[CompanyName]

Fire Sprinkler Installation

Site-specific Health and Safety Plan

[ProjectName]
[ProjectNumber]

Management acceptance

This Site-specific Health and Safety Plan has been reviewed and accepted

Endorsed By: (Name / Title)	[SafetyManagerName], Safety Manager		
Signature:	*[SafetyManagerName]*	Date:	[Date]
Version	1.0	Notes	Initial Issue

SITE-SPECIFIC HEALTH AND SAFETY PLAN

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2. Statement of Safety and Health Policy, Goals, and Objectives

a. Safety and Health Policy

[CompanyName] is committed to providing a safe, healthful, and environmentally responsible workplace for all employees, subcontractors, and visitors. Our objective is to proactively prevent incidents, injuries, and illnesses through hazard identification, control measures, training, and continuous improvement.

In carrying out our commitment to safety:

- We comply with all applicable OSHA, federal, state, and local safety, and health regulations.
- Each project maintains a Site-Specific Health and Safety Plan (HSP) tailored to its unique

b. Stop Work Authority

Every employee has the authority and responsibility to immediately stop work when unsafe conditions, behaviors, or procedures are observed. Upon issuing a stop work:

- The employee must promptly notify their supervisor or the Site Safety Officer.
- The Safety Manager or Superintendent will assess the condition and determine necessary corrective actions.
- Work may resume only after verification that the issue has been resolved.
- Employees exercising Stop Work Authority in good faith will not be subject to disciplinary action.

This policy reinforces our commitment to a proactive safety culture and open communication.

c. Site-specific Safety Performance Goals and Objectives

Our safety philosophy is rooted in the belief that zero incidents is achievable. The following goals guide our on-site safety efforts:

- Zero recordable injuries and illnesses
- Zero fatalities or permanent disabilities

Primary Safety Goals

- Zero recordable injuries and illnesses

- Zero fatalities or permanent disabilities
- Zero OSHA violations
- Zero environmental incidents
- No major fires, vehicle incidents, or property losses

OBJECTIVES TO SUPPORT THESE GOALS

- Prepare and implement site-specific HSP and JHAs for all major work tasks
- Conduct daily inspections and enforce safety controls
- Hold weekly toolbox talks and monthly safety meetings

By deploying proactive planning, strong supervision, and continuous education, [CompanyName] fosters a work environment where safety is embedded in every phase of construction.

4. NONCOMPLIANCE POLICY

Maintaining a safe and compliant jobsite requires consistent enforcement of safety rules, procedures, and responsibilities. All personnel—employees, subcontractors, and suppliers—are expected to comply with the Site-Specific Health and Safety Plan (HSP), applicable OSHA standards, and the [CompanyName] Safety System.

a. PURPOSE AND ENFORCEMENT PHILOSOPHY

[CompanyName] uses a progressive discipline model to address safety noncompliance. This model emphasizes corrective action, education, and accountability before enforcement escalates to removal or termination. However, serious violations that place individuals or the project at significant risk may result in immediate disciplinary action.

b. CATEGORIES OF NONCOMPLIANCE

To provide clarity, safety violations are categorized as either minor or major, based on their potential to cause harm or repeat.

Violation Type	Examples
Minor	• Failure to wear proper PPE (first offense) • Late or missed toolbox talk • Untidy work area or housekeeping lapse • Incomplete daily inspection log
Major	• Bypassing fall protection systems • Hot work without a permit • Operating equipment without authorization • Tampering with LOTO devices • Repeated minor violations • Failure to report an injury or near miss

Note: Reclassification may occur based on frequency, severity, or willfulness of the behavior.

c. PROGRESSIVE DISCIPLINARY ACTION

The following progression is used for minor violations. Major violations may skip steps based on severity.

Step	Action	Responsible Party
Verbal Warning	Supervisor discusses issue; no formal documentation required	Supervisor or Foreman
Written Warning	Documentation issued; placed in employee's file	Superintendent and Safety Manager

Step	Action	Responsible Party
Final Warning	Formal notice of repeated violations and risk of removal	Safety Manager and Project Manager
Removal from Site	Employee is removed from project pending further evaluation	Project Leadership

d. Subcontractor Noncompliance

Subcontractors are subject to the same policy. In addition:

- Backcharges for rework or delays caused by noncompliance
- Termination of subcontractor's contract for persistent violations

e. Reporting and Documentation

All noncompliance events will be documented using:

- Daily Inspection Forms
- Nonconformance Reports (Appendix E)
- Safety Meeting Notes
- Incident Reports, if applicable

Corrective actions and follow-up dates are tracked in the Nonconformance Report Control Log.

