

CONCRETE AND MASONRY	Identifier: PRD-2013 Revision*: 5 Page: 1 of 6
-----------------------------	--

Subcontractors	Program Requirements Document	For Additional Info: http://EDMS	Effective Date: 03/12/20
----------------	-------------------------------	---	--------------------------

Manual: Subcontractor Requirements

Change Number: 365468

*The current revision can be verified on EDMS.

Alternate ID: SRM-ISIH-2.4

1. PURPOSE

This document provides requirements for performing concrete and masonry construction at the Idaho Cleanup Project (ICP) Core. This document implements requirements from codes and standards along with *contractor* (see def.) requirements. Any applicable regulatory or contractor requirements must be followed, with the most stringent requirement being met.

2. APPLICABILITY

This document applies to all subcontractors who perform concrete and masonry construction at the ICP, as specified in their contract with contractor. Stricter requirements may be imposed by subcontractors upon their employees or subtier contractors. The requirements of this document must be followed by subcontractors; however, the means of implementation may vary as determined by the subcontractor.

3. REQUIREMENTS

3.1 Formwork

- 3.1.1 Formwork shall be in accordance with 29 CFR 1926.701 and 29 CFR 1926.703.
- 3.1.2 Manufactured forms shall be assembled and used following the manufacturer's recommendations.
- 3.1.3 Lumber, concrete, form hardware, and other materials shall not be permitted to accumulate on whalers, scaffolds, walkways, and form decks.
- 3.1.4 Signs and barricades shall be in place to protect others at lower levels.
- 3.1.5 An architect or qualified person shall specify the strength of the partially cured concrete and/or reshoring necessary to carry proposed construction loads. This information may be contained in the project drawings or specifications.

3.2 Concrete Placement

- 3.2.1 Concrete placement shall be in accordance with 29 CFR 1926.702.

CONCRETE AND MASONRY	Identifier: PRD-2013 Revision*: 5 Page: 2 of 6
-----------------------------	--

- 3.2.2 Proper access shall be provided to walkways, scaffolding, and any point of concrete or masonry placement.
- 3.2.3 Concrete truck drivers and equipment operators shall be briefed about area/site specific hazards.
- 3.2.4 Concrete trucks and other mobile equipment shall EITHER
 - A. Be equipped with automatic audible backup alarms, OR
 - B. Have a spotter to control backing operations.

NOTE: *In congested or noisy areas, a spotter may be required to control vehicle operations regardless of whether the vehicle is equipped with an audible backup alarm.*

- 3.2.5 When discharging concrete on a slope, one of the following precautions shall be taken to keep the truck from moving, in accordance with 29 CFR 1926.601:
 - A. The driver shall remain in the cab and control the vehicle's movement, OR
 - B. The wheels shall be chocked and the brakes set to prevent movement.
- 3.2.6 Concrete shall not be discharged on any type of unstable ground or unstable incline.
- 3.2.7 If the point of placement is not readily visible to the discharge operator, then a qualified spotter using a uniform hand signal system shall be positioned in clear view of the operator and the point of placement.

NOTE: *If necessary, the qualified spotter may use a telephone or two-way radio communication.*

- 3.2.8 Concrete pumping operations shall use the following precautions:
 - 3.2.8.1 Pumping systems shall comply with the manufacturer's recommendations.
 - 3.2.8.2 Manufacturer's specifications shall be followed when air pressure and a clean-out plug are used to clean the transfer lines to prevent the clean-out plug from becoming airborne.
 - 3.2.8.3 Stable footing shall be provided for employees placing concrete through a pneumatic hose.

CONCRETE AND MASONRY	Identifier: PRD-2013 Revision*: 5 Page: 3 of 6
-----------------------------	--

3.3 Equipment and Handles

3.3.1 Equipment and handles shall be in accordance with 29 CFR 1926.702.

3.4 Precast Concrete

3.4.1 Precast concrete shall be in accordance with 29 CFR 1926.704.

3.4.2 Precast concrete shall be handled and erected under the supervision of a qualified person.

3.4.3 If precast concrete members must be stored, they shall be stored in such a fashion that:

- A. They are supported to prevent tipping
- B. The base is level and stable to prevent differential settlement
- C. Lifting attachments are undamaged and accessible.

3.4.4 Employees shall be trained in the proper methods of handling and erecting precast concrete products.

3.5 Bracing Precast Concrete

3.5.1 Bracing for precast concrete shall be in accordance with 29 CFR 1926.704.

3.5.2 Temporary supports or bracing shall be designed by, or their use shall be supervised by, a person qualified in accordance with ANSI A58.1-1982, *American National Standard Minimum Design Loads for Buildings and Other Structures*.

3.6 Safeguards for Pre-cast Concrete

3.6.1 Safeguards for precast concrete shall be in accordance with 29 CFR 1926.704.

3.6.2 Barricades, warning signals, signs, or other methods shall be provided as needed to safeguard traffic and people in the area of all handling and erection operations.

