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Introduction

An effective safety program combined with a quality and efficiently delivered work product is key to the ultimate project success.

The ultimate success of International EHS Project’s safety program relies on the full cooperation of each employee. Work must be performed in a safe manner to protect all employees, visitors, the public and adjacent property. It is the responsibility of both International EHS Project, as the employer, and each individual employee to ensure that all safety procedures are enforced and that effective training and education programs are implemented and used.

This booklet provides an overview of the general safety and health rules, regulations, and policies for working on site (based on the Safety Management System – HSMS). This information is intended to help you perform your assigned work tasks in a safe and productive manner.

The general rules and procedures outlined in this booklet have been developed for our projects. However, they are not meant to be a complete listing, nor do they cover every situation or condition that you are likely to encounter. Your assignment may require special procedures or more specific protective measures. Your supervisor or Project Manager (PM) should provide you with that information as the need arises. Always, if you have questions regarding safety, ask your supervisor, Project Management or Site Safety Representative.
International EHS Project Safety, Health and Welfare Policy

It is the International EHS policy to execute all our activities to ensure the safety, health, and welfare of all International EHS Project's employees, suppliers, and subcontractors.

We will manage and apply our total quality management system in such a manner that every employee involved shall ensure the implementation of proper safety, health, and welfare procedures, practices, and standards.

Care for safety, health, and welfare is a company management value, commitment, and priority. It is the responsibility of management to provide a safe work environment, proper tools, and adequate training.

Our supervisors have the responsibility to stimulate safety, health, and welfare awareness among employees, to manage proper usage of the work environment and tools, and to create a climate in which everyone shares concern for the safety, health, and welfare of their fellow workers.

Our employees are required to execute their work in such a manner as to prevent all circumstances that could lead to incidents that can cause personal injury, illness, or material damage. All employees are responsible for helping achieve our goal of zero incidents.

We will implement this policy, in combination with safety, health, and welfare regulations, standards, and codes of best practice, in accordance with applicable national laws.
International EHS Project Work Rules

Keep in mind these important work rules, which were created to keep you safe:

1. Incidents must be reported to your Supervisor or Site Safety Office immediately. This includes all injuries and/or property damage. International EHS Project will not take responsibility for any injury that is not documented with the safety department before the end of a shift.

2. All employees are required to comply with the requirements of the International EHS Project Substance Abuse Program (SAP), which includes drug and alcohol testing pre-access, for cause, post-accident or incident, and/or at random.

3. Zero Tolerance;

   Failure to comply with site fall protection requirements;

   Failure to comply with lock out/tag out procedures;

   Working in excavations/trenches without required protective Systems (utility locate, sloping, benching, shoring);

   Working near energized power lines without proper safeguarding (de-energization, insulating measures, distance requirements);

   Drug and/or alcohol violation; or

   Reckless driving.
The following are examples of prohibited conduct on the job site, and may result in immediate dismissal.

1. Violation of a zero tolerance safety policy.

2. Possession or use of alcohol.

3. Possession of any and all firearms, ammunition, or lethal weapons.

4. Gambling, raffles, or other games of chance.

5. Threats of violence, intimidation, insubordination, or any type of harassment.

6. Destroying and/or defacing any property belonging to the owner, company, or other employees.

7. Removing from site without written permission any property, including scrap belonging to the owner, company or other employee.

8. Posting unauthorized signs/pictures or placement of graffiti.

9. Sleeping during work hours, loitering, roaming, or leaving the assigned workplace or job site without authorization.

10. Failure to allow vehicle, parcel, or lunch box inspection upon entering or leaving the job site.

11. Refusing to accept work assignments, carelessness, uncooperative conduct, and unsatisfactory work performance.
12. Falsely stating or making false claims of injury

13. Falsifying reports involving personnel, absence, sickness, or termination.


15. Failure to abide by site-specific work rules and/or procedures, including project traffic (blocking access) and parking regulations (onsite parking is in the area as designated for use by contractor employees).

16. Unauthorized use of company vehicle.

17. Fighting and horseplay.

18. Improper use of the phone or two-way communication system.

Electronic communication devices shall not be used when an employee is driving a motor vehicle, operating equipment, working with tools, or performing work aloft unless specifically authorized. Additionally, electronic communication devices shall not be operational when an employee is responsible for providing undivided attention to another company employee. "Electronic communication devices" includes, but is not limited to, cell and smart phones (IPhone, Bluetooth, Note Pads, GPS devises, two-way radios, etc.),
10 Rules to Live By

Safety is everyone's responsibility. Even the best-trained professionals can have accidents. Keep yourself and your coworkers safe:

1. **Think-Use common sense.**

2. **If you don't know, ask!**

3. **If you can't perform the task safely, don't do it.**

4. **Perform a thorough Pre-task Plan.** If something changes, conduct another meeting with all crew members before continuing.

5. **Always use the right tool and the proper PPE for the task.** If you don't have the right equipment, don't do the work until you do.

6. **Always use proper fall protection if you are more than 6 feet off the ground/working surface and are not protected from falling.**

7. **Always have a spotter when moving heavy equipment or backing up.**

8. **Never work alone.**

9. **Always maintain minimum approach distances to power lines.**

[Type text]
10. Think- you are responsible for yours and your fellow employee's safety.
STOP Work Authority

All employees have the authority and obligation to stop any task or operation where there are concerns or questions regarding the control of safety, health, and/or environmental risk.

No work will resume until all STOP work issues and concerns have been adequately addressed.

There will be no form of retribution or intimidation for any person or company exercising their authority, as outlined in the STOP program.

