

July 21, 2026

Policy, Regulation and Research Department
WorkSafeBC
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Vancouver, BC V6B 5L5

Sent via email: ohsregfeedback@worksafebc.com

RE: PROPOSED PART 20 SHOTCRETE AMENDMENTS — ALIGN THE RULES WITH THE FORMWORK FRAMEWORK WORKSAFEBC CITES

Dear Sir or Madam,

On behalf of the more than 6,000 construction and resource companies that make up the Independent Contractors and Businesses Association (ICBA), Canada's largest construction association, I am writing in response to WorkSafeBC's [proposed amendments to Part 20 of the Occupational Health and Safety Regulation](#) (the Regulation) governing shotcrete backing and the application of shotcrete.

ICBA members include the specialty contractors who perform the great majority of shotcrete work in this province – shoring and excavation stabilization, tunnel and underground work, retaining structures, foundations, swimming pools and architectural features. They are the firms that will live with these rules on the job site every day, and they care about getting their crews home safe at the end of every shift.

Let me begin where we agree, because the agreement is genuine and it is broad. Shotcrete is high-pressure, high-consequence work. The hazards – a pressurized delivery system, hose whip, the risk that freshly placed material sloughs, collapses or becomes unstable – are real, and they have hurt workers. The existing Regulation does not address them adequately. ICBA supports a purpose-built regime for shotcrete, and we support one that is built on recognized technical authority. The proposal draws appropriately on ACI 506.2 and ACI 506R, the American Shotcrete Association's safety guidelines, and CSA Standard S269.1-16, and it is modelled on the established concrete falsework and formwork rules in sections 20.16.1 to 20.26. That is the correct foundation.

We also want to acknowledge, plainly, that the draft gets a number of things right and that it is not uniformly heavier than the concrete rules it mirrors. Certifying worksite-specific plans against the Regulation's own enumerated list in section 20.54.7, rather than requiring full compliance with the CSA standard, is a sensible and accessible choice. Allowing a qualified person, rather than a professional engineer, to confirm it is safe to resume after shotcrete becomes unstable (section 20.54.20(6)) is more workable than the formwork equivalent, which requires an engineer to specify the repair (section 20.25(4)(b)). The exemption of dry-mix shotcrete and of permanent backing from the engineering provisions is reasonable and well-reasoned. We say this so there is no doubt about our posture: we are not opposed to this project. We want it to succeed, and we want it to be workable.

Our concerns are specific and, we believe, readily fixable. They turn on a single principle, one that WorkSafeBC has already set for itself. The explanatory note accompanying the draft states that, under this proposal, “the same engineering requirements will apply regardless of whether the employer has chosen to use cast-in-place concrete or shotcrete for a given site.” We agree with that principle without reservation. The difficulty is that, on the two requirements that carry the most cost and the most operational friction for contractors, the draft does not deliver it. In those places the shotcrete rules are materially stricter than the formwork rules they are said to mirror, and the draft offers no safety rationale for the difference. The recommendations that follow are aimed squarely at closing that gap.

1. The engineering trigger for non-vertical backing is stricter than for concrete, with no rationale for the difference.

The proposal defines “specified shotcrete backing” – the category that requires an engineer-certified worksite-specific plan and a professional-engineer inspection and certificate before shotcrete may be applied – as temporary backing that is either over 4 m (13 ft) in height or non-vertical at any height, meaning horizontal, slanted or curved regardless of how small it is. The vertical threshold of 4 m mirrors the concrete formwork rule, and we have no quarrel with it. The non-vertical trigger is the problem.

The existing formwork rules do not treat non-vertical work this way. Under [section 20.17\(1\)\(g\)](#), single-sided, battered or inclined forms require an engineer-certified plan only when they exceed 2 m (6.5 ft) in height; general formwork triggers engineering only over 4 m (section 20.17(1)(e)). In other words, the concrete rules already contemplate that inclined and non-vertical work carries elevated risk – and they answer it with a 2 m threshold, not a zero threshold. The shotcrete draft discards that calibrated judgment and replaces it with an absolute.

The practical consequences are not hypothetical. A sloped or curved temporary backing of half a metre, the kind of low-rise feature that arises constantly in pool work, small retaining structures and architectural detailing, would require a full professional-engineer worksite-specific plan, the entire fourteen-item information package in section 20.54.7, and an engineer on site to inspect and certify the backing before a single pass of shotcrete can be applied. The identical geometry executed in cast-in-place concrete, at any height up to 2 m, would require none of that. A contractor who chooses shotcrete for a modest curved feature is thereby penalized, in engineering cost and in schedule, for the method of placement alone.

That is not consistency with the formwork framework; it is a stricter standard imposed on one method of placing the same concrete. It is also, with respect, in direct tension with WorkSafeBC’s own stated objective of method-neutral engineering requirements. We recommend that the trigger for non-vertical specified shotcrete backing be set at over 2 m (6.5 ft), matching section 20.17(1)(g). That preserves the engineering regime exactly where the formwork rules already say it belongs (taller and inclined structures) while ensuring that genuinely low-rise, low-risk backing is not swept needlessly into it.

