SUNDT

Health, Safety, & Environment System Manual

SM-SAFETY-001 Version 2.2

SUNDT

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1.0 INTRODUCTION

1.1 Purpose

Sundt Construction Inc.'s work encompasses a wide variety of markets including transportation, industrial, and building. Our construction projects are unique and are comprised of many different trade contractors, including Sundt as a self-performing contractor. Given the nature of our work, there may be inherent hazards to control while adhering to a number of different Authorities Having Jurisdiction (AHJ) such as:

- the Federal Occupational Safety and Health Administration (OSHA),
- OSHA approved State Plans (such as Arizona and California and others),
- Mine Safety and Health Administration (MSHA), and/or
- the US Army Corps of Engineers (USACE).

This is a proactive safety and health program that ensures safe and healthful working conditions are created and maintained for all stakeholders.

1.2 Scope

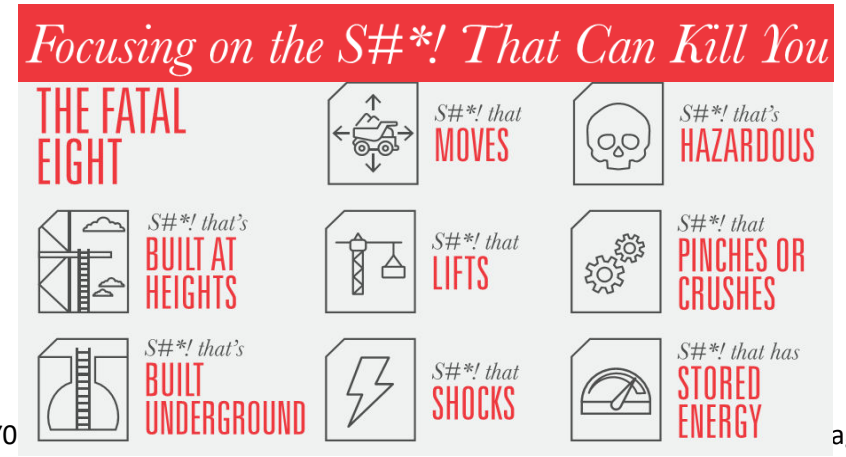
Mandatory compliance with the "Required Practices" identified in this manual are **minimum** standards for **all** business units. "Recommended Practices" are encouraged to be considered. This document applies to all project locations, operations performed by subcontractors and their tiers, *and* other project stakeholders under the control of Sundt.

1.3 Notices

The Sundt Health, Safety, and Environment Management Team reserves the authority to modify this document as deemed necessary. The safety rules and regulations contained herein are NOT all inclusive. United States Department of Labor and other legal standards not specifically referenced in these rules, regulations, and policies shall apply when appropriate. Some hyperlinks contained in this document are only be accessible by Sundt personnel. Please refer to the Project Safety Management Plan for additional programs, requirements, etc.

1.3 STCKY

Over the past 20 years, construction fatalities have plateaued, and industry data shows a company with comparable worker hours will have a fatality every five years and 91 days. While Sundt's OSHA recordable rate is considered best-in-class, we do not take a day off when it comes to respecting safety with the utmost seriousness. We plan our work and protect our people from the Stuff That Can Kill You (STCKY).



2.0 CORPORATE SAFETY POLICY STATEMENT

Employees are our most important asset and their safety is our greatest responsibility. It is the policy of Sundt Construction, Inc. to make every effort to provide a safe working environment, eliminate safety hazards, and provide adequate personal protective equipment.

Further, it is our goal to create safety awareness among our employees so that each individual understands that they have the ultimate responsibility to work safely as well use their authority to stop any activity that may expose personnel to potential hazards.

It is the policy of our company to:

1. Comply with federal, state, and local regulations
2. Comply with client safety requirements
3. Take expedient action to correct unsafe conditions and work practices
4. Promote safety awareness
5. Hold each employee accountable for performing safely
6. Encourage personnel to inform supervision immediately of safety issues
7. Encourage personnel to report safety issues without the fear of reprisal
8. Provide training to implement this policy

Every reasonable effort will be made to ensure that employees are able to safely accomplish assigned tasks. No task is so important or so urgent that it cannot be done safely.

SUNDT CONSTRUCTION, INC.

G. Michael Hoover
President and CEO

Paul C. Levin
Corporate Director of Safety & Quality

3.0 RESPONSIBILTIES

To achieve our goal of ensuring everyone goes home safely;

a) Group & Project Management will support and monitor the safety, health and risk management process;
b) The project team is responsible and accountable to lead and implement the safety, health and risk management process;
c) Supervising personnel shall possess the skills commensurate with project responsibilities;
d) Site personnel must comply with safety, health and risk management requirements; and
e) We will foster continuous improvement and a culture that values safety.

3.1 Employee-Owners, Site Personnel, and Site Visitors

a) Use the correct tools and equipment for the job
b) Use the personal protective equipment provided
c) Attend safety meetings daily and/or weekly
d) Do not endanger self or co-workers
e) Keep tools in good condition
f) Refrain from horseplay
g) Do not abuse safety devices or equipment
h) Report unsafe conditions to supervision
i) Do not report to work under the influence of illegal drugs or alcohol

3.2 Project Directors / Project Managers

a) Set an example as a safety leader
b) Actively support and monitor each project under their control for compliance with OSHA regulations, the Safety Management Plan, and the goals establish by the Company President
c) Write subcontracts to ensure that all subcontractors are required to conform to both OSHA rules and regulations and the requirements of our Safety Program
d) Assist the Superintendent(s) in pre-construction safety planning for each of the projects under his/her control. Help identify potential unsafe or unusual conditions that may be encountered during construction
e) Incorporate safety inspections (visual or written) during job site visits and notify the Superintendent / supervision of any recognized unsafe acts or conditions
f) Ensure implementation and execution of the Project Health, Safety, & Environmental Management Plan
g) Communicate expectations for safety to supervision and craft personnel
h) Ensure the reading of this manual and the Project Health, Safety, & Environmental Management Plan by management and supervision
i) Champion behavior-based safety and employee engagement processes
j) Ensure that the safe behaviors of individuals and groups are recognized and rewarded
k) Ensure proper implementation of and strict adherence to the Sundt Corporate and Site-Specific Drug & Alcohol policies
l) Ensure project planning processes are being implemented effectively
m) Ensure that team performance and achievements are recognized and rewarded
n) Act as Sundt's representative and a primary contact in the event of a government inspection

o) Identify designees to ensure that these roles and responsibilities are conducted in his/her absence
p) Participate in incident reporting and causal analyses
    i. Review incident reports to ensure completion
    ii. Schedule incident review meetings
    iii. Ensure appropriate corrective actions are implemented
    iv. Observe for trends that may require action
q) Industrial: Ensure the Site-Specific Project Training Plan is developed and implemented as required

3.3 Construction Managers / Superintendents

a) Set an example as a safety leader
b) Actively support and monitor the project and trade contractors for compliance with OSHA regulations, the Project Health, Safety, & Environmental Management Plan, and the goals established by the company President
c) Ensure an adequate visual inspection of the work site is completed at least daily
d) Report/document and correct unsafe acts and conditions
e) Facilitate and document weekly all-hands safety meetings
f) Request weekly safety meeting documentation from subcontractors
g) Monitor completion of Task Hazard Analysis for self-perform and subcontractor work
h) Notify the local OSHA office of injuries or hospitalization of employees when required
i) Participate in incident investigations and causal analyses
j) Record, report, and implement corrective actions from incidents
k) Communicate expectations to new employees through safety orientation
l) Ensure fair, consistent, and ethical application of disciplinary action
m) Identify designees to ensure that these roles and responsibilities are conducted in his/her absence

3.4 Field/Project Engineers

a) Actively support and monitor their project for compliance with OSHA regulations, the Project Health, Safety, & Environmental Management Plan, and the goals establish by the company President
b) Set a personal example for safety
c) Report and correct any recognized unsafe acts or conditions
d) Assist the Superintendent in implementing project safety controls / programs.
e) Attend weekly safety meetings
f) Assist the Superintendent in preparing accident / property damage reports for submittal to the safety department
g) Compile and manage the collection of Material Safety Data Sheets from the Subcontractors for products submitted on the project

3.5 Project Administrators

a) Actively support and monitor their project for compliance with OSHA regulations, the Project Health, Safety, & Environmental Management Plan, and the goals establish by the company President
b) Set a personal example for safety
c) Create, maintain, and closeout the safety file for the project

3.6 Foremen / Frontline Supervisors / Other Supervision

a) Set an example as a safety leader
b) Actively support and monitor their project for compliance with OSHA regulations, the Project Health, Safety, & Environmental Management Plan, and the goals establish by the company President
c) Complete a visual inspection of their work areas daily, correct any recognized unsafe acts and conditions
d) Conduct / participate in daily/weekly safety meetings
e) Ensure that new employees are properly trained before they are allowed to start work
f) Monitor the care of company materials, tools, and equipment for proper use and maintenance
g) Assist in preparing accident / property damage reports
h) Clearly and concisely communicate safety expectations to employees
i) Recognize safe performance/behavior and coach, mentor, and develop those under your supervision
j) Ensure fair, consistent, and ethical application of disciplinary action
k) Support behavior-based safety and employee engagement processes

3.7 Project HS&E Managers / Safety Representatives

a) Set an example as a safety leader and act as an overall safety champion on the project
b) Actively support and monitor their project for compliance with OSHA regulations, the Project Health, Safety, & Environmental Management Plan, and the goals establish by the company President
c) Participate in Safety Committee/Task Force inspections
d) Install and maintain the required postings for Safety and Affirmative Action
e) Maintain the OSHA 300 log for the project
f) Maintain/ensure OSHA permits and activity notifications for Sundt and Subs
g) Assist Project Management in facilitating Preconstruction Safety Meetings
h) Assist the Project Team in collecting and reviewing contractor safety submittals
i) Ensure Task Hazard Analysis forms are completed and collected
j) Assist Superintendent in facilitating safety meetings
k) Ensure personnel working on the project have attended safety orientation
l) Conduct frequent safety inspections (at least daily)
m) Encourage teammates to meet inspection quotas (see this best practice)
n) Provide safety data to the project team, client, and the Sundt HSE Department as required
o) Assist Project Team in completing incident reports/analyses/reviews
p) Provide basic first aid and emergency care within the limits of their training
q) Manage injuries and claims until closure
r) Ensure clear communication of policy changes to affected parties
s) Assist the Project Manager in the event of a government inspection
t) Industrial: Assist the Project Manager with the Site-Specific Project Training Plan development and implementation

3.8 Trade Contractors

a) Comply with federal/state/local safety requirements and the Project Health, Safety, & Environmental Management Plan
b) Get enrolled in the appropriate insurance program

c) Attend a preparatory/pre-installation meeting(s)
d) Provide safety submittals to Sundt prior to starting work on site

3.9 Craft Personnel

a) Understand and comply with the applicable standards and policies
b) If unsure about the safety of a task or have any other questions, ASK
c) Report all incidents regardless of the nature, involved personnel, size, or perceived consequences
d) Plan ahead for safety via the work planning and Task Hazard Analysis processes
e) Watch out for others and intervene to prevent incidents

4.0 ASBESTOS & LEAD

4.1 Scope

a) Hazardous waste may pose a substantial hazard to human health and the environment.
b) The EPA classifies solid wastes as being either Non-Hazardous or Hazardous. These wastes are regulated under the Resource Conservation and Recovery Act (RCRA).
    i. Non-Hazardous Waste can be broken down into:
        1. Municipal solid waste (garbage or trash).
        2. Waste that is non-hazardous and is suitable for the local municipal dump. Examples include office or food waste.
        3. Industrial waste that is non-hazardous and is not suitable for municipal dumps (i.e., scrap wood, dry wall, bricks, concrete, plaster, asphalt).

4.2 Required Practices

c) Project stakeholders including Sundt and any tier of subcontractors must comply with Federal, State or local standards applicable to the project when performing any work that involves potential contact with asbestos or lead containing materials.
d) Asbestos or lead containing material removal operations must be done under the direction of a qualified competent person designated as Supervisor.
e) Abatement must be completed by a licensed abatement company prior to any subsequent demolition or construction operations taking place in or near the affected area.

4.3 Recommended Practices

a) It is recommended that abatement be contracted directly by the project owner.
b) Contact Legal Department for any issues regarding liabilities.

5.0 BLOODBORNE PATHOGENS

5.1 Scope

a) These are minimum requirements to ensure the protection of personnel who may be at risk of exposure to blood or other potentially infectious materials (OPIM).
b) Blood Borne Pathogens include but are not limited to disease-causing organisms transmitted through contact with infected blood and other bodily fluids such as Human Immunodeficiency Virus (HIV), Hepatitis B, or any other pathogen which could lead to disease or death upon exposure to an infected individual's body fluids.
c) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to the more restrictive of:
    i. 29 CFR 1910.1030 and 29 CFR 1910.1200
    ii. State or local standards applicable to this project

5.2 Required Practices

a) A task specific Exposure Control Plan (ECP) will be developed as a component of the approved safety management plan for a Work Package that includes potentially infectious material exposure.
b) Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in the approved Work Package ECP.
c) A competent responsible individual will be designated to ensure all necessary personal protective equipment (PPE), engineering controls, labels, and red bags as required by the standard are provided and maintained and the aforementioned equipment are available in the appropriate sizes. Contact the designated Sundt Project Safety Representative if you have any questions.
d) Contractor, and any other entity conducting operations at the project, including any tier of subcontractors, will be responsible for training, documentation of training, and making a written Exposure Control Plan (ECP) available to employees
e) Any material saturated with blood or other bodily fluids, shall be considered Regulated Waste including but not limited to:
    a) Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood
    b) OPIM in a liquid or semi-liquid state if compressed
    c) Items that are caked with dried blood or OPIM.
f) Any employee potentially exposed to Blood Borne Pathogens must use the appropriate PPE and observe the following precautions:
    i. Wash hands immediately or as soon as feasible after removing gloves or other PPE.
    ii. Remove PPE after it becomes contaminated and before leaving the work area.
    iii. Used PPE may be disposed of in a container clearly labeled as "Hazardous Material"
    iv. Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or other potentially infectious materials, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.

v. Utility gloves must be properly discard after use or when they show signs of cracking, peeling, tearing, puncturing, or deterioration.
vi. Never wash or decontaminate disposable gloves for reuse.
vii. Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or other potentially infected materials (OPIM) pose a hazard to the eye, nose, or mouth.
viii. Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

g) Used PPE exposed to blood or OPIM is to be handled as Regulated Waste.
h) Regulated waste must be placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled, and closed prior to removal to prevent spillage or protrusion of contents during handling.
    i. The procedure for handling other regulated waste must be identified in the ECP as a component of the approved safety management plan in the Work Package.
    ii. The following labeling methods may be used:
        1. Red bag
        2. Biohazard label
i) The supervisor responsible for activities covered within the Work Package is responsible for ensuring that warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility.
j) Employees are to notify immediate supervisor and designated Sundt safety representative if they discover regulated waste containers, blood or OPIM, contaminated equipment, etc., without proper labels.

5.2.1 Hepatitis B Vaccination

a) When recommended by the approved Work Package ECP the employer is responsible to provide training to employees on hepatitis B vaccinations, addressing safety, benefits, efficacy, methods of administration, and availability.
b) The hepatitis B vaccination series will be made available at no cost after initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section of the ECP plan.
c) Vaccination is encouraged unless:
    i. Documentation exists that the employee has previously received the series
    ii. Antibody testing reveals that the employee is immune
    iii. Medical evaluation shows that vaccination is contraindicated.
d) If an employee declines the vaccination, the employee must sign a declination form.
    i. Personnel who decline may request/obtain vaccination later at no cost.
    ii. Documentation of vaccine refusal will be maintained by the responsible employer.
e) Following the medical evaluation, a copy of the health care professional's written opinion will be obtained and provided to the employee within 15 days of the completion of the evaluation. It will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered.

5.2.2 Post-Exposure Evaluation and Follow-Up

a) Should an exposure incident occur, contact your supervisor and the designated Sundt project safety representative.
b) An immediately available confidential medical evaluation and follow-up will be conducted by a designated licensed health care professional. Following initial first aid (clean the wound, flush eyes, or other mucous membrane, etc.), the following activities will be performed:
    i. Document the routes of exposure and how the exposure occurred.
    ii. Identify and document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).
    iii. Obtain consent and decide to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider.
    iv. If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.
    v. Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
    vi. After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status
    vii. If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

5.2.3 Administration of Post-Exposure Evaluation and Follow-Up

a) The employer will ensure that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's blood borne pathogens standard.
b) The employer will ensure that the health care professional evaluating an employee after an exposure incident receives the following:
    i. a description of the employee's job duties relevant to the exposure incident
    ii. route(s) of exposure
    iii. circumstances of exposure
    iv. if possible, results of the source individual's blood test
    v. relevant employee medical records, including vaccination status
c) The employer will ensure the employee is provided with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

5.2.4 Procedures for Evaluating the Circumstances Surrounding an Exposure Incident

a) An incident investigation will be conducted and include a review of the circumstances to determine:
   i. Engineering controls in use at the time
   ii. Work practices followed
   iii. A description of the device being used (including type and brand)
   iv. Protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)
   v. Location of the incident (OR, ER, patient room, etc.)
   vi. Procedure being performed when the incident occurred
   vii. Employee's training

5.2.5 Employee Training

a) All employees who have occupational exposure to blood borne pathogens must receive initial and annual training conducted by the employer.
b) All employees who have occupational exposure to blood borne pathogens will receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program will cover, at a minimum, the following elements:
   i. A copy and explanation of the OSHA bloodborne pathogen standard
   ii. An explanation of our ECP and how to obtain a copy
   iii. An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident
   iv. An explanation of the use and limitations of engineering controls, work practices, and PPE
   v. An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
   vi. An explanation of the basis for PPE selection
   vii. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
   viii. Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
   ix. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
   x. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
   xi. An explanation of the signs and labels and/or color coding required by the standard and used at this facility
   xii. An opportunity for interactive questions and answers with the person conducting the training session.
c) Training materials will be furnished by the employer.