YOU SEE IT, YOU OWN IT!

Emergency Medical Incident, Police Support or Fire: Call 911 first, then Site Safety.
Incident Reporting

An incident is an uncontrolled act that causes property damage, personnel injury/illness, a spill, theft, threat to International EHS Project security, harm to the general public, environmental impact, transportation violations, and/or a near miss/hit of personnel injury or property damage.

All incidents must be reported to your Supervisor and Safety Representative immediately.

* Refer to Section 19 of Health and Safety Management Plan for further details and forms for Reporting Incidents.
**Weather Warning**

**Emergency Signals**

The three primary emergency signals used at the site will be Vehicle Horns, Air Horns, or Bull Horn. Cell phones and radios may be used if available.

**Lightning Warning**

**Two Short Blast...Pause Thirty Seconds...Repeat**

**Lightning: 30/30 Rule**

Lightning within 30 miles= shutdown in an orderly manner and seek shelter until 30 minutes after last lightning strike.

Exit all lifts, elevated scaffolds, work surfaces/structures. Find shelter a minimum of 100 feet from elevated structures. When instructed, return to normal work activities.

**Tornado Warning**

**Long Continuous Thirty Second Blast**

**Tornado Response:**

Tornado Watch: Site Supervision will be notified to have crews on alert, but site will not be evacuated.

Tornado Warning: Site will be evacuated – personnel to take most direct route off site while remaining out of path of tornado.
Imminent Tornado: Seek Shelter in the nearest designated facility or in low areas away from work areas, trailers and electrical lines. Assess shelter options prior to starting each day’s work.

**Evacuation Warning**

**Short Continuous Blasts For Thirty Seconds**

**Site Evacuation:**

Localized Work Site: Report at front of access road or other point as designated on your Pre-task Plan, if designated area is not safe, regroup at Office Trailers.

Site-Wide Evacuation: You will be released from site by your supervisor.

Evacuation Warning: Short Continuous Blast for thirty seconds

*Emergency procedures and emergency contact numbers will be updated weekly and posted in offices and break/rest areas.*
Weather Extremes

Workers should be drinking 16 oz. of water prior to beginning work. They should also be intaking enough water during the day, at least 16 oz. every hour for a total of one to two gallons per day. Workers will be provided a cool, air-conditioned area for rest breaks. Sunscreen should be applied to areas of skin exposed when working in direct sunlight.

Relative Humidity

<table>
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<tr>
<th>Temperature °F</th>
<th>10%</th>
<th>20%</th>
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<td>81</td>
<td>83</td>
<td>85</td>
<td>85</td>
</tr>
</tbody>
</table>

Note: Add 10°F when protective clothing is worn and add 10°F when direct sunlight.

Special Notice

Hot or cold weather, keep yourself hydrated. You should be drinking enough fluids that you are urinating at least every two hours.

* Refer to Section 17 of Health and Safety Management Plan for further details for Hot and Cold Weather Extremes.
Personal Protective Equipment (PPE)
Hard hat
(Chin strap required when working in area of height or high wind)

Safety glasses

Earplugs required in areas above 85 decibels of noise

No dangling jewelry

Shirt must cover cap of shoulder

Reflective safety vest

Gloves as needed for the job task

Long pants in good condition

Safety-toed boots
Shirt must cover cap of shoulder and sleeve should be 4" over the shoulder (minimum)

Further arm coverage needed for Hot Work

Reflective safety vest

100% Glove use

Safety-toed boots

Long pants in good condition

* Refer to Section 3 of Health and Safety Management Plan for further PPE details and inspection forms.
Quarterly Inspection Color Code

Required for rigging slings, electric chords, weld cables, GFCI’s, ladders, power tools, personal fall arrest equipment and testing equipment -

1st January, February, March = White

2nd April, May, June = Green

3rd July, August, September = Red

4th October, November, December = Orange
Traffic Control Procedures

Complete Pre-Task Plan (PTP) as a team.

Follow Safe Traffic Control Commandments:

Inhibit traffic movement as little as possible.

Guide drivers and any pedestrians in a clear and positive manner as they approach and traverse work areas or traffic control areas.

Because of the potential for traffic hazards, pay constant attention to roadside safety requirements and the correct traffic control procedures within the work zone.

Establish temporary traffic control zones- Trenching and collector system construction will often run near or cross over or under project roadways.

Establish a temporary traffic control zone while work is underway to ensure the safety of both crewmembers and drivers. The zone includes the entire section of roadway from the first advance warning sign through the last traffic control device, where traffic returns to its normal path and conditions.

* Refer to Sections 6 and 9 of Health and Safety
Management Plan for further details and inspection forms for Traffic and Pedestrian Control.
Lighter area indicates possible operator blind spots
Important Note: Always confirm with eye contact that the operator is aware of your presence whether in or out of a bind spot.
Equipment & Vehicles

Complete Pre-Task Plan (PTP) as a team.

Perform equipment inspection by a COMPETENT person on every piece of equipment and vehicle used.

Post and enforce site speed limits.

Use backup alarms or horns on all equipment and vehicles.

Use signalperson as required for safety (10' minimum clearance from < 50 KV overhead lines or increase distance with higher KV).

Equip all equipment with a fire extinguisher.

Shut off engine during refueling operations.

Observe load limit of equipment.

Keep all warning equipment operational.

Follow traffic rules and regulations.

* Refer to Section 9 of Health and Safety Management Plan for further details and inspection forms for Mobile Equipment.
Barricades

Barricade Types

Yellow or Yellow/Black tape is used to convey "CAUTION".