2. The draft provides no qualified-person path for reused backing; the formwork rule does.

The concrete formwork regime recognizes that requiring a fresh engineering inspection of an identical, unchanged assembly each time it is reused is wasteful and unnecessary. Section 20.26(4) allows ganged forms reused on the same worksite without modification to be re-inspected and documented by a qualified person, confirming erection in accordance with the up-to-date plans; only modified reuse, under section 20.26(3), triggers a renewed professional-engineer inspection. It is a sensible, risk-proportionate accommodation, and it has worked well since it was enacted in 2019.

The proposed shotcrete provisions contain no equivalent. Read plainly, section 20.54.9 requires a professional-engineer inspection and certificate before shotcrete is applied to specified backing every time, including for an identical, unmodified backing configuration used repeatedly on the same site over the course of a project. The result is a crew standing idle, on the clock, waiting on an engineer to re-certify work that an engineer has already designed and already certified once. This is not reform of the inspection requirement; it is duplication of it. We recommend that the substance of section 20.26(4) be imported into section 20.54.9, permitting a qualified person to re-inspect and document unmodified specified backing reused on the same worksite, with a renewed engineering inspection reserved, exactly as in concrete, for backing that has been modified.

3. The competency standard for shotcreters must be knowable before the rule takes effect.

Section 20.54.18 requires the employer to ensure that a shotcreter is “qualified and able” to apply shotcrete competently and safely. We support the objective. But the thirteen-point list of competencies that gives that phrase any operational meaning resides in an OHS Guideline that WorkSafeBC, by its own explanatory note, is still developing and has not published. That sequencing is backwards. An employer cannot reasonably be held to a standard it has not been permitted to read, and a Prevention Officer cannot apply such a standard consistently from one site to the next. The predictable outcome is inconsistent enforcement and disputes that help no one, least of all the worker the section is meant to protect.

We recommend that the Guideline accompanying section 20.54.18 be finalized and published before, or concurrent with, the Regulation coming into force, and that it be developed in genuine consultation with the contractors who employ shotcreters. We further recommend that the standard remain what it says it is – a demonstrable competency standard rooted in education, training and experience, as “qualified” is defined in section 1.1 – and that it not be permitted to harden, in practice or by later amendment, into a mandatory third-party paid certification or ticket. The objective is a competent nozzleperson, not a new credentialing market.

The same concern applies, in lesser degree, to the written safe-work procedures required by section 20.54.11. The obligation to author procedures addressing all twelve enumerated subjects, to develop them in consultation with the joint committee or worker representative, to keep them available on site and to train every worker to them is substantial – particularly for the smaller specialty firms that perform much of this work. A WorkSafeBC model template, which an employer could review and adapt to the specific worksite as subsection (4)(a) already contemplates, would

secure the safety benefit without imposing a from-scratch drafting burden on every contractor in the province. We urge WorkSafeBC to commit to publishing one.

4. Equipment requirements need a defined transition period.

Several provisions in section 20.54.13 will require some operators to retire or retrofit existing equipment. The prohibition on couplings with grooved ends, including Victaulic-type couplers (subsection (5)), is consistent with the existing concrete-pumping rule in section 20.43(1) and with ASA guidance, and we do not dispute its safety basis. But for an operator whose current delivery lines rely on such couplers, compliance means real capital expenditure on new couplings, clamps and fittings. The same is true of the requirements to whip-check or otherwise restrain hoses (subsection (8)), to pin or secure clamps (subsection (7)), and to guard elbows, reducers and other components against discharge on failure (subsection (9)).

We support all of these requirements on their merits. We ask only that the amendments include a clearly defined transition period, of sufficient length to allow operators to source, procure and install compliant equipment in the ordinary course, before the delivery-system provisions take legal effect. A reasonable phase-in costs nothing in safety and prevents the disorderly, and in some cases unachievable, scramble that a hard start date would create across the sector.

5. The overhead-application rule and the pre-shoot inspector role need clarification.

Section 20.54.21(2) establishes that the overhead application of shotcrete must not require a worker to be in the hazard area created by that application, and permits a shotcreter and an assistant to enter only where that is “not practicable” and only under the written instructions of a qualified person (subsections (3) and (4)). For tunnel and overhead work, this is a significant operational constraint, and everything turns on the meaning of “not practicable” – a term the draft leaves undefined. Without a clear standard, the same overhead operation will be judged compliant on one site and non-compliant on the next, depending on the officer. We recommend that the accompanying Guideline define “not practicable” for the purpose of subsection (2), with worked examples drawn from real underground and overhead shotcrete work.

Relatedly, the explanatory note to section 20.54.17 observes that the pre-shoot inspection of backing and embedded material “in many cases may be” performed by the shotcreter, “given their expertise.” We agree, and on most sites that is the sensible and efficient arrangement. We ask that this be confirmed in the Guideline so that employers are not left to guess whether the Regulation requires a separate inspector to be staffed alongside the shotcreter for what is, in practice, the same person’s work.

