

Project Implementation Plan Guide

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A Project Implementation Plan is intended to assist permit applicants, constructors and owners in understanding and fulfilling their roles and responsibilities associated with a construction project. To promote awareness of obligations and accountability for outcomes, project planning before work begins is prompted through required submission of a letter of commitment to developing a Project Implementation Plan (PIP) as a part of the permit process. A template letter of commitment is located at the end of this Guide.

The PIP is a plan, created by the permit holder or delegated competent person, containing construction procedures designed to protect the workers on a project, adjoining and adjacent private property, public property, and the general public. The PIP is intended to document the actions to support compliance with relevant Safety Codes Act, Occupational Health and Safety Act, and municipal bylaw requirements for a safe and stable excavation, a safe demolition site and/or a safe construction site, as the case may be, including a process to follow if conditions arise in the course of the project that are not directly addressed in the plan. The PIP is to be available for reference by a safety codes officer or bylaw compliance officer at any inspection or site check at any reasonable time.

This Guide is intended to provide information and may not address circumstances specific to a particular project. Users are responsible for assessing and interpreting whether the information is appropriate in context of each site's unique conditions. City of Edmonton, and its agents, employees and contractors do not make any warranties or guarantees as to the completeness or accuracy of the contained information, and accepts no liability whatsoever for any defect, deficiency, error, or omission in any statement or information contained in, or in any way related to, the use of the information contained in this Guide which is not intended to provide legal or other professional advice. If legal or other professional expertise is required with respect to a specific issue or circumstance, seek services of a competent professional. Any questions, errors or omissions may be brought to our attention by email to:

BuildingSafetyCodes@edmonton.ca RE: Project Implementation Plan Guide feedback.

Who is the Project Implementation Plan and companion Guide for?

This Guide supports the plan that is to be created, applied and maintained through the life of a demolition, excavation or construction project where it may directly impact adjacent and adjoining private and public property. The Guide is not an exhaustive prescriptive list as each site is unique, however does list factors that are generally seen to contribute to a successful project. The PIP may be adjusted or updated as appropriate as the project progresses.

- PIP for the project property owner and permit holder

The project owner and the constructor are together responsible for the safety of the public during construction and ensuring work undertaken does not damage or create a hazard to adjacent properties. The owner is responsible for the repair of any damage to public property or public works, improvements and amenities that may occur as a result of undertaking work regulated by the Code. The building permit holder is responsible for ensuring conditions of issuance of the permit are met. A building permit neither provides nor implies authorisation for entry onto, over or under any adjacent private land, nor unfettered use of public land in support of the project.

- PIP for the project constructor, subcontractors, and service people coming onto the project site National Building Code (Alberta Edition) (NBC(AE)) does not prescribe specific means and methods of demolition, excavation or construction work. However, excavation assessment and support, and building demolition considerations and techniques for worker protection <u>are</u> established in the Occupational Health and Safety (OHS) Code. Appropriate application of the OHS rules results in a safe site that contributes fundamentally to achievement of the NBC(AE) goals related to public safety and protection of property during the realization of a project.

For clarity, 'means' relates to the equipment deployed and 'methods' are the ways or procedures used to accomplish a task. Constructors bear responsibility for how they construct a project, as they should be most experienced in deciding what will work to successfully complete tasks, and are in the best position to determine what temporary measures or facilities are needed to achieve that success while complying with applicable regulations, codes and standards. Safety code officers are not responsible for the means and methods of construction by the constructor or subcontractors and assume no type of responsibility for the construction work.

Nevertheless, a safety code officer may order the method of construction to stop and the equipment used in that method of construction to be removed if cranes or other equipment used in a particular method of construction interfere with public safety, create an unsafe condition, or interfere with, disrupt activities on, or impede access to adjacent properties or public facilities.

- PIP for neighbours adjacent and adjoining the project site

The PIP Guide provides neighbours of a project a view of the minimum expectations in respect of site safety and activities that are placed on a building permit holder, the affiliated project owner, constructor and others involved in the project.

Insightful owners and builders know that neighbours of a project deserve to know the scope and duration of construction that may affect them, and anticipated timing of various meaningful stages of work so that they may plan their activities and protect their property accordingly. A considerate permit applicant will advise adjacent properties likely to be affected by work on the project, to a greater extent than provided on Development Permit site signage. The PIP may foster communication between a builder and affected parties.

- 1. For an emergency, call 911.
- 2. For a non-emergency situation, neighbours are encouraged to first turn to the site contact listed on the signage or provided by the builder during their outreach.
- 3. For unsafe worksite practices, contact OHS online or telephone 780-415-8690 with urgent concerns.
- 4. Concerns that are relatable to the project's operations should be reported to 311 by telephone, 311 online or through the mobile app.

A more focused level of communication with neighbours whose property adjoins the project site is a necessary consideration. For a project that cannot practically be realised entirely on the site such that use of adjoining property is required--even on a momentary or temporary basis--written agreement between the project owner and the affected property owner and building occupants will best be negotiated **before starting any work**. Such an agreement ought to contemplate circumstances where the project cannot be completed without crossing **onto**, **over or under** that adjacent property: excavation, walking on the property, hoisting over the property, as well as mitigation of damage and a dispute resolution mechanism.