Personnel are allowed to enter the barricade only after they have read the tag and have fulfilled the requirements of the PTP.

Red tape is used to convey "DANGER - DO NOT ENTER".

Personnel are not allowed to enter without the approval of the Foreperson/Craftsperson in charge. Must wear all required PPE indicated for the hazard and fulfill the requirements of the PTP.

Barricade Tags

Tags shall be placed on all barricades to indicate:

Supervisor who placed the barricade tape/Supervisor's contact #

Purpose or reason for the barricade

What PPE is required to enter

Date placed
RED & WHITE TAPE AND GREEN & WHITE TAPE WILL BE IMPLEMENTED FOR COMMISSIONING PROCEDURES. No crossing into striped tape unless you are assigned to the commissioning team.

Cones and hard barricades with signs may also be used to control access.

* Refer to Sections 2, 5, 6, 8, 9, 10, 15 and 16 of Health and Safety Management Plan for detailed requirements for Barricading.
Lockout/Tagout

Training includes:

Recognition of hazardous energy (air pressure, water pressure, gas pressure, electric and hydraulic)

Type and magnitude of energy found in the workplace.

The means and methods of isolating and/or controlling energy.

The means of verification of effective energy control, and the purpose of the procedures to be used.

The needs for energy control are dynamic and ever changing at a construction site. You must be part of the job task team implementing a lockout procedure and sign off as a participant in that procedure.

ONE LOCK-ONE KEY-FOR EACH PERSON

* Refer to Sections 7 and 20 of Health and Safety Management Plan for further details, forms and permits for Lockout/Tagout.
Pre-task Plan

Housekeeping

• This includes proper waste disposal of personal trash and tobacco products. A clean site is a safe site.

Considerations

Before completing the Pre-task Plan Form (page 25), considerations of the following shall be made:

What is the purpose of the job? - What has to be done?

Who has to do it?

What are the activities involved? – How are the activities to be performed?

When is it done?

Where is it done?

What tools and equipment will be used?

Hazard Assessment

A hazard is a potential danger. The purpose of the Pre-task Plan is to identify potential hazards associated with site activities, both those produced by environmental conditions and those connected with the job procedure.

* Refer to Section 2 of Health and Safety Management Plan for further details and Pre-task Plan documents. Pre-task Plan sample and Safety Memory Jogger are included in the
## PRE-TASK PLAN (SAMPLE)

### EMERGENCY ACTION PLAN

<table>
<thead>
<tr>
<th>Contractor:</th>
<th>XYZ</th>
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<tbody>
<tr>
<td>Job Name:</td>
<td>SAMMY</td>
</tr>
<tr>
<td>Job Number:</td>
<td>8289</td>
</tr>
<tr>
<td>Name of Task:</td>
<td></td>
</tr>
<tr>
<td>PTP # and Rev. Level:</td>
<td></td>
</tr>
<tr>
<td>Competent/Qualified Person:</td>
<td>Rick Brown</td>
</tr>
<tr>
<td>CQP Responsible for:</td>
<td>Safe work</td>
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<tr>
<td>Professional Engineer:</td>
<td></td>
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<tr>
<td>PE Responsible for:</td>
<td></td>
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<td>Date Prepared:</td>
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<tr>
<td>Prepared by Name:</td>
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<tr>
<td>Prepared by Title:</td>
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</tbody>
</table>

**Emergency Contact**  
(Security, etc): Security  
Outside 313-972-6000 / In-Plant  
In Plant and/or Outside Phone: 911

**DO NOT HANG UP UNTIL TOLD TO DO SO!** Be prepared to give: YOUR NAME, LOCATION (building name, column #, address, etc.), and TYPE OF EMERGENCY. Also contact the following:

| 1st Shift Contact (name, position): | |
| 1st Shift Contact (name, position): | |
| 2nd Shift Contact (name, position): | |
| 2nd Shift Contact (name, position): | |

*If situations arise that fall outside the scope of this PTP or if an incident occurs, stop work and contact your Supervisor and/or Safety Person.*

Re-evaluate the PTP and make changes as necessary.

<p>| Name of Task: | 0 |</p>
<table>
<thead>
<tr>
<th>STEPS IN TASK</th>
<th>HAZARDS</th>
<th>HAZARD CONTROL AND SAFE WORK PRACTICES</th>
<th>CONTINGENCIES</th>
</tr>
</thead>
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</table>
SAFETY Memory JOGGER

Safety Memory Jogger is designed to assist Pre-Task Plan or site safety audits.
## SAFETY MEMORY JOGGER

<table>
<thead>
<tr>
<th>Job #:</th>
<th>8289</th>
<th>Job Name:</th>
<th>Water Line Install</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td></td>
<td>Name of Task:</td>
<td>0</td>
</tr>
</tbody>
</table>

### General Safety
- **Eyes on Path**: Fire Extinguishers<br>**Housekeeping**: Water Hose<br>**First Aid Kit**: Regulator Flash Back Arrestors<br>**Evacuation Routes**: Dedicated Fire Watch<br>**Hazard Communication/MS DS**: Welding Screens In Place<br>**Sloping or Shoring**: Welding Leads<br>**Shower/Eye wash**: In Good Condition<br>**Access/Egress**: Ladders & Scaffolds

### Welding/Burning
- **Material Storage Equipment Inspection**: Proper Footing<br>**Signs, signal & barricades**: Material Hoist Rope<br>**100% Tie off**: Handrails, Mid-Rails<br>**Weather Hazards**: and Toeboards<br>**Fire Extinguisher Locations**: Scaffold Tag Current<br>**Other**: Ladder Inspection Current

