# 9. [ZERO ACCIDENT TECHNIQUES: IMPLEMENTATION ELEMENTS (SD-86)](https://www.construction-institute.org/zero-accident-techniques)

**Report Summary:** This study investigated ways that owners and contractors can achieve zero accidents for construction projects. The study identified techniques that are successful in achieving zero accidents to convince management of the value of an effective safety program. The overall conclusion confirms that zero lost workday injuries are achievable on large projects. The study’s key conclusions are as follows.

* Zero injury can be achieved under a variety of project conditions and situations.
* Joint owner and contractor management commitment to zero accidents is a key requisite.
* An effective safety program that produces good results must contain a broad base of essential techniques.
* Attaining zero injuries is significantly more likely on projects that apply the five High-Impact Zero Injury Techniques:
  1. Pre-project/pre-task planning for safety
  2. Safety orientation and training
  3. A written safety incentive program
  4. An alcohol and substance abuse program
  5. Accident/incident investigations
* Success in eliminating accidents is not guaranteed by the use of the five High-Impact Zero Injury Techniques alone.
* Time spent data suggest that quality effort is a vital ingredient in reaching zero injuries.

**Key Takeaways:**

## (1) Conduct pre-project/pre-task planning to ensure workplace safety.

## (Project Phase: Detailed Design and Procurement through Operate Facility)

* Define and communicate clear safety goals to all project stakeholders.
* Assign dedicated safety personnel for oversight and compliance.
* Conduct comprehensive hazard analysis to identify potential risks.
* Review and integrate subcontractor safety plans and requirements.
* Ensure that all the necessary safety equipment and training are in place before work begins.

## (2) Implement safety orientation and training.

## (Project Phase: Detailed Design and Procurement through Operate Facility)

* Conduct a comprehensive worksite safety orientation session.
* Involve owner in the safety orientation.
* Provide detailed safety policies and procedures.
* Explain all project-specific information and regulations.
* Schedule and conduct additional periodic formal safety training sessions.

## (3) Provide a written safety incentive program.

## (Project Phase: Construction through Operate Facility)

* Define and document cents per hour incentives for workers.
* Implement spot cash incentives for immediate recognition.
* Award milestone cash incentives for achieving specific safety goals.
* Provide end-of-project incentives to all eligible workers.

## (4) Promote an alcohol and substance abuse program (ASAP).

## (Project Phase: Construction through Operate Facility)

* Conduct pre-hire screening for alcohol and drug use.
* Implement random alcohol and drug screening.
* Conduct post-accident screening for all employees.
* Perform regular inspections for contraband.
* Require all project contractors to have an ASAP​.

## (5) Deploy accident/incident investigations.

## (Project Phase: Construction through Operate Facility)

* Promptly investigate all recordable incidents, first aid cases, and near misses.
* Report all incidents to the home office.
* Investigate accidents without injuries.
* Establish a project accident review team for all incidents.
* Report project work exposure hours and safety statistics to the home office.

## [(6) Tool: Zero Injury Techniques.](https://www.construction-institute.org/guide-to-precursor-analysis-for-construction-fatalities)

## (Project Phase: Detailed Design and Procurement through Operate Facility)

* Identify five high-impact techniques (golden nuggets bullets above) that are essential for achieving zero-injury performance in construction projects.
* Emphasize safety excellence through pre-project planning, orientation, incentives, substance control, and incident investigation.
* Highlight zero-injury feasibility across various project sizes and labor types.
* Emphasize that quality of effort is more important than time spent in implementing safety measures.
* Adopt a ‘zero injury’ philosophy, with senior management setting clear expectations and responsibilities.

## [(7) Tool: Zero Injury Economics.](https://www.construction-institute.org/zero-injury-techniques)

## (Project Phase: Detailed Design and Procurement through Operate Facility)

* Conduct a comprehensive assessment of current safety protocols and workplace hazards.
* Implement robust training programs to ensure that all workers are equipped with the necessary safety knowledge and skills.
* Establish clear communication channels for promptly reporting hazards and near misses.
* Enforce strict adherence to safety regulations and best practices through consistent monitoring and enforcement measures.
* Continuously evaluate and improve safety procedures based on feedback and data analysis.
* Foster a culture of safety and accountability among all employees, emphasizing the importance of injury prevention at all levels of the organization.

## [(8) Tool: Construction Safety Self-Assessment Process.](https://www.construction-institute.org/construction-safety-self-assessment-process)

## (Project Phase: Detailed Design and Procurement through Construction)

* Conduct initial assessment: Evaluate existing safety measures against identified techniques.
* Identify weaknesses: Determine areas that lack significant safety techniques.
* Develop an improvement plan: Outline specific actions to enhance safety performance.
* Implement changes: Integrate new safety measures into project practices.
* Monitor progress: Regularly review safety performance and adjust strategies as needed.