It is reasonable to establish express permission of willing adjoining private property owners for certain uses of their property, just as the project owner/constructor/permit holder must obtain express permission for certain uses of public land through various permits/processes in addition to the development permit and a building permit for the project itself.

The permit office does not negotiate or mediate this private-to-private authorization, however the best projects are those where the project owner works to establish and maintain trust between the constructor, neighbours and themselves, and the affected parties reciprocate. Where no agreement can be reached, alternate methods of construction that will not touch the adjoining private property must be undertaken.

What is a Project Implementation Plan?

A PIP, based in part on factors discussed in this Guide and committed to through the PIP Letter of Commitment submitted with the building permit application, will

- contain notes and/or copies of relevant documents such as
 - o observations made in preparation for a project,
 - notifications provided and permissions received from adjoining property owners,
 - o safety and control measures taken during the project,
 - o supporting documentation of decisions taken in regard to demolition and excavation,
 - o the PIP Letter of Commitment itself that was filed with the building permit application;

- be a 'living' document, commenced before work begins and proactively updated as site-specific conditions dictate;
- **not** absolve an owner, constructor, subcontractors and suppliers from compliance with legislation relating to site activities; and
- not be submitted with the building permit application, however must be available on-site for review at any reasonable time by an inspector or enforcement officer for safety codes, bylaws, or occupational health and safety.

The PIP is the documented planning and preparation invested in facilitating implementation of the project, and the progressive observations and actions arising during the project execution, thus becoming a permit holder's best practice tool on subsequent jobs. Safety measures specifically concerning the workforce are found in the Alberta Occupational Health and Safety Act (OHS), its Regulations and Code.

When is a Project Implementation Plan required?

Any project that requires a construction fence to protect a part of a property from accidental / inadvertent intrusion will typically require a PIP, however minor interior alterations to a building and minor alterations and minor additions to a single detached house and accessory structures are typically exempted.

Adjacent property inquiries and complaints arise from both "infill" and "greenfield" projects, and a PIP is required for either setting. Compliance efforts prioritise:

- mitigation of risks to public safety and all property not part of the site; and
- communication between permit holder and adjacent and adjoining property owners, including the understanding of roles and responsibilities of the project.

Where is a Project Implementation Plan found?

The PIP is generated and maintained by the permit applicant or competent delegate, based on the specific site needs. It is to be created before any work on the site starts. There is no ready-to-go plan as each site has unique characteristics and limitations.

Completion and submission of the confirmation letter with the building permit application demonstrates applicant intention to comply with pertinent OHS Act, Safety Codes Act and municipal bylaw requirements. The PIP is to be available for reference on site at any reasonable time by a safety codes officer or Edmonton bylaw enforcement officer.

Why is a Project Implementation Plan and letter of commitment important?

A PIP letter of commitment submitted by an applicant for building permit has three useful functions.

- **1.** The letter **reminds the permit applicant** of roles and responsibilities in relation to a number of common factors arising on a construction site that may trigger actions involving a safety codes officer.
- 2. The letter **assures the permit office** the applicant is aware of the obligations under the Safety Codes Act being assumed in acquiring a building permit, and intention to exercise due diligence--the care the reasonable person exercises to avoid harm to other persons or their property--in planning and carrying out activities to realize the project, including but not limited to committing to:
 - document construction, demolition or excavation needs and characteristics specific to the project site;
 - anticipate, assess and address potential impacts of site construction work that may undesirably affect the general public, adjoining and neighbouring residents or businesses and any property;
 - take all necessary steps to mitigate potential conflict with adjoining property owners and occupants, or adjoining property permit holder if it is also a construction site;

- adequately communicate anticipated construction schedule to directly affected neighbours, and negotiate written authorization before entering or working under, on or over adjoining private or public property;
- carry out the project construction or have the construction carried out in accordance with requirements of the Safety Codes Act and its Regulations including NBC(AE);
- demonstrate compliance with conditions on safety code permits issued for the project; and
- demonstrate compliance with regulatory requirements of any and all applicable Acts, regulations, codes, standards and bylaws throughout the project;

while confirming understanding that compliance obligations ultimately rest with the property owner, permit holder as authorised agent representing the property owner, and the constructor.

3. The PIP **documents the planning** and preparation invested in the project, and the progressive observations and actions in outlining the roles and responsibilities for construction-stage management of projects with respect to public safety, health, accessibility and environment, to minimise risk (and nuisance) to the public. A PIP record can contribute to more efficient planning and execution of subsequent projects.

PLAN

1 SITE OBSERVATIONS

enabled by a reliably staked-out site

- **1.1** Location of existing improvements, trees, and **features on or near property lines** that may be impacted through identification of any:
 - fences, and if they will likely remain intact, or are salvageable/reusable if removed/relocated;
 - retaining walls/structures, ownership, function, condition;
 - gardens, beds, walks, facilities and structures crossing the property line; ownership, condition;
 - existing trees that may be impacted by project; ownership, condition.