- Reporting a safety concern or hazard
- Refusing to perform unsafe work
- Exercising Stop Work Authority

6. TRAINING

Training is a critical component of [CompanyName]'s safety program. It ensures that all personnel have the knowledge, skills, and awareness necessary to perform their work safely, respond to emergencies, and comply with site-specific safety requirements. This section outlines the structure and requirements for safety training throughout the project.

a. TRAINING PROGRAM OVERVIEW

[CompanyName] maintains a comprehensive safety training program that includes:

- New hire orientation and onboarding
- Job-specific training and certifications
- Periodic refresher training
- Task-based instruction tied to Job Hazard Analyses (JHAs)
- Emergency response and drill participation
- Corrective action retraining when needed

Training records are maintained in the **Training Log** (Appendix E) and reviewed regularly by the Safety Manager.

- Job Hazard Analyses (JHAs) for relevant work scopes
- Emergency response protocols and contact information
- Stop Work Authority and hazard reporting procedures
- Personal protective equipment (PPE) requirements

Each employee signs an attendance roster acknowledging participation. Documentation is maintained in project training files.

c. MANDATORY TRAINING AND CERTIFICATIONS

Personnel must complete all training and hold valid certifications required for the tasks they are assigned to perform. Examples include:

Training/Certification	Required For
OSHA 10/30-Hour	Field personnel / Supervisors
Fall Protection	Work at height, elevated platforms
Confined Space Entry	Entry or standby roles in permit spaces
Lockout/Tagout (LOTO)	Work on energized systems or equipment

Training/Certification	Required For
First Aid, CPR, AED	Minimum two individuals per site shift
Hot Work and Fire Watch	Welding, brazing, soldering tasks
Respirator Use & Fit Testing	Tasks requiring respiratory protection
Hearing Conservation	Exposure to >85 dBA (TWA)
Traffic Control / Flagger	Personnel working near vehicle movement

The Safety Manager verifies that all required certifications are current and readily available for review.

d. Refresher and Ongoing Training

The following refresher training is conducted at regular intervals or when triggered by specific events:

- Annual Training: Confined space, fall protection, respirator use, hazard communication
- Monthly Meetings: Site-wide safety topics led by the Safety Manager
- Weekly Toolbox Talks: Conducted by the Superintendent or Foreman; includes task-specific or seasonal topics
- Corrective Action Training: Required after safety nonconformance or as directed by the Safety Manager

Topics are selected based on inspection findings, incident trends, and project phase transitions.

- Emergency evacuation procedures
- Site access control and escort responsibilities

Briefings are documented in a visitor log maintained by the Safety Manager or designated escort.

f. Emergency Response Training

All personnel receive training on:

- Fire, medical, and severe weather response procedures
- Assembly points and headcount procedures
- How to contact site emergency responders
- Use of fire extinguishers (where applicable)
- Identifying and assisting injured coworkers

Quarterly emergency drills are conducted and evaluated for effectiveness. Results are reviewed and shared at safety meetings.

g. TRAINING DOCUMENTATION AND RECORDS

The Safety Manager maintains the following:

- A Training Plan (Appendix E) outlining required courses by role
- A Training Log recording completed training by individual
- Copies of certifications, sign-in sheets, and refresher training records
- A matrix tracking training expiration dates for proactive scheduling

All training records are made available for review by clients, regulatory agencies, or auditors upon request.

7. Safety and Health Inspections

Regular inspections are essential for identifying hazards, verifying compliance, and reinforcing a proactive safety culture. [CompanyName] conducts multiple levels of safety inspections throughout the project lifecycle to ensure work is performed in accordance with all applicable safety standards, this Health and Safety Plan, and relevant Job Hazard Analyses (JHAs).

a. Inspection Types and Responsibilities

Inspection Type	Frequency	Conducted By	Purpose
Daily Safety Inspection	Daily during work hours	Superintendent / Safety Manager	Identify immediate hazards and ensure site readiness
Work Task Safety Inspections	Before, during, and after each task	Superintendent / Qualified Inspector	Verify safe conditions exist at each work phase
Weekly Safety Inspection	Weekly	Superintendent / Safety Manager	Focused review of high-risk areas and recurring issues
Monthly Safety Audit	Monthly	Safety Manager	Comprehensive compliance audit across all areas of worksite safety
Closeout Inspection	Project completion	Safety Manager / Superintendent	Confirm all work is completed to safety standards before turnover
External Inspections	As scheduled or unscheduled	OSHA, client, or third-party auditors	Verify compliance with regulatory and contract requirements