5.2.6 RECORDKEEPING

a) Training Records Training records must be completed for each employee upon completion of training.
b) These documents will be kept for at least three years at (Location of records).
c) The training records must include:
    i. The dates of the training sessions
    ii. The contents or a summary of the training sessions
    iii. The names and qualifications of persons conducting the training
    iv. The names and job titles of all persons attending the training sessions
    v. Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to (name of responsible person or department).

5.2.7 Medical Records

a) Medical records will be maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records."
b) The employer is responsible for maintenance of the required medical records. These confidential records will be maintained by the employer for at least the duration of employment plus 30 years.
c) Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to the corporate office of the employer.

5.2.8 OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by the responsible employer.

5.2.9 Hepatitis B Vaccine Declination (MANDATORY)

a) Any employee with potential exposure to blood borne pathogens ore OPIC who elects to decline recommended vaccinations must sign a form as follows:
    i. I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.
    ii. Signed: (Employee Name)_____ Date:_____

5.3 Recommended Practices

a) None at this time

6.0 CONFINED SPACES

6.1 Scope

a) The requirements for successful control of work in and around confined spaces.
b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to the more restrictive of:
   i. 29 CFR 1910.146 Permit-Required Confined Spaces
   ii. 29 CFR 1926 Subpart AA Confined Spaces in Construction
c) This section applies to all confined space operations at project locations including but not limited to operations by any tier subcontractor or other project stakeholder under the control of Sundt.

6.2 Definitions

a) Confined Space: An area that meets any of the following criteria:
   i. Limited or restricted means of entry or exit
   ii. Is large enough for an employee to enter for performance of assigned work
   iii. Is not designed for continuous occupancy by an employee
   iv. These spaces may include, but are not limited to:
      1. Underground vaults
      2. Tanks
      3. Storage bins
      4. Pits and diked areas
      5. Vessels
      6. Silos.
b) Permit Required Confined Space: meets the definition of a confined space and has one or more of the following characteristics:
   i. Contains or has the potential to contain a hazardous atmosphere.
   ii. Is exposed to a material that has the potential for engulfing the entrant.
   iii. Has an internal configuration that might cause an entrant to be trapped or asphyxiated including but not limited to:
      7. Inwardly converging walls
      8. A floor that slopes downward and tapers to a smaller cross section.
   iv. Contains any other recognized serious safety or health hazards.
c) Non-Permit Confined Space: a confined space that does not include any characteristics or potential for hazards indicated for a Permit Required Confined Space.
d) Entry Supervisor: A designated individual assigned the following responsibilities during the preparation and execution of a confined space operation, including;
   i. Determining if entry conditions are acceptable.
   ii. Assure proper training is conducted prior to initial assignment of both entrants and attendants.
   iii. Formally authorizing entry.
   iv. Overseeing entry operations.
   v. Terminating entry operations.

e) Attendant: An individual designated to remain stationed outside a Permit Space and is responsible for monitoring the entrants as well as performing other assigned duties.
f) Authorized Entrant: an individual who is authorized by the employer to enter confined spaces or permit space.
g) Entry Employer: The employer who directs workers to enter a space.
h) Entry Rescue: Added to clarify the differences in the types of rescue employers can use.
i) Entry Permit: The physical document provided by the employer to allow and control entry into a hazardous Permit Required Confined Space.
j) Permit System: A written procedure for preparing, issuing and canceling Entry Permits.
k) Isolation: The process by which a confined space is completely secured against the release of energy and material into the space by protective means and methods such as:
    v. Removal of inlets and outlets from service
    vi. Blanking or binding
    vii. Misaligning, or removing sections of lines, pipes, or ducts
    viii. Double block and bleed system
    ix. Lockout of all sources of energy
    x. Blocking or disconnecting all mechanical linkages.
l) Acceptable Entry Conditions: Conditions that must be established, validated and monitored prior to and during entry to a permit confined space to ensure that employees may safely enter into and work within the space.
m) Hazardous Atmosphere: Any atmospheric conditions under which employee exposure creates a potential risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness. See Hazardous Atmosphere below)
n) Prohibited Condition: Any condition in a Permit Space that is not allowed by the permit during the period entry is authorized.
o) Emergency Rescue Team: A team of prospective rescuers designated to a confined space work safety plan.
    xi. Rescue duties can be contracted out to a private agency or arrangement made with local fire departments.
    xii. If rescue duties are contracted out, the designated duties for this role do not apply to the employees of Sundt
p) Incident Commander: Individual in charge of Emergency Response activity
q) Immediately Dangerous to Life and Health (IDLH): any condition that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment

6.3 Required Practices

6.3.1 General

a) Regardless of the prevailing regulatory standard applicable to the work the project safety management plan must comply with the more stringent requirements of either OSHA General Industry or Construction Industry confined space standards including but not limited to:

i. A Competent Person must conduct a jobsite evaluation to identify potential permit required confined spaces.
ii. Air contaminant monitoring must be continuous.
iii. Emergency response planning must be completed and an emergency rescue teams must be available while authorized entrants are in the confined space.

b) A means of warning employees about the existence of confined spaces and the potential for danger upon entry required for any "Permit Required Confined Spaces". The minimum requirements for warning include a sign which indicates:

DANGER
PERMIT REQUIRED CONFINED SPACE
DO NOT ENTER

c) Unauthorized entry into confined spaces must be prevented.
d) All employees must be informed of the presence of confined spaces in the workplace and their hazards.
e) When multiple employers are potentially exposed to any confined space the safety management plan for that work must coordinate activities of all stakeholders that may be impacted.
f) Employees must be trained and demonstrate competency in work practices for safe entry into, and working within and around confined spaces
g) An emergency rescue team must be available as required by regulations when work is conducted in a confined space.
h) The emergency rescue team must:
   i. Participate in the planning process
   ii. Identify capabilities and necessary equipment
   iii. Be provided access and the opportunity to practice rescue procedures
i) The emergency rescue team must be identified in the safety management plan and may be any of the following:
   i. Local emergency responders
   ii. A contracted outside service
   iii. Facility operator that has a team willing and capable of response
   iv. Other qualified competent party.

6.3.2 The Entry Permit

a) A Confined Space Entry Permit (SMS-T-SFTY011) must be completed before an entrant will be permitted to enter a Permit Required Confined Space.
b) Subcontractors may use their own company's entry permit provided it complies with the requirements of this System Manual.
c) Should work extend past the duration stipulated on the permit or extend beyond a single shift, a new permit must be developed.
d) All confined space entry permits must be closed. Closure must be documented on the permit, either by:
   i. Completion of the permit activities
   ii. Early termination of the permit for any reason.
      1. Reason for early termination must be documented on the permit.

e) All permits must be maintained in the project records (See SMS File Structure & Record Retention) with a copy sent to the client / facility owner for their records.
f) Where multiple employers must enter/work in a space at the same time, Sundt will coordinate those activities and ensure that each employer understands their role/s.
g) The minimum contents of a Confined Space Entry Permit (SMS-T-SFTY011) include the following:
    i. A description of the permit space to be entered.
    ii. Purpose of the entry.
    iii. Date and duration of activities covered by the permit.
    iv. Name and signature of the individual authorizing the entrance into the space.
    v. Identification of employees who are authorized to enter the space.
    vi. Name of the attendant
        2. Note: attendants are not permitted to monitor multiple confined spaces at one time.
    vii. Name of the current entry supervisor.
    viii. Measures taken for personal protective equipment and for mitigating any hazards placed upon the workers in a hazardous area.
    ix. Any equipment which will be used to monitor the confined space.
    x. Descriptions of acceptable entry conditions for the confined space.
    xi. Documented results of initial and continuous monitoring performed in the space
        3. See Continuous Monitoring Requirements of this Plan.
    xii. A listing of any supplemental permits applicable during the confined space activity (I.e., hot works, etc.).

6.3.3 Hazardous Atmospheres

a) Hazardous Atmospheres include, but are not limited to the following:
    i. An atmosphere which is not suitable for human occupancy
    ii. An oxygen-deficient atmosphere - Measured oxygen content is less than 19.5%
    iii. An oxygen-enriched atmosphere - Measured oxygen content is greater than 23.5%
    iv. Flammable and explosive atmospheres - The presence of gases or vapors exceed 10% of the Lower Explosive Limit (LEL)
    v. Exposure to toxic or poisonous chemical in excess of the Permissible Exposure Limit (PEL).
        1. The PEL for various chemicals, agents and carcinogens is available from OSHA and can be found on their website.
        2. Exposure must be calculated using the method dictated by OSHA or other Authority Having jurisdiction (AHJ), whichever is more stringent.
        3. Exposure to chemicals and/or other agents not available from OSHA resources may be identified in the Safety Data Sheets for those compounds.
        4. Exposure to any chemical or agent for which the PEL cannot be verified and measured is prohibited.
b) All Sundt employees are prohibited from conducting any work in a confined space with atmospheric conditions that are an Immediately Dangerous to Life and Health (IDLH).

i. Work required under such conditions must be reassigned to the facility owner or a subcontracted third party with expertise for working in IDLH atmospheres.

6.3.4 Entry Supervisor Responsibilities/Duties

a) Know the potential hazards that may be faced by employees during the confined space entry.
b) Coordinate all activities, including emergency rescue, with the client / facility owner or operator for gaining access to confined spaces under their jurisdiction or control.
c) Assure that potential energy sources that may impact the work area or other potentially hazardous conditions have locked out and tagged out.
    i. No worker may be exposed until both the facility owner and Sundt's locks are in place.
d) Determine whether potential exposure exists to other workers not associated with entry process, pedestrians, equipment or vehicle traffic and develop a plan for controlling the exposure.
e) Assure proper training is conducted prior to initial assignment of both entrants and attendants or any change in assigned duties.
f) How the exposure to the hazards might occur.
g) Recognize signs or symptoms indicative of exposure to the potential hazards.
h) Know and understand consequences of exposure to the hazards.
i) Verify before entry to any confined space begins:
    ii. All the tests specified by an entry permit have been conducted.
    iii. All procedures and equipment specified on the permit are in place.
    iv. Emergency Rescue Team is available and means of communication with them are confirmed.
    v. Emergency Rescue Team can and will communicate status if they become unable to respond for any reason.
j) Sign the permit for work to begin after verification of the conditions of entry have been met.
k) Remove unauthorized individuals who enter or attempt to enter the permit space during entry operations.
l) Monitor and verify continuity whenever responsibility for a permit space entry operation is transferred.
    vi. Transfer may occur at intervals dictated by the hazards and operation performed within the space.
m) Ensure during the period which a permit activity is conducted:
    vii. Entry operations remain continuous and consistent with terms of the entry permits
    viii. Acceptable entry conditions are maintained.
n) Suspended any permit in the event a change of conditions in the space requires evacuation from the space.

6.3.5 Attendant Responsibilities/Duties

a) Know the potential hazards that may be faced by employees during the confined space entry.
b) Be aware of possible behavioral effects of hazard exposure to authorized entrants.

c) Continuously maintain an accurate count of authorized entrants in the permit space.
    i. An Attendant may only monitor one confined space at any time.
    ii. An Attendant may not perform any other duties that may interfere with the primary duty to monitor and protect the safety of authorized entrants.
d) Ensure each Authorized Entrant is accurately identified by a reliable means, including but not limited to:
    iii. Valid driver license or other government issued photo ID.
    iv. Personal knowledge of the individual's identity.
    v. A valid employee badging system that is authorized for use in the Project Management Plan.
e) Remain on duty outside the permit space during entry operation until relieved by another attendant.
f) Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants to the need for evacuation of the space.
g) Monitor activities inside and outside of the confined space through observation and communication and ensure entrants may safely evacuate immediately under any of the following conditions:
    vi. Conditions prohibited under the permit are detected;
    vii. Attendant detects a situation outside the space that could endanger the authorized entrant
    viii. Attendant cannot effectively and safely perform all required duties.
h) Summon emergency services as soon as confined space is determined hazardous.
i) Inform unauthorized personnel to stay away from, and do not enter permit area.

6.3.6 Entrant Duties/Responsibilities

a) Know the hazards that may be faced during entry, including information on the warning signs or symptoms, and consequences of the exposure.
b) Properly use equipment as required.
c) All entrants must wear a full-body harness and have a lifeline attached to a mechanical device for retrieval.
d) Communicate with the Attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required.
e) Alert the attendant when:
    i. The entrant recognizes any warning signs, or symptoms of exposure to a dangerous situation
    ii. The entrant detects a prohibited condition
f) Exit the permit space as quickly as possible whenever:
    i. An order to evacuate is given by the attendant or the person in charge of the entry.
    ii. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation
    iii. The entrant detects a prohibited condition
    iv. The evacuation alarm is activated

6.3.7 Emergency Rescue Team Personnel Responsibilities/Duties

a) The ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified
    i. Timely will vary according to the specific hazards involved in each entry.
b) Ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit space or types of permit spaces identified;
c) The capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified;
d) Is equipped for, and proficient in, performing the needed rescue services;
e) Agrees to notify the employer immediately in the event that the rescue service becomes unavailable;
f) Is informed of the required services based upon the hazards they may confront when called on to perform rescue at the site.
g) Is provided prior access to all permit spaces from which rescue may be necessary so that the rescue team or service can develop appropriate rescue plans and practice rescue operations.
h) Be trained in the use of personal protective equipment and rescue equipment.
i) Must have at least one member of the rescue service trained in basic first-aid and cardiopulmonary resuscitation

6.3.8 Incident Commander Duties/Responsibilities

a) Command the rescue scene and process to ensure:
    i. Responder safety
    ii. Safety of the victim
    iii. Assessment of the situation
    iv. Type of Rescue
    v. Development of the rescue plan
    vi. General public control and safety

6.4 Recommended Practices

a) Effective coordination of rescue activities is critical in the event that a life-threatening incident should occur. Emergency service providers are encouraged to work closely with employers who request their services for permit-required confined space rescues, including:
    i. Pre-rescue planning,
    ii. Communication
b) When a local Emergency Service Provider is considered for services as an Emergency Rescue Team the following issues should be discussed and addressed prior to engagement of their services:
    i. Have they been informed of the hazards they might encounter?
    ii. Responders must be able to answer when an employer requests their services:
        1. Are they able to respond and conduct a rescue in a timely manner based on the site conditions?
        2. Do they have the appropriate equipment for response and rescue, such as:

   A. atmospheric monitors
   B. fall protection
   C. extraction equipment
   D. Self-contained breathing apparatus (SCBA) for the particular permit-required confined spaces?
3. Are they prepared for the hazards the employer has identified?
   E. Atmospheric hazards (e.g., flammable vapors, low oxygen)
   F. Electrocution (e.g., unprotected, energized wires)
   G. Flooding or engulfment potential
   H. Poor lighting
   I. Fall hazards
   J. Chemical hazards
4. Are they trained for the hazards identified by the employer?
   K. Hazard Communication training (HAZCOM)
   L. Respiratory Protection training
   M. Hazardous Material training
   N. HAZWOPER training
   O. Hazard recognition
5. Can they cope with other hazards they have identified on the site?
   P. Do you need to develop a new procedure for these hazards/conditions?
6. Have they been provided with the exact location of the work site?
   Q. Information on access routes, gates or landmarks
   R. A project site plan if necessary
   S. GPS coordinates if in a remote location
7. Has (or will) a site visit been conducted and a practice rescue held?
8. Do they have / know the best way to contact you?
9. How would the company communicate any changes to site conditions throughout the project?
10. Could other emergencies or group training preclude you from responding and how will that be communicated?

7.0 CONTROL OF STORED/HAZARDOUS ENERGY

7.1 Scope of this Section

a) This section includes the required procedures to limit and/or eliminate the danger of the unexpected release of stored or residual energy including but not limited to:
   i. Mechanical
   ii. Electrical
   iii. Chemical
   iv. Hydraulic
   v. Pneumatic
   vi. Other sources of hazardous potential energy
b) The required practices in this section supplement; but in no instance supplant applicable laws, regulations or requirements of any Authority Having Jurisdiction over the work.
c) This section applies to all operations which require control of hazardous energy at project locations including but not limited to operations by any tier subcontractor or other project stakeholder under the control of Sundt.

7.2 Required Practices

7.2.1 General

a) The Safety Management Plan component of any Work Package must include provisions that assure the safety and health of project stakeholders from potential hazards of exposure to any type of stored energy.
b) Any plan must comply with the applicable laws and regulations or standards for the work.
c) Regardless of the prevailing regulatory standard applicable to the work the project safety management plan must comply with the more stringent requirements of either the prevailing standard or the following:
   i. OSHA General Industry or Construction Industry Control of Hazardous Energy standards including but not limited to:
      1. 29 CFR 1910.147, The control of hazardous energy (lockout/tagout/tryout)
      2. 29 CFR 1910.269, Electric Power Generation, Transmission, And Distribution
      a. Appendix A, Flow charts
      3. 29 CFR 1926.64, Process Safety Management of Highly Hazardous Chemicals
      4. 29 CFR Subpart K 1926.417 “Locking and Tagging of Circuits” standards
d) All Valves, switches, electrical panels and circuits, and other mechanical or electrical equipment must be properly locked and tagged out of service to prevent the system from being energized and/or operating while installation, maintenance, or repair work is in progress.
e) Contractor and any tier of subcontractor completing work which requires control of hazardous energy is responsible for training all of their impacted workers and implementation of control procedures.