Engaging a professional--typically a certified arborist--if not wholly located on the project property provides 3rd-party guidance of steps for best tree survival outcomes.

- **1.2** Decommissioning or protection of existing utilities and services:
 - Alberta First Call provides existing utility location marking service;
 - Epcor can usually provide sewer elevation to verify viable Finished Floor Elevation indicated on permit drawings can be achieved avoiding plan amendment delay.
- **1.3** Surface soil and drainage characteristics:
 - **1.3.1** consult subdivision soils reports on general conditions, particularly where it appears the lot was used to stockpile material or has engineered fill.
 - Engaging a professional (typically geotechnical) engineer will provide 3rd party determination of excavation stability parameters in addition to soils bearing capacity, sulphate content, etc.
 - 1.3.2 deal with debris left on site that must be removed before starting excavation;
 - **1.3.3** plan dirt management per OHS location and slope regulations, as spoil pile spilling/placement onto adjoining/adjacent property is only with express permission;
 - **1.3.4** determine precipitation drainage controls to prevent flow onto adjacent private property due to slope, soils wash onto public property and into drains.
- **1.4** Location of proposed work relative to property lines, surface, and structures:
 - 1.4.1 location of "Dig to Here" stakes reduces dead reckoning leading to error
 - confirm hub placements and ensure intact; identify garage/wing walls/step footings;
 - **1.4.2** confirmation of structures remaining after excavation--on property and on adjoining properties--informs a preliminary assessment of potential excavation support needs (8, below);
 - **1.4.3** assessment of probability that cuts require sloping is key, as excavating over property line is allowable only with express consent;

- **1.4.4** assessment of possibility that cuts require temporary support is key to planning appropriate solution(s) with foresight. *Seasonal precipitation protection of the excavation relative to projected open-time is a consideration a professional may assist with (1.3.1, above).*
- **1.5** Assessment of secure location of sanitary facilities for workers acceptable to OHS, as well as construction trailers/containers and any other temporary structures.

2 ADJOINING PRIVATE PROPERTY

Visual assessment of apparent conditions of adjoining properties to explore means of their protection from damage will raise your awareness of potential risk to the project property from nearby as well as serve to minimizing the risk of complaints and claims for damage due to construction activities.

Awareness of ways that an adjoining property could be damaged immediately or during the construction process leads to early prevention efforts that will demonstrate good intentions. Gather pre-construction pictures with intention to review with the neighbours to reduce or avoid dispute after the project is completed. Satisfied neighbours may provide positive feedback testimonials of goodwill that could serve well for future projects.

- **2.1** Identification of adjacent downspout and sump pump discharge locations, and existing surface drainage patterns that may be water sources that flow toward the project site are of concern, and potential adjustments or mitigations to address potential apparent patterns of water flowing onto the project property and into the proposed excavation may be a topic of the important adjoining-neighbour conversation (*4*, *below*) with request/offer for redirection of downspouts, etc versus planning for a barrier and drainage on the project property.
- **2.2** Identification of each building--houses, garages, sheds, porches, verandas, steps/landings/decks and their foundations--allows for focussed options assessment for excavation in conformance with OHS (8, below).
- **2.3** Identification of secondary structures such as fence, retaining structure, trellis, gazebo, hot tub, air conditioner and so on, and accounting for risk of damage to each is a the exercise of due diligence and can be a topic of the adjoining-neighbour conversation.
- **2.4** Observations of improvements and landscaping: e.g., lawns, gardens, flowers and plantings, bushes and shrubbery, rock, driveway, sidewalks, paths may lead to room for some property line area improvement by the end of the project that may benefit both parties, such as proposing a grade adjustment between houses that in some cases can facilitate proper drainage swale and eliminate the need for an 'infill' retaining wall to satisfy lot grading requirements.

3 ADJACENT PUBLIC PROPERTY

Photos and written observations of the apparent characteristics and condition of public property is an effective way of dealing with any questions arising about cracked sidewalks or chipped curbs and such. Public property includes the whole of the road right-of-way-public walks, roadway and boulevard--and public trees as well as alley, curbs, gutters, drains, hydrants, lamp- and utility poles, and similar infrastructure, all requiring protection from construction damage.

Ultimately, the project property owner is responsible for the repair of any damage to public property or works located thereon that may occur as a result of undertaking work regulated by the Code, and the owner must ensure that work undertaken does not damage or create a hazard to adjacent properties--public or private. Where damage to public property is caused by workers associated with the project, that damage must be repaired immediately. Service connection excavation repairs must be conducted in a timely manner.

While mud tracking onto the right-of-way is a bylaw matter, excess soil or mud that creates a risk of slip, trip and fall by a member of the public in the vicinity of the construction site may be deemed an unsafe condition. Maintaining infrastructure in as good or better condition than found, including snow and yard/boulevard maintenance equal or better than the rest of the block, demonstrates respect for the neighbourhood and its people and places.

