Job hazard analysis (JHA): Demolition

Task: Demolition	**Site or job:**
Crew:	**Date:**
Supervisor:	

No.	Job step	Hazard	Controls (most effective first)
1	Survey the structure and the hazards	Unplanned collapse of floors, walls or framing	**Engineering control:** Shore or brace walls and floors of a structure damaged by fire, flood or explosion before employees work inside. (29 CFR 1926.850(b)) **Administrative control:** Have a competent person complete an engineering survey of framing, floors and walls before demolition begins. (29 CFR 1926.850(a)) **Administrative control:** Write a demolition sequence from the survey and brief the crew on it.
2	Survey the structure and the hazards	Hazardous materials in the structure	**Eliminate:** Have asbestos, lead paint and other hazardous materials identified and removed by qualified crews before general demolition. **Administrative control:** Keep the survey results on site and stop work if an unknown material is found.
3	Isolate utilities	Contact with live electric, gas, water or steam lines	**Eliminate:** Shut off, cap or otherwise control electric, gas, water, steam, sewer and other service lines outside the building line before demolition starts. (29 CFR 1926.850(c)) **Engineering control:** Temporarily relocate and protect any utility that has to stay in service. (29 CFR 1926.850(d)) **Administrative control:** Verify isolation in writing with the utility, and lock out the sources.
4	Protect the site and the public	Debris and dust reach people at entrances and outside the footprint	**Engineering control:** Protect employee entrances to multi-story structures being demolished with sidewalk sheds or canopies or both. (29 CFR 1926.850(k)) **Engineering control:** Barricade the drop zone and the perimeter, and post signs. **Administrative control:** Use water to control dust and set a no-entry exclusion zone for non-essential workers.

No.	Job step	Hazard	Controls (most effective first)
5	Control floor openings and debris drops	Fall through a floor opening, or struck by dropped debris	**Engineering control:** Cover floor openings that are not material drops with material strong enough for any load and secure it. (29 CFR 1926.850(i)) **Engineering control:** Enclose the drop area with barricades when debris is dropped through floor holes without chutes. (29 CFR 1926.850(h)) **Engineering control:** Install a substantial gate at or near the discharge end of each chute, and assign a competent employee to control the gate and the truck loading. (29 CFR 1926.852(c)) **Administrative control:** Do not drop material outside the exterior walls unless the area is effectively protected. (29 CFR 1926.852(a))
6	Take the structure down	Machine strikes a worker or brings down more than planned	**Eliminate:** Keep all workers out of areas that can be affected when balling or clamming is being done. (29 CFR 1926.859(a)) **Engineering control:** Keep the crane boom and load line as short as possible. (29 CFR 1926.859(c)) **Engineering control:** Attach the demolition ball with a swivel connection and by positive means so it cannot disconnect. (29 CFR 1926.859(d)) **Administrative control:** Cut free all steel members affected before pulling over walls. (29 CFR 1926.859(e)) **Administrative control:** Remove roof cornices and ornamental stonework before pulling walls over. (29 CFR 1926.859(f))
7	Inspect as the work progresses	Weakened floors, walls or loosened material as demolition goes on	**Administrative control:** Have a competent person make continuing inspections as the work progresses for hazards from weakened floors or walls or loose material. (29 CFR 1926.859(g)) **Administrative control:** Keep everyone out of any area where the inspection finds such a hazard until it is corrected by shoring, bracing or other effective means. (29 CFR 1926.859(g)) **Administrative control:** Hold a short briefing at the start of each shift on what changed since the last one.
8	Clear debris and close out	Falling and tripping hazards in the clean-up	**Administrative control:** Keep walkways clear and remove debris in the order planned. **Administrative control:** Keep the discharge area of a chute closed off when operations are not in progress. (29 CFR 1926.852(d)) **PPE:** Wear a hard hat, eye protection, gloves, boots and a respirator when dust requires it.

Required PPE

- Hard hat
- Safety glasses or goggles
- Work gloves
- Steel-toe, puncture-resistant boots
- Hearing protection when machines run
- Respirator where dust or hazardous materials are present

OSHA sections

29 CFR 1926.850 Preparatory operations; 29 CFR 1926.852 Chutes; 29 CFR 1926.859 Mechanical demolition; 29 CFR 1926.21 Safety training and education

Reviewed with the crew. Names and signatures

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