7.2.2 Control of Hazardous Energy Permit (LO/TO Permit)

a) A Lock Out/Tag Out Permit must be completed before any work will be permitted that requires control of hazardous energy

b) Subcontractors may use their own company's LO/TO permit provided it complies with the requirements of this System Manual.
c) Should work extend past the duration stipulated on the permit or extend beyond a single shift, follow the procedures in Standard General LO/TO Procedures
d) All LO/TO permits must be closed. Closure must be documented on the permit, either by:
    i. Completion of the permit activities
    ii. Early termination of the permit for any reason.
        1. Reason for early termination must be documented on the permit.
e) All permits must be maintained in the project records (See SMS File Structure & Record Retention) with a copy sent to the client / facility owner for their records.
f) Where multiple employers must perform work that requires the control of hazardous energy at the same time, Sundt will coordinate those activities and ensure that each employer understands their role/s.
g) The minimum contents of a LO/TO Permit include the following:
    i. A Competent Person must identify conditions requiring the control of hazardous energy.
    ii. A description of the permit scope.
    iii. Purpose of the exposure.
    iv. Date and duration of activities covered by the permit.
    v. Name and signature of the individual authorizing the work under the permit.
    vi. Identification of employees who are authorized to enter the permitted work area.
    vii. Rules for performing work under the permit
    viii. Techniques that must be implemented to ensure a safe work environment
    ix. Personal Protective Equipment (PPE) required for the work
    x. Training required for workers performing duties under the permit
    xi. A checklist for verification of sources of hazardous energy are isolated and rendered inoperative or are at a state of zero energy
    xii. Methods of compliance
h) If it is not possible to render potential energy source inoperative or reduce residual energy to zero an "Energized Work Permit" must be completed and approved by an authorized individual.
i) Required meetings must be completed prior to any work under the permit.

7.2.3 Standard General LO/TO Procedures

a) STEP 1: TURN OFF THE EQUIPMENT AND DISCONNECT THE ENERGY SOURCE
    i. Locate and identify all switches, valves, and other devices that will have to be locked and/or tagged. More than one energy source may be involved.
    ii. Notify all affected employees that a lock-out procedure is beginning, and why.
b) STEP 2: LOCK-OUT ENERGY SOURCES
    i. Use a lock to prevent the flow of energy from being restored.
    ii. The individual authorizing work under the permit must engage a lock (or a multiple-lock adapter and a lock) on the means of disconnection (control lever or other).

iii. If more than one person is going to be working under the permit, use a multiple lock-out device
    1. Separate keyed locks must be used for each worker.
    2. When the LO/TO spans more than one shift, each worker(s) will remove their respective lock at the end of the shift.
    3. Worker(s) on the following shift must add their respective lock.

iv. The lock applied by the individual authorizing work under the permit may not be removed until work under the permit completed and approved.

v. Test the means of disconnection to be sure it cannot be energized or moved to the "on" position.

vi. The flow of energy must be prevented from becoming reestablished without the knowledge and authorization of the individual applying the lock.

vii. PULLING A FUSE OR FLIPPING A CIRCUIT BREAKER IS NO SUBSTITUTE FOR LOCKING OUT.

viii. If locks cannot be utilized in LO/TO, then an alternative means of protecting workers from hazardous energy must be implemented. These may include:
    1. Tags
    2. Warning signs
    3. Or other approved means

ix. Any tags and/or signs utilized must
    1. Warn against energizing the system or equipment
    2. i.e.: DO NOT ENERGIZE
    3. Be substantial enough to prevent removal
    4. Include the name of the worker and contractor/subcontractor authorizing the LO/TO.

c) STEP 3: TAG-OUT AT THE DISCONNECT POINT
    i. In addition to a lock or other approved means a tag must also be placed at the disconnect point.
    ii. The tag must contain the following Information:
    iii. Name of individual authorizing the permit
    iv. Time and date work began
    v. Copy of the Permit or description of work being done.
    vi. A warning such as:
        1. DO NOT START
        2. DO NOT OPEN
        3. DO NOT ENERGIZE.

d) STEP 4: RELEASE RESIDUAL ENERGY
    i. A state of zero potential energy must be achieved
    ii. If unable to de-energize a system or isolate any form of potential energy, an "Energized Work Permit" must be completed.
        1. An Energized Work Permit must be approved by an authorized individual

e) STEP 5: TEST EQUIPMENT

i. Verify that equipment or other source of stored energy to will not operate before beginning work.
    1. CAUTION: An isolation or disconnecting device or could be defective, the wrong switch thrown or valve closed, leaving the potential energy present.
    2. After you have completed Steps 1 thru 4, turn on the switch or push the start button or employ other appropriate means to ensure all energy sources have been successfully blocked out.
    3. Return any switch to the “off” position after test verifies isolation.

ii. CAUTION: Be aware of hidden energy sources. There might be more than one energy source. Make sure you lock out and tag the other sources following the steps above.

f) STEP 6: RESTORE ENERGY SAFETY

i. After completion of all work verify:
    1. All tools have been removed
    2. All services have been reconnected or unblocked
    3. All guards have been replaced
    4. Workers are safely out of the way

ii. Notify all stakeholders that the energy is being restored to the system.
    1. CAUTION: Ensure you do not expose another person to danger by removing the lock.

iii. Make sure all co-workers have been notified Remove lock and tag

iv. Return energy to the system

7.3 Recommended Practices

a) None at this time

8.0 DEMOLITION

8.1 Scope

a) These requirements address successful control of work in and around demolition activities.
b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:
    i. 29 CFR 1926 Subpart T, Demolition
    ii. State and local standards and regulations applicable to the project.
c) This section applies to all demolition operations at project locations including but not limited to operations by any tier subcontractor or other project stakeholder under the control of Sundt.

8.2 Required Practices

a) All project stakeholders including Sundt and any tier of subcontractors must comply at all times with Federal, State or local standards applicable to the project when performing any work that involves demolition of a structure, building or component part thereof.
b) A Supervisor must be designated as the competent person responsible for all demolition work on the job in writing before any such work is started.
    i. The designated competent person must be experienced in demolition operations.
    ii. Their duties will include the direct supervision of the work force
    iii. Ensuring that Work Permit requirements are met
    iv. Act as liaison with others working in the general area including:
        1. Contractors
        2. Operators
        3. Construction engineers
c) All utility services such as electricity, gas, and water must be shut off and main supplies disconnected outside the line of the demolition whenever possible.
    i. The requirements contained in Utility Strike Prevention apply to demolition.
d) When total shutdown is not possible, utilities must be identified and then protected from damage throughout demolition and any subsequent operations.
e) Adjacent structures must be protected from debris and, where necessary, bracing must be installed to ensure stability.
f) Barricades must be erected around the work area.
g) Signs bearing the words “DANGER -DEMOLITION IN PROGRESS” must be erected at each approach to the barricades.

8.3 Recommended Practices

a) None at this time

9.0 DROPPED/FALLING OBJECTS

9.1 Scope

a) Protective measures must be in place to prevent drop hazards from falling and potentially causing harm where work is being conducted at heights. Drop hazards may consist of persons, tools, material, equipment, or other objects. A one-pound object dropped a mere six feet can cause a potentially serious injury.
b) Hand tools and material can become drop hazards in three ways:
    i. During usage when control of the tool/material is lost;
    ii. During transportation to or from the location of work; and
    iii. After use, tools/materials can be left unsecured.

9.2 Requirements

9.2.1 General

a) Objects shall be prevented from falling if they:
    i. may potentially expose others to injury
    ii. may potentially fall to a lower level
    iii. are stored/used at 6' or above the adjacent/walking surface
    iv. are stored/used within 15' of a leading edge or opening
    v. are on wheels or casters (Rolling objects must be stored with brakes engaged, but a secondary tether may be required. Objects with no brakes must be tethered.)

9.2.2 Pre-Planning

a) Potential dropped object hazards and protective controls must be addressed in:
    i. Stop the Drop Checklists (not mandatory),
    ii. THAs,
    iii. JHAs, **and/or**
    iv. Site-specific safety programs.

9.2.3 Edge Protection

a) For guardrail systems where personnel may be present below, a suitable covering shall be in place from the walking surface to the top of the guardrail (or higher as feasible).
b) Suitable coverings may consist of screening, paneling, mesh, netting, etc.
c) Elevator lobbies and shaft openings must be enclosed via suitable coverings.
d) When finished surfaces must be protected, guardrails shall be installed in a manner that prevents personnel from leaning over the leading edge to install or remove guardrails.

9.2.4 Storage of Drop Hazards

a) Trash and waste at heights must be properly contained in buckets/pouches/containers that can prevent spillage.
b) Work areas, tools, and materials must be maintained in an orderly fashion.
c) Unless guardrails with screening or paneling have been erected, unsecured tools/materials must not be stored within 15 feet of a leading/perimeter edge.
d) Stacked materials must be stable and self-supporting.
e) Potential drop hazards must be secured to prevent them from being wind-blown.

9.2.5 Controlled Access Zones (CAZs)

a) CAZs and/or designated spotters must be in place unless measures are enacted to prevent drop hazards (i.e., screening, netting, etc.).
b) CAZs must be clearly marked with barricades or danger tape to restrict access to unauthorized personnel. When a CAZ is no longer in effect, the barricades/tape must be taken down.
c) CAZs must have signage posted that identifies who the CAZ belongs to, what the hazard is, and the person to contact for permission to access the area.
d) CAZs must be of adequate size to effectively mitigate the risk from falling or ricocheting material.
e) Persons authorized to work in CAZs must pay attention to what is going on above them (i.e., scaffold erection/dismantling, concrete deck forming, installation/removal of perimeter protection, etc.).
f) Persons not authorized to enter a CAZ are subject to disciplinary action including termination.
g) CAZs must be in place around hoisting activities (i.e., structural steel shake-out areas, forklift loading zones, etc.). Paths of travel for overhead loads must be kept clear of persons.
h) Objects may be allowed to free fall only when an *adequate* controlled access zone (CAZ) is established *and* a written safety plan is in place (JHA or THA). However, tools and material shall be tethered, as feasible, due to their potential to ricochet outside of a CAZ.

9.2.6 Tethering/Securing of Drop Hazards

a) Unless adequate perimeter protection is in place, tools and materials must be tethered/secured when work is conducted at heights.
b) Pole/post shores and re-shores that may potentially fall into unprotected areas must be tethered. Tethering must be supervised by a Competent Person and conducted in accordance with manufacturer specifications and engineered drawings.
c) Prior to selecting a tool lanyard, a proper attachment point must be established on the tool and the person/belt/harness/equipment.
    i. Attachment points must be manufactured for the purpose of tethering or certified as third-party tested for dynamic load by the manufacturer.
    ii. Attachment points must be tested to an adequate load rating for the intended use of the tool.
    d) Tethers/lanyards shall be inspected prior to use. Excessively worn or damaged tools or materials must be immediately removed from service and replaced.
    e) Tools weighing more than five pounds may not be tethered directly to a person's body or wristband.
    f) Wristbands used for tethering must be certified by the manufacturer as having been third-party tested for dynamic load.
    g) Positive tool transfer must be used. (When transferring a tethered tool from one person to another, "100% tie off" must be engaged. The tool must be tethered to the passing person. Prior to handing off, the receiving person must connect their tether to the tool as well. After positive connection has been completed, the passing person may disconnect their tether from the tool.)
    h) For the safe transportation of tools and materials, buckets/holsters/pouches/bags may be utilized only if they are manufactured with a closure system which allows the user to secure the contents from potential spills.

i) Buckets/bags that are hoisted must be load rated by the manufacturer and third-party tested for static load.

9.2.7 Safety Nets

a) In applications where safety nets are used, nets must be designed with specific sized webbing approved by the manufacturer for use based on the specific task, location and type of tools/materials being used.
b) Forged steel safety hooks or shackles must be used to fasten the net to its supports. Nets should be installed as closely below the work in progress as is deemed practicable, but never more than 25 feet below (30' for Fed/OSHA projects). Safety nets shall be hung, maintained and tested in accordance with the manufacturer's instructions as well as the requirements set forth by the Occupational Safety and Health Administration found in CFR 1926.502.
c) Nets designed for use to prevent falling objects shall not be used as fall protection for human beings (falling-object nets may be deployed below fall protection nets in these cases). When falling-object nets are used alone, signs must be posted informing persons that "Fall Protection is still required in work areas above placed netting."
d) Inspections of safety netting must occur weekly and defective netting may not be deployed.

9.2.8 Overhead Protection

a) Personnel entering and exiting a structure that is undergoing construction on its perimeter (i.e., glazing, framing, roofing, etc.) shall use designated entrances and exits that are equipped with overhead protection.
b) Overhead protection must be provided at each designated, building-access point, setback, and over or near any public interface (combined with appropriate controlled access zones).
c) The sides and tops of overhead protection must be free of gaps to prevent passage of material. Canopy tops must be tightly planked/covered to minimize any gaps.
d) Protective canopies in a public right-of-way must be constructed in accordance with applicable local jurisdictions.
e) The top of the canopy may consist of secured chain link fencing sandwiched between two sheets of ¾" plywood.
f) Canopy roofs must sustain a 300lb live load (in order to prevent dropped items from penetrating) when constructed near a building that is taller than 100 feet. For buildings shorter than 100 feet, the canopy top must be able to support a live load of 150 lbs.
g) Canopies must be designed and have plans stamped by an engineer.

9.2.9 Modification of Protection

a) Prior to the modification of protective devices/methods used for dropped-object protection, permission and conditions for use/access shall be granted by the contractor who installed the protection.
b) It shall be the responsibility of the contractor who modifies protection to repair/replace/reinstall.

9.2.10 Elevated-Work Platforms

a) Elevated-work platforms includes scissor lifts, articulating boom lifts, one-person lifts, scaffolding, and other work platforms that are elevated.
b) When elevated-work platforms are used, tools and material must be safely secured.
c) The basket/platform must be enclosed with netting or other manufacturer-approved material if feasible or determined by a competent person.
d) Transported material must be secured in accordance with the platform manufacturer (i.e., special racks, hooks, devices).
e) Tools and material must be tethered if they have a potential to fall and strike a person or work-in-place.
f) The area below the work platform must be delineated if there is a potential for others to enter the area.
g) Delineation must consist of danger tape or red rope and signage that states the hazard and whom to contact.

9.3 Recommended Practices

a) Stop the Drop Checklists can be used to aid in planning work at heights.
b) Consider a robust netting material such as this for preventing dropped objects
c) Partner with suppliers and manufacturers to educate trades on drop-prevention controls
    a. Ergodyne
    b. 3M
    c. Hilti

10.0 ELECTRICAL

10.1 Scope

This section applies to all electrical operations at project locations including but not limited to operations by any tier subcontractor or other project stakeholder under the control of Sundt.

10.2 Required Practices

10.2.1 Work On or Near Live Electrical Equipment

a) No work may be conducted on live electrical circuits, panels, etc. unless approved by an authorized individual as a component of the approved Work Package (Reference Project Management Plan – Safety – Responsibility & Authority).
b) When a situation arises where it is impossible to perform a work task with the circuit, panel, etc. de-energized, the Work Package Safety Management Plan must include safety procedures specific to this task.
c) An "Energized Electrical Work Permit" will be developed by the employer performing the work on the energized circuit, panel, etc.
d) Upon completion of the permit, all workers involved in the energized work task will meet to review the permit and all safety precautions.
e) Only qualified workers who are knowledgeable of electrical hazards and controls (i.e.: shock, electrocutions, arc flash, special precautionary techniques, personal protective equipment, insulating and shielding materials, insulated tools, etc.), may work on energized electric circuits, panels, etc.
f) Energized work will be completed in strict compliance with the more stringent requirements of
    i. The Project Management Plan
    ii. The Authority Having Jurisdiction
    iii. The most current edition of NFPA 70E

10.2.2 Ground Fault Circuit Interrupters

a) All workers must be protected from electrical shock by using Ground Fault Circuit Interrupter devices (GFCI's) on all 120 volts single-phase 15 and 20-ampere circuit lines, regardless of any prevailing regulatory standard which may permit lesser protections.
    i. The GFCI program will comply with the more stringent requirements of OSHA 1926.404(b) (1) (iii) or other Authority Having Jurisdiction.
    ii. This requirement is mandatory for both permanent and temporary wiring within the structure and surrounding area
    iii. GFCI protection will consist of GFCI outlets, GFCI circuit breakers, or GFCI pigtails.
    iv. An "Assured Grounding Program" may supplement; however, under no circumstances replace the use of GFCI devices.
b) Visual inspections and function tests must be performed on all temporary power circuits and GFCI boxes on a weekly basis by a competent individual.

i. The results of inspections and testing must be documented and delivered to the designated Sundt safety representative GFCI Weekly Checklist (SMS-T-SFTY012) at the end of each week.