### Personal Protection Equipment Required
- **Tyvex Suit**<br>**Full Body Harness**<br>**Single Lanyard**<br>**Double Lanyard**<br>**Retractable Lanyard**<br>**Cotton Gloves**<br>**Leather Gloves**<br>**Kevlar Gloves**<br>**Rubber Gloves**<br>**Hearing Protection**<br>**Full Face Shield**<br>**Mono-Goggles**<br>**Personal Floatation Device**<br>**Respirator**<br>**Reflective Vest/Shirt**
<table>
<thead>
<tr>
<th><strong>Permits Required</strong></th>
<th><strong>Electrical</strong></th>
<th><strong>Knee Pads</strong></th>
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<tbody>
<tr>
<td>Hot Work</td>
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<td></td>
</tr>
<tr>
<td>Confined Space</td>
<td>GFCI In Use</td>
<td></td>
</tr>
<tr>
<td>Excavation</td>
<td>Ground Prong Good</td>
<td>Hard Hat</td>
</tr>
<tr>
<td>Roof Access</td>
<td>Cord In Good Condition</td>
<td>Welding Hood</td>
</tr>
<tr>
<td>In Service Equipment</td>
<td></td>
<td>Long Sleeves</td>
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<tr>
<td><strong>Material Handling</strong></td>
<td><strong>Chemical Suit</strong></td>
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<tr>
<td>Utility Shut Off</td>
<td>Proper Body Position</td>
<td>Insect repellent</td>
</tr>
<tr>
<td>Critical Lift</td>
<td>Proper Rigging Lifting Devices</td>
<td>Other</td>
</tr>
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<tr>
<td><strong>Lockout / Tagout</strong></td>
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<td></td>
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<tr>
<td></td>
<td>Buddy-Lift Heavy Loads</td>
<td>System Drained / Purged</td>
</tr>
<tr>
<td></td>
<td>Rigging Equipment Inspected</td>
<td>All Power Sources Off &amp; Locked</td>
</tr>
</tbody>
</table>

**Post-Job Requirements**

- **Lockout Locks Removed**
- **Rigging Equipment Inspected**
- **All Power Sources Off & Locked**
- **Address "At Risk" Behaviors**
  - **Electrical, Air, Hydraulics, Gravity, Water, Gas, Other**
  - **LOCK, TAG, TRY - VERIFY!**
  - **ALL ENERGY SOURCES**

**Remember the BIG FOUR hazards!**

- **LINE OF FALLS**
- **LINE OF FIRE**
- **PINCH POINTS**
- **ELECTRICAL**

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Fire Prevention

Many fires can be prevented by performing routine housekeeping.

Do you know the location of the nearest fire extinguisher?

**Complete Pre-Task Plan (PTP) as a team.**

Report all fires immediately.

Keep sources of ignition away from combustible/flammable materials. This would include dry grasses and crops.

Make sure all vehicles and equipment have a fire extinguisher.

Inspect fire extinguishers on a monthly basis.

Attempt to extinguish the fire, if it is of the size that you can put it out with a fire extinguisher.

Report all fire extinguisher use immediately to the safety department.

Smoking is only allowed in the designated areas – no smoking in buildings/offices.
* Refer to Section 13 of Health and Safety Management
  Plan for further details and Hot Work permit information.
Excavations (Ground Disturbance Permit Required)

Complete Pre-Task Plan (PTP) as a team.

International EHS Project requires 8” ground disturbance permit. Perform locates and identify and mark all underground lines.

Make sure that the excavation is shored, sloped, or benched correctly.

Have excavations inspected by a competent person on a daily basis; provide written documentation of the inspection at location during work activities.

Post issued excavation permit at the work location.

Properly install barricades and warning signs.

Keep spoil piles a minimum of 3 feet back.

* Refer to Section 5 of Health and Safety Management Plan for further details and Excavation permit.
Concrete Work

Complete Pre-Task Plan (PTP) as a team.

Use proper PPE (i.e. rubber boots, rubber gloves, eye and ear protection to guard against splash).

Always have eyewash station available.

Cap vertical rebar and any other protruding objects that could cause punctures.

Use proper lifting methods - protect your back.

Watch for overhead hazards at all times.

Be aware of moving traffic in the area.

* Refer to Section 15 of Health and Safety Management Plan for further details.
Walking/Climbing/Working Surfaces

The condition of your work area is a reflection of the quality of your work.

Reminder: did you do your pre-shift stretches?

**Complete Pre-Task Plan (PTP) as a team.**

Keep your work area clean to prevent accidents.

Use supplied trash containers for your trash.

Never walk with both hands in your pockets in a wet area.

Keep walkways clear at all times.

Avoid injury by awareness of your surroundings.

Remember that same level falls are responsible for many serious injuries.

Use a ladder that is designed for the job task at hand; ladder must be:

- Class 1, 1A. or 1AA
- Non-conductive fiberglass
Inspect ladder before each use, as well as quarterly color code.

Remove defective or damaged ladders from service immediately.

Tie off ladder properly; if the ladder cannot be tied off, have a co-worker hold it for you.

Make sure ladder extends 3 feet above the step off point.

Place ladders on a stable surface; never place on boxes or other materials to gain height.

Make sure that the ladder has slip-resistant feet or is secured.

Always face the ladder to climb or work.

Allow only one person on a ladder at a time.

Remove debris around the base of the ladder and step off point at the top.