PREPARE

4 NOTIFICATION

to adjoining property owners/occupants is recommended at least 7 days before work starts

The PIP guides the owner, permit holder and constructor together to do their best to protect and respect the neighbourhood's people, built environment and heritage. As a new--if only temporary--member of that neighbourhood, work to establish and maintain a relationship that can be beneficial to everyone. Keep nearby affected residents informed of plans and what they should expect from a project through a thoughtful informational approach, through signage, newsletters and special considerations for adjoining properties (5, below).

- **Posting** both the mandatory signage and some informative signage where the community most readily passes prior in advance of commencement of **any** work for which permits are required, including who you are and how to contact you or an informative company representative at any time of day.
- **Newsletters** are a simple way to inform adjacent building occupants, the community and the community league (or HOA) about what you intend to do, when--planned start date and realistic project timelines--and why. In addition to allowing affected parties to take necessary steps to assess the physical condition of their own property before the project begins, they can also take steps to shield themselves from some aspects of the construction they deem undesirable; this may mean shifting an outdoor sitting area of theirs to a more private location, installing curtains on windows previously uncovered, and so on.

Outline work steps in terms people not involved in construction can understand and appreciate about the work and coordination needed to succeed with a project, such as

asbestos survey and removal in and on an existing building

demolition and material salvage of an existing building

excavation for a new basement

disturbance for site servicing or service upgrades

placement of foundation, (floor deck) and restoration of roughly-level ground

construction of superstructure

mechanical and electrical trades work

exterior as well as interior trade and labour work to finish

Updates periodically dropped in mailboxes inform of project progress, as well as of any impending roadway/sidewalk disruption such as for sewer work or events such as concrete/pumping, modular assembly, and so on.

In the absence of clear lines of communication, anxiety of some neighbours will give rise to complaints which take up valuable time for a builder to resolve. Often, a complaint stems from an affected person not knowing enough about what is happening very near their home; some complaints may be incorrect or unfounded when discussed. Having information before the project begins will resolve a lot of potential conflict.

On the other hand, many complaints are well-founded from the affected person's perspective. The most common heard of include but are not limited to

- no real communications with the builder: no warning of work happening or what to expect, and no site contact who answers questions / responds to concerns or who will provide milestone information;
- theft of water and power by trespass, most often when the homeowner is not present;
- disrespectful behaviours: noise (unnecessary sound) of out-of-hours tools and equipment, music played overly loudly, and foul language heard from the site;
- strewn garbage and debris, falling material, and water or demolition dust crossing the property lines;
- improper worker vehicle parking, equipment operation, and materials lay-down;

These all point to a disregard for adjacent property and disrespect for the neighbours and community. Good neighbours can be made in working to stave off these very real irritants. And good neighbours help each other--for example, they could let you know if someone opens your site fencing or is acting suspiciously on the site.

5 PERMISSION

of adjoining property owners to enter onto and/or use their property for work

Permission from an adjoining property owner to enter onto and/or use their property for work if any access is intended or needed, even to fix or install something for their own benefit, must be obtained before going onto that property. Tenants occupying a house do not necessarily have authority to extend right to enter; seek out the property owner while keeping in mind that any work may not interfere with the safety of the owner or any occupant or tenant of the adjoining property.

Discuss directly what may possibly be damaged on or beyond the property line, what you intend to do about it if damage happens, and how the neighbour can trust you to carry through.

In a few cases, it has been reported that a neighbouring property owner has been unwilling to enter into any written agreement with the permit holder or property owner intending to conduct demolition and construction, even though the purpose is to facilitate a more settled relationship. Reasons may vary from not understanding what is being talked about, often briefly on the doorstep, to not trusting what is being said. Be prepared to leave written material and arrange a return visit at a convenient time. Establishing a level of trust, transparency and reliability as early as practical in the project may alleviate some concerns.

A limited and specific written permission to enter an adjoining property may include, for example and as applicable,

- assessment of the existing condition of the adjoining property improvements;
- cutting of any part of a tree or rearrangement of any structure or facility that straddles the property line or to avoid being damaged during the work (e.g., shed relocation, boundary fence removal for later replacement, etc);
- adjustment of their surface drainage patterns, including redirection of downspouts and sump pump discharge away from the joint property line, for erosion control;
- placement of the required construction fence, which must be located to maintain safe passage from any required means of egress on their property (e.g., primary and/or secondary suite door, sleeping-room egress window, etc.);
- transit between front and back of site (considerate, even where 'allowed' under an easement agreement for reduced/zero lot line properties);
- placement ladders or scaffolding during construction;
- use of water, power or yard for laydown/parking area, etc under specific arrangement which must be
 operated and maintained to at least the same minimum requirements the constructor as the
 property for which the building permit is issued; and

• any other specific arrangements agreed upon

Excavations that cannot be safely contained within the project property while following the excavation wall heights and cutback angles as established by the OHS Code *may possibly be conducted* with specific written consent of the adjoining property owner to entry onto their property to temporarily use space to work or to excavate/cut back per OHS / engineer requirements. Again, discuss what may possibly be damaged on or beyond the property line, what you intend to do about it if damage happens, and how the neighbour can trust you to carry through to their satisfaction.

