

TRADES GUIDELINES – EXCAVATION AND TRENCHING

It must be pointed out that every company or sub-contractor on the residential site is classified as an “employer” under the WSH Act – and have the same legal duties and responsibilities. In a nutshell, employers must ensure the safety and health of their workers and ensure that their actions (or lack of action) do not cause anyone else harm.

By law, each employer must abide by the WSH Act, Regulations. Systems should be in place to:

- Share required information necessary to Identify; Communicate and Control hazards
- Ensure workers are supervised by a competent person (knowledge, training or experience)
- Ensure workers are competent to perform the tasks assigned (instruction and training)
- Ensure tools and equipment are maintained properly
- Ensure PPE is provided and worn.

Further, each Employer is responsible to ensure plans are in place and their workers are aware of the following minimum emergency procedures:

- Providing first aid to the injured
- Providing transportation to medical aid for the injured
- Conducting initial attack fire fighting; and
- Promptly contacting outside agencies for assistance.

You should ensure Site Orientations are conducted and information is posted on site to cover the above, along with any other site specific hazards and controls – PPE Requirements; Communication Device; Emergency Phone Numbers; Muster Point; First Aid Kit; MSDS Sheets; Safe Work Practices.

Before doing any digging, ensure all utilities have been notified and the accurate location of all underground facilities have been determined – including gas, oil, steam, water, sewer, communication and electrical.

*Manitoba Legislation requires all excavation or trenching activity to be conducted by a “Registered Excavator”. Notification to excavate must be done **48 hours prior** if:*

- Trench excavation exceeding 1.5 metres
- Any other excavation exceeding 1.5 metres

NOTE: 45 degree CUT BACK of SHORING is required if workers required to enter

Further, every ‘Registered Excavator’ must directly supervise all excavation work and appoint a trained excavation worker to supervise each excavation project

- Direct supervision of all excavation work requiring workers to enter the excavation
- Workers must be instructed in the safe work practices
- Workers must have another worker who is in direct communication and is keeping the trench/excavation under observation

MAIN HAZARDS: The main hazards associated with Excavation & Trenching include: Collapse of Ground; Slips and Trips; Falls; Struck by Objects or Equipment; Noise and Over-exertion.

EXCAVATION – SAFE WORK PRACTICES

- Workers must be wearing the proper Personal Protective Equipment (PPE) such as a hardhat, safety footwear, safety eyewear, hearing protection, and fall protection as required.
- Never use pointed tools to probe for underground gas and electrical services. Shovels are recommended.
- The spoil pile must be placed at least one meter away from the edge of the excavation.
- The excavation must have adequate entrance and exit points.
- Ladders must be installed in an excavation greater than 1.5 metres - secured and extend at least three rungs above ground level.
- The walls and faces of the excavation must be cut back to a 45-degree angle if they are over 1.5 meters in height or temporary shoring must be provided.
- All work materials should be a least two meters back from the edge of the excavation.
- Before approaching the excavation site workers should make eye contact with equipment operators.
- No vehicles should be within a distance equal to the depth of the excavation.
- Ensure a first aider and first aid supplies are available.
- Workers must receive WHMIS training and MSDS's (Material Safety Data Sheet) must be on site.

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TRENCHING – SAFE WORK PRACTICES

- Workers must be wearing the proper Personal Protective Equipment (PPE) such as a hardhat, safety footwear, safety eyewear, hearing protection and fall protection as required.
- Never use pointed tools to probe for underground gas and electrical services. Shovels are recommended.
- The spoil pile must be placed at least one meter away from the edge of the excavation.
- The trench must have adequate entrance and exit points every eight meters.
- Protective barricades should be installed to protect workers and the public.
- Ladders must be within 3 metres of workers – secured and extend at least three rungs above ground.
- If trench depth is over 1.0 meters in height below the sloped sides, a support structure or adequate shoring must be provided.
- Shoring is to be installed beginning from the top and working down to the bottom. Removed in reverse order – bottom to the top.
- Hydraulic Shores work well when repairing drainage or waterproofing systems around the house. Set up is fast and they protect the workers well.
- Work materials and equipment must be at least two meters back from the edge.
- No vehicles should be within a distance equal to the depth of the excavation or may endanger the stability of the walls.
- Ensure a first aider and first aid supplies are available.
- Workers must receive WHMIS training and MSDS's (Material Safety Data Sheet) must be on site.