Never climb a ladder with tools or materials in your hands.

Never stand on the next-to-the-top or top step of a ladder.

Do not overextend your body; move the ladder if necessary.

Have all scaffolds inspected by competent person daily.

Do not stand, sit, or lean on handrails.

Do not stand on boxes or materials to gain height.
Tag all scaffolds:

**Green** tag - ready for use and complete

**Yellow** tag - incomplete; 1DO% fall protection is required

**Red** tag - being erected or dismantled; access is denied

Have all job site constructed platforms, steps and ladders inspected daily by competent person.

* Refer to Section 8 of Health and Safety Management Plan for further details and inspection forms for Working Surfaces.
Fall Protection/ Falling Objects

Falling from heights is the #1 killer on construction worksites.

Complete Pre-Task Plan (PTP) as a team.

Follow the 100% fall arrest protection project requirement; inspect harness and lanyards for wear, tear and discoloring.

Provide guardrails on the perimeter of elevated work areas.

Tie off whenever and wherever you are exposed to a 6 foot or greater fall hazard.

Secure your lanyard to a proper anchor point must be able to hold 5,000 lbs.

Notify your supervisor or safety department if you have:
Any medical problems or medication you are taking that may affect your job performance

Any problems working at heights

Use fall arrest protection when positioned in any personnel rated lifting equipment (JLG, Man-Basket).

Do not work under overhead loads.

Barricade overhead work areas.

Always wear your hard hat.

Pay attention to barricades and signs.

Never throw waste materials or debris from heights.

Be aware of employees working below you.

Park away from structures and use ice safety procedures in cold temperatures.

Use tool lanyards when working from heights.
Tightlines, which have been commonly referred to as Horizontal Lifelines, can create a tremendous force on structures and personal fall arrest equipment.

Consideration must always be made for slings, attachments and building members.

Only tightlines that have been designed and approved by a personal fall arrest equipment engineer will be permitted for use at International EHS Project.
Absorbing Lanyard Fall Distance
**Anchorage Connector**

Anchor: The point of attachment for lanyards and lifelines, also called a tie off point. Must be capable of handling a 5,000 lb load in the direction a fall would occur. (Roof Truss, I-Bean)

Anchorage connector: Used to join the anchor point to the connecting device. (Beamer, Cross Arm Strap)

**Body Wear**

Full body harness distributes the weight of impact across the body in a fall. It keeps the user upright if hanging from the dorsal D-ring. Completes the connection of Anchor to connector to harness.

**Connecting Device**

Connects the harness to the anchor or anchor age connector.

**Deceleration Device**

Device that slows and reduces energy in a fall. It lowers forces the body receives upon impact. (Shock Absorbing Lanyard, Rope Grab, Retractable Lifeline)

*Refer to Section 4 of Health and Safety Management Plan for further details and inspection forms for Fall Protection.*
**Welding & Cutting**

**Complete Pre-Task Plan (PTP) as a team.**

Read, understand, and follow all permit requirements.

Use caution around flammable or combustible materials; keep fire extinguisher nearby.

Use the proper PPE: welding shield, lens, leather sleeve and vest for slag splash and kevlar sleeves for sparks, welding gloves (soft cap welding is not allowed).

Use screens and fire blankets when other employees may be in area.

Stabilize material being worked on.

Properly ground close to the workstation.

Barricade the area below.

Check the condition of the hoses, regulators, and torch.

Inspect all welding cable for damage.

Make sure gas cylinders are upright and secured.

Make sure regulator has flash back arrestors.

Remove gauges during relocation of the bottles.

Turn off the equipment when not in use.

*Refer to Sections 2, 3 and 13 of Health and Safety Management Plan for further details and Hot Work Permit.*
Lifting Operations/ Material Handling

Complete Pre-Task Plan (PTP) as a team.

Properly supervise erection, with one COMPETENT person in charge of communications and signals.

Confirm rescue personnel and equipment are within 5 minutes of your work area.

Inspect tag lines before each use; tag lines must fulfill International EHS Project specifications.

Maintain 100% fall arrest protection.

Use International EHS Project wind limits.

Complete critical lift form, if required.

Use safety latches on all hooks.

Ensure that overhead power lines are at a safe distance (10' minimum <50 KV and additional distance with higher KV) for crane/equipment lifts and crane/equipment walks.

Fully extend outriggers.
Inspect all rigging appliances by QUALIFIED personnel.

Make sure that the load is within the load chart.

Ground compaction is confirmed for crane pads and crane paths.

Use only approved rigging appliances.

Inspect all wire ropes, chain slings, and nylon chokers for defects before each use, as well as quarterly color code.

Use proper softeners to protect rigging.

Make sure that material is stacked on a firm and level base.

Never stack materials on the edge of elevated work areas (3' Excavation, 6' Fall Rule).

Maintain clear walkways around materials.

Contain the materials.

**How to Barricade and Which Signs to Use**

Barricade the fall zone (1.5Xboom length. Use red tape and/or signs).

Put signs on barricades to direct entrance of visiting personnel.

Put effective barricades on all sides of work zone.

Barricade swing radius of the crane.