10.2.3 Assured Equipment Grounding Conductor Program

a) This program is applicable to all temporary electric power for which Ground Fault Circuit Interrupters do **not** apply.
b) Temporary power cords and other cords used on other circuits not protected by GFCI, (such as 220-volt extension cords for electric welders, mason saws etc.), must comply with the requirements of an Assured Equipment Grounding Conductor Program (AEGCP).
    i. An AEGCP will comply with the requirements of OSHA or other Authority Having Jurisdiction whichever is more stringent.
    ii. All such circuits must be marked accordingly before being placed in service.
    iii. Inspection and tests of equipment, devices and marking must be completed must be completed and documented as required by the approved AEGCP.

10.2.4 Grounding of Portable Generators

a) All portable generators on any project must be grounded unless one of the following conditions apply:
    i. The manufacturer's operation manual states that grounding is not required.
    ii. A letter is obtained from the manufacturer stating grounding is not necessary.
b) If the operation manual is silent on the topic, the generator must be grounded.

10.2.5 Electrical Tools

a) All tools shall be maintained in their original condition.
b) Damaged electrical tools will be removed from service and tagged "Out of Service". Damaged includes but is not limited to any of the following conditions:
    i. Damage to the case or housings of the tool
    ii. Power cord is cut
    iii. Internal wiring is exposed
    iv. Cord is missing ground pin
    v. Tool has been modified by an entity other than the manufacturer
c) All hand tools must be properly grounded or be of the double-insulated type.

10.2.6 Extension Cords

a) Extension cords must be inspected each shift before being placed into service or more frequently as may be necessary.
b) Any extension cord that is damaged shall be removed from service by cutting off the male plug or tagging "Out of Service". Damage includes but is not limited to:
    i. Outer insulation is cut or torn
    ii. Grounding pin is missing
    iii. Wiring is exposed
    iv. Plug is separated from cord insulation at strain relief connection

c) Whenever an extension cord is plugged into an existing building outlet for construction work, the requirements of Ground Fault Circuit Interrupters or Assured Equipment Grounding Conductor Program must be followed as applicable to the service.
d) At the completion of each shift or when no longer required during the shift, extension cords must be inspected and rolled up and properly placed in storage.
e) Extension cords used for charging equipment and for lighting may be left plugged in at end of shift. These must be neatly coiled and out of the path of travel.

10.2.7 Temporary lighting

a) The design and installation of temporary lighting must be reviewed and approved by Sundt project management prior to installation.
b) All fixtures and wiring must be
    i. Secured with non-conductive material high enough above the floor to avoid contact with workers and equipment
        1. Temporary supply wiring shall be maintained at least 8" above the ground or floor
    ii. Mounted and secured by nonconductive means
c) Light plants shall be grounded in accordance with manufacturer's recommendations.

10.2.8 Overhead Lines

a) Any contractor or subcontractor of any tier performing work adjacent to overhead electrical power lines is responsible for protecting workers and equipment from coming in contact with the lines.
b) Protection must include, but is not limited to one or a combination of the following:
    i. De-energize the lines
    ii. Blanket the lines
    iii. Use of ground monitors, warning signs or flag lines
    iv. Any other means necessary to protect workers and equipment.
c) Work conducted near energized overhead lines rated 50 KV or below shall maintain a minimum clearance distance of 20 feet or that required by applicable laws and regulations, whichever is greater.
    i. Minimum clearance must be extended to include the length of conductive object that may be handled during the operation.
    ii. This requirement also applies erection or dismantling activities for scaffolding
d) For lines rated greater than 50KV, the minimum clearance must be determined based on the more stringent requirement of:
    i. Authority having jurisdiction
    ii. Utility Company that operates the lines
    iii. Applicable Laws or regulations.
    iv. These required practices are applicable to any part of a crane including the load and cables, aerial lifts, heavy equipment such as tractors, backhoes, front-end loaders, dump trucks, etc.…

10.3 Recommended Practices

a) Send a calendar invite to the electrical subcontractor as a reminder to submit monthly inspections
b) Outfit workers with a device such as this that detects live energy
c) Consider using durable temporary lighting equipment
d) Consider these examples for overhead cord management
e) Consider specifying Meltric brand electrical spider boxes due to arc-flash prevention features

11.0 EXCAVATION, GROUND DISTURBANCE, & UTILITY DAMAGE PREVENTION

11.1 Scope of this Section

a) This section applies to operations that disturb the ground/break grade.
b) This section is intended to establish minimum procedures to ensure compliance with regulatory requirements including but not limited to *the more restrictive* of:
   i. 29 CFR 1926.651 Specific Excavation Requirements
   ii. Applicable state or local standards

11.2 Required Practices

a) A Disturbance Permit must be completed prior to operations that break grade.
b) A designated Competent Person must be present during the operations.
c) The competent person and respective work plan shall identify protective measures for open excavations.
d) The Competent Person must inspect excavations daily or more frequently as required for changing conditions (i.e., weather, earthquake, etc.) via the Excavation Checklist (SMS-T-SFTY014) or equivalent form.
e) Completed checklists will be posted at the site of the excavation and submitted to the designated Sundt safety representative upon shift completion.
f) Excavations 5 feet deep or greater require a protective system.
g) Access/egress shall be located as to require no more than 25 feet of lateral travel for employees.
h) Adequate precautions must be taken to protect employees against the hazards posed by water accumulation.
i) “Bridges” with handrails are required for walking across trenches wider than 30”
j) Fall protection is required along edges of excavations deeper than 6’ (that are not sloped).
k) Trenches 20 feet deep or greater require that the protective system be designed by a registered professional engineer or be based on tabulated data prepared and/or approved by a registered professional engineer in accordance with 1926.652(b) and (c). Copies of the stamped design documents will be maintained in the project’s safety file structure.

11.3 Utility Damage Prevention

11.3.1 Notify Authorities Having Jurisdiction

a) A Project’s Safety Management Plan will identify the Authorities Having Jurisdiction for utilities at the site.
b) Contractors shall coordinate and comply with the requirements of utility owners prior to creating a disturbance.

c) Each contractor shall acquire their own ticket.
d) Before calling dig alert, the area to be disturbed must be pre-marked with white paint, stakes, or flags.
   i. The service can be contacted by calling 811.
   ii. The website is www.digalert.org
e) Do not disrupt public utilities without permission from the authority having jurisdiction.
f) Do not close, shut off, or disrupt existing life safety systems that are in use without prior written notification to Owner.
g) Any existing facility that is damaged must be immediately reported as an incident to Sundt and Authorities Having Jurisdiction including the facility owner, utility service companies, 811 service, or other entities as applicable.
h) Refresh any existing tickets if the excavation will not be completed at the time the ticket expires. Plan on submitting the refresh request at least 48 hours prior to your ticket expiration date to avoid delays in work.

11.3.2 Locate Existing Utilities

a) Prior to any ground disturbance, a thorough review of all available information pertaining to the existing site conditions and location of underground facilities should be reviewed for conflicts and potential hazards, including but not limited to:
   i. Identify services to surrounding buildings such as gas meters, water valves, cable pedestals, sewer laterals, etc.
   ii. Request property owners or maintenance staff assist in identifying potential private facilities not marked by 811 or the utility company.
   iii. Review former as-builts and soil reports.
b) If a utility is unable to be found during locating or potholing, the ground disturbance may not proceed without approval from the respective Sundt Project Manager or escalated to Regional or Area Manager if needed.
c) Caution must be taken to ensure that service/lateral lines were located.
d) Private locators offer the ability to locate utilities, but they do not release the constructor from liability for utility strikes.

11.3.4 Protect Utilities and Markings

a) Existing and new utility installations on site require markings and/or protection.
b) Protective methods include, high-visibility markers, barricades, signage, etc.
c) Markings and utilities must remain protected, visible, and maintained throughout operations.
d) Any markings that deteriorate or are destroyed prior to completion of the operation should be remarked.
e) Master/as-built utility plans should be updated to reflect new installations.
f) Temporary construction utilities should be marked on a separate plan sheet and kept readily available for reference.
   i. Station, offset, and invert should be notated on temporary construction utility drawings.

11.3.5 Pothole to Verify

a) When disturbances are in potential conflict with utilities, potholing should be used to verify the location and depth of the utility.
   i. If a utility is unable to be found during potholing, the ground disturbance may not proceed without approval from the Sundt Project Manager or escalated to Regional or Area Manager if needed.

b) After potholing, uncovered utilities must be marked, protected, or removed, as necessary.

c) Utilities that are located within a roadway must be potholed.
   The street plates shall be of sufficient size and thickness to allow traffic to safely drive over them.
   i. Plates shall be flush with the horizontal plane and shall be secured in place in accordance with the local, state and/or federal requirements.
   ii. For roadway work not scheduled to be excavated in the current operation, an asphalt patch will be placed over the pothole. This will be done after all pothole information has been recorded and the pothole has been offset using stakes and ribbon.

11.3.6 Unintentional Uncovering of a Utility

a) If an unidentified utility is found it is the contractor's responsibility to:
   i. immediately notify a member of the Sundt Project Management Team,
   ii. inspect and support the utility, and
   iii. Notify Utility Owner/Authority Having Jurisdiction
   iv. Update as-built plans accordingly

11.3.7 Overhead Utilities

a) If overhead utilities cannot be eliminated/relocated, the following practices should be implemented;
   i. When working near overhead lines, the contractor should provide warning devices at all designated equipment crossings communicating the overhead hazard.
   ii. Spotters, when required, should be trained, will assume no other duties, and be equipped with an air horn/whistle/red flag and reflective vest.
   iii. If required, designated areas will be established to allow equipment to cross beneath the overhead line.
   iv. The contractor shall protect utility poles and guy wires from contact.

11.3.8 Reporting Utility Damage

a) Damaged utilities must be reported immediately to the Sundt Project Management team.

b) Reporting must comply with the Authority Having Jurisdiction including notification of the facility owner, utility service companies, 811 service, or other entities as applicable.

c) If utility damage occurs, the respective contractor shall:
   i. clear and secure the area if there is potential exposure to harm (i.e., gas leaking, energized electricity, etc.),

ii. notify the Sundt Superintendent and Sundt HS&E Department
iii. contact the appropriate utility owner to inform them of the damage, and
iv. complete the Sundt Incident Report.

d) Incident reports will include
i. Photos of the area
ii. Measurements of the disturbed area
iii. As built drawings/Existing Utility Drawing
iv. Pre-planning paperwork associated with the operation
v. Locate ticket

11.4 Recommended Practices

11.4.1 Underground Best Practices

a) The daily area of expected excavation should be clearly designated with paint. Any existing utilities within this area should have been previously located. A review of the location of these utilities will be conducted with the crew. The crew should not exceed this excavation limit until they establish a new limit of excavation and review all utilities in that area and confirming they have been located.
b) Where possible/feasible, tattle tales should be left in the void created while locating utilities. These objects will make it easier to locate a second time if a nearby excavation is required.
c) Meet Tickets or Pre-Dig meetings allow the project team to meet with the various utility operators on site prior to placing markings. These meetings facilitate greater communication and coordination, and provides insight into any high value or hazardous facilities
d) Conduct a job site review of known utilities with the project personnel. Including this in the site orientation is also acceptable.
e) Collect precise horizontal and vertical locations of utilities while hand digging and transfer the data to the Existing Utility Drawing or a 3D model.
f) Create an Existing Utility Drawing (EUD) that encompasses all identified utilities.
i. The Sundt Project Team is responsible for creating and updating the EUD.
ii. The EUD must be updated prior to;
1. Beginning a new phase of work;
2. When discrepancies are identified;
3. When new utilities are installed (i.e., temporary power, etc.).
4. Periodically through the course of work; or
5. When advised by a member of Sundt Management.

11.4.2 Vacuum Excavation

a) Vacuum excavation is considered an effective soft dig method.
i. **Get permission:** Before using a vacuum excavation system, get approval from utility owner.
ii. **Use a rotating nozzle**: Water can be a powerful source – and the conduit or polyurethane on a utility is not invincible. A rotating nozzle, also known as an oscillating nozzle, is the only nozzle that should be used for exposing utilities. This type of nozzle does not have a direct spray which can damage utilities. Also, it delivers a constant stream of circulating water that pulls away more dirt and

can use up to 50 percent less water than a fan nozzle. Essentially, the oscillating water stream maintains safety without sacrificing productivity.

iii. **Do not exceed 3,000 psi:** The recommended pressure for soft excavation is between 2,500 to 3,000 psi. Although many vacuum excavators and nozzles offer higher psi capabilities, too much pressure can damage utilities. If using heated water, pressure should be reduced.

iv. **Stay at least eight inches from the utility:** Holding the nozzle too close to the utility also increases the risk of damage. The recommended distance is six to eight inches from the utility.

v. **Keep the nozzle moving:** Although the rotating nozzle keeps the intense stream of water from remaining in constant, direct contact with the utility – it is important to physically move the lance/nozzle around, as well. Keeping a rotating stream of water during excavation avoids applying excessive pressure to a single area and, in turn, reduces damage.

vi. **Never dig with the nozzle:** As tempting as it may be to push the nozzle into the dirt, this can clog the nozzle and decrease efficiency. If you are struggling to expose utilities in hard soil or heavy clay, hot water heater packages are an option with most vacuum excavators. Using hot water can help break down clay without applying additional water pressure. However, keep the temperature below 150 degrees Fahrenheit and reduce pressure to avoid damaging utilities.

12.0 FALL PROTECTION

12.1 Scope of this Section

a) These minimum requirements address the protection of employees who are exposed to work areas that are elevated or depressed with respect to adjacent levels.

b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited *to the more restrictive of*:

   i. 29 CFR 1926, Subpart M – Fall Protection Standards.

   ii. State or local standards applicable to this project

12.2 Required Practices

12.2.1 General

a) 100 percent fall protection will be required when any potential exposure to an adjacent level exceeds six vertical feet, including trenches and excavations.

b) Each employer at the project site which will encounter fall exposures greater than six feet will submit "Site Specific Fall Protection and Rescue" program to Sundt for review and comment prior to starting work on the project.

c) The minimum requirements of Site Specific Fall Protection and Rescue program will include:

   i. Type of Exposures anticipated:

      1. Roof and Floor Perimeters
      2. Aerial Lifts
      3. Scaffolding
      4. Scissor Lifts
      5. Floor and Wall Openings
      6. Excavations/Trenches
      7. Climbing Vertical Walls/Columns
      8. Ladders
      9. Loading Platforms
      10. Steel Erection/Decking
      11. Falling Objects, Struck by hazards, etc.

   ii. Type of Systems anticipated:

      1. Fall Arrest including Personal Fall Arrest Systems (PFAS), Safety Nets, etc.
      2. Fall Restraint including: Guardrails, Warning Lines, etc.
      3. Falling Object Protection: Toe Boards, Canopies, Barricades, etc.

   iii. Type of Equipment anticipated:

      1. Harnesses
      2. Lanyards
      3. Retractable
      4. Static Lines

5. Mobile Anchors
6. Guardrails (2 x 4, Wire Rope, etc.)
7. Warning Line
8. Rope Grabs, etc.

iv. Identity of Competent Person [A Competent-Qualified Person form (SMS-F-SFTY001) must be completed and submitted along with the competent persons qualifications.]

v. Rescue Procedures: Methods to safely rescue workers who have fallen

d) If a "Fall Arrest" program is utilized in lieu of a "Fall Restraint" program, the "Competent Person" must take into consideration the calculation of free fall distance and required clearances (Free Fall + Shock Absorber Deceleration + D Ring to Feet + 2' to 3' Safety Factor), arresting forces (Maximum: 1,800 lbs.), and potential pendulum swing falls when implementing this program.

e) The "Competent Person" must train all workers in the "Site Specific Fall Protection and Rescue" program prior to being assigned a work task with fall exposures to workers.

f) All training must be documented to verify that workers are properly trained in fall protection and presented to Sundt upon request.

g) Any employer that does not anticipate potential exposure requiring fall protection must deliver a letter on company letterhead which includes a confirming statement.

12.2.2 Floor Hole/Opening Protection

a) Hole covers will be installed by the employer that creates the hole as follows:

i. 2"- 12" Holes

1. Openings with a horizontal dimension between 2" - 12" must be protected so materials cannot fall to levels below.
2. Covers must be:
   A. Secured to prevent displacement
   B. Capable of supporting 2 times the maximum intended load
   C. Marked with the word "HOLE" or "COVER", or use a color-coded system using a high visibility color.
   D. Cal/OSHA requires hole covers to bear a pressure sensitized, painted, or stenciled sign with legible letters not less than one inch high, stating: "Opening--Do Not Remove." Markings of chalk or keel shall not be used.

ii. 12" - 42" Holes

1. Unless a standard guardrail system is used, holes with a horizontal dimension between 12" up to and including 42" must be
   A. Covered using material capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time
   B. Secured to prevent displacement.

C. Marked with the word “HOLE” or “COVER”, or use a color-coded system using a high visibility color.
D. Cal/OSHA requires hole covers to bear a pressure sensitized, painted, or stenciled sign with legible letters not less than one inch high, stating: “Opening--Do Not Remove.” Markings of chalk or keel shall not be used

iii. Holes or Openings > 42”

A. Standard guardrail system must be used on all holes or openings greater than 42” wide.
B. The system will include vertical support members no more than 8 feet apart with a top rail, midrail, and toe boards.