GENERAL SAFETY INFORMATION

1. PPE (Personal Protective Equipment)

PPE may be used as a method to help reduce identified hazards – as a “last line of defence”. Every effort to eliminate or reduce the hazard should follow this order:

- At the Source (Elimination or Substitution)
- Along the Path to the Worker (Modifications to Work or Process)
- At the Worker (PPE)

The Workplace Safety and Health Regulation states that **Safety Headwear and Safety Footwear** must be made “immediately available” for all personnel on a construction site (including new construction; renovations and any alterations or modifications to a structure, building or street). They must be worn if a danger to an injury is present.

Safety Headwear and Safety Footwear are mandatory PPE that must be “immediately available” or worn by any person on a construction site

Required PPE to be worn or made “readily available” at residential construction sites include:

Head Protection: Where a danger of injury to a worker's head exists or may exist. E.g. where overhead work is being done or where material is being hoisted overhead.

Foot Protection: Where danger of injury to a worker's foot exists or may exist. E.g. where housekeeping is poor, material delivery, uneven terrain.

Fall Protection: If working at heights over 10 feet, or less, if a worker may fall onto a hazard, fall protection is required. Generally your options will be guardrails; travel restraint or fall arrest systems.

Other PPE that may be required include:

Eye Protection: Where danger of injury or irritation to a worker's eye exists. E.g. during use of power or pneumatic tools, drywall sanding.

Respiratory Protective Equipment: When working with or around airborne contaminants that may be an inhalation hazard or if the airborne contaminant exceeds applicable Occupational Exposure Limits, respiratory protection is required. E.g. dusts or chemicals; spray painting, sanding, etc.

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Hearing Protection: When noise levels exceed 80 dBA, a hearing conservation program must be implemented. Ear muffs or Ear plugs should be worn when working with or around loud tools or equipment. E.g. skill saws, air nailers, pneumatic tools.

Limb and Body Protection: Where danger of injury to a worker's hands, arms or legs, or trunk of the body exists suitable clothing and equipment must be worn – E.g. dust, material handling, kneeling, sun, etc.

2. Lifting

Caution and appropriate controls must be used during any lifting activity – to protect the load and the workers. Lifting on work sites is done either mechanically or manually.

Mechanical Lifting: Equipment or machinery must be of sufficient size to safely lift anticipated loads. Equipment or machinery must be properly maintained. Workers must be competent in the operation of the equipment, including certification if cranes or forklifts are used.

Manual Lifting: Proper lifting techniques should be employed (i.e. keep objects as close to the body as possible, keep your back straight, lift with legs, not back, turn your whole body to move or place – don't twist your back). Know your limits, and do not be afraid to ask for help. Eliminate potential tripping or slipping hazards before beginning to lift.

3. Access to the Work Area

Proper access to the work area must be available at all times – this may include grading or levelling of ground during excavation and trenching. Trees, rocks or similar objects near the edge must be removed to avoid falling into the excavation or trench. Ladders are required when entering an excavation deeper than 4 feet. Ladders must be secured from movement, extend a minimum three feet above ground level, and must be within 10 feet of a worker in trench.

Ladders: Ladders should be used for short-term work only. Never lean out while on a ladder – move the ladder. Ladders used to access work areas should be grade 1. They must be secured from movement (normally tied off) and extend a minimum three feet above work level. The ladder should be positioned to maintain a 4:1 slope. Always maintain three-points of contact when climbing or descending a ladder.

Ramps: Ramps should be constructed of at least two – 2 x 10 planks. They must be secured from movement and have a slope no greater than one vertical to three horizontal. Cross cleats must be provided at regular intervals to exceeding 1 ½ feet – and must be kept clear of snow, ice and mud accumulations.

Stairs: Temporary stairs should be constructed to support any likely loads. They must be secured from movement; be uniform in width, length and height; with a slope not exceeding 50 degrees from horizontal. Open sides must have a handrail equivalent in strength to the top rail of a guardrail.