* Refer to Section 6 of Health and Safety Management Plan for further details, permits and inspection forms for Lifting Operations.*
Safe Tagline Practice

- Work out center of gravity
- Angle of sling wire should be less than 60 degrees
- Load was properly secured
- Directing safe movement of suspended load
- Use tag lines
<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP</td>
<td>With arm extended horizontally to the side, palm down, arm is swung back and forth.</td>
</tr>
<tr>
<td>EMERGENCY STOP</td>
<td>With both arms extended horizontally to the side, palms down, arms are swung back and forth.</td>
</tr>
<tr>
<td>HOIST</td>
<td>With upper arm extended to the side, forearm and index finger pointing straight up, hand and finger make small circles.</td>
</tr>
<tr>
<td>RAISE BOOM</td>
<td>With arm extended horizontally to the side, thumb points up with other fingers closed.</td>
</tr>
<tr>
<td>SWING</td>
<td>With arm extended horizontally, index finger points in direction that boom is to swing.</td>
</tr>
<tr>
<td>RETRACT TELESCOPING BOOM</td>
<td>With hands to the front at waist level, thumbs point at each other with other fingers closed.</td>
</tr>
<tr>
<td>RAISE THE BOOM AND LOWER THE LOAD</td>
<td>With arm extended horizontally to the side and thumb pointing up, fingers open and close while load movement is desired.</td>
</tr>
<tr>
<td>DOG EVERYTHING</td>
<td>Hands held together at waist level.</td>
</tr>
<tr>
<td>LOWER</td>
<td>With arm and index finger pointing down, hand and finger make small circles.</td>
</tr>
<tr>
<td>LOWER BOOM</td>
<td>With arm extended horizontally to the side, thumb points down with other fingers closed.</td>
</tr>
<tr>
<td>EXTEND TELESCOPING BOOM</td>
<td>With hands to the front at waist level, thumbs point outward with other fingers closed.</td>
</tr>
<tr>
<td>TRAVEL/TOWER TRAVEL</td>
<td>With all fingers pointing up, arm is extended horizontally out and back to make a pushing motion in the direction of travel.</td>
</tr>
<tr>
<td>LOWER THE BOOM AND RAISE THE LOAD –</td>
<td>MOVE SLOWLY – A hand is placed in front of the hand that is giving the action signal.</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>CRAWLER CRANE TRAVEL, BOTH TRACKS – Rotate fists around each other in front of body; direction of rotation away from body indicates travel forward; rotation towards body indicates travel backward.</td>
<td>USE MAIN HOIST – A hand taps on top of the head. Then regular signal is given to indicate desired action.</td>
</tr>
<tr>
<td>TROLLEY TRAVEL – With palm up, fingers closed and thumb pointing in direction of motion, hand is jerked horizontally in direction trolley is to travel.</td>
<td></td>
</tr>
</tbody>
</table>
Hand, Power& Powder Actuated Tools

Complete Pre-Task Plan (PTP) as a team.

**Permit is required for use of cut off wheels (wafer wheels).**

Use the correct tool for the job; do not use makeshift tools.

Inspect condition of the tool, cord, and plug before each use.

Tag defective tools out of service.

Operators must be qualified.

Wear proper PPE.

Control cartridges.

Barricade work area.

Post warning signs.

Dispose of misfire properly.

Properly guard tools.

Do not use locking triggers.

* Refer to Section 21 of Health and Safety Management Plan for further details, permit and inspection form.
Electrical

Complete Pre-Task Plan (PTP) as a team.

Leave electrical work to trained and QUALIFIED individuals.

Do not use appliances with defective parts.

Use GFCl/assured grounding.

Inspect and tape all cords and electrical equipment quarterly.

Never tamper with an electrical installation.

Use the lockout/tagout procedure.

When Construction is completed and equipment is turned over to the Owner or Site Operations Group, control of lock out tag out is also transferred to the Owner or Site Operations Group. At this point the LOTO procedure established by the Owner or Site Operations group will be met to allow International EHS Project employees or their subcontractors to work on the turned over equipment that must be isolated. This is expected to include compliance with OSHA 1910 general industry standards and require personal locks.
Due to the nature of electrical hazards associated with energizing and testing of electrical systems during the construction phase, (i.e., switch yards, transmission lines, substations, electrical collector circuits, transformers, junction boxes and individual components), the project will develop detailed site-specific procedures to address the safety hazards associated with these processes. The site-specific requirements for energizing, testing, and turnover of electrical systems should specifically address the methods and processes in which these systems are to be energized, inspected, tested, checked-out, and turned over to the client or site operations group (SOG). Implementation of these procedures will be controlled through a LOTO Log System.

For work on equipment or systems not addressed in pre-developed LOTO procedures (and controlled through the LOTO Log system), implementation of LOTO activities must be controlled through the LOTO permit system. The LOTO Permit and procedures must be completed by the competent person(s)/authorized employee(s) prior to starting work on the system.

Notify all affected employees of the intent to shut down/isolate equipment, electrical system and/or circuit, and that a LOTO system is to being implemented.

The machine or equipment shall be turned off or shut down using the procedures established for the equipment.
Be aware of underground cables.

All electrical cords and equipment that are repaired must be approved by Site Safety Officer.

Flash Protection as required by NFPA 70 Standard.

* Refer to Sections 7 and 20 of Safety Management Plan for further details, forms and permits for Electrical Work.
Confined Space

Complete Pre-Task Plan (PTP) as a team.

Complete entry permit and post at worksite.

Test for toxic, flammable gas and oxygen.

Work with trained confined space attendant.

Be aware of the emergency plan.

Verify rescue equipment is available.

Follow lockout/tagout procedures to secure the confined space for entry.

* Refer to Sections 7 and 16 of Health and Safety Management Plan for further details, permits and forms for Confined Space Entry
International Hazard Communication

**Complete Pre-Task Plan (PTP) as a team.**

Obtain Safety Data (SDS) for all chemicals prior to their arrival onsite; SDS files are kept in the safety office.

