



Technical Note

If contractors are required to shut down a construction project, there are several basic steps that should be taken to minimize risks of loss to the Contractor, the Owner, and the partially completed project. Risks associated with suspension of work can be classified into two categories, (1) liability and property risks, and (2) project execution risks. Liability risks associated with a vacant project site include “attractive nuisance” exposures and Environmental exposures such as groundwater contamination, erosion, and storm water management. Property exposures include vandalism, theft, arson as well as weather-related damage. Project Execution Risks are exposures related to re-opening the site and re-starting the work.

The following checklist contains suggested actions that can be taken to minimize the exposures to property and liability losses during the shutdown. Preventing damage to the project will save time and money when work resumes.

Recommendations for Safely Shutting Down a Construction Project

Action	Date Completed
Review site security, inspect project fencing (hoarding) and gates, repair any openings and verify the integrity of perimeter security measures.	
Arrange for on-site security guards or periodic security patrols.	
Notify the local Police Department that the project will be inactive.	
Notify the local Fire Department that the project will be inactive and advise them of the status of the Fire Sprinkler system and if there are any combustible materials that will remain stored at the site.	
Inspect the SWPPP (Storm Water Pollution Prevention Plan) protection measures, correct all deficiencies and document the conditions. Arrange for periodic inspection and maintenance during the cessation in accordance with local ordinances and building codes to avoid civil penalties.	
<p>If the project has an open excavation with a Support of Excavation (SOE) system installed, the SOE and site conditions surrounding the excavation should be carefully inspected:</p> <ul style="list-style-type: none">• Ensure site grading deflects water away from the excavation and top of the shoring system. If grading can't be used to protect the edge of the excavation, install impervious ground cover (tarps, plastic sheeting, lean concrete, etc.) to prevent water from eroding the fill behind the shoring.• Arrange for periodic surveys (monitoring) of the shoring to check for movement to continue during the cessation of work.• Ensure that dewatering systems, sump pumps and discharge hoses/piping are clear and secured in place, so removal of accumulated water continues. Consult with local AHJs and the Owner to determine what must be done to maintain operation of the pumps. Consider power supply and mechanical breakdown when establishing periodic inspections and maintenance.	



Action	Date Completed
<p>If the project has dewatering systems or sump pumps to protect the site from inundation, consult with local AHJs (Authorities Having Jurisdiction) and the Owner to determine what must be done to maintain operation of the pumps. Consider power supply and mechanical breakdown when establishing periodic inspections and maintenance.</p>	
<p>Ensure that all retaining walls or partially completed retaining walls are stable (or are adequately braced) and have adequate drainage to prevent subsidence and/or collapse.</p>	
<p>If the building is partially complete and can be secured, temporarily enclose and secure all openings at ground-level to prevent unauthorized access to the building</p>	
<p>If the building enclosure is partially complete, coordinate with trade contractors to conduct a detailed survey of the cladding systems to verify they are securely attached to the structure and will be able to withstand storms (wind and rain). Cladding systems (curtainwall, aluminum windows (storefront), precast concrete, insulated metal panels) and assemblies may not provide 100% of their rated strength or wind-speed resistance if they are only partially completed. Determine if additional bracing should be installed to prevent damage to completed work.</p>	
<p>Identify any installed equipment or materials that could be damaged by exposure to weather or by intruders. Follow manufacturer guidelines for protection and storage. Relocate or remove these items if possible. Make sure materials and storage locations do not create or present fire risks.</p>	
<p>Exposure to weather and water damage will largely depend on the type of structure, status of construction, and progress towards enclosure. If the building envelope is still open to the weather, it will not be feasible to prevent water intrusion. However, actions can be taken to minimize the migration of water within the building:</p> <ul style="list-style-type: none"> • Install temporary flashing or curbs around shafts and openings on elevated floor decks exposed to rain to limit migration to lower floors. • Installing a temporary roof on the floor just above the progress of interior work is an effective control to shed water out of the building. This can be a simple single-ply membrane adhered to the floor and covers over shafts and openings. Make sure the membrane is pitched to the exterior so it drains to the outside. • If the structure is complete, or near completion, make sure the roof deck can drain. If the permanent roof drains are installed, make sure that strainers or wire mesh are installed to prevent debris from clogging the drains. If roof drain piping is not yet installed, consider fabricating temporary drain leaders from PVC pipe and route them to the exterior so they project out past the edge of the floor slab. 	
<p>Trade subcontractors should remove all their stored material, tools and equipment from the building. If the material has already been billed and title has transferred to the project, or if removal is not practical, consider bringing storage containers or trailers on-site to provide secure and protected storage. At a minimum, all flammable and explosive materials must be removed from the site and stored properly.</p>	
<p>High-value construction materials (copper pipe, electrical wiring, etc.) should be removed from the site or stored out of site in locked storage containers to reduce the exposure to theft.</p>	



Action	Date Completed
All loose material, trash, and debris should be removed from all floors of the building to prevent items from becoming airborne projectiles in high winds.	
Have all dumpsters emptied and removed from the site.	
Take down and secure all job-built ladders from between floors to prevent unauthorized access and injury claims.	
Ensure that all perimeter hand rails and/or cabling is secured and in good condition.	
Determine whether construction equipment (cranes, hoists, concrete pumps, earth moving equipment, compactors, portable generators, etc.) at the site will stay in place or be returned to the yard. Small, portable equipment and tools should be stored in a secured location (storage box or interior room). Empty gas tanks to prevent fire risk. Follow the manufacturer's guidelines for preparing and storing idle equipment.	
Consider whether building systems (HVAC, Domestic Water, Fire Sprinkler) should be drained.	
Consider whether temporary structures (scaffold, stair towers, debris netting, fall protection) should be taken down. Verify that any temporary structure to remain is adequately braced, tied off, and anchored to prevent collapse.	
Ensure that all free-standing walls have adequate bracing to withstand potential wind loads to prevent collapse (overturning).	
De-energize and lock-out temporary and/or permanent power supply. (Note that if the Fire Sprinkler system is already active and includes a fire pump, that power supply must be maintained. Coordinate with the Electrical Contractor to shut down power to the rest of the building.)	
Shut off and lock-out the main water supply valve. (Note that if the Fire Sprinkler system is already active, this water supply must be maintained. Coordinate with the Plumbing Contractor to shut off water to the rest of the building).	
Conduct a thorough inspection of the project and site to document existing conditions (video, photos and narrative) and ensure all shut down tasks are complete.	
The contractor and/or owner should establish a team to conduct periodic inspections of the site during the cessation of work to monitor conditions, maintain operating systems (sump pumps) and make minor repairs as needed to keep temporary enclosures and drains in good condition.	