Only qualified personnel designated by the Safety Manager may perform inspections for specific activities.

b. Inspection Criteria and Documentation

Inspections follow standardized checklists that cover:

- Use and condition of personal protective equipment (PPE)
- Housekeeping and material storage

- Electrical safety and GFCI protection
- Proper signage and barricades

Inspection results are documented using appropriate forms found in Appendix E. Observations are logged, and immediate hazards are corrected on the spot or escalated as nonconformances.

c. Nonconformance Reporting and Controls

If a deficiency is not immediately corrected:

- The Safety Manager or Superintendent issues a Nonconformance Report
- The affected area or item is marked and, if necessary, isolated with a Stop Work Order

cause analysis and preventive measures are implemented per Section 8 (Incident Reporting).

d. Control of Unsafe Conditions

If an inspection identifies a safety concern, the Superintendent or Safety Manager will determine whether work can proceed:

- Continue Work: If the issue does not pose immediate risk, work may continue under restrictions
- Stop Work Order: If the issue presents a serious hazard, work must cease until the issue is resolved

Affected areas will be clearly marked with tags, tape, or signage to prevent inadvertent exposure.

e. Continuous Improvement Through Inspections

Inspection findings are reviewed monthly to:

- Identify recurring hazards or unsafe behaviors
- Evaluate subcontractor safety performance
- Measure adherence to JHAs and the Health and Safety Plan
- Inform updates to procedures, training, and hazard controls

Inspection trends are discussed during the Monthly Safety Review Meeting and documented in the Safety Performance Review Log.

10. Required Project Risk Management Plans (Programs, Procedures)

Effective risk management is essential to safeguarding personnel, property, and the environment. [CompanyName] develops and implements risk-specific plans based on the unique hazards associated with each project phase. These plans supplement the core Health and Safety Plan (HSP) and provide targeted controls for high-risk activities.

a. Project Risk Assessment Process

The Safety Manager conducts a formal Project Risk Assessment prior to the start of work. This process includes:

- Reviewing the full project scope and work breakdown structure
- Identifying foreseeable hazards associated with project activities
- Evaluating severity, probability, and exposure duration for each hazard
- Determining the need for specialized safety plans, procedures, or permits

The results of the assessment are documented on the Project Risk Assessment Form (see Appendix B).

b. Job Hazard Analyses (JHAs)

For each definable work task, a detailed Job Hazard Analysis (JHA) is prepared. JHAs outline:

- Specific steps of the task
- Potential hazards associated with each step
- Required engineering, administrative, and PPE controls
- Competency, training, and supervision requirements

JHAs are reviewed with the work crew during preparatory phase meetings and prior to the start of each task. All JHAs are included in Appendix C.

c. Risk-Specific Plans and Procedures

Based on the Project Risk Assessment and task-specific JHAs, the Safety Manager identifies additional required risk-specific plans. These may include:

- Fire Prevention Plan
- Confined Space Program
- Hazardous Energy Control (Lockout/Tagout)
- Respiratory Protection Plan
- Exposure Control Plan (e.g., for chemicals, silica)
- Fall Protection Plan
- Heat/Cold Stress Monitoring Plan
- Traffic Control Plan
- Hearing Conservation Plan
- Compressed Air Safety Plan
- Excavation and Trenching Plan

- Personal Protective Equipment (PPE) Program

These plans are documented in the List of Required Risk-Specific Plans, Programs, and Procedures form and maintained in Appendix D.

If new risks are introduced during the course of the project (e.g., scope changes, equipment modifications), the Safety Manager will revise the list and create or amend plans as needed.

d. Implementation and Communication

Risk-specific plans are:

- Reviewed during the Pre-Construction Safety Conference
- Communicated with all affected personnel through task briefings and toolbox talks
- Integrated into subcontractor orientation and oversight
- Stored on-site and made accessible to all field personnel

The Safety Manager ensures that subcontractors follow either [CompanyName]'s plans or submit equivalent plans for approval prior to mobilization.

e. Recordkeeping and Updates

All plans are reviewed periodically and updated when:

- Site conditions change
- Equipment or work methods are modified
- New hazards are identified
- Regulatory requirements are revised

Updated plans are redistributed to all affected personnel and documented in the Safety File.