Use proper DOT/OSHA labels on all containers; one-time use containers are an exception.

Post warning signs at storage areas.

Provide environmental control of all hazardous material storage.

Global Harmonized System (GHS) has replaced MSDS labeling and classification system. Training must be completed by December 31, 2013. GHS must be in full compliance by June 1' 2015.

Provides specific criteria for Chemical Classification.

Revises the requirements for Labels.

Provides standardized Pictograms to be used on labels.

Replaces the current MSDS with a standardized Safety Data Sheet (SDS).

Provides specific criteria for Health Hazard.

Provides specific criteria for Physical Hazard.
HMIS/NFPA Hazard Ratings

0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

QHS Hazard Categories

Cat. 1 – 'Severe Hazard'
Cat. 2 – 'Serious Hazard'
Cat. 3 – 'Moderate Hazard'
Cat. 4 – 'Slight Hazard'
Cat. 5 – 'Minimal Hazard'
SAMPLE LABEL

PRODUCT IDENTIFIER

CODE
Product Name

SUPPLIER IDENTIFICATION

Company Name
Street Address
City State
Postal Code Country
Emergency Phone Number

PRECAUTIONARY STATEMENTS

Keep container tightly closed. Store in cool, well-ventilated place that is locked.
Keep away from heat/sparks/open flame. No smoking.
Only use non-sparking tools.
Use explosion-proof electrical equipment.
Take precautionary measure against static discharge.
Ground and bond container and receiving equipment.
Do not breathe vapors.
Wear Protective gloves.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Dispose of in accordance with local, regional, national, international regulations as specified.

In Case of Fire use dry chemical (BC) or Carbon dioxide (CO₂) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center.
If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

HAZARD PICTOGRAMS

SIGNAL WORD Danger

HAZARD STATEMENT

Highly flammable liquid and vapor. May cause liver and kidney damage.

SUPPLEMENTAL INFORMATION

Directions for use

Fill weight: ______ Lot Number ______
Gross weight: ______ Fill Date: ______
Expiration Date: ______
<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogen</td>
<td>Flammables</td>
<td>Irritant (skin and eye)</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>Pyrophorics</td>
<td>Skin Sensitizer</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Self-Heating</td>
<td>Acute Toxicity</td>
</tr>
<tr>
<td>Respiratory Sensitizer</td>
<td>Emits Flammable Gas</td>
<td>Narcotic Effects</td>
</tr>
<tr>
<td>Target Organ Toxicity</td>
<td>Self-Reactives</td>
<td>Respiratory Tract</td>
</tr>
<tr>
<td>Aspiration Toxicity</td>
<td>Organic Peroxides</td>
<td>Irritant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hazardous to Ozone Layer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Non-Mandatory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gases Under Pressure</td>
<td>Skin Corrosion/Burns</td>
<td>Explosives</td>
</tr>
<tr>
<td></td>
<td>Eye Damage</td>
<td>Self-Reactives</td>
</tr>
<tr>
<td></td>
<td>Corrosive to Metals</td>
<td>Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment</th>
<th>Skull and Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidizers</td>
<td>Aquatic Toxicity</td>
<td>Acute Toxicity (fatal or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>toxic)</td>
</tr>
</tbody>
</table>
**Section 1**, Identification

**Section 2**, Hazard(s) identification

**Section 3**, Composition/information on ingredients

**Section 4**, First-aid measures

**Section 5**, Fire-fighting measures

**Section 6**, Accidental release measures

**Section 7**, Handling and storage

**Section 8**, Exposure controls/personal protection

**Section 9**, Physical and chemical properties

**Section 10**, Stability and reactivity

**Section 11**, Toxicological information

**Section 12**, Ecological information

**Section 13**, Disposal considerations

**Section 14**, Transport information

**Section 15**, Regulatory information

**Section 16**, Other information

*Refer to Section 16 of Health and Safety Management Plan for further details on International Hazard Communication.*
Navigable Water and Helicopter Safety

Helicopter Cranes Safety Rules

Complete Pre-Task Plan (PTP) as a team.

Prior to each day's operation, a briefing shall be conducted. A mutual understanding and agreement of the operating conditions shall exist between pilot, foreperson, and crew. This briefing shall set forth the plan of operation for the pilot and ground personnel and will include:

**Slings and Tag Lines:** Loads shall be properly slung. Tag lines shall be of a length that will not permit their being drawn up into rotors.

**Cargo Hooks:** All electrically operated cargo hooks shall have the electrical activating device designed and installed to prevent inadvertent operation. In addition, these cargo hooks shall be equipped with an emergency mechanical control for releasing the load. The hooks shall be tested prior to each day's operation to determine that the release functions properly, both electronically and mechanically.
**Personal Protective Equipment:** Personal protective equipment for employees receiving load shall consist of complete eye protection and hard hats secured by chin straps. Loose fitting clothing likely to flap in a downwash, and thus be snagged on hoist line, shall not be worn.

**Loose Gear and Objects:** Every practical precaution shall be taken to provide for the protection of the employees from flying objects in the rotor downwash. All loose gear within 100 feet of the place of lifting the load, and all other areas susceptible to rotor downwash, shall be secure or removed.

**Housekeeping:** Good housekeeping shall be maintained in all helicopter loading and unloading areas. Open fires shall not be permitted in an area that could result in such fires being spread by the rotor downwash.

**Hooking and Unhooking Loads:** When employees are required to perform work under hovering craft, a safe means of access shall be provided for employees to reach the hoist line hood and engage or disengage cargo slings. Employees shall not perform work under hovering craft except when necessary to hook or unhook loads.