4. Trucking Operations and Mobile Equipment

Trucking operations and mobile equipment are used to haul material or equipment to and from work sites. During homebuilding, the site can get very busy with backhoes, loaders, dump trucks, cement trucks and delivery vehicles. Protection of workers and/or the public is required in the working area. Traffic Control techniques should be implemented. Other general precautions should include:

- Minimize the need for equipment backing up. If required, ensure vehicles and equipment have back-up alarms and workers wear high visibility vests. Ensure standard signalling procedures are known and followed by everyone involved (including drivers of delivery vehicles and spotter).
- Be aware of the operators 'blind spots' – always maintain eye contact with the operator if you must approach equipment.
- Never stand under a suspended load or raised forks, buckets or blades.
- When receiving a load, use taglines to keep a safe distance between you and the load.

Truck drivers should be competent in the operation of the truck and or any other equipment associated with the truck (i.e. conveyors, hoists) as well as any techniques used to load and unload materials. All equipment must be capable of performing the task for which it is to be used and must be properly maintained.

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5. General

Housekeeping is a major cause of residential incidents – scrap shingles and asphalt pebbles are often a cause of slips, trips and falls. It's very important to keep your job site clean – clean up as you go. Use a bin or create dedicated scrap piles as soon as possible. From a safety standpoint, cables and cords should be kept clear of workspaces to prevent tripping hazards.

It's recommended for fire extinguishers to be readily available for trades working with open flames.

There must be adequate lighting when performing work at all times.

Prior to beginning work, a toolbox talk can be very beneficial. When safety discussions are held, the chances are higher that a safe job will result.



RESTRICTED AREA
Authorized Personnel Only
All persons must contact Site Supervisor before entering

Employer: _____
Contact: (204) _____
First Aid: (204) _____ OR **911**
First Aid Kit: ON SITE or in Service Vehicle 
First Aiders: ON SITE
Safety Rep: ON SITE or contact employer 

*ON SITE look for personnel / locations displaying these symbols

 Winnipeg: 204-775-3171 Brandon: 204-728-3456



MANDATORY PPE
All persons entering this site must wear:

Hard Hat 
Safety Footwear 
Eye Protection 
Hearing Protection 
Other: 

CONSTRUCTION SAFETY ASSOCIATION OF MANITOBA


Winnipeg: 204.775.3171 Brandon: 204.728.3456

To assist the general public in “awareness” of the potential and actual hazards – the first and simplest method is to Post a Sign and if the hazards warrant, you may need secure the site (i.e. fencing and warning tape) or the actual hazard (i.e. floor openings or access ramps / ladders).

ACKNOWLEDGEMENT

With respect to the objects and purposes of ensuring, so far as reasonably practicable, that all construction and maintenance work undertaken by contracted parties of the builder or renovator will be undertaken in a safe manner, the following declaration must be signed and submitted.

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CONTRACTOR COMPLIANCE DECLARATION

With respect to the objects and purposes of ensuring, so far as reasonably practicable, that all construction and maintenance work undertaken by contracted parties of the builder or renovator will be undertaken in a safe manner, the following declaration must be signed and submitted.

Submitted To: _____

Company Name: _____

Address: _____

CSAM Safety Program Information

COR Certification # _____ Safety Program Registration # _____

DECLARATION

I have read the information provided to me by the Builder or Renovator respecting Excavation and Trenching, which I am advised was taken from the Manitoba Residential Construction Safety Guide, prepared by the Construction Safety Association of Manitoba. Its information relates to my trade or occupation to help ensure a safer job site.

- As required by all employers in the province of Manitoba, I have obtained current copies of the Workplace Safety and Health Act (W210) and the Construction Industry Regulation.
- As required by all employers in the province of Manitoba, I will ensure workers are supervised by a competent supervisor, familiar with the WSH Act and Regulations.
- As required by all persons in the province of Manitoba, I will share required information with the prime contractor, and those affected, necessary to identify and control existing and potential hazards.
- To the best of my knowledge, I and my company employees meet the minimum safety training requirements as outlined in Manitoba's Workplace Safety and Health Legislation.

Print Name: _____

Signature: _____

Print Company: _____

Date: _____



Head Office: Winnipeg (204) 775 – 3171

Westman Office: Brandon (204) 728 – 3456

www.constructionsafety.ca

Head Office: Winnipeg (204) 925 – 2560

www.homebuilders.mb.ca

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