6. The daily inspection and documentation requirements should be confirmed as workable and non-duplicative.

The draft layers two separate per-shift obligations onto every shotcrete operation: a pre-use inspection and testing of the pump, delivery system, compressed-air system and other equipment under section 20.54.16, and a separate pre-shoot inspection of the backing and embedded material under section 20.54.17. Each must be conducted by a qualified person, each must be

documented, and the records of each must be kept available at the worksite. We do not object to the substance (these are the right things to check) but we ask WorkSafeBC to confirm two practical points so the paperwork does not outgrow the safety purpose. First, that a single qualified person may perform and record both inspections where competent to do so, rather than the provisions being read to require separate personnel. Second, that the explanatory note's sensible observation, that different individuals "may" complete separate aspects of the equipment inspection, such as the pump operator inspecting the pump and a foreman inspecting the delivery system, is permissive and not a mandate to divide the work. Clear confirmation in the Guideline will prevent over-cautious over-staffing driven by uncertainty rather than by hazard.

7. Two definitional points would prevent avoidable disputes.

First, the boundary between wet-mix and dry-mix shotcrete carries enormous regulatory weight – nearly the entire new regime in sections 20.54.1 to 20.54.22 applies to wet-mix and exempts dry-mix – yet it rests on where water enters the process. The explanatory note states the requirements apply to gunite where water is added at the pump but not where it is added at the nozzle. That distinction is workable, but because so much follows from it, we recommend it be made explicit on the face of the Regulation or in a definition, rather than left to an explanatory note that does not form part of the enacted text.

Second, the definition of "specified shotcrete backing" in section 20.1, as it appears in the strikethrough draft, is difficult to parse and does not read cleanly as a single sentence. Given that this definition is the trigger for the most demanding obligations in the entire Part, it must be unambiguous. We recommend it be redrafted in plain, sequential language – stating clearly that specified shotcrete backing means temporary shotcrete backing that is either (a) over the applicable height threshold, or (b) non-vertical – so that a contractor reading the Regulation in the field can determine, without an interpretive gloss, whether a given backing requires an engineer.

8. Proportionality and the impact on small specialty contractors.

The cumulative effect of these provisions – engineered plans and engineer inspections, written safe-work procedures, per-shift documentation, equipment upgrades and a new competency standard – will fall hardest on the small and medium-sized specialty firms that perform the bulk of shotcrete work in British Columbia. These are not large general contractors with in-house engineering departments and full-time safety staff; many are owner-operated crews. We are not asking WorkSafeBC to weigh cost against worker safety. Safety comes first, and our members run their businesses that way. We are asking that the requirements be calibrated so that they impose no more administrative and capital burden than the hazard actually warrants, and that the burden track the formwork precedent WorkSafeBC has chosen as its model. Where the draft departs from that precedent in the more onerous direction, the non-vertical trigger and the absence of a reuse path chief among them, the departure should be justified by a hazard the formwork rules do not face, or it should be corrected. We have not been able to identify such a hazard, and we do not believe one exists.

ICBA Recommendations

- **Match the engineering trigger to the formwork rule.** Set the threshold for non-vertical specified shotcrete backing at over 2 m (6.5 ft), consistent with section 20.17(1)(g), rather than at any height.
- **Add a qualified-person reuse provision.** Import the substance of section 20.26(4) into section 20.54.9, allowing a qualified person to re-inspect and document unmodified specified backing reused on the same worksite, with a renewed engineering inspection reserved for modified reuse.
- **Publish the competency guidance before the rule takes effect.** Finalize and publish the shotcreter competency Guideline under section 20.54.18 before, or concurrent with, the Regulation coming into force, and keep it a competency standard rather than a mandatory paid certification.
- **Provide a model safe-work-procedure template.** Publish a WorkSafeBC template for the procedures required by section 20.54.11 that contractors can adapt to their worksite.
- **Define a transition period for equipment.** Phase in the delivery-system requirements of section 20.54.13 so operators can source and install compliant couplings, clamps, restraints and guards before the provisions take effect.
- **Clarify the open terms.** Define “not practicable” for overhead application under section 20.54.21(2), and confirm in guidance that the shotcreter may perform the pre-shoot inspection under section 20.54.17 and that a single qualified person may conduct both per-shift inspections.
- **Tighten the definitions.** Make the wet-mix / dry-mix boundary explicit in the enacted text, and redraft the definition of “specified shotcrete backing” in section 20.1 in plain, sequential language.

Our members build the tunnels, shoring and excavation stabilization, retaining structures, foundations, pools and architectural works that keep British Columbia’s construction sector moving and keep its communities safe. They do that work with crews whose wellbeing is their first responsibility, and they share WorkSafeBC’s goal of seeing every one of those workers home safe at the end of the day. We support this project. We are asking only that the final rule honour the principle WorkSafeBC has already set for itself – the same requirements, regardless of method – and that it be workable on the sites where it will actually be applied.

We would welcome the opportunity to provide further detail, to share our members’ field experience, or to meet with your team as these amendments are finalized. ICBA is ready to work constructively with WorkSafeBC to get this right.

Sincerely,

INDEPENDENT CONTRACTORS AND BUSINESSES ASSOCIATION



Chris Gardner
President and CEO