3.7 Lift-Slab Construction

3.7.1 Lift-slab construction shall be in accordance with 29 CFR 1926.705.

3.7.2 Only essential employees shall position or move lift-slab equipment permitted in the area of jacking operations.

CONCRETE AND MASONRY	Identifier: PRD-2013 Revision*: 5 Page: 4 of 6
-----------------------------	--

3.8 Patching, Finishing, and Curing

- 3.8.1 Safe access shall be provided while patching, finishing, or curing work is being done at elevations beyond the reach of workmen.

3.9 Winter Protection/Heating

- 3.9.1 Adequate fire protection shall be provided for heating equipment used for concrete curing.
- 3.9.2 Temporary winter protection enclosures shall have adequate light and ventilation for the safety of personnel in these areas.
- 3.9.3 Temporary heating equipment, including storage containers, valves, piping, and fittings, shall be installed, tested, and operated only with the concurrence of a qualified person.

3.10 Cutting and Sandblasting

- 3.10.1 All abrasive blasting will meet the requirements of 29 CFR 1910.94(a).
- 3.10.2 All cutting and sandblasting equipment shall be operated in compliance with manufacturer's specifications.
- 3.10.3 Cutting and sandblasting equipment shall be inspected at regular intervals and shall be maintained in safe operating condition per manufacturer's specifications.

3.11 Storing Cement

- 3.11.1 Bagged portland cement, masonry cement, and lime shall be stacked in piles or on pallets in a stable position and in accordance with 29 CFR 1926.250.
- 3.11.2 Pallets and empty bags shall be disposed of promptly to eliminate fire and tripping hazards.
- 3.11.3 Returnable pallets shall be stored in an orderly manner until ready for shipment.

3.12 Masonry Construction

- 3.12.1 Masonry construction shall be performed under the supervision of a qualified person.
- 3.12.2 Masonry materials placed on a scaffold shall not exceed the design capacity of the scaffold.

CONCRETE AND MASONRY	Identifier: PRD-2013 Revision*: 5 Page: 5 of 6
-----------------------------	--

- 3.12.3 Bricks and blocks shall be stored in a safe manner, on a firm and level surface and in accordance with 29 CFR 1926.250.
- 3.12.4 When removing bricks or blocks, stacks shall be kept level and proper step back shall be maintained.
- 3.12.5 Packages of bricks or blocks shall be lifted as follows:
 - 3.12.5.1 Banded packages of bricks or blocks shall not be lifted by crane or lift truck forks inserted in formed voids in the package unless the voids are spanned with a suitable support and the package is complete and the bands are tight.
 - 3.12.5.2 Packages that are lifted by forks placed in voids in blocks in the bottom layer shall be neatly cubed and shall contain no visible broken blocks.
 - 3.12.5.3 A pallet or other similar device shall be used as needed to lift or move packages of bricks or blocks.
- 3.12.6 Masonry saws shall be guarded with a semicircular enclosure over the blade and additional requirements of 29 CFR 1926.300 and 303.

3.13 Wall Erection/Limited Access Zone

- 3.13.1 Wall erection/limited access zones shall be in accordance with 29 CFR 1926.706.

3.14 Reinforcing Steel

- 3.14.1 All protruding reinforcing steel shall be in accordance with 29 CFR 1926.701 (b).
- 3.14.2 Reinforcing steel for walls, piers, columns, or similar vertical structures shall be guyed and supported to prevent collapse.
- 3.14.3 The following uses of reinforcing steel are prohibited:
 - A. Using reinforced steel to attach guy wires at anchor points
 - B. Using reinforced steel as hooks or stirrups for scaffolding, or any other makeshift structural function.

4. DEFINITIONS

See LST-27

CONCRETE AND MASONRY	Identifier: PRD-2013 Revision*: 5 Page: 6 of 6
-----------------------------	--

5. REFERENCES

5.1 Source Documents

29 CFR 1926, Subpart H, Materials Handling, Storage, Use and Disposal

29 CFR 1926, Subpart I, Tools-Hand and Power

29 CFR 1926, Subpart Q, “Concrete and Masonry Construction”

26 CFR 1910.94(a), “Abrasive Blasting”

ANSI A10.9-1983, “Safety Requirements for Concrete and Masonry Work”

ANSI A10.9a-1989, “Construction and Demolition Operations – Concrete and Masonry Work (supplement to ANSI A10.9-1983)”

ANSI A58.1-1982, “American National Standard Minimum Design Loads for Buildings and Other Structures”

5.2 Related Requirements

The following documents may also contain requirements that apply to this activity:

PRD-2001, “Personal Protective Equipment”

PRD-2002, “Fall Protection”

PRD-2004, “Scaffolding”

PRD-2007, “Hoisting and Rigging”

PRD-2015, “Hand and Power Tools”

PRD-2016, “Material Handling, Storage, and Disposal”

PRD-2020, “Heavy Industrial Equipment”

6. APPENDICES

None