12.3 Recommended Practices

a) In lieu of traditional slab grabbers, plan ahead and consider using an edge protection system such as this, this, this, this, or this
b) For structures with leading edges, plan ahead to install anchor points in strategic locations.
   i. Prevent hanging straps that could damage concrete.
   ii. Here’s one example to conceal overhead straps.
   iii. Here’s an example of using construction drawings to plan anchor points for roofing.
c) Plan ahead for truck offloading—establish an overhead anchor point for workers who may be exposed to falls greater than six feet.
d) Use alternative methods to reach work at heights such as these push-around scissor lifts
e) Consider erecting slip-resistant ramps for building/elevator/structure access such as these
f) In lieu of plywood or other floor protection that may cause trip hazards, consider an option such as these or these
g) Consider using a fabricated guardrail system such as this
h) Ensure harnesses are suitable for the specific task. For example, welders may this harness and painters could use this harness.
i) Holes with a minimum horizontal dimension greater than 12” up to a maximum of 42” may be covered using 1” (5/16”) metal shaker screen covers, bearing a minimum of 3” on the working surface, and padlocked in place. Sundt would control the locks and keys for access to the openings.
j) The ownership of hole covers can be transferred via the Floor Hole Cover Procedure and Checklist available on SMS.

13.0 Fire Hazards and Prevention

13.1 Scope of this Section

These minimum requirements address fire prevention, fire extinguishers, and hot work.

13.2 Required Practices

13.2.1 General

a) If permitted, smoking will only be allowed in designated areas.
b) Work areas shall be cleaned daily to prevent accumulation of fuel sources and other hazardous material.
c) No motors or machinery shall be left running during non-working hours
d) Each entity on the project site is response for training its workers in the proper use of fire extinguishing equipment which is applicable to and available in the workplace.
e) A fire watch will be established for hot work activities.
f) Fire extinguishers shall be provided so that the travel distance from construction work areas (including on site construction parking areas) to the nearest extinguisher is less than 100 feet unless a lessor distance is required by and AHJ (i.e. Cal/OSHA requires 75 feet).
    i. When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet.
    ii. Hot work activities, including, but not limited to welding, burning, and grinding require a 20 lb., ABC rated, dry chem fire extinguisher within 25’ of the work activity.
    iii. Extinguishers must:
        1. be maintained in a fully charged and operable condition;
        2. be visually inspected each month; and
        3. undergo a maintenance check each year.
    iv. The area in front of extinguishers must be kept clear.
    v. Post “Exit” signs over exiting doors (i.e., construction trailers, and post “Fire Extinguisher” signs over/at extinguisher locations.
g) Solvent waste and oily rags must be kept in a fire resistant, covered container until removed from the site.
h) Combustible materials must be relocated 35’ from hot work, covered with fireproof material, or otherwise protected from exposure.
i) Combustible materials stored outside should be at least 10 feet (3 meters) from any building.
j) Sparks and slag should not be allowed to fall on top of cylinders, hoses or other combustible or flammable materials. These should be relocated or protected from these hazards.
k) Flash arrestors are required at both gauge and torch ends unless otherwise determined by the gauge manufacturer.
l) Cylinders must be secured up right

m) Only bottle carts and racks designed for hoisting shall be used to hoist bottles. Bottles shall not be hoisted by rigging directly to the bottle itself. A cart/rack approved for hoisting must be used.
n) Any carted bottles that go unused for 24 hours or more are considered stored and shall be placed in the appropriate storage racks.
o) If the bottle cart has the appropriate fire wall protection, the bottles can remain in the cart until the crew/employee is finished with the bottles or work. At that time, the bottles must either be placed back in the appropriate racks or relocated to the next work area for use.

13.2.2 Hot Work Permits

a) A Hot Work Permit (SMS-T-SFTY015) is required for all hot work activities including but not limited to tasks:
    i. Potentially generating a spark
    ii. Involving open flame
    iii. Involving welding operations
    iv. Where a potential for spontaneous combustion exists
    v. Other activities as determined when developing the Project Safety Management Plan
b) Permits must be included dint he approved Work Package and posted in the corresponding work area prior to begin of work.
c) Prior to the initiation of activity requiring a Hot Work permit the following requirements must be verified and documented by the responsible individual authorizing the permit:
    i. All areas to be checked and combustibles removed or protected before commencement of work
    ii. All areas to be screened, protected, roped off as necessary and warnings signs displayed
    iii. All systems associated with the work to be isolated, inclusive of smoke alarms
    iv. A designated competent individual must be in place to:
        1. Observe and recognize conditions that were not anticipated in the approved permit.
        2. Identify and address fire hazards
        3. Operate fire extinguishing equipment suitable for task
    v. Building Facilities Manager notified
    vi. Area to be checked/inspected for combustion 1 hour after completion of work
d) Hot work operations will cease 30 minutes before the end of the shift
e) The responsible supervisor must:
    i. Perform a fire walk at the end of the shift
    ii. Close the permit after verification of safe conditions

13.3 Recommended Practices

a) None at this time.

14.0 HAZARD COMMUNICATION PROGRAM

14.1 Scope of this Section

a) These minimum requirements are intended to ensure the protection of employees who may be at risk of exposure to hazardous properties of chemicals with which they work and may cause physical or health-related hazards including but not limited to:
   i. Safe handling procedures and training programs
   ii. PPE for hazardous material exposure.
   iii. Labeling of containers
   iv. Safety Data Sheets (SDS's formally known as MSDS's)
   v. Hazardous chemical jobsite survey

b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to the more restrictive of:
   i. 29 CFR 1910.1200 – Hazard Communication
   ii. 29 CFR 1926.59 – Hazard Communication
   iii. State or local standards applicable to this project

c) This section applies to all project locations including but not limited to operations by any tier subcontractor or other project stakeholder under the control of Sundt.

14.2 Required Practices

14.2.1 Safety Data Sheets (SDS)

a) Each employer at the project site is responsible for obtaining and maintaining on-site a file of all SDS for any materials which they bring to or use at the site.

b) SDS may not be uniform in appearance; however, the minimum contents must include:
   i. Identity of the product
   ii. Known acute and chronic health effects
   iii. Exposure Limits Threshold Limit Values (TLV)
   iv. If the product is a suspected carcinogen
   v. Personal protective equipment to be used
   vi. Emergency and First-Aid Procedure
   vii. Identification of the party responsible for the SDS
   viii. Target organ affected

c) An SDS must be received with each shipment of material that is a potential exposure hazard.
   i. If an SDS is not furnished at the time of delivery the vendor or supplier must be must be immediately notified in writing
   ii. Material packaging may not be opened until required SDS is received.
   iii. Material must be removed by the vendor or supplier if SDS is not received within 72 hours of notification.

d) Current SDS on file are acceptable if they are valid and have been received within the previous 3-year time period.

e) SDS for Sundt Operations
   i. Sundt maintains a list of the hazardous chemicals known to be present in our offices and self-performing job sites
   ii. To access this list and/or the SDS, Click HERE to go to MSDSOnline

14.2.2 Container Labeling

a) All containers must have the manufacturers original label including:
   i. Clearly identification of contents
   ii. Warnings as prescribed in the current GHS protocol
   iii. Names and addresses of the manufacturers
b) Any secondary containers used for small quantities of a material must be properly labeled with an approved alternate system.
   i. Any alternative to the original manufacturers labeling system used must be approved by the designated Sundt safety representative.
c) Labels may be in writing, pictures, numerical system, or any combination of these.
   i. Labels must include:
      1. Identity of product
      2. Nature of the hazard
      3. Personal protective equipment needed
      4. Parts of the body affected
      5. Emergency procedures for exposure

14.2.3 Worker Training and Education

a) Each employer is responsible for training their workers regarding Hazard Communication policy and program.
b) Each employer is responsible for designating a competent person that is responsible for training employees under their supervision in hazard communication before they start their jobs or are exposure to new hazardous chemicals.
c) Minimum training required for each employee must cover the following topics:
   i. An overview of the requirements in OSHA's Hazard Communication Standard.
   ii. Hazardous chemicals present in their workplace.
   iii. Any operations in their work area where hazardous chemicals are used.
   iv. The location of the written hazard communication plan and where it may be reviewed.
   v. How to understand and use the information on labels and in Safety Data Sheets.
   vi. Physical and health hazards of the chemicals in their work areas.
   vii. Methods used to detect the presence or release of hazardous chemicals in the work area.
   viii. Steps we have taken to prevent or reduce exposure to these chemicals.

ix. How employees can protect themselves from exposure to these hazardous chemicals through use of engineering controls/work practices and personal protective equipment.
x. An explanation of any special labeling present in the workplace.
1. What are pictograms?
2. What are the signal words?
3. What are the hazard statements?
4. What are the precautionary statements?
xi. Emergency procedures to follow if an employee is exposed to these chemicals.

d) Workers must demonstrate both knowledge and understanding of the training
i. Training will be documented and records maintained by the employer.
ii. Records must be available for review and the project location at any time.

e) Prior to introducing a new chemical hazard into any work area or crew activity, each employee in that department must be given information and training as outlined above for the new chemical hazard

14.2.4 Informing Employees Who Do Special Tasks

a) Before employees perform special (non-routine) tasks that may expose them to hazardous chemicals, their supervisors will inform them about the chemicals' hazards.
b) The supervisor must inform employees about:
i. How to control exposure and
ii. What to do in an emergency.
c) The employer will evaluate the hazards of these tasks and provide appropriate controls including
i. Personal Protective Equipment and all additional training (See Personal).
ii. Examples of special tasks that may expose employees to hazardous chemicals as needed.

14.2.5 Informing Contractors and Other Employers about Our Hazardous Chemicals

a) Each employer is responsible to coordinate and communicate potential exposure to hazardous chemicals with other entities which may be impacted by their operations in the workplace
i. It is the responsibility of the contractor or other entity using the hazardous materials to provide any other stakeholder (including employees) with the following information:
1. The identity of the chemicals
2. How to review our Safety Data Sheets
3. An explanation of the container labeling system.
4. Safe work practices to prevent exposure.

5. A copy of the Safety Data Sheet for the hazardous chemical

14.2.6 Exchange of SDS

a) The exchange of SDS on this project shall take place initially when any entity comes onto the site, at site safety meetings, or at any other time designated by the Sundt Management Team or Project Superintendent.
b) A copy of every SDS from each employer using potentially hazardous chemicals at the site must be provided promptly to the designated Sundt safety representative.

14.2.7 Updating Inventory Listings

a) Each entity at the site must maintain a current inventory list of potentially hazardous chemicals and their SDS at the project site.
b) This inventory will be available for review and inspection at all times.

14.3 Recommended Practices

a) Hazard communication training may include the following techniques:
    i. In-house seminar
    ii. Guest speakers
    iii. Use of visual aides
    iv. On-site updates of new products and materials and other related hazards
    v. Discussions during project safety meetings

15.0 First Aid & CPR

15.1 Scope

a) The minimum requirements to ensure that, in the critical minutes between the occurrence of an injury and the availability of physician or hospital care, any injured employee will have prompt access to first aid treatment through the availability of a trained first aid provider at the worksite.
b) The required practices in this section are supplemental to a project's Emergency Response Plan.
c) This section is intended to establish minimum procedures to ensure compliance with regulatory requirements including but not limited to *the more restrictive* of:
   i. 29 CFR 1910.151 and 1926.50(c)
   ii. State or local standards applicable to this project

15.2 Required Practices

15.2.1 General

a) Contractor, and any other entity conducting operations at the project, including any tier of subcontractors, must have at least one full time person who has a valid certificate in first-aid and CPR training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, available at the worksite to render first aid.
b) Subcontractors including any lower-tier are solely responsible for training of certified persons and ensuring certification is maintained current throughout the duration of the project while they conduct operations on site.
c) Only trained and certified personnel may administer first aid.

15.2.2 First Aid Kits

a) All employers conducting operations must furnish and maintain on site sufficient first aid kit(s) which comply with the more stringent of:
   i. OSHA 29 1926.50 and 1926.50 Appendix A
   ii. State or local standards and regulations applicable to the project
   iii. The requirements of the project Emergency Procedures and Incident Response plan.
b) First aid kits must contain an infection control kit and Personal Protective Equipment for the prevention of exposure during first-aid and CPR. See Blood Borne Pathogens.
c) First aid kits must receive documented inspections and be stocked not less than monthly.

15.3 Recommended Practices

a) None at this time

16.0 HEAT ILLNESS PREVENTION PROGRAM

16.1 Scope

a) The minimum requirements to ensure safe working conditions during periods when employees are exposed to heat-related hazards that are likely to cause potential heat illness including serious bodily harm or death.
b) The required practices in this section are supplemental to a Project's Emergency Response Plan.
c) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:
   i. 29 CFR 1910
   ii. 29 CFR 1926
   iii. State or local standards applicable to this project

16.2 Required Practices

16.2.1 General

a) When temperatures are expected to reach 80 degrees or more, supervisors will conduct meetings to remind workers about the importance of frequent consumption of water and access to shade throughout the shift.
b) Each employer at the site is responsible to ensure their employees are provided areas for taking breaks, recovery or rest periods, and onsite meal periods which are:
   i. Readily accessible
   ii. Cooled or in the shade and open to the air as required below
   iii. Near sufficient supplies of drinking water as required below
   iv. Sized such that enough space is available to accommodate the number of employees who remain onsite on during the meal period.
c) All workers will be permitted at any time, and encouraged to, take a preventive cool-down rest when they feel the need to do so to protect themselves from overheating.
d) A "Heat Wave" is defined as any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.
   i. Acclimatization must be conducted during any Heat Wave

16.2.2 Provision of Water and Replenishment During the Shift

a) Employees will have access to sufficient quantities of "fresh, pure, suitably cool" potable drinking water to minimize the risk of heat related illnesses. The minimum requirements include:
   i. Each employer must provide at least 2 quarts of water per employee at the start of the shift, and replenish as needed
   ii. Water containers will be placed in a convenient, accessible location near the workers.

iii. Each supervisor or their designee will monitor water containers.
   1. Employees are encouraged to report to supervisor/designated person low levels or dirty water.
   2. Water levels must not fall below the point which would limit an adequate water supply to workers during the time necessary to effect replenishment.

iv. Supervisors will provide frequent reminders to employees to drink sufficient water

v. Water breaks will be provided as needed to maintain proper hydration of employees.

vi. Disposable/single use drinking cups will be provided to employees, or provisions will be made to issue employees their own cups each day.

16.2.3 Access to Shade

a) When the temperature exceeds 80 degrees Fahrenheit in the workplace access to rest and shade or other cooling measures will be provided to minimize the risk of heat related illnesses.

b) The minimum requirements for providing shade include:
   i. The shade must be located as close as practicable to the areas where employees are working.
   ii. On site facilities under construction may be used for shade when it is safe to do so and the use of facility does not hinder work in progress.
   iii. When existing facilities are not available the supervisor will provide one of the following:
      1. An adequate area for its employees inside the job site trailer
      2. Umbrellas, canopies, tents or other portable devices set up outside provided that are:
         A. Set up at the start of the shift
         B. Relocated to be reasonably accessible employees throughout the shift.
         C. Available in sufficient quantity to accommodate the number of employees on recovery or rest periods so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other.

c) Employees will have access to office, construction trailer, or other building with air conditioning as needed.

16.2.4 Weather Monitoring

Each employer with workers at the site must monitor the weather and routinely check for approaching heat waves utilizing The National Weather Service forecasts or similar. Weather forecasts and information are broadcast on NOAA Weather radio and can be accessed at http://www.noaa.gov/

16.2.5 High Heat Conditions - Temperature ≥ 95 Degree Fahrenheit

a) All employers at the site will implement the high-heat preventive procedures listed below when the temperature equals or exceeds 95 degrees Fahrenheit.
b) Each employer must ensure effective observation of their employees for alertness and signs or symptoms of heat illness using one more of the following practices:
    i. A supervisor or designee will:
        1. Observe and monitor 20 or fewer employees
        2. Implement a mandatory buddy system, or
        3. Regularly communication with a sole employee such as by radio or cellular phone, or similarly effective means of observation.
c) Designate personnel at each worksite to call for emergency medical services and allow other personnel to call for emergency services when no designated personnel are available.
d) Prior to each shift each supervisor must conduct a heat advisory meeting with employees to:
    i. Review high heat procedures
    ii. Encourage employees to drink plenty of water
    iii. Remind employees of their right to take a cool-down rest break when needed.
    iv. Ensure effective communication by voice, observation, or electronic means are maintained so that employees at the work site can contact a supervisor when needed.
        1. A device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.

16.2.6 Acclimatization

a) Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly exceeded. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when temperatures are hot, or a heat wave strikes, or when starting a new job that exposes the employee to heat to which the employee's body hasn't yet adjusted. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.
b) An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.

16.2.7 Responding to Symptoms of Possible Heat Illness

a) If at any time, personnel are observed or are reported to have signs or symptoms of heat illness, the supervisor will take immediate action commensurate with the severity of the illness.

b) These symptoms may be indicative of severe heat illness and require immediate emergency response:
   i. decreased level of consciousness
   ii. staggering
   iii. vomiting
   iv. disorientation
   v. irrational behavior
   vi. convulsions
c) Personnel with less severe symptoms must be provided appropriate first aid or emergency response.
d) Personnel exhibiting signs or symptoms of heat illness must be monitored and will not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services.
e) Personnel taking "preventative cool-down rest" must be:
   i. Monitored by the supervisor for symptoms of heat illness
   ii. Encouraged to remain in the shade as long as necessary
   iii. Encouraged to hydrate
   iv. Not ordered back to work until symptoms are gone; however, in no event sooner than 5 minutes after reaching access the shade and water.

16.2.8 Heat Illness Training

16.2.8.1 General Employee Training

a) Each employer is responsible for training each supervisory and non-supervisory employee before the employee begins work that may reasonably be anticipated to result in exposure to the risk of heat illness.
b) The minimum training to comply with this requirement must include:
   i. The environmental and personal risk factors for heat illness
   ii. The added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.
   iii. Employer specific procedures for complying with the requirements of this plan, including, but not limited to employer's responsibility to:
      1. provide water
      2. shade
      3. cool-down rests
      4. access to first aid
   iv. Employees' right to exercise their rights under this plan without retaliation.
   v. The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment

is hot and employees are likely to be sweating more than usual in the performance of their duties.

vi. The concept, importance, and methods of acclimatization
vii. The different types of heat illness
viii. The common signs and symptoms of heat illness
ix. Appropriate first aid and/or emergency responses to the different types of heat illness
x. That heat illness may progress quickly from mild symptoms and signs to serious and life-threatening illness.
xi. The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers.
xii. Procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.
xiii. Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider.
xiv. {Procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

c) Each employer will designate a person to be available to ensure that emergency procedures are invoked when appropriate.

16.2.8.2 Supervisor Training

a) In addition to General Employee Training employees supervising other workers must additionally be trained:
   i. Procedures the supervisor is to follow to implement the applicable provisions in this section.
   ii. The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness
   iii. Emergency response procedures.
   iv. How to monitor weather reports and respond to hot weather advisories.

16.3 Recommended Practices

a) Adopt a flag system to visibly alert personnel on site to heat index
b) Supervisors should provide daily reminders to supervisors and employees when the temperature is expected to be 80 degrees Fahrenheit or above for the working day.
c) As the day progresses supervisors should give periodic reminders to employees to ensure they remain hydrated.
d) All employees should monitor and remind each other to keep hydrated throughout the day.

e) Each supervisor should use a thermometer to keep track of the temperature at the worksite on hot days.
    i. A simple thermometer like those available at hardware stores can be used to measure the outdoor ("dry bulb") temperature
        1. Take the temperature in an area where there is no shade
        2. The temperature measurement device should be in an area with full sunlight and the bulb or sensor of the thermometer shielded from direct contact with sunlight using a hand or some other object.
f) Outfit workers with "cooling gear" such as these items or these gloves or this headwear
g) Equip the project with a Heat Illness Kit from the warehouse

17.0 INJURY MANAGEMENT

17.1 Required Practices

17.1.1 Medical Referral & Doctor Work Release

a) When an injured Sundt employee has been prescribed light/restricted duty, submit a copy of the medical report noting restrictions with the incident report to the HS&E Department.
b) When the employee is released to full-duty work, notify the HS&E Department by sending a copy of the Work Release form signed by the physician and the employee.

17.1.2 Return to Work Program

a) Employees that are temporarily restricted from performing some or all of their regular job functions as a result of a work-related injury will be offered an opportunity to return to the workplace and contribute whenever practicable.
b) The Transitional Work Assignment is defined as the period of time during which an employee returns to the workplace with restrictions, modifications or in an alternative capacity until medically released to their full job functions.
c) Transitional Work Assignments are temporary in nature and intended to provide an opportunity for progressive return to regular job functions based on the employee's ability during the recovery process.
d) Transitional work assignments will be managed to:
    i. Reduce the medical, disability and lost time costs
    ii. Reduce indirect accident costs
    iii. Establish a more stable workforce
    iv. Enhance the physical and psychological recovery process for the injured worker
    v. Enhance the injured employee's sense of confidence and well being
    vi. Minimize the chance of re-injury
    vii. Safely reintegrate injured employees fully into the workforce as soon as possible.
    viii. Ensure the work is contributory and adds value to the daily business operations in a beneficial manner.
e) Transitional Work Assignment may not be:
    i. A respite from duties which an employee is deemed fit to perform
    ii. Punitive in nature
    iii. Intended to create an undue hardship on the operations of the respective department

iv. We will make an effort to bring our employees back to work whenever practicable.

f) Transitional Work Assignments will be determined after receiving appropriate documentation from a physician according to the following process:
   i. The prescribed work restrictions will be reviewed to ensure that both the employee and immediate supervisor understand the limitations.
   ii. Available opportunities will be reviewed to identify work that meets the requirements of the Return to Work program.
   iii. An available, suitable Transitional Work Assignments will be made to the employee by means of an offer letter.
g) Suitable, available Transitional Work Assignments may require an employee to change shifts.
   i. Employees offered Transitional Work Assignments must be available to work any shift as necessary.
h) Employees maintain the following rights and responsibilities under Transitional Work Assignments:
   i. Employee must abide by all Sundt Construction Inc. policies and procedures.
   ii. Employee must notify their manager/supervisor of all scheduled and unscheduled absences.
   iii. Are subject to all applicable project policies and procedures
   iv. Employees are expected to participate in all treatment that is reasonably essential to promote their recovery, including but not limited to keeping all scheduled appointments with occupational health care providers
   v. Any and all changes in the employees' restrictions and transitional work status must be reported to their manager/supervisor and/or human resources representative immediately with the appropriate documentation.
i) Non-compliance with the Return to Work Program may result in an interruption of benefits and could jeopardize the employee's ability to remain at work under this program.
j) Sundt Construction Inc. reserves its ability to exercise its rights in accordance with applicable laws regarding an employee's diagnosis, treatment plan and status.

17.1.3 Questionable Industrial Claims

a) Injuries not reported at the time of the incident, or circumstances under which an employee retains a doctor without a referral or without having reported the accident to the supervisor / foreman may be considered questionable industrial claims.

b) Any reasons the validity of a claim may be in doubt must be documented on the accident report or on an attached statement. Any such reasons must be dated, signed and witnessed.
c) The Sundt Construction insurance provider must be informed of any suspicious claims and an investigation will be conducted.
d) Every reasonable step must be taken to confirm the accident occurred on the job.
    i. The slightest doubt or suspicion regarding an alleged accident must be investigated as thoroughly as possible using discretion and prudence.
    ii. A written statement regarding every detail, no matter how trivial it may appear, may prevent an unwarranted, costly claim or lawsuit.

18.0 LADDERS & STAIRWAYS

18.1 Scope

a) The minimum requirements to ensure safe access, egress to the various elevations encountered at the worksite.
b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:
    i. 29 CFR 1926 Subpart X - Stairways and Ladders
    ii. State or local standards applicable to this project

18.2 Required Practices

a) Contractors will plan work using a "Ladders Last" program when practicable. This program will focus on safer alternatives in lieu of working off ladders and exposing workers to potential falls such as
    i. aerial baskets
    ii. Perry/Baker style scaffolds
    iii. scissor lifts
    iv. one-man pods
b) All ladders must:
    i. Be protected from fall exposure by means of a controlled access point maintained in good working condition to each ladder such as:
        1. A "corral"
        2. A barrier
        3. A gate.
    ii. Be used per the manufacturer's instructions
    iii. Not be modified in any manner from the manufacturer's design
    iv. Maintain in place and legible all manufacturer safety instructions and labeling.
c) Applicable ladder locations must have a hoist rope for lifting materials.
d) Extension ladders used for access to another elevation will be secured/tied off to prevent movement.
e) Step ladders must
    i. Always be used with all legs extended fully and locked in position as required by the manufacturer.
    ii. Never be used above the top two steps
    iii. Not be used as a seat
    iv. Never be used as an extension ladder
f) Only ladders constructed of nonconductive material are permitted on the project.
g) Portable metal ladders are not permitted on any project except when specifically designed for that purpose such as:
    i. Attachment to scaffolds
    ii. Skeleton steel during steel erection
    iii. Metal work platforms (not exceeding 3' in height and 5' in length)

h) Personnel shall be trained by their respective companies on the proper set-up, care, maintenance, and use of any ladders they will be expected to use on this project site.
i) Ladders must be at least a Type 1A (rated for up to 300 pounds). If the expected load is in excess of 300 pounds, then an appropriately rated ladder (i.e.: Type 1AA or larger) shall be utilized.
j) The use of flex or multi-styled ladders such as the Little Giant™ or Gorilla™ brands is prohibited without the expressed permission of the Sundt Project HSE Manager. Little Giant™ Safety Series Ladders are allowed.

18.3 Recommended Practices

a) In lieu of slab grabbers, consider using a modular rail system like this
b) In lieu of poorly-fitting temporary stair treads, consider these tread infills
c) Adopt a ladder-inspection sticker system such as this
d) Consider alternatives to traditional access methods/ladders/work platforms such as these or these or these

19.0 NON-COMPLIANCE & DISCIPLINE

19.1 Workplace Violence

a) Contractor will not tolerate any unwanted or hostile physical contact, including physical attack, threat of violence, harassment, or damage to property by or against any persons including, Contractor employees, owner employees, subcontract employees, or visitors / vendors.

b) Any worker who experiences, witnesses, or has knowledge of acts, conducts, behavior, or communication that may constitute or may lead to a workplace violence event should immediately report the incident in accordance with the Contractor Human Resources Policies and Procedures governing workplace violence

19.2 Trade Contractor Corrective Action Notices

a) Contractor may notify a Trade Contractor of any non-compliance with these requirements and of the corrective action required.

b) This notice, when delivered to a Trade Contractor or their representative at the jobsite, shall be deemed sufficient notice of the non-compliance.

c) After receiving such notice, a Trade Contractor must immediately take corrective action.

d) If a Trade Contractor fails or refuses to take corrective action promptly, Contractor may issue an order stopping part or all the work until satisfactory corrective action has been implemented.

19.3 Coaching and Progressive Discipline

a) Contractor reserves the right and sole authority to determine the type of discipline initiated, up to and including removal or termination.

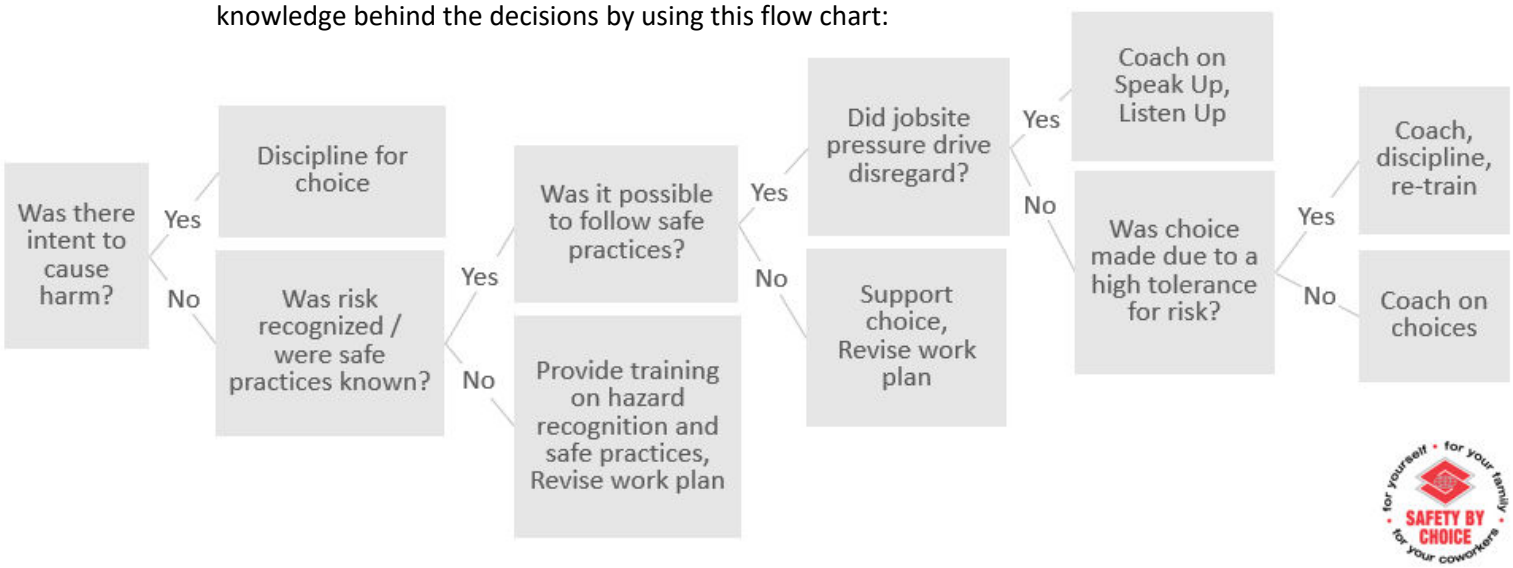
b) Final authority for discipline on the project is held by the senior Contractor supervisor at the project site at any given time.

c) All employers at the site are required to hold their employees responsible and accountable.

d) Contractor HSE personnel are not responsible for taking disciplinary action on any employees except for those directly under their supervision.

e) HSE personnel will make recommendations as to the appropriate disciplinary action that an employee's supervisor should consider based on the incident.

f) We determine whether it is appropriate to coach or discipline by looking at the intent and knowledge behind the decisions by using this flow chart:



19.4 Discipline Levels and Actions

a) Level 1
   i. Unintentional breach of a safety control
      1. Potential Actions:
         A. Provide Corrective Action Notice
            1) For subs, email notice to company
            2) For Contractor personnel, follow instructions on form
         B. Repeat safety orientation
         C. Stand down with crew
         D. Task-specific retraining
         E. 1-3 Day suspension
         F. Probationary Period
         G. Performance Improvement Plan
         H. Internal project review of infraction

b) Level 2
   i. Second occurrence of a Level 1
   ii. Intentional breach of a safety control
   iii. STCKY*
      1. Potential Actions:
         A. Level 1 actions plus:
            1) 3-5 Day suspension
            2) Suspension of driving/operating privilege
            3) Termination
            4) Notify/involve district leadership in review

c) Level 3
   i. Third occurrence of a Level 1
   ii. Second occurrence of a Level 2
   iii. Serious and willful breach of a safety control
      1. Potential Actions:
         A. Level 1 & 2 actions plus:
            1) Extended suspension
            2) Notify/involve corporate leadership in review

Safety Stand Downs/Ups

- An incident, exposure, or hazard deemed serious by project management may require a Safety Stand Down.
- Attendance must be documented and may be required for all project supervision and workers.
- The incident, exposure, or hazard will be discussed as relevant.

*The following are STCKY and should be managed as a Level 2 or 3:

Fall Protection/Scaffolding/Work Platforms

- Exposure to a fall that may cause serious injury/death (a fall greater than six feet)
- Standing on top of a step ladder
- Standing on the handrails of a lift platform

Excavation/Trenching

- Working outside the protective system in an excavation that is five feet or deeper
- Not following established rules while excavating near utilities

Energized Equipment/Systems

- Working on an energized system without lock-out/tag-out procedures in place

Confined Space

- Entering an identified confined space without a completed Entry Permit

20.0 OPERATION OF EQUIPMENT & VEHICLES

20.1 Scope

a) This section includes the minimum requirements for operation of construction equipment on project sites.
b) This section, nor this manual include the Sundt Driver Policy regarding vehicles--please refer to SMS for the Sundt Driver Policy.

20.2 Required Practices

20.2.1 General

a) All individuals authorized to operate construction equipment must be certified/qualified and able to demonstrate competency for the designated equipment including but not limited to:
   i. Thorough familiarity with the controls and operating system including:
      1. On Board Computer system (when equipped)
      2. Proper setup and/or programming of safety devices.
      3. This includes devices such as a Load Moment Indicator (LMI) on crane.
   ii. A working knowledge of inspection requirements for designated equipment and the ability to identify deficiencies or problems in the assembly, structure, drivetrain or other functional components.
   iii. Understand the capabilities of the specific model in use
   iv. Understand the Capacity and applicable Load Charts.
   v. Familiarity with the Operator and Maintenance manuals supplied with the unit
   vi. Be stable in character, physically fit and capable of recognizing and responding quickly to unforeseen potential hazards
b) Use of a cellular phone or other mobile devices is prohibited at all times while operating construction equipment.

20.2.2 Training & Certification Requirements

a) Cranes & hoisting equipment must comply with requirements of the Crane & Riggings Systems Manual.
b) Forklift, reach-lift, and rough terrain forklift (rtf) operators must:
   i. be identified to Sundt on an Equipment Operator Certification Form (SMS-F-SFTY007).
   ii. have the knowledge of load charts, forklift safety, and basic operational procedures for the forklift they will operate.
   iii. be in possession of their current certification card at all times.
   iv. refrain from the following practices:
      1. Suspending loads from forks / “free-rigging” (An approved manufacturer attachment must be used)
      2. Traveling with the boom extended

3. Traveling with the load high off the ground
4. Traveling without proper visibility/spotters

c) Boom and scissor lifts operators
   i. must be identified via an Equipment Operator Certification Form (SMS-F-SFTY007).
   ii. must be indoctrinated in the safe use of this type of equipment.
   iii. must only travel with baskets lowered
   iv. must only exit basket at heights with 100% fall protection

d) General construction equipment (i.e., Excavators, Backhoes, Loaders, Graders, Rollers, Skid Steers, Haul Trucks, Water Trucks, etc.) operators must
   i. be identified to Sundt as a Designated Operator on an Equipment Operator Certification Form (SMS-F-SFTY007).
   ii. be knowledgeable and demonstrate proficiency when operating construction equipment.

e) Subcontractors must provide an Equipment Operator Certification Form (SMS-F-SFTY007) to the designated Sundt Representative attesting that the operator has demonstrated proficiency and knowledge and is designated to operate that specific type of equipment. The form must be signed by an authorized representative of Subcontractor management.