Consent is recommended in the strongest terms to be **in writing** and to include an agreed-upon dispute resolution mechanism. Agencies such as Alberta Arbitration and Mediation Society or the <u>ADR Institute of Alberta</u>, among others, may be suitable. Claims of verbal consent to trespass may prove inadequate in a dispute; absence of written permission implies access denial.

6 PERMITS

Required permits must be **acquired before beginning activity** to which the permit pertains.

These typically include

- **6.1 Development Permit** Check the permit for all conditions.
- **6.2 Building Permit and related trades permits**, and copy of record plans/ specs upon which the permit was issued. Check the permits for Conditions of Issuance and general Advisements.

 A building permit includes excavation work and new structure construction. Equipment and material may be placed temporarily on the site while waiting for a Building Permit to be issued, but no further excavation or construction is permitted until a building permit has been obtained.

 Some projects require a temporary **Hoarding Building Permit**: a temporary installation intended to provide protection to the public in the vicinity of a construction, alteration or demolition project. Hoarding consists of any combination of fence, covered way, railing, boarding, barricade, guard, buffer, or other structure, material or equipment, including any temporary walkway. Hoardings often occupy portions of the road right-of-way for the safety of workers as well as the public and additionally may provide area for construction activities where site constraints exist. Hoardings have maintenance, directional signage, lighting and other conditions attached to permit.

 A few projects require a **Crane Permit** for placement of a stationary crane on or adjacent to the site.
- **6.3** <u>Public Tree Preservation Permit</u> where work includes demolition/construction access, hoarding, laydown, or work above or below ground within 5m of a public tree or 10m of a public natural stand of trees, per <u>Edmonton Bylaw 18825</u>.
- **6.4** OSCAM (On-Street Construction & Maintenance) Permits for temporary use or crossing of the road right-of-way for machinery and vehicle operation, intended to safeguard boulevard, sidewalk, curbs and other City assets. Consider applying for OSCAM Permit no later than the time the demolition and related permits are applied for. Consider your project worker parking in restricted and neighbourhood parking program zones, curb crossing, bin/equipment placement on right-of way, and hoarding and crane, as applicable, and for some service connections in the right-of-way.

PROCEED

7 CONSTRUCTION SAFETY CONTROLS AND MEASURES

for the safety of the public including persons occupying adjoining and adjacent property and persons reasonably expected to be on or about the premises, protection of adjacent property, and maintaining respectful neighbourhood relations during the course of the project.

The constructor is to ensure precautions are taken to safeguard the public and protect adjacent properties, and conduct work safely. The constructor is responsible jointly and severally with the owner for any construction or work undertaken.

The owner is ultimately responsible for work and damage arising from work undertaken on the project. The owner is responsible for the repair of any damage to public property or works located on public property that may occur as a result of undertaking work regulated by NBC(AE). Any sidewalk, boulevard, street, alley or other public property damaged in the course of the project must be restored to a safe condition without delay and to the satisfaction of City of Edmonton. Builders and neighbours are advised to take photos and notes of areas of concern before work starts and then again immediately it has ended to verify pre-existing conditions.

The building permit holder is responsible for ensuring conditions of issuance of the permit are met.

The general public is any person not engaged in work on the site.

7.1 Fencing and Access Control to be installed before any demolition, excavation or construction not within an existing structure starts. A minimum 1.8m high continuous construction site fence around the perimeter of the project site, including gate(s) which are to be locked closed when the site is not active and workers are not on site, is intended to prevent inadvertent access to the site. Fences can be removed to accommodate work activities, so long as workers on site are trained to be attentive and to restrict access to any member of the public who can reasonably be expected to be on or near a site.

Security fencing may also reduce risk of damage to adjacent properties by containing materials on the site. Fencing is to be contained <u>entirely</u> within the property boundary. Where fencing is to extend onto the public sidewalk, boulevard, roadway or alley, a hoarding building permit is required before placing the fencing (**6.2** and **6.4**, *above*).

The fence is to remain in place until the lockup stage is achieved, the site is backfilled and rough-graded with no open excavations on the site, and debris and garbage is removed. Lockup is considered to be when all openings into the structure within 3m of the ground have been appropriately secured.

- **7.2 Construction site Fire Safety Plan** established and maintained for the duration of the project, including provisions for <u>adjacent property fire-spread protection</u>, is the mandatory component of a more comprehensive fire/rescue/medical emergency protocol, which may include other elements such as site communications protocol, after-hours security measures, and a sudden-adverse-weather response strategy.
- **7.3 Hazard Identification and Control** through active monitoring of hazards (conditions, situations or materials that can cause harm) and the risk they pose (assessment of the chance someone will be impacted by one or more hazards) both on the site and surrounding area must be conducted on an ongoing basis. Examples of such include but are not limited to awareness of
- site management obligations:

