided with the minimum level of PPE as defined under Control Measure of the document.

CONTROL MEASURES

Administrative controls include procedures to reduce the risks associated with the identified hazards. These controls include:

- Job Safety Analysis (JSA) or Task Analysis.
- Isolating/taping off the know areas with barrier tape and signage
- Personal will wear:
- Disposable HazMat suits
- Disposable gloves
- Washable Rubber boats or disposable over shoes
- Respirators + a minimum disposable dust mask shall be available on site)

Hand to mouth and hand to face contact shall be avoided during work; Hands shall be washed before eating, drinking and smoking; Eating, drinking and smoking shall only be permitted in designated areas;

All Hazmat gear shall be properly disposed of and removed from the site.

IDENTIFICATION OF NEW HAZARDS

There is the potential for additional hazards to be identified and encountered during the GTLWTR project. The Competent person is responsible for reviewing any new work element and assessing whether there are any new associated hazards and associated elimination.
The Competent person shall then instruct all personnel on the health and safety procedures associated with the new hazard.

HAZARD MITIGATION PROCESS

Hand to mouth and hand to face contact shall be avoided during work; Hands shall be washed before eating, drinking and smoking; Eating, drinking and smoking shall only be permitted in designated areas; Overalls worn within the works area shall be removed before leaving the works area; and Disposable coveralls may be worn and disposed of at the end of each working day.

MAINTENANCE OF TRAFFIC

Scope of Work

A safety plan for the maintenance of traffic (MOT) during road construction or maintenance projects is crucial to ensure the safety of both the workers and the public. Below is RMCF detailed safety plan that outlines the key elements required for effective traffic management during such activities:

This plan aims to provide a safe and efficient flow of traffic while protecting workers and the public during road construction or maintenance activities.

Roles and Responsibilities

- Project Manager: Oversees the entire project and ensures compliance with safety protocols.
- Superintendent: Responsible for implementing and monitoring the traffic control plan.
- Foreman & Workers: Follow safety guidelines and report hazards.
- Safety Officer: Conducts regular safety audits and ensures adherence to the safety plan.

Traffic Control Plan

- Signage: RMCF will follow all planned use of advance warning signs, detour signs, and any necessary regulatory signs as required.
- Barriers and Cones: RMCF will use minimum National Cooperative Highway Research Program Report 350 or better of cones, barrels, barriers, and barricades to delineate the work zone.
- Lighting: Adequate lighting for night work to ensure visibility.
- Variable Message Signs (VMS): Required use of electronic signs to provide real-time updates to motorists.

Work Zone Layout

- Buffer Zone: Area between the traffic and the work zone to provide a safety margin.
- Transition Area: Section where traffic is directed from its normal path.
- Activity Area: Space where the actual work is performed.
- Termination Area: Where traffic returns to its normal path.

Communication Plan

- Pre-Construction Meetings: Regular meetings to discuss the TCP and safety procedures.
- Public Information Campaign: Use of media, websites, and social media to inform the public about the project.
- On-Site Communication: Use of radios and other communication devices among workers and supervisors.

Safety Training

- Worker Training: Comprehensive training on MOT safety practices, PPE use, and emergency procedures.
- Flagger Certification: Ensure all flaggers are certified according to local regulations.
- Emergency Response Training: Procedures for responding to accidents or emergencies within the work zone.

Personal Protective Equipment (PPE)

- Mandatory PPE: Hard hats, high-visibility vests, gloves, safety glasses, and steel-toed boots.
- Additional PPE: Hearing protection, respiratory protection, and fall protection as required.
- Lighting: Adequate lighting for night work to ensure visibility.

Inspection and Maintenance

- Daily Inspections: Regular checks of traffic control devices and PPE.
- Maintenance of Equipment: Ensure all traffic control devices are in good working condition.
- Record Keeping: Maintain logs of inspections, incidents, and maintenance activities.

Emergency Procedures

- Cease all operation in the immediate area
- Evacuate necessary personnel
- Secure area
- Call 911
- Attend to all injuries
- Contact all pertinent parties
- Process all RMCF reporting incidents policies

Monitoring and Evaluation

- Regular Audits: Conduct safety audits to ensure compliance with the MOT plan.
- Feedback Mechanism: Allow workers and the public to provide feedback on the MOT.
- Continuous Improvement**:** Update the safety plan based on feedback and incident reports.

Compliance and Documentation

- Regulatory Compliance: Adherence to local, state, and federal regulations.
- Documentation: Keep detailed records of the safety plan, training sessions, incident reports, and audits.

INCIDENT REPORTING

All incidents shall be reported via RMCF Accident/Incident policies and procedures

ASBESTOS HANDLING

Preparation and Planning

Risk Assessment:

- Conduct a thorough risk assessment to identify the type, condition, and location of asbestos-containing materials (ACMs).
- Determine if the removal requires a licensed asbestos removal contractor.

Training:

- Ensure all workers involved in the removal are adequately trained in asbestos handling, safety procedures, and the use of personal protective equipment (PPE).
- Provide refresher training regularly.

Regulatory Compliance:

- Obtain all necessary permits and notifications as required by local, state, and federal regulations.
- Develop an Asbestos Management Plan (AMP) that includes procedures for handling and disposing of asbestos.

Work Area Preparation

Containment:

- Set up a regulated work area using plastic sheeting to contain asbestos fibers.
- Seal off HVAC systems and other openings to prevent contamination spread.

Signage and Barriers:

- Place warning signs and barriers to prevent unauthorized access to the work area.

Decontamination Units:

- Establish decontamination units for workers to use when entering and exiting the work area.

Personal Protective Equipment (PPE)

Respiratory Protection:

- Provide appropriate respirators (e.g., P100 respirators) certified for asbestos work.
- Fit-test all respirators to ensure a proper seal.

Protective Clothing:

- Use disposable coveralls, gloves, and footwear that are impermeable to asbestos fibers.
- Ensure all clothing and PPE are disposed of appropriately after use.

Removal Procedures

Wet Methods:

- Wet ACMs with a fine mist of water mixed with a wetting agent to minimize the release of asbestos fibers.

Controlled Removal:

- Use hand tools instead of power tools to reduce fiber release.
- Carefully remove ACMs and place them directly into labeled, airtight containers.

Minimize Breakage:

- Handle materials gently to prevent breaking and further fiber release.

Cleaning and Decontamination

HEPA Vacuums:

- Use HEPA-filtered vacuums to clean the work area and tools.

Wet Wiping:

- Wipe down surfaces with damp cloths to pick up any remaining fibers.

Decontamination Procedures:

- Ensure workers follow strict decontamination procedures when exiting the work area.
- Decontaminate tools and equipment before removal from the work area.

Waste Disposal

Labeling and Packaging:

- Double-bag all asbestos waste in heavy-duty plastic bags.
- Label all bags with appropriate asbestos warning labels.

2. Transport:
   - Transport asbestos waste to a designated, approved disposal site following regulatory guidelines.

Air Monitoring and Final Inspection

Air Monitoring:

- Conduct air monitoring before, during, and after removal to ensure fiber levels remain below permissible exposure limits.

2. Final Inspection:
   - Perform a thorough visual inspection to ensure no asbestos debris remains.
   - Obtain clearance from a qualified asbestos professional before reoccupying the area.

Documentation and Reporting

Record Keeping:

- Maintain detailed records of the project, including risk assessments, training certifications, air monitoring results, and waste disposal receipts.

Reporting:

- Submit required reports to regulatory agencies as necessary.
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Emergency Procedures

Emergency Contact Information:

Refer to the Contact Information

Spill Response:

- Utilize appropriate spill kits
- Use earth dams to prevent run-off
- Secure area

Medical Surveillance:

- All medical records resulting from work activities engaged in Asbestos removal will be maintained for 5 years

Respiratory Crystalline Silica

Scope of Work

Respiratory crystalline silica is a significant hazard in construction environments where activities such as cutting, grinding, drilling, or demolishing materials like concrete, stone, or sand are performed. Inhalation of respirable silica dust can lead to serious health conditions, including silicosis, lung cancer, and other respiratory diseases.

Control Measures

- Exposure Assessment
- Conduct regular air monitoring to assess levels of respirable crystalline silica.
- Identify high-risk activities and areas where silica dust is likely to be generated.

Engineering Controls

- Use water delivery systems to suppress dust at the source during cutting, grinding, and drilling activities
- Implement housekeeping practices to minimize dust accumulation, such as using HEPA-filtered vacuum systems instead of dry sweeping.
- Use water delivery systems to suppress dust at the source during cutting, grinding, and drilling activities.
- Implement local exhaust ventilation systems to capture and remove silica dust if necessary
- Restrict access to areas where silica dust is being generated to only those employees necessary for the task.
- Implement housekeeping practices to minimize dust accumulation, such as using HEPA-filtered vacuum systems instead of dry sweeping
- Provide appropriate respiratory protection to employees working in areas with silica dust exposure, ensuring compliance with OSHA standards.
- Conduct regular fit-testing and training for the use of respiratory protection.

Emergency Procedures

- In case of accidental release of large amounts of silica dust, evacuate the area immediately.
- Implement spill containment measures and use appropriate PPE for cleanup operations.
- Report the incident to the safety officer and conduct an investigation to prevent recurrence

Venomous Snakes and Spider

Scope of Work

Venomous snakes and spiders pose a serious risk to workers on construction sites, particularly in outdoor environments common in Florida. Encounters with these creatures can result in serious injuries or fatalities. Ric-Man Construction Florida, Inc. is committed to protecting employees by implementing measures to prevent and respond to encounters with venomous snakes and spiders.

Preventive Measures

- Site Assessment and Preparation
- Conduct thorough site assessments to identify potential habitats for venomous snakes and spiders.
- Clear vegetation and debris where these creatures may hide, particularly in high-traffic areas.
- Provide training to employees on the identification of common venomous snakes and spiders in the area
- Educate workers on the behavior of these creatures and how to avoid provoking them.

Work Practice

- Encourage employees to wear protective clothing, including long pants, boots, and gloves, when working in areas where snakes and spiders may be present.
- Instruct workers to inspect their work areas and equipment before use, particularly if items have been left unattended.

Pest Control

- Engage professional pest control services to regularly inspect and treat the site for venomous snakes and spiders.
- Use appropriate barriers and repellents around work areas to deter these creatures.

INCIDENT REPORTING

All incidents shall be reported via RMCF Accident/Incident policies and procedures