20.2.3 Records of Training

a) Records of all training will be maintained and available for review at all times.
b) The minimum training records include:
   i. Employees name
   ii. Employee number
   iii. Name of individual that conducted the training
   iv. Type of training conducted
   v. Number of Hours of training
   vi. Copy of any certificate issued confirming successful completion of training
c) Records of training will be maintained for a minimum of three (3) years after successful completion.
d) Records will be managed as described in SMS File Structure & Record Retention or the PMP.

20.2.4 Equipment Inspections

a) All construction equipment will be visually inspected by a competent person prior to operation.
b) Inspections will be documented and records maintained.
c) The minimum requirements for inspection will include:
   i. Verification of current certification for equipment (when required)
   ii. Presence of load charts and other required documentation (when required)

iii. Items recommended by the equipment manufacturer.
iv. Pre-operation checklist designated for that equipment.
v. Damage to the equipment or its component parts.
vi. Condition of tracks and/or tires for proper operating condition
vii. Condition of ground engaging components for excessive wear
viii. Lubrication, coolant, fuel and other fluid levels
ix. Fluid leaks
x. Draining of condensate from air reservoirs (when applicable)
xi. Proper operation of signaling equipment
xii. Brakes & other safety devices
xiii. Proper visibility & clearances around equipment for safe operation.

d) Any indications of deficiencies must be noted on the inspection report and promptly communicated to the supervisor.
e) Any equipment that does not comply with safe operation requirements shall be immediately removed from service.

20.2.5 Property, Vehicle & Equipment Damage

When repair costs or expenditures of any nature are anticipated, request a work order number from the Health, Safety and Environment department. Enter the number on the report and complete the report in detail. Costs must be coded to the work order number and a copy of the invoices submitted to the Health, Safety and Environment department office in Tucson.

20.3 Recommended Practices

a) For concrete pumping activities, consider using hose/pump covers such as these
b) For operating equipment on muddy surfaces, consider these ground covering mats
c) Refer to this guide for hydraulic safety practices

21.0 OSHA | MSHA INSPECTION

21.1 Scope of this Section

a) The minimum requirements to ensure any request to inspect the site by an Authority Having Jurisdiction such as OSHA, MSHA or other entity is properly managed.

21.2 Required Practices

a) Upon arrival of any Authority Having Jurisdiction including OSHA, MSHA or other inspector:
   i. Immediately contact:
      1. Health, Safety and Environment department
      2. Local Area Safety Manager
   ii. Inform them of the inspection
   iii. You will be given instructions on how to proceed.
      1. If the Health, Safety and Environment department is not available, proceed with items 2 through 8.

b) The inspector or compliance officer must present their credentials, which include both a photograph and a serial number. A Sundt rep should verify that credentials appear valid.

c) A Sundt representative must accompany the Inspector at all times and carefully observe the inspection as it is conducted.
   i. Whenever the inspector takes pictures take duplicate pictures.
   ii. Video cameras should be discouraged

d) Take the Inspector by the most direct route to the area or site to be inspected.
   i. Provide the fewest opportunities for additional unrequested inspections.

e) Act courteously to the Inspector at all times
   i. Courtesy does not, however, require volunteering information, nor offering more cooperation than outlined by this guideline.

f) Any questions from the inspector that may suggest a violation must be responded to as follows:
   i. If the question and related circumstances are fully understood respond with only the known facts about the condition.
   ii. If the question and/or related circumstances are not fully understood or individual lacks such knowledge, DO NOT GUESS OR RESPOND WITH ANYTHING THAT IS NOT KNOWN.
      1. Make an effort to immediately learn the circumstances surrounding the condition and relay only known facts to the inspector.
      2. For example, if certain equipment is temporarily inoperative, the OSHA Inspector should be advised of the circumstances i.e. repair safety check, power failure, etc.

g) Upon concluding the inspection of the job site
   i. Complete the AHJ Inspection Checklist
   ii. Note all violations claimed by the Inspector

iii. Note any other potential violations observed the by the company representative.

h) Complete the "Comments Section" of the AHJ Inspection Questionnaire form noting any topics or items the company representative thinks may be significant.
   i. Examples include:
      1. Whether the inspection was too long or too short
      2. Comments from the inspector(s)
      3. Whether, he / she was friendly or hostile
      4. Level of professionalism etc.

i) Inspection Questionnaire
   i. Company representatives must familiarize themselves with AHJ Inspection Checklist later in this section.
   ii. During the inspection, informal answers to the questions should be sought from the Inspector.
   iii. The questionnaire is to be completed immediately upon the Inspector's departure, and turned into the Health, Safety and Environment department office.
   iv. The questionnaire provides documentation which will help respond to requests and charges
   v. The questionnaire must be completed as fully as possible.

21.2.1 Additional Information & Inspection Protocol

a) Upon arrival the inspector will be directed to report to the job site main office. The Project Manager or Project Superintendent will be notified of his or her arrival. It is recommended that if someone from the Health, Safety and Environment department is available, then this person should act as the "Key Person" in dealing with the inspector.

b) It is likely that the inspector will commence with an opening conference. If the inspector is unknown to the key person, the key person is to review the identification documents of the inspector and verify the inspector's identity with an appropriate official.

c) During the opening conference, attempt to determine the reason for the inspection. If the key person does learn of the basis for the inspection, try and limit the scope of the inspection to the subject matter, which is the basis for the inspection. That is, if the inspector wants to inspect a given machine, try and limit the inspection to that machine. Remember: An inspector does have the right to conduct an inspection of the entire workplace.

d) The key person is to accompany the inspector throughout the inspection. The only exception is when the inspector desires to talk to company employees in private. Employees are entitled to privacy when being questioned by the inspector. This right of privacy is for the protection of the employees. If the employees have no objection to the presence of the key person during such an interview, they have effectively waived their right to confidentiality, and the key person does have the right to be present. It may be that the employee would feel more comfortable if

the key person is present during any interview. If the inspector objects, however, to the presence of the key person at any employee interviews, even though acceptable to the employee(s), allow the interview to proceed in private. You may always talk with the employees after the inspector has left the workplace.

e) It is not advisable to include other company representatives during any stage of the inspection procedure; rather, limit the management team to the key person.
f) Throughout the inspection, the key person should be courteous to the inspector and respond to questions if authorized by the company to do so. It may be that the key person will be considered to "speak for management." If so, his/her statements could be considered "authorized admissions" by the employer and, therefore, admissible in evidence in a later judicial proceeding. If the key person has not been expressly authorized by the company to speak "for the company" the inspector should be informed of that fact.
g) Do not argue with the inspector.
h) Do not agree with the statements of the inspector, for they could be wrong. If wrong, there may be occasions to point that out but it is generally advisable to remain non-committal.
i) Under no circumstances is the key person, or any other employee of the company, to guess or speculate when responding to questions of an inspector. If an answer is to be given the key person or employee has no knowledge regarding the question that should be the response.
j) Detailed explanations are not encouraged, as they may tend to confuse or unduly prolong the scope of the investigation. Answer the question and only then, and then only with the facts. Do not volunteer information.
k) The company representative should never admit or concede the existence of an unsafe condition.
l) Never admit a violation
m) If the company has commenced its own investigation of an accident, but has not completed that investigation at the time of the OSHA inspection, answers to any questions regarding the accident, operation or procedure should be deferred pending the completion of the company investigation.
n) If, during the inspection or any time thereafter, the inspector asks for copies of written documents or materials, consider the source of the document or material. If the company prepared the document in question, for example, an OSHA Log (300), the inspector should be provided with a copy as soon as reasonably possible. Remember: Some regulations require immediate accessibility to various written documents; for example, copies of the company's written hazard communication program.
o) The key person should keep a record of the scope of the inspection, including the identities of employees to whom the inspector spoke, items of apparent interest to the inspector (for example, a specific machine or machine operation), comments made by the inspector, and individual observations of the key person.
p) Upon completion of the inspection, the inspector should hold an exit conference. Sometimes this exit conference will be considered to also be a 'closing"

conference, although it may be that a closing conference will take place later. If a conference conducted at the end of the inspection is considered by the inspector to be a closing conference, it is advisable that more than one company representative attends the conference to ensure that the company understands the statements of the inspector.

q) During the closing conference, the inspector should be asked if any citations are to be issued as a result of the inspection. If citations are to be issued, determine, if possible, what safety orders were allegedly violated. Also attempt to determine the classification of any citations that may be forthcoming as a result of the inspection; for example, “serious” etc. The closing conference is neither the time nor place to argue with the inspector.

22.0 PROTECTION FROM WILDFIRE SMOKE

22.1 Scope

a) This program applies to the project when the current Air Quality Index for "PM2.5" is 151 or higher and we reasonably anticipate that site personnel may be exposed to wildfire smoke.

b) The following workplaces and operations *are exempt* from this program:

   i. Enclosed buildings or structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other openings are kept closed to minimize contamination by outdoor or unfiltered air.

   ii. Enclosed vehicles in which the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed to minimize contamination by outdoor or unfiltered air.

   iii. The employer demonstrates that the concentration of PM2.5 in the air does not exceed a concentration that corresponds to a current AQI of 151 or greater by measuring PM2.5 levels at the worksite in accordance with Appendix A.

   iv. Employees exposed to a current AQI for PM2.5 of 151 or greater for a total of one hour or less during a shift.

22.2 Definitions

a) Current Air Quality Index (AQI): the method used by the U.S. Environmental Protection Agency (U.S. EPA) to report air quality on a real-time basis. Current AQI is also referred to as the "NowCast," and represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible. The current AQI is divided into six categories as shown in the table below, adapted from Table 2 of Title 40 Code of Federal Regulations, Part 58, Appendix G.

Air Quality Index (AQI)	
Categories for PM2.5	*Levels of Health Concern*
0 to 50	Good
51 to 100	Moderate
101 to 150	Unhealthy for Sensitive Groups
151 to 200	Unhealthy
201 to 300	Very Unhealthy
301 to 500	Hazardous

b) NIOSH: The National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.

c) PM2.5: Solid particles and liquid droplets suspended in air, known as particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller.

d) Wildfire Smoke Emissions from fires in “wildlands,” as defined in Title 8, section 3402, or in adjacent developed areas.

22.3 Roles & Responsibilities

a) Sundt Safety Manager and/or Superintendent:
   i. Ensure project personnel are protected from harmful exposures to outdoor air quality and wildfire smoke
   ii. Train project personnel on the requirements of this program
   iii. Implement, monitor, and enforce this program
   iv. Monitor air quality conditions and the current AQI
   v. Communicate to project team, foremen, and project personnel that the AQI for PM 2.5 is 151 or higher
      1. If work continues, ensure that personnel on site are provided with proper respiratory protection
      2. Ensure that necessary precautions and/or measures are taken to protect personnel

b) Foreman/Craft Supervision:
   i. Ensure personnel are trained on this program
   ii. Provide respiratory protection
   iii. Ensure that necessary plans, precautions, and supplies are available in advance

22.4 Identification of harmful exposures

a) Sundt shall determine employee exposure to PM2.5 for worksites covered by this section before each shift and periodically thereafter, as needed to protect the health of the employee, by any of the following methods:
   i. Check AQI forecasts and the current AQI for PM2.5 from any of the following: U.S. EPA AirNow website, U.S. Forest Service Wildland Air Quality Response Program website, California Air Resources Board website, local air pollution control district website, or local air quality management district website; or
   ii. Obtain AQI forecasts and the current AQI for PM2.5 directly from the EPA, California Air Resources Board, local air pollution control district, or local air quality management district by telephone, email, text, or other effective method; or
   iii. Measure PM2.5 levels at the worksite and convert the PM2.5 levels to the corresponding AQI in accordance with Appendix A.

b) If Sundt assumes the current AQI for PM2.5 is greater than 500, we may use that assumption to comply with the “Control of Harmful Exposures to Employees” section of this program.

22.5 Communication

a) In addition to the procedures for communication in the “Responsibilities” section above, wildfire smoke hazards will be addressed verbally with personnel on site. Personnel may be addressed one-by-one, crew-by-crew, or in an all-hands fashion. Site personnel shall be verbally notified when the current AQI for PM2.5

exceeds 151 and protective measures will be made available to employees to reduce their wildfire smoke exposures.

b) Personnel whom inform Sundt of wildfire smoke hazards will not be retaliated against. In fact, we encourage our site personnel to inform us of worsening air quality and any adverse symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

22.6 Training and instruction

Sundt shall ensure personnel are provided with effective training and instruction that contains, at a minimum, the "Information to be Provided to Affected Employees (Mandatory)".

22.7 Control of harmful exposures to employees

a) In emergency situations, such as protecting a project for closure pending an evacuation order due to wildfire, Engineering and Administrative Controls do not apply and Sundt shall ensure compliance with the control of Respiratory Protective Equipment.

b) Engineering Controls: Sundt shall reduce employee exposure to PM2.5 to less than a current AQI of 151 by engineering controls whenever feasible, for instance by providing enclosed buildings, structures, or vehicles where the air is filtered. If engineering controls are not sufficient to reduce exposure to PM2.5 to less than a current AQI of 151, then Sundt shall reduce employee exposures as much as feasible.

c) Administrative Controls: Whenever engineering controls are not feasible or do not reduce personnel exposures to PM2.5 to less than a current AQI of 151, Sundt shall implement administrative controls, if practicable, such as relocating work to a location where the current AQI for PM2.5 is lower, changing work schedules, reducing work intensity, or providing additional rest periods.

d) Control by Respiratory Protective Equipment: Where the current AQI for PM2.5 is equal to or greater than 151, but does not exceed 500, Sundt shall provide respirators to all employees (and subcontractors will provide respirators for their employees) for voluntary use in accordance with section 5144 and encourage employees to use respirators. Respirators shall be NIOSH-approved devices that effectively protect the wearers from inhalation of PM2.5, such as N95 filtering facepiece respirators. Respirators shall be cleaned, stored, maintained, and replaced so that they do not present a health hazard to users.

   i. Sundt shall use Appendix B to this section in lieu of Appendix D to section 5144 for training regarding voluntary use of respirators.

   ii. NOTE: For voluntary use of filtering facepieces, such as N95 respirators, some of the requirements of section 5144 do not apply, such as fit testing and medical evaluations.

   iii. Where the current AQI for PM2.5 exceeds 500, respirator use is required in accordance with section 5144. Sundt shall provide respirators with an assigned protection factor, as listed in section 5144, such that the PM2.5 levels inside the respirator correspond to an AQI less than 151.

Protection from Wildfire Smoke - Information to Be Provided to Employees (Mandatory) ("OSHA 5141.1 Appendix B")

The health effects of wildfire smoke:
Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not very close to the fire is "particulate matter," the tiny particles suspended in the air. Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. Particulate matter can also cause more serious problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.

People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects. The smallest -and usually the most harmful -particulate matter is called PM2.5 because it has a diameter of 2.5 micrometers or smaller.

The right to obtain medical treatment without fear of reprisal:
Sundt shall allow employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment and will not punish affected employees for seeking such treatment. Sundt has effective provisions for prompt medical treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure (see Sundt's Emergency Response Plan).

How employees can obtain the current Air Quality Index (AQI) for PM2.5:
Various government agencies monitor the air at locations throughout California and report the current AQI for those places. The AQI is a measurement of how polluted the air is. An AQI over 100 is unhealthy for sensitive people and an AQI over 150 is unhealthy for everyone.

Although there are AQIs for several pollutants, Title 8, section 5141.1 about wildfire smoke only uses the AQI for PM2.5. The easiest way to find the current and forecasted AQI for PM2.5 is to go to www.AirNow.gov and enter the zip code of the location where you will be working. The current AQI is also available from the U.S. Forest Service at https://tools.airfire.org/ or a local air district, which can be located at www.arb.ca.gov/capcoa/dismap.htm. Personnel who do not have access to the internet can contact Sundt or their employer for the current AQI. The EPA website www.enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

The requirements in Title 8, section 5141.1 about wildfire smoke:
If personnel may be exposed to wildfire smoke, Sundt shall find out and monitor the current AQI applicable to the worksite. If the current AQI for PM2.5 is 151 or more, Sundt shall:

- Check the current AQI before and periodically during each shift.
- Provide training to employees.
- Lower employee exposures.
- Provide respirators and encourage their use.

Sundt's two-way communication system:
Sundt project management shall muster and verbally alert employees and site personnel when the air quality is harmful and what protective measures are available to employees. Sundt shall encourage personnel to inform us or their employers if they notice the air quality is getting worse or if they are suffering from any symptoms due to the air quality, without fear of reprisal.

Sundt's methods to protect personnel from wildfire smoke:
Sundt shall take action to protect employees from PM2.5 when the current AQI for PM2.5 is 151 or greater. Protective methods for this site include:

- Suspending work activity until AQI improves
- Locating work in enclosed structures or vehicles where the air is filtered
- Changing procedures such as moving workers to a place with a lower current AQI for PM2.5
- Reducing work time in areas with unfiltered air
- Increasing rest time and frequency, and providing a rest area with filtered air
- Reducing the physical intensity of the work to help lower the breathing and heart rates
- Providing N95 respirators for employee use

The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke:
Respirators can be an effective way to protect employee health by reducing exposure to wildfire smoke, when they are properly selected and worn. Respirator use can be beneficial even when the AQI for PM2.5 is less than 151, to provide additional protection.

When the current AQI for PM2.5 is 151 or greater, Sundt shall provide our workers with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required.

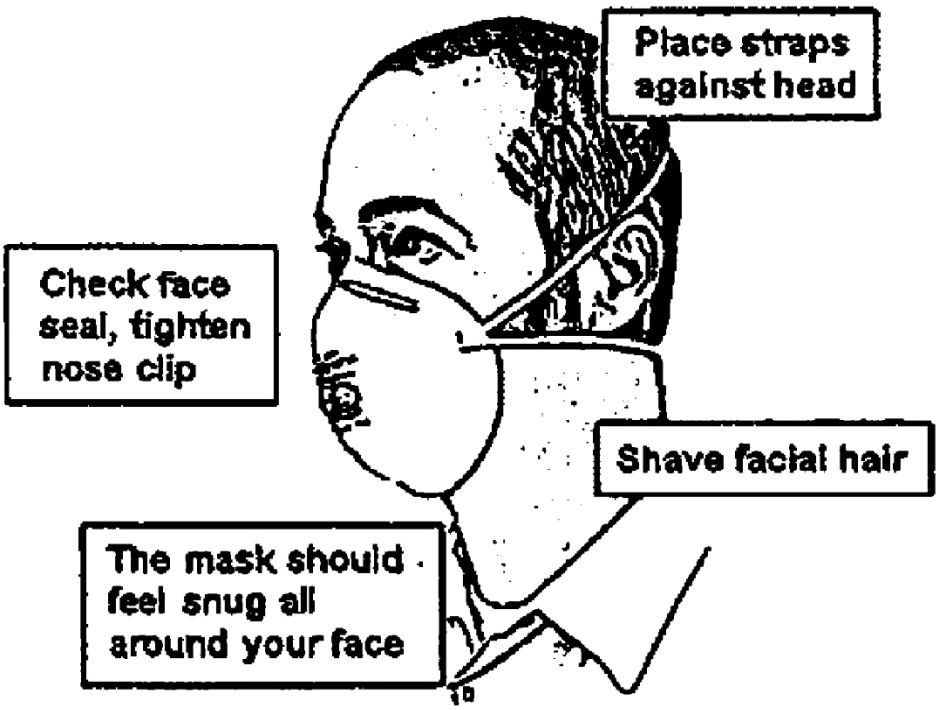
The following precautions shall be taken:

1) Respirators must be used properly and kept clean
2) Sundt and our subcontractors shall select respirators certified for protection against the specific air contaminants at the workplace. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example).
3) Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering facepiece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.
4) Read and follow the manufacturer's instructions on the respirator's use, maintenance, cleaning and care, along with any warnings regarding the respirator's limitations. The manufacturer's instructions for medical evaluations, fit testing, and shaving should also be followed, although doing so is not required by Title 8, section 5141.1 for voluntary use of filtering facepiece respirators.
5) Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect employees against gases or vapors, and it will not supply oxygen.
6) Employees should keep track of their respirator so that they do not mistakenly use someone else's respirator.
7) Employees who have a heart or lung problem should ask their doctor before using a respirator.

How to properly put on, use, and maintain the respirators provided by Sundt:
To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.

The proper way to put on a respirator depends on the type and model of the respirator. For those who use an N95 or other filtering facepiece respirator mask that is made of filter material:

1) Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.
2) Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.



Drawing Showing Proper Fitting of a Filtering Facepiece Respirator (shaving is not required for voluntary respirator use)

For a respirator that relies on a tight seal to the face, check how well it seals to the face by following the manufacturer's instructions for user seal checks. Adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives.

Filtering facepiece respirators are disposable respirators that cannot be cleaned or disinfected. A best practice is to replace filtering facepiece respirators at the beginning of each shift. If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with clean air, take off the respirator, and seek medical help.

23.0 RELENTLESS HOUSEKEEPING

23.1 Scope of this Section

a) The minimum requirements to ensure safe access, egress, and sanitary conditions at the worksite.
b) This section is intended to establish minimum procedures to ensure compliance with regulatory requirements including but not limited to *the more restrictive* of:
    i. 29 CFR 1910.22
    ii. 29 CFR 1926.25 Housekeeping

23.2 Required Practices

a) Sundt projects maintain industry-leading cleanliness to the point of "Relentless Housekeeping".
b) Each trade with workers on site shall allocate adequate manpower and equipment to clean their own work areas and consolidate unused material daily.
c) If the housekeeping is not adequate, Sundt reserves the right to shut down operations until the work area is properly addressed, or an action plan is agreed upon.
d) At the end of each day:
    i. Cords and hoses shall be rolled up/stored in accordance with the project's safety management plan.
    ii. Tools shall be properly stored in gang boxes.
    iii. Work areas shall be broom swept using controls to prevent the creation of airborne dust.
e) At all times:
    i. Floors shall be maintained in a broom-swept condition.
    ii. Protective floor coverings must be secured and not expose personnel to trips/slips/falls.
    iii. Egress pathways shall be free of materials and/or debris.
    iv. Material located indoors shall be kept on rolling carts or pallets.
    v. Conduit, pipe, water bottles, rebar, and other similar items that may be "roller hazards" must be kept off the ground or stored in a manner to prevent trip hazards.
    vi. Objects on wheels that have the potential to fall to lower levels must have brakes and/or tethers.
    vii. Waste shall be placed into trash receptacles immediately (no trash shall be left on the ground).
    viii. No food or beverages other than water are permitted outside of Sundt-designated break areas.
    ix. Pallets shall be marked with the contractor's company name (or follow site-specific requirements for labelling/color coding).
f) Coordination between Sundt personnel and each crew's foreman/superintendent must occur for all movement of materials from lay down to working areas. Stored materials must:
g) Not clutter work areas.
h) Not block other trades' access to their work.

i) Project trash cans are for lunches, breaks and incidental trash and waste. Each contractor, subcontractor of any tier or any other stakeholder producing waste is responsible for their own trash storage and hauling of containers to common collection bins provided by others. Trash cans shall have lids.
j) Throwing materials to the ground or to a container on the ground is prohibited. A properly designed and constructed trash chute installed by a qualified person can be used after approval by the Sundt Project Management team.
k) The minimum criteria for project housekeeping practices includes on-going clean-up with the following:
    i. Clean & definable access & egress
    ii. Organized material stacking and storage
    iii. Timely and adequate trash management
    iv. Work in progress controlled and managed
    v. Proper condition of tools, trucks, & equipment
l) Personnel will be provided clean facilities away from the work area in which to eat/drink during breaks and lunch.
m) Bathroom facilities shall be provided and maintained via a third-party vendor.
n) A hand and face wash area shall be established for personnel.
o) Hand sanitizing stations shall be included with the bathroom facilities.
p) Sundt shall provide drinking water for Sundt employees by Identify how water is to be provided (coolers, individual bottles, etc.)
q) Each subcontractor shall ensure their employees have an adequate supply of potable water and sanitary facilities.
r) Ice makers shall be monitored and tested for cleanliness and hygiene by a third-party vendor.
s) Dumpsters shall be clearly marked indicating allowable contents.
t) Any spills shall be cleaned immediately pursuant to the guidelines established in any applicable plans or policies.

23.3 Recommended Practices

a) The following clauses may be adopted into contracts, Project Safety Management Plans, exhibits, etc:
    i. Composite Cleanup Crew - In addition to providing daily cleanup of their own work, Subcontractor shall provide labor and the cost thereof for general cleanup for a composite cleanup effort once per week, supervised by Contractor. Include costs at the rate of one-half (1/2) man-hour of composite clean-up labor per week for every 40 man-hours of Subcontractor work performed onsite per week including, but not limited to, foreman, journeyman, apprentice, etc. This will be verified through daily reports and / or certified payroll reports, if applicable. Contractor may, at its sole discretion, elect to deduct these amounts for composite clean-up from the Contract Amount and perform this clean-up on Subcontractor's behalf.
    ii. Cleanup Crew Tools - Each Subcontractor will manage the composite clean-up crew at Contractor's direction. The Subcontractors will provide brooms, clean sweep, leaf rakes, steel rakes, shovels, vacuums as needed for the composite cleanup crew.

24.0 RESPIRATORY PROTECTION

24.1 Scope

a) These are minimum requirements to ensure workers can identify, obtain, and employ the proper protection for the safe conduct of their assigned work when potentially exposed to respiratory hazards.

b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:

i. CFR 1910.134 Respiratory Protection
ii. CFR 1910.1053(I) - Respirable crystalline silica.
iii. 29 CFR 1926.1153(k) - Respirable crystalline silica.
iv. Applicable state or local standards

24.2 Required Practices

24.2.1 General

a) Each employer is solely responsible for providing:
   i. Identifying and furnishing appropriate respirators and/or other protective equipment
   ii. Training in the use of such equipment
   iii. Required testing (medical and otherwise) and certification of the worker(s) in accordance with applicable standards

b) All dust or fume generating activities must use engineering controls as a primary method for controlling exposure.
   i. Only when engineering controls are not able to remove the hazard will respirators be worn.

c) All respirators must be selected and used in accordance with the current applicable regulatory requirements while performing work on this project.

d) Workers exposed to dust, metal fumes, fibers, vapors, gases, etc. will be provided with proper respiratory protection. The minimum requirements include:
   i. NIOSH approved equipment
   ii. Designed to protect the worker against the particular substance encountered.

e) A subcontractor of any tier must furnish and maintain at the project site a respiratory protection program compliant with this program.
   i. Subcontractors must submit program to Sundt authorized safety representative for approval prior to any work to which this program is applicable.

f) Sundt employees are prohibited from working in atmospheric conditions that are Immediately Dangerous to Life and Health (IDLH).

24.2.2 Use of Respiratory Protection

a) The minimum requirements for use of respiratory equipment necessary to comply with this program include:

i. Respirator use will be identified in the Work Package safety management plan and THAs.
ii. Respirators must be selected on the basis of hazards to which the worker is exposed.
iii. The user must complete a confidential medical evaluation to determine if they are medically fit to wear a respirator.
iv. The employee has the right to discuss the results with the medical professional during normal working hours.
v. A clear medical evaluation is a prerequisite to fit testing the user for a respirator.

b) The user must be instructed and trained in the proper use of respirators and their limitations.
c) Respirators must be assigned to individual workers for their exclusive use.
d) Users must leave the protected area to change out cartridges, if breathing resistance is noticed, a break-through is detected or to wash the respirator.
e) Respirators must be regularly inspected, cleaned and disinfected by the employee using the respirator.
   i. Those issued for the exclusive use of one worker must be cleaned after each day's use, or more often, if necessary.
   ii. Those used by more than one worker must be thoroughly cleaned and disinfected after each use.
   iii. Respirators must be stored in a convenient, clean, and sanitary location.
   iv. Worn or deteriorated equipment or component parts must be taken out of service until repaired or replaced.

24.2.4 Respirable Crystalline Silica Dust

a) An activity that may potentially generate respirable crystalline silica includes, but is not limited to the following;
   i. stationary masonry saws;
   ii. handheld power saws (any blade diameter);
   iii. handheld power saws for cutting silica-containing materials
   iv. walk-behind concrete saws;
   v. drivable concrete saws;
   vi. handheld and stand-mounted drills (including impact and rotary hammer drills);
   vii. dowel drilling rigs for concrete;
   viii. jackhammers and handheld powered chipping tools;
   ix. handheld grinders for mortar removal (i.e., tuck-pointing);
   x. handheld grinders for uses other than mortar removal;
   xi. walk-behind milling machines and floor grinders;
   xii. crushing machines;
   xiii. Heavy equipment and utility vehicles used to abrade or fracture silica-containing material.

b) A project-specific written exposure control plan, which meets the requirements of the applicable standards for controlling respirable crystalline silica, must be submitted to the Sundt authorized safety representative for review and comment prior to starting any activity that may potentially generate respirable crystalline silica.
c) The Work Package safety management plan must identify control measures for respirable crystalline silica for any task with potential exposure.
    i. Project specific written exposure control plan completed -
    ii. Silica awareness training for all supervision shall be completed
    iii. Medical evaluations and related training, and task specific training shall be completed

24.3 Recommended Practices

a) None at this time.

25.0 SCAFFOLDING

25.1 Scope of this Section

a) The minimum requirements to ensure safe erection, dismantling, access, egress and work from scaffolding.
b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:
    i. 29 CFR 1926 Subpart L - Scaffolds
    ii. State or local standards applicable to this project

25.2 Required Practices

a) Erection and dismantling operations for scaffolds must be planned by a competent person.
b) The use of scaffolds as an element of any Work Package must address such use in the safety management plan for each task including but not limited to:
    i. Verification that the scaffold is suitable for the intended use by a competent person
    ii. Access
    iii. Egress
    iv. Loads applied
    v. Fall protection.
    vi. Designated competent person responsible for inspection of scaffolds if it is not the same entity which is responsible for erection and dismantling.
c) Where entry to the scaffold is by external ladder, a gate will be installed for access.
    i. Climbing through or over the railing or bracing is not allowed.
d) Scaffold platforms will be fully planked.
    i. Plank systems that allow for gaps greater than 1” are prohibited.
e) A Permit Tag must be attached to all sets of scaffolding:
    i. Tag must identify Competent Person responsible for erection.
    ii. Tag must be signed and dated by the Competent Person authorizing work on the scaffolding.
    iii. Tags affixed to scaffolds must be one of the following:
        1. Red – Scaffold not suitable for use or it is being erected/dismantled
        2. Green – Scaffold has been inspected and is ready for use
f) Scaffolding will be inspected prior to use on each shift and documented by the designated Competent Person.
g) Inspections will be documented with a signature and dated by the designated competent person on an Inspection log which must be secured to the scaffolding at all times.

25.3 Recommended Practices

Access to scaffolding above one level shall be by means of stair towers or internal drop down ladders.

26.0 STEEL ERECTION

26.1 Scope of this Section

a) The minimum requirements to ensure workers can identify, obtain and employ the proper personal Protective Equipment (PPE) for the safe conduct of their assigned work.

b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:

   i. 29 CFR 1926 Subpart R - "Steel Erection

   ii. 29 CFR 1926.754 - Structural steel assembly

   iii. Final Rules issued in Fed Register #:66:5317-5325 - Safety Standards for Steel Erection

26.2 Required Practices

a) 100% fall protection is mandatory for all work at heights greater than 6', including steel erection and decking.

b) A Steel Erection Plan must be submitted to the Sundt Safety Representative for review and comment prior to starting erection.

c) Sundt will provide steel erector with a written notice to proceed when concrete has reached required strength.

d) Perimeter fall protection installed by the erector must adequate for decking and other subsequent contractors. Erector to provide Sundt with signed deck release form.

e) "Christmas Tree" picks require a multiple-lift rigging (MLR) procedure and may not exceed 5 similar/structural members (minimum spacing of 7' apart). MLR must meet anticipated load for each component as it will be used in the assembly.

26.3 Recommended Practices

a) Use this guide to ensure proper application of Crosby Clips

27.0 TRAFFIC & FLAGGING

27.1 Scope of this Section

a) The minimum requirements to ensure safe conduct of assigned work in work areas exposed to traffic.
b) This section is intended to establish minimum procedures to assure compliance with regulatory requirements including but not limited to *the more restrictive* of:
   i. US Department of Transportation Federal Highway Administration (FHWA) Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations
   ii. FHWA Work Zone Safety and Mobility Rule
   iii. State or local standards applicable to this traffic control for a project

27.2 Required Practices

a) All Traffic control operations must be planned and performed in accordance with the applicable Federal, State or local standards while performing work on this project. Equipment and methods used for signaling purposes must meet local regulations.
b) Changes to Traffic Control Permits must be submitted and approved.
c) The following flagging methods should be used in stopping or slowing traffic:
   i. The sign paddle bearing the clear messages STOP or SLOW should be used
   ii. Sign paddles should be at least 24 inches wide, with six-inch series C letters.
   iii. A rigid handle should be provided
   iv. This combination sign may be fabricated from sheet metal or other light semi-rigid material.
   v. The background of the STOP face must be red with white letters and border.
   vi. The background of the SLOW must be orange with black letters and border
   vii. When used at night:
      1. The STOP face must be reflectorized red with white reflectorized letters and border
      2. The SLOW face must be reflectorized orange with black letters and border.
d) Flag persons must possess these minimum requirements:
   i. Completion of flagger training (as required by AHJ).
   ii. Competent Person for assigned task.
   iii. Good physical condition with sight and hearing which is considered unimpaired either with or without the use of corrective devices.
   iv. Mental alertness.
   v. Courteous but firm manner.
   vi. Sense of responsibility for safety of public and crew

27.3 Recommended Practices

None at this time

28.0 VERTICAL STRUCTURAL ELEMENTS

28.1 Scope of this Section

This section applies to structural vertical elements over 10 feet in height and those of lesser height as regulatorily/contractually required.

28.2 Required Practices

a) Vertical elements and bracing shall be designed by a professional engineer.
   i. Drawings must be stamped by a professional engineer registered in the state where the project is located.
   ii. The engineer's stamped drawings must be submitted to the Contractor's project management personnel for review.
   iii. Elements must free stand or be self-supporting by means of internal bracing until permanently supported.
   iv. If vertical elements cannot be internally braced because of height or structural design (i.e., masonry walls, concrete tilt panels, formwork, etc.), then a feasibility study and alternate bracing plan should be included in work plans, if applicable, for review and acceptance by Contractor's project management personnel.
b) Contractors performing structural vertical work shall submit a work plan and visual field inspection process for installation purposes.
c) Plans shall be submitted to Contractor's project management personnel for review and acknowledgment prior to release of work package.

28.3 Recommended Practices

None currently