**Static Charge:** Static charge on the suspended load shall be dissipated with a grounding device before ground personnel touch the suspended load, or protective rubber gloves shall be worn by all ground personnel touching the suspended load.
Visibility: When visibility is reduced by dust or other conditions ground personnel shall exercise special caution to keep clear of main and stabilizing rotors. Precautions shall also be taken by the employer to eliminate as far as practical, reduced visibility.

Signal Systems: Signal systems between air, crew, and ground personnel shall be understood and checked in advance of hoisting the load. This applies to either radio or hand signal systems.

Barges, Boats and Decks

Complete Pre-Task Plan (PTP) as a team.

Personnel should be aware of the location of the fire extinguisher, location and function of the emergency locator beacon, location of first aid kit and survival equipment.

Employees shall stay clear of barge cables while barges are being moved.

When barges are moored at docks, the mooring lines shall be loose enough to keep sway from passing boats from breaking lines yet shall be tight enough to permit the passage of personnel from dock to barge.

Only authorized employees shall operate International EHS
Project boats.
The lifeboat and workboats shall, at all times, be equipped with a pair of oars and a ring buoy attached to a 50 foot coil of inch line attached to the boat.

Docks and walkways shall be maintained in safe condition at all times. They shall be kept clear of all obstructions.

While working on boats, barges, rafts, or other floating equipment or on docks, employees shall wear an approved Type III Personal Flotation Device and/or a belt with an approved lifeline attached.

Employees shall not enter a barge, which is being unloaded by a grab bucket unless he or she is in full view of the crane man or signalman.

Before working on a barge, the gunwales and end decks shall be cleared of loose debris.

Employees shall not work under a crane or grab bucket at anytime.

Crane buckets shall always be lowered before the crane is left unattended.

* Refer to Sections 3, 6 and 10 of Health and Safety Management Plan for further details on Air and Water Navigation.
Indigenous Insects, Snakes and Creatures

Be aware that several indigenous insects, snakes and creatures can be present at the jobsite.

Certain spiders can be a threat (black widow, brown recluse).

The female black widow spider has a round, shiny black body and a red or yellowish orange hourglass shape on the underside of the abdomen.

Black widows are most commonly found in stacked piles, rubble, sheds, stumps, basements, crawl spaces, garages, or in the corners and nooks of equipment.

Symptoms of a black widow bite may include one or two swollen bite marks, pain and cramping, nausea, heavy perspiration, fever, labored breathing, tremors, and increased blood pressure. These symptoms may last for several days.

The brown recluse spider is and golden brown with a dark fiddle shape located on the top of the leg attachment.

They build small retreat webs behind any sort of object or pile of objects.

Although the severity of a brown recluse bite varies greatly, reactions may include chills, fever, weakness, nausea, and joint pain. Also, the tissue around the bite may die and eventually shed.
To protect yourself from being bitten by a spider, you should wear a long-sleeved shirt, hat, and gloves; inspect objects before handling them (including your shoes and clothing), and use insect repellent when needed.

Black Widow  Brown Recluse

Fire ants can also be a concern.

Fire ants average between 1/8" to 6/25” in length and can range in color from reddish brown to black.

They are found in mound-shaped nests, and display aggressive behavior when disturbed.

To protect yourself from fire ants, be careful not to stand on their nest. Also, using insect repellent, wearing boots, and/or tucking your pant legs into your socks can help reduce the risk of being bitten or stung.

Symptoms of a fire ant bite include a blister-like sore and even shock, chest pains, nausea, swelling, shortness of breath, or in some cases, coma. Immediate medical attention should be sought for these more serious reactions.
Be on the lookout for bees or bee hives near the worksite.

Watch carefully for the presence of bee hives and wasp nests in your work area. Disturbing these can agitate the insects and provoke and attack. Bees will generally swarm food sources and certain flowering plants. Wasps nests are commonly found in corners and nooks of buildings, equipment, or debris.

Insect repellent can help reduce the risk of a sting. Additionally, general housekeeping practices such as picking up debris and securing lids on trash cans, can help reduce the presence of nests.

Symptoms of a sting may include burning, itching, redness, and swelling, but medical attention should be sought immediately if these symptoms are extremely severe or are present in areas that are not near the sting site.

Treating a sting includes removing the stinger (if possible) to reduce the amount of venom that is injected. Also, applying ice can help reduce the swelling of a sting.
Bees
Rodents and Wild/Stray Animals can be threat to health and safety.

Both dead and live animals can spread diseases such as rabies and rat bite fever.

Therefore contact with rats and wild or stray animals should always be avoided.

Dead animals should be safely disposed of as soon as possible.

If contact cannot be avoided, wear protective gloves and wash your hands regularly. If scratched or bitten, seek medical attention immediately.

Dangerous snakes can be present on or near the jobsite.

Watch where you place your hands, especially under debris, fallen trees, and dark/cool corners. If you see a snake step back immediately and allow it to leave the area.

Wear heavy gloves and boots at least 10" high, especially when working in area where snakes are likely to be present.

If bitten, note the color and shape of the snake's head to help with treatment.

Housekeeping

Unwanted creatures, especially rodents, are drawn to waste
and garbage, be sure to keep a clean work area.
Bite victims should be kept still and calm to slow the spread of the venom. Lay the person down so that the bite is below the level of the heart, cover the bite with a clean dressing, and seek medical attention immediately.

Never cut the wound or attempt to suck out the venom.