- site address is displayed on the building, foundation or fence, clearly visible from the street
- site is safe to access, including a continuous, hard surface walkway of minimum 2 ft width and free of ice/snow is available from the sidewalk to the building; handrails/guardrails are installed on walking surfaces over 3 ft in height, stairs of 5 or more risers, and ramps; guardrails are installed around open pits, shafts and stairs; ladders are secured on a stable base to extend 1m above the level being accessed;
- missing, misplaced or fallen site fencing;
- water accumulation in an excavation or depressions on the site;
- winds requiring tarps, other hoardings and materials above ground to be secured;
- hoisting zone access controls, flaggers and signage to warn and redirect the public;
- eco-centre location for disposal of controlled substances;
- site-specific management details such as excavation restrictions for top-of-bank sites;
- good housekeeping measures for combustible waste materials on the site;
- concrete pumping operations, hoses/lines, on-site washout location;
- onsite fuelling points (aquifer protection is under purview of Alberta Environment);
- 'winter construction heat' energy supply requires gas or electrical inspection.

If equipment including cranes create an unsafe condition, interferes with public safety, or interferes with, disrupts activities on, or impedes access to adjacent properties or public facilities, that equipment must be removed.

7.4 Bylaws compliance, with the following being the most commonly applicable

- 7.4.1 Safety Codes Permit Bylaw 15894, applied in conjunction with Building Code.
- **7.4.2** Fire Rescue Services Bylaw 15309, applied in conjunction with Fire Code
- 7.4.3 Traffic Bylaw 5590 for parking, obstructions, mud tracking, snow on walks, etc.

Workers and delivery persons are allowed to park on public streets except in "no parking" zones including where in front of hydrants, private or public driveways, or where a permit parking program is in effect. Permission for use, occupation or obstruction of the highway--that is, the sidewalk, boulevard, road and alley--related to a project, including placement of fencing/hoarding on right-of-way, or mobile crane operation from public property, is arranged through an OnStreet Construction and Maintenance (OSCAM) permit. Hoardings and cranes then also require a building permit for their installation and use. Temporary relocation of a public walkway is a hoarding and as for all hoarding must be accessible for all persons including those using a wheelchair or mobility aid, incorporating proper surface treatment, ramp provisions and intelligible wayfinding signage. Post-project restoration as soon as the hoarding is no longer needed is required.

- **7.4.4** Drainage Bylaws 18093 for surface drainage, and 19627 for wastewater management Control and disposal of dewatering, surface drainage, sludge and construction material liquid byproducts are administered by the Drainage Branch.
- **7.4.5** Community Standards Bylaw 14600 pertains to a broad range of deeds, with many related to construction including but not limited to
 - general conditions: construction waste, debris and garbage; Site care would include clean up of wind-strewn materials and packaging from adjacent ground or trees
 - seasonal conditions: snow removal from sidewalks, grass and weed controls;
 - specific conditions originating from the project: dust control; excessive/needless noise in work or lighting sensible beyond the site; extended engine idling; mud tracking Regular, adequate road and walk sweeping, load covers, and wheel wash if necessary to control soil and rock carried off the site on vehicle tires.

8 DEMOLITION

includes total or partial deconstruction, and demolition of portions of a building left behind after move-off of a structure A demolition that is safe for workers per the OHS Code coincidentally contributes to the NBC(AE) goals of safety of the public and avoidance of damage to adjacent properties and infrastructure.

The owner must provide written assurance to the City that--where asbestos-containing materials are located in a building--that asbestos management and abatement work plans were submitted to Workplace Health and Safety for compliance with Occupational Health and Safety legislation and that typically the work has been complete before any demolition permit is issued.

The permit to demolish must be in place before beginning demolition, to reduce risks from a number of potential hazards: fire, explosion, certain materials/substances release, electrical shock or arc, flooding, or natural gas line rupture.

In addition to applicable obligations listed in 1 through 7 above, a demolition or deconstruction requires formulation of appropriate strategies to eliminate or limit any nuisance such as dust or debris from leaving the property, to limit vibration that may be harmful to adjoining and adjacent properties, and to maintain bank/soil stability upon removal of foundations below ground level.

Demolition permits are typically restricted to demolition scope of work; further work such as excavation for new development beyond that needed to remove a foundation is not allowed without permit issued.

- 8.0 NO DEMOLITION or DECONSTRUCTION or BUILDING REDUCTION is included in the project.
- **8.1 A site-specific engineered demolition plan will be included in the PIP** outlining appropriate strategies for building demolition, deconstruction or removal, including any applicable temporary excavation support plans and specifications for maintaining ground stability if removing foundation before ground levelling or proceeding with further excavation for new foundation construction. This applies to demolition projects of size or complexity, such as:
- **8.1.1** where its foundation to be disturbed or removed abuts, adjoins or is immediately adjacent to a building or structure.
- **8.1.2** where its foundation to be disturbed or removed is within the 'angle of repose' of the soils below any adjacent/adjoining building or structure foundation or base, including floor-on-ground or driveway. Different soils have different angles of repose which a competent engineer will assess and take into account in determining appropriate measures --whether under time of demolition or continuation of an excavation resulting from a basement removal.
- 8.1.3 other than Part 9 wood-frame construction over typical basement
- 8.1.4 any part 3-sized requires professional involvement for its alteration or demolition
- **8.1.5** on a parkade or over underground links/passageways,
- **8.1.6** with multiple basements or deep foundations
- 8.1.7 with tensioned steel cables/ bars in the structure
- 8.1.8 explosives, balling or other unconventional techniques are to be used

Certain activities that are part of the demolition and subsequent construction process that may be highly impactful to buildings and infrastructure in the vicinity include blasting, caisson drilling, work within the water table, large-scale soil compaction, and any other activity or method of construction that may cause sufficient vibration to have impact beyond the site.

An engineer will provide a preliminary evaluation of potential impact of the proposed project on adjoining and adjacent buildings and structures for inclusion in the PIP.

8.2 - Site-specific documentation will be included in the PIP, where **8.1** does not apply, outlining appropriate strategies, based on demolition and excavation requirements set out in OHS Code, for ensuring that the methods used in demolition are safe, including dust controls, vibration controls, and maintaining stability of the excavation resulting from basement removal until backfilled or stabilised for immediate new-foundation construction.

If uncertain or not competent to proceed with a demolition, obtain services of a competent party and place documented directives in the PIP.

9 EXCAVATION

An excavation that is safe for workers per the OHS Code contributes directly to the NBC(AE) goals of safety of the public, prevention of loss of supporting soils for adjoining property foundations, and avoidance of damage to adjacent properties and infrastructure. Evolution of municipal zoning regulation and housing styles is leading to demand for deeper basements, thus foundation excavations require increasing foresight and planning for successful completion while avoiding undesirable impacts on neighbouring residents and their property.

In addition to applicable obligations listed in 1 through 8 above, OHS Code mandatory requirements for cutting back excavations, temporary excavation support, or a combination of both must be considered in order to create a stable excavation. This applies to a fresh excavation as well as to one resulting from removal of a foundation (basement) following building demolition, and includes dewatering of water accumulation and dust control strategies.

Assessment of site-specific excavation needs, characteristics and constraints is necessary to mitigate potential risks. While NBC(AE) Part 9 does not prescribe how an excavation is to be supported, OHS regulations have requirements for cutting back excavations, temporary supports, or a combination of both that must be applied for protection of workers in an excavation or trench--being an excavation that is deeper than the width of the excavation at its bottom. These regulations are discussed in these provincial publications:

OHS Resource Portal. Excavations: Cutting back walls (alberta.ca)

OHS Resource Portal. Excavations: Temporary protective structures (alberta.ca)

OHS Resource Portal. Excavations: Locating buried facilities (alberta.ca)

OHS Resource Portal. Excavation/Trench Safety Checklist (alberta.ca)

Every excavation shall be undertaken in such a manner as to prevent movement that would place persons at risk or cause damage to adjacent property at all phases of construction. If the stability of a building may be endangered by excavating work, adequate underpinning, shoring and bracing must be provided to prevent damage to or movement of any part of that building, and to stave off the creation of a hazard to the public. A competent person must make this risk assessment.

The majority of excavation problems in Edmonton occur where excavation depth exceeds 1.5m (5') for basements constructed at the minimum side yard distance of 1.2m (4') to the property line in soils that have been previously disturbed. Proper application of the OHS regulations, including soil categorization, results in a stable excavation which contributes to achievement of the goals of ensuring safety of workers and, correspondingly, the public, as well as avoidance of loss of supporting medium for adjoining properties' foundations or damage to adjoining properties and infrastructure.

Backfilling should be completed as soon as practicable to avoid the risk of soil sloughing that typically increases the longer the excavation is open, which may cause injury to workers or the public. Any archaeological artefact encountered should be reported to Alberta Culture without delay.

- **9.0** NO EXCAVATION is included in the project.
- **9.1** A site-specific engineered excavation report will be included in the PIP demonstrating compliance with the OHS regulation and Code, outlining appropriate strategies for maintaining

excavation stability, including any temporary excavation support plans and specifications **if any of the following applies to the excavation:**

- **9.1.1** depth will be greater than 3m below ground level at any point, including any void resulting from existing foundation removal;
- 9.1.2 abuts or adjoins an adjacent building or structure;
- **9.1.3** is within the 'angle of repose' of the soils below any adjacent or adjoining building or structure foundation or base, and including any floor-on-ground or driveway, as determined by a competent person;
- **9.1.4** vehicular traffic, working machinery, heavy object or dirt pile is within a distance equal to the depth of the excavation as measured from the bottom of the near edge of the excavation; or
- **9.1.5** professional involvement is required per NBC(AE):Div C:2.4.2. as the lot contains engineered fill (soils levelled or built up), or is desired for enhanced project certainty and excavation safety.
- **9.2 Site-specific documentation will be included in the PIP** demonstrating compliance with the OHS regulation and Code, where 9.1 does not apply, outlining appropriate strategies for maintaining excavation stability--including effective measures to be taken in the event the excavation shows signs of failure--applying OHS Code soil category classifications and consisting of one or more of the following:
- **9.2.1** a registered engineer confirms that the **unsupported excavation** is stable and will remain free from cave-ins, sliding or rolling materials and other hazards associated with the workings for the purposes of the proposed work up to and including backfill time;
- 9.2.2 a registered engineer confirms that **no temporary support system is required with cutback** in the Category 1 and 2 soils above 1.5m in depth below grade at any point **or** for any Category 3 soil excavation that is fully cutback; or
- **9.2.3** a registered engineer or competent constructor/contractor confirms that an installed **temporary excavation support system** is adequate for excavation of Category 1 and 2 soils without cutback above 1.5m in depth below grade at any point **or** for any Category 3 soil excavation.

Where excavation cutback cannot be safely achieved within the properly-fenced site, and explicit written permission to extend fencing, excavation, etc. onto adjoining property is not provided by that adjoining-property owner, a temporary excavation support system or amended foundation plan that results in the excavation remaining within the site and not impacting the adjoining site is required.

10 LETTER OF COMMITMENT

Project Implementation Plan LETTER OF COMI	MITMENT for submission with Building Permit Application	
TO: City of Edmonton Safety Codes Perr	nits and Inspections	
RE: PROJECT ADDRESS (or LEGAL DESCRIPTION	ON or CITY FILE No.)	
READ AND CHECK EACH APPLICABLE SECTION, COMP	PLETE CONFIRMATION AND SUBMIT WITH PERMIT APPLICATION	
with applicable requirements to reduce the risk of and activating a site-specific Project Implementat	entation Plan Guide, and undertake to maintain compliance of harm to people and damage to adjacent property by preparing tion Plan (PIP). Observations, notifications, permissions and ded in the PIP may include, as applicable, but are not limited to:	
1 <u>SITE OBSERVATIONS</u> enabled by a reliably s	staked-out site	
2 ADJOINING PRIVATE PROPERTY existing ch		
3 ADJACENT PUBLIC PROPERTY existing char	acteristics and apparent conditions	
4 NOTIFICATION to adjoining property owner	/occupants at least 7 days before starting construction	
5 PERMISSION of adjoining property owners t	to enter onto and/or use their property for work	
6 PERMITS including permits required in additional formatter and additi	tion to Development Permit and Building Permit	
7 CONSTRUCTION SAFETY CONTROLS AND N	//EASURES for the safety of the public including persons	
	otection of adjacent property, and maintaining respectful	
neighbour relations		
8 DEMOLITION includes partial or total decor	nstruction See PIP Guide.	
■ 8.0 - NO DEMOLITION or deconstruction	ion or removal.	
<u>OR</u>		
8.1 - A site-specific engineered demo	olition plan will be included in the PIP,	
OR		
	ill be included in the PIP where 8.1 does not apply	
for demolition, deconstruction or remova 9 EXCAVATION See PIP Guide.	31.	
9.0 - NO EXCAVATION		
OR		
9.1 - A site-specific engineered excav	vation report will be included in the PIP	
OR	ration report will be included in the rin	
	II be included in the PIP where 9.1 does not apply	
explicit written permission to extend fe provided by that adjoining-property of	safely achieved within the properly-fenced site, and encing, excavation, etc. onto adjoining property is not owner, a temporary excavation support system or in the excavation remaining within the site and not	
CONFIRMATION		
I, (PRINT NAME)	, the undersigned, confirm by my signature	
below that		
lam aware of relevant responsibilities set out	t in the National Building Code-2019 Alberta Edition (NBC(AE	
·	n C: Subsections 2.2.10- 2.2.15., relevant Occupational Healt	
requirements of Division D. Fall o and DIVISIO	n c. Jubbections 2.2.10- 2.2.15., relevant Occupational Health	

I am aware of relevant responsibilities set out in the National Building Code-2019 Alberta Edition (NBC(AE)) requirements of Division B: Part 8 and Division C: Subsections 2.2.10- 2.2.15., relevant Occupational Health and Safety (OHS) Code obligations for the project, including but not limited to those listed in the companion **Project Implementation Plan Guide**, and intend to communicate to and comply jointly and severally with the project property owner, constructor and/or permit holder, as applicable to the project, in fulfilment of those obligations including but not limited to:

\Box	10.1 ensuring that work undertaken does not damage or create a hazard to adjacent properties, and
	assume responsibility for the repair of any damage to public property and/or works located thereon
	that may occur as a result of undertaking work regulated by the NBC(AE);
	10.2 the responsibility for any construction and/or work undertaken, and for ensuring compliance with
	site safety measures of Division B: Part 8 of NBC(AE) and relevant Fire Code provisions;
	10.3 the responsibility to fulfill the Conditions of Issuance of the building permit;
	10.4 conduct and/or oversee the conduct of appropriate, applicable hazard and risk assessments of
	site-specific demolition, excavation, and general construction needs, characteristics and constraints as
	outlined in this commitment to PIP preparation;
	10.5 conduct and/or oversee assessments before beginning work and on ongoing basis during work to
	mitigate potential risk to safety of the public and workers, loss of supporting medium for adjoining
	properