## Preventing Struck-by and Caught-between Incidents Chart

Use this chart as a reference to help you identify common struck-by/caught-between hazards and ways to protect your workers against them and in some cases, eliminate the hazard altogether. Of course, this isn't an exhaustive list, so feel free to edit it based on your specific events and hazards. You can also use the information as a starting point in creating your own struck-by/caught-between safety checklists.

Event	Hazard	Solution
Struck-by vehicles/Caught-between vehicle and object	≚ Back-over	<ul><li>Back-up cameras</li><li>Back-up alarms</li><li>Back-over prevention</li><li>SOPs</li></ul>
	Runover and back- over during night work	<ul> <li>Hardhats with active illumination</li> <li>Hardhat mounted mirrors</li> <li>High-visibility clothing</li> <li>Portable lights</li> </ul>
	Passenger vehicles in work zones	<ul> <li>Concrete/water         filled barriers</li> <li>Mobile longitudinal         barriers</li> <li>Intrusion alarms</li> <li>Traffic signs and         warnings</li> <li>Gradual tapering of         lane closures</li> <li>Police enforcement</li> <li>Automated flagging         devices</li> </ul>

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Struck-by flying objects	➤ Projectiles from power tools  ➤ Pushing, pulling, prying objects loose  ➤ Debris from grinding, sanding, or striking materials	<ul> <li>Only trained workers use nail guns and other power tools</li> <li>Sequential triggers         <ul> <li>nail guns</li> <li>Tool inspection procedures/enforcement</li> <li>PPE!</li> </ul> </li> </ul>
Struck-by falling objects	✓ Objects falling from elevated work ✓ Materials being lifted and moved overhead ✓ Materials being moved via forklifts, trucks, etc. ✓ Stacked and stored materials	• Tethers for hand tools • Hardhats • Designated pedestrian walkways • Toe-boards, screen, nets, and guardrails on scaffolds • Enforce policies on working with and around suspended loads – i.e. maintain a safe distance, never stand or walk under suspended load • Train on proper transport and storage of materials • Put up signs and barricades to keep people OUT!

Struck-by swinging or slipping objects	<ul><li>✓ Swinging materials</li><li>✓ Slipping loads</li></ul>	<ul> <li>Enforce policies on working with and around suspended loads         <ul> <li>i.e. maintain a safe distance, never stand or walk under suspended load</li> <li>Train on safe load securement</li> </ul> </li> </ul>
Struck-by/Caught-between equipment	Heavy equipment or machinery in use — i.e. swinging crane booms, excavator buckets, dump-truck beds Rolling, moving vehicles or equipment — i.e. equipment not properly blocked, emergency brake not set, release of hydraulic energy on raised implements	<ul> <li>Keep machines safe distance away from excavation work</li> <li>Remove workers from excavation when machines are being used; when materials being brought into/out of excavation</li> <li>Require use of high-visibility clothing</li> <li>Enforce pre-use inspections</li> <li>Train operators and workers on foot of hazards and safe work practices</li> </ul>
Crushed-by/Caught-between materials	➤ Trench collapse ➤ Engulfment by grain, sand, other moveable materials	<ul> <li>Ensure shoring, shielding, of trench and excavation work</li> <li>Prohibit "walking the grain'</li> <li>Have tools available to dislodge grain or other material</li> </ul>