12. APPENDIX B: PROJECT TASKS AND RISK ASSESSMENTS

a. OVERVIEW OF PROJECT RISK ASSESSMENT AND JOB HAZARD ANALYSIS (JHA)

A comprehensive Project Risk Assessment identifies specific hazards associated with the work scope. These identified hazards directly inform the development of detailed Job Hazard Analyses (JHAs). JHAs outline step-by-step safety precautions and controls tailored to specific tasks, ensuring risks are proactively managed on a daily basis.

b. SAFETY CONTROLLED WORK TASK LIST

A Job Hazard Analysis is performed for each safety-controlled work task listed below.

1. Site Preparation and Setup
2. Material Handling and Storage
3. Layout and Measurement
4. Pipe Cutting and Threading
5. Installation of Piping
6. Installation of Fittings and Valves
7. Sprinkler Head Installation
8. Hydrostatic and Leak Testing
9. Fire Sprinkler System Flushing
10. Installation of Control and Alarm Equipment
11. System Commissioning and Inspection
12. Hot Work (Soldering, Brazing, Welding)
13. Electrical and Alarm Integration
14. Scaffold and Ladder Work
15. Equipment Maintenance and Housekeeping
16. Cleanup and Demobilization

d. List of Required Risk-specific Plans, Programs, and Procedures

Required Risk-specific Plans, Programs, and Procedures

Based on the industry standards and typical practices for this fire sprinkler system installation, the potential hazards and corresponding risk-specific hazard plans are listed below:

1. Fire Prevention Plan

- if the installation involves hot work (e.g., welding, brazing, or soldering of pipes). Welding (per AWWA C206) and brazing (per AWS B2.2/B2.2M) create fire hazards, especially in confined or combustible areas.

2. Emergency Response Plan

- Required for all projects to address potential fire incidents, accidents, or medical emergencies.

3. Hazardous Energy Control Program and Procedures

- Necessary for safely managing energy sources, particularly when working with water pressure systems or near electrical systems during installation.

4. Exposure Control Plan

- Required for tasks like disinfection (AWWA C651) and corrosion protection (NACE SP0169) can involve chemical hazards.

5. Respiratory Protection Plan

- Required if dust, fumes, or chemical exposure occurs during welding, cutting, or using certain coatings.

6. Hearing Conservation Program

- Required if noise levels from drilling or mechanical installations exceed OSHA thresholds.

7. Heat/Cold Stress Monitoring Plan

- Required if installation work is often conducted in varying outdoor environments.

8. Confined Space Program

- Required if installation occurs in confined spaces like basements, crawlspaces, or ceiling voids.

9. Personal Protective Equipment Plan

- Required for the proper selection and use of PPE for tasks involving welding, cutting, or chemical handling.

10. Housekeeping Plan

- Required to keep worksites clear of debris, which reduces trip hazards and fire risks.

11. Site Layout Plan

- Required for the efficient and safe layout of equipment and materials during large installations.

12. Compressed Air Plan

- Required if compressed air is used for pipe flushing or system testing.

13. Excavation/Trenching Plan

- Required if installation includes underground piping (NFPA 24) that involves excavation, which carries cave-in and utility strike risks.

14. Traffic Control Plan

- Required if installation involves road crossings or street-level piping.

13. APPENDIX C: JOB HAZARD ANALYSIS

WORK TASK: SITE PREPARATION AND SETUP

JOB STEPS (WORK SEQUENCES):

1. Mobilizing equipment and tools.
2. Setting up site safety measures (barriers, signage, safety stations).

SPECIFIC ANTICIPATED HAZARDS AND CONTROLS:

1. MOBILIZING EQUIPMENT AND TOOLS

Hazard	Controls	Risk Assessment Code (RAC)
Musculoskeletal injuries from heavy lifting	Use mechanical aids (forklifts, dollies, hand trucks). Utilize proper lifting techniques—bend knees, keep load close to body. Implement team lifting for heavy items.	Moderate (M)
Slips, trips, and falls	Ensure clear access pathways by removing obstructions. Maintain good housekeeping. Wear slip-resistant footwear.	Low (L)
Pinch points and crushing hazards	Provide training on pinch-point locations on equipment. Keep hands and feet clear. Use appropriate gloves.	Moderate (M)
Vehicle and equipment collision risks	Establish designated work zones with barriers and warning signs. Use spotters and ensure proper communication. Workers must wear high-visibility vests.	High (H)

2. SETTING UP SITE SAFETY MEASURES

Hazard	Controls	Risk Assessment Code (RAC)
Vehicular traffic hazards	Wear high-visibility vests. Clearly delineate work zones with barriers and signs. Use trained flaggers when necessary.	High (H)
Pedestrian hazards	Install signage restricting pedestrian access. Erect sturdy barriers isolating pedestrians from active work areas.	Moderate (M)

Injury from improper lifting techniques	Train workers in proper lifting methods. Use lifting aids for heavy items.	Moderate (M)
Cuts or abrasions from sharp objects or tools	Wear appropriate PPE (gloves, protective clothing). Inspect tools before use.	Low (L)
Slips, trips, and falls from uneven or obstructed surfaces	Conduct regular inspections. Promptly remove debris and clearly mark uneven surfaces. Utilize slip-resistant mats where needed.	Moderate (M)

Equipment to be Used:	Personal Protective Equipment (PPE):	Training Requirements	Inspection Requirements:
• Vehicles for transporting tools and equipment • Hand and power tools • Safety barriers, cones, and tape • Signage for traffic and pedestrian control	• Safety glasses • Hard hats • High-visibility vests • Steel-toed boots • Work gloves	• PPE usage and inspection • Proper lifting techniques • Equipment operation safety • Traffic control and flagger training (if applicable) • Site-specific safety orientation	• Daily: Site visual inspection for obstructions, debris, or hazards • Pre-use: Equipment and tool safety inspection • Before work begins: Verify signage, barriers, and PPE compliance • Ongoing: Check PPE condition before each shift

WORK TASK: INSTALLATION OF PIPING

JOB STEPS (WORK SEQUENCES):

1. Installing overhead piping, risers, and branch lines.
2. Fastening pipes securely using hangers, clamps, and brackets.
3. Installing underground piping systems.

SPECIFIC ANTICIPATED HAZARDS AND CONTROLS:

1. INSTALLING OVERHEAD PIPING, RISERS, AND BRANCH LINES

Hazard	Controls	Risk Assessment Code (RAC)
Falls from ladders or scaffolding	Use approved ladders and scaffolding with guardrails. Workers must be trained in ladder safety and use of fall arrest systems.	High (H)
Falling objects (tools, pipes, fittings)	Workers to wear hard hats at all times. Use tool lanyards. Install temporary netting or barriers below work areas.	High (H)
Eye injuries from dust or debris	Mandatory use of safety goggles or face shields. Keep work area clean to minimize debris.	Moderate (M)
Strains or sprains from improper lifting	Use team lifting methods for heavy items. Train workers on ergonomic lifting techniques.	Moderate (M)

2. FASTENING PIPES SECURELY USING HANGERS, CLAMPS, AND BRACKETS

Hazard	Controls	Risk Assessment Code (RAC)
Pinch points, hand or finger injuries	Train workers on identifying pinch points. Wear appropriate gloves. Maintain clear communication between team members.	Moderate (M)
Falls from height when accessing overhead areas	Use proper fall protection (harnesses, lanyards, anchors). Inspect ladders and scaffolding before use. Maintain three-point contact when climbing.	Moderate (M)

Dropped tools or materials causing injury below	Secure tools using lanyards. Set up controlled access zones below elevated work areas.	Moderate (M)

3. Installing Underground Piping Systems

Hazard	Controls	Risk Assessment Code (RAC)
Trench collapse or cave-ins	Use trench boxes and shoring as per OSHA standards. Inspect trenches before entry. Provide a safe means of egress within 25 feet.	High (H)
Contact with underground utilities	Conduct utility scans and obtain locates before digging. Use hand tools when near known utility lines.	High (H)
Slips, trips, and falls in excavation areas	Keep work areas well-lit and clear of debris. Use slip-resistant footwear.	Moderate (M)
Exposure to hazardous gases or lack of oxygen	Test for hazardous gases and provide proper ventilation. Workers to wear respiratory protection if required.	High (H)

Equipment to be Used:	Personal Protective Equipment (PPE):	Training Requirements	Inspection Requirements:
• Ladders and scaffolding • Fall protection systems (harness, lanyard, anchors) • Hand and power tools • Trenching and shoring equipment	• Safety glasses or face shields • Hard hats • High-visibility vests • Work gloves • Fall protection harnesses	• Ladder and scaffold safety training • Fall protection and working-at-height certification • Ergonomic lifting techniques and hazard recognition training • Trenching and excavation safety training • PPE usage and care training	• Daily: Inspection of ladders, scaffolding, and fall protection equipment • Pre-use: Inspect trenching and shoring equipment • Before work begins: Verify utility scans and underground locates • Ongoing: Keep work areas clear of obstructions and hazards

WORK TASK: SYSTEM COMMISSIONING AND INSPECTION

JOB STEPS (WORK SEQUENCES):

1. Testing functionality of the sprinkler system in accordance with NFPA standards.
2. Performing operational checks and adjustments to valves and control systems.
3. Participating in formal inspections with fire marshals or local authorities.

SPECIFIC ANTICIPATED HAZARDS AND CONTROLS:

1. TESTING FUNCTIONALITY OF THE SPRINKLER SYSTEM

Hazard	Controls	Risk Assessment Code (RAC)
Pressurized system failures causing sudden water discharge	Verify system integrity before pressurization. Use pressure relief valves and controlled pressurization procedures.	High (H)
Electrical hazards from system integration	Follow NFPA 70E safety guidelines. Ensure electrical components are properly grounded before activation.	High (H)
Slips, trips, and falls from wet surfaces	Use slip-resistant footwear and maintain clear drainage paths. Place warning signs in wet areas.	Moderate (M)
Eye injuries from pressurized leaks	Wear safety glasses or face shields when working near pressurized components.	Moderate (M)

2. PERFORMING OPERATIONAL CHECKS AND ADJUSTMENTS TO VALVES AND CONTROL SYSTEMS

Hazard	Controls	Risk Assessment Code (RAC)
Hand injuries from adjusting valves under pressure	Use proper valve operation techniques. Wear gloves to protect against pinch points and burns from hot pipes.	Moderate (M)
Incorrect adjustments leading to system malfunctions	Verify system settings against design specifications. Conduct checks with trained personnel only.	Low (L)
Repetitive motion strain from valve adjustments	Rotate tasks among workers and use ergonomic positioning when possible.	Moderate (M)

3. Participating in Formal Inspections with Fire Marshals or Local Authorities

Hazard	Controls	Risk Assessment Code (RAC)
Miscommunication leading to improper procedures	Conduct pre-inspection meetings to align roles and responsibilities. Follow official guidelines and procedures.	Moderate (M)
Delays due to unprepared system components	Ensure system components are pre-tested and meet all compliance standards before inspection.	Low (L)
Exposure to environmental conditions (heat, cold, confined spaces)	Dress appropriately for weather conditions. Take breaks in temperature-controlled environments when necessary.	Moderate (M)

Equipment to be Used:	Personal Protective Equipment (PPE):	Training Requirements	Inspection Requirements:
• Pressure testing devices and gauges • Hand tools for valve adjustments • Electrical testing equipment • Communication devices for coordinating inspections	• Safety glasses or face shields • Insulated gloves (for electrical work) • Slip-resistant footwear • High-visibility vests • Hearing protection (if required)	• NFPA fire sprinkler testing and commissioning procedures • Electrical safety training (NFPA 70E compliance) • Valve and system operation training • PPE usage and inspection • Regulatory compliance training for inspections	• Daily: Inspect system components, tools, and PPE before use • Pre-use: Verify system components meet compliance standards • Before work begins: Ensure all personnel understand test procedures and safety measures • Ongoing: Monitor for leaks, pressure irregularities, and operational issues

14. APPENDIX D: SUPPORTING PLANS, POLICIES, AND PROCEDURES

APPENDIX D.5: RESPIRATORY PROTECTION PLAN

Project Name: [ProjectName]
Project Number: [ProjectNumber]
Prepared By: [SafetyManagerName]
Date: [Insert Date]
Revision: 1.0

1. PURPOSE

This plan establishes procedures to protect employees from exposure to airborne contaminants during project activities, in compliance with OSHA 29 CFR 1910.134. It ensures that respiratory protection is provided, used, and maintained properly whenever required by the work environment or task-specific hazards.

2. SCOPE

This plan applies to all personnel who may be exposed to:

- Dusts, fumes, or vapors from soldering, brazing, or welding
- Chemical vapors from adhesives, sealants, or coatings
- Residual contaminants during pipe disinfection or flushing
- Airborne particulates in enclosed or poorly ventilated areas

3. RESPONSIBILITIES

Potential Hazards	Examples
Safety Manager	Administers the program, ensures compliance, conducts fit testing and training
Superintendent	Enforces use of respiratory protection on-site
Employees	Wear and maintain assigned respiratory protection as trained
Supervisors	Ensure respiratory hazards are evaluated and PPE is available for affected workers
Medical Provider	Conducts evaluations to determine medical fitness for respirator use

4. HAZARD IDENTIFICATION

Exposure Source	Potential Hazards	Example Tasks
Welding/Brazing Fumes	Metal oxide inhalation	Hot work on pipes and fittings
Adhesive/Solvent Vapors	VOCs, respiratory irritation	Pipe coating, joint sealing
Disinfection Chemicals	Chlorine, bleach vapors	Pipe flushing or sanitization
Dust or Silica Particulates	Respiratory irritation or lung damage	Cutting or grinding materials

5. Control Measures

A. Engineering and Administrative Controls

- Use local exhaust ventilation and fans where feasible
- Perform high-exposure work outdoors or in ventilated areas
- Limit time spent in exposure zones
- Rotate workers when practical

B. Respiratory Protection Use

Respirators will be provided when engineering or administrative controls cannot adequately eliminate exposure. Types of respirators may include:

Respirator Type	Use Case
N95 or P100 Filtering Facepiece	Dusts, non-oil particulates
Half-Face Air-Purifying Respirator	Organic vapor exposure (e.g., adhesives)
Full-Face Respirator	Combined protection for eyes and lungs
N95 or P100 Filtering Facepiece	Dusts, non-oil particulates

All respirators must be NIOSH-approved and matched to the identified hazard.

6. Training and Fit Testing

All personnel required to wear a respirator must receive training and pass a fit test prior to use. Training includes:

- Respirator types, selection, and limitations
- Proper donning, doffing, and user seal checks
- Maintenance, cleaning, and storage
- Recognition of medical symptoms that may affect respirator use
- Emergency procedures for exposure or respirator failure

Fit testing (qualitative or quantitative) is conducted:

- Initially before use
- Annually thereafter
- When facial structure or equipment changes

7. Medical Evaluation

Before being assigned a respirator, employees must complete a medical questionnaire and, if needed, undergo an exam by a licensed health care provider to determine fitness for use. Evaluations are confidential and maintained per OSHA standards.

8. Emergency Procedures

If a respirator fails or an exposure occurs:

1. Exit the contaminated area immediately
2. Notify a supervisor and the Safety Manager
3. Seek medical evaluation if symptoms develop
4. The respirator will be inspected, repaired, or replaced before reuse

9. RECORDKEEPING

The Safety Manager maintains records of:

- Training and fit testing results
- Respirator assignment logs
- Medical evaluations (documentation only, not confidential details)
- Equipment inspection and maintenance logs

10. REVIEW AND UPDATES

This plan is reviewed:

- Annually
- When tasks, materials, or respiratory hazards change
- Following a respiratory incident or regulatory update

11. ENFORCEMENT

Improper use, failure to wear assigned respiratory protection, or tampering with PPE is considered a safety violation and may result in disciplinary action.

APPENDIX D.6: FALL PROTECTION PLAN

Project Name: [ProjectName]
Project Number: [ProjectNumber]
Prepared By: [SafetyManagerName]
Date: [Insert Date]
Revision: 1.0

1. PURPOSE

This Fall Protection Plan establishes the requirements and procedures for preventing falls during work at heights, in compliance with OSHA 29 CFR 1926 Subpart M. It outlines methods for protecting workers exposed to fall hazards of **6 feet or more** during fire sprinkler system installation and related construction tasks.

2. SCOPE

This plan applies to all employees and subcontractors engaged in tasks involving:

- Overhead piping installation
- Work on ladders, scaffolds, lifts, or aerial platforms
- Access to roof edges, mezzanines, or open-sided floors
- Work above floor openings or wall openings
- Steel erection or pipe rack installations

3. RESPONSIBILITIES

Role	Responsibilities
Safety Manager	Oversees plan implementation, reviews fall hazard controls, verifies training
Superintendent	Ensures fall protection systems are provided, used, and inspected daily
Competent Person	Conducts fall hazard assessments, inspects equipment, verifies anchor points
Employees	Use fall protection equipment properly and report damaged or unsafe conditions

4. FALL HAZARD IDENTIFICATION

Activity	Potential Fall Hazard
Overhead pipe installation	Working from ladders, scaffolds, or lifts
Work near edges or open sides	Falls to lower levels
Roof or elevated mechanical areas	Slips, trips, unprotected edges
Working through openings	Floor or wall openings without covers or rails

5. Control Measures

A. Fall Protection Systems

When working at elevations of **6 feet or higher**, the following systems must be used as appropriate:

System	Application
Guardrail Systems	Roof edges, floor openings, platform perimeters
Personal Fall Arrest Systems (PFAS)	Aerial lifts, scaffolds, open-edge work
Fall Restraint Systems	Where fall arrest is not feasible or excessive
Safety Net Systems	Only when PFAS or guardrails are infeasible

B. Anchor Points

- Anchor points must support **at least 5,000 pounds per worker** attached
- Temporary anchor devices must be approved and installed under Competent Person oversight

C. Ladders and Scaffolds

- Ladders inspected before each use; only rated ladders are allowed
- Scaffolds must include guardrails, midrails, toe boards, and safe access
- Employees must maintain **three points of contact** when climbing ladders

6. Training Requirements

All workers exposed to fall hazards must be trained in:

- Fall protection systems and their proper use
- Inspection, donning, and maintenance of PFAS
- Ladder and scaffold safety requirements
- Recognizing fall hazards and reporting deficiencies
- Rescue procedures in the event of a fall

Training is conducted prior to exposure and retraining is provided when:

- New fall hazards are introduced
- A worker demonstrates improper use or behavior
- Fall protection procedures or equipment change

7. Equipment Inspection and Maintenance

- Harnesses, lanyards, and connectors must be **inspected before each use**
- Damaged or defective gear must be removed from service immediately
- The Safety Manager conducts monthly audits of fall protection equipment
- Inspection records are documented and maintained in project files

8. Rescue Procedures

In the event of a fall:

1. Activate the emergency response system immediately
2. The nearest competent person coordinates rescue efforts
3. Only trained personnel may conduct fall rescues using retrieval systems or lifts
4. The fallen worker is not to be moved unless necessary for immediate safety
5. The incident is reported and investigated according to Section 8 (Incident Reporting)

9. RECORDKEEPING

- Fall protection training records retained per company and OSHA requirements
- Monthly inspection records for PFAS and anchor systems
- Documentation of fall hazard assessments and control measures

10. REVIEW AND UPDATES

This plan will be reviewed:

- Annually
- After any fall incident or near miss
- When new fall hazards or equipment are introduced

11. ENFORCEMENT

Failure to use fall protection systems or follow safe practices will result in immediate disciplinary action. Deliberate bypassing of fall protection is grounds for removal from the project.

15. APPENDIX E: PLANNING DOCUMENTS AND REPORTING FORMS

Daily Safety Inspection Form

Project Number	Project Name	Inspection Date	Time:
[ProjectNumber]	[ProjectName]		
Inspector Name		**Job Title:**	

Work Areas Inspected:

☐ Material Storage	☐ Equipment Operations	☐ Excavation/Trenching
☐ Site Access/Egress	☐ Scaffold/Ladder Areas	☐ General Housekeeping
☐ Overhead Work Areas	☐ Hot Work Areas	☐ Other: _____

Inspection Item	Yes	No	N/A	Observations/Comments
Proper PPE worn by workers	☐	☐	☐	
Equipment inspected & in safe condition	☐	☐	☐	
Tools & materials properly stored	☐	☐	☐	
Housekeeping adequate (no slip/trip hazards)	☐	☐	☐	
Fall protection systems in place & inspected	☐	☐	☐	
Scaffold/Ladders secure & correctly erected	☐	☐	☐	
Hot work permits posted & precautions in place	☐	☐	☐	
Excavations secured & protective systems in place	☐	☐	☐	
Clear access and egress paths maintained	☐	☐	☐	
Electrical cords & tools in safe condition	☐	☐	☐	
Fire extinguishers accessible and inspected	☐	☐	☐	
High-risk task checklists completed (if applicable)	☐	☐	☐	

Immediate Hazards / Nonconformances Identified:

Description of Hazard	Immediate Action Taken	Additional Corrective Action Required	Responsible Person	Due Date

Follow-Up Actions			
Action Required	**Assigned To**	**Date Completed**	**Inspector Verification**

Additional Comments/Recommendations

Inspector Signature: _____	Date:_____
Supervisor Signature: _____	Date: _____

Near-Miss Report Form

Project Number	Project Name	Location of Near-Miss:	Date & Time of Near-Miss:
[ProjectNumber]	[ProjectName]		

Near Miss Details

Person(s) Involved or Witness(es): _____

Describe the Near-Miss Event: (Include details on what happened, work being performed, conditions, etc.)

_____

_____

_____

Potential Outcome if Event Had Escalated: (Injury, property damage, environmental impact, etc.)

_____

_____

Immediate Action Taken: _____

_____

Recommended Corrective Action(s): _____

_____

Reported By: _____ **Job Title:** _____

Supervisor's Review and Comments: _____

_____

Supervisor's Signature: _____ **Date:** _____

Safety Manager's Review and Comments: _____

_____

Safety Manager's Signature: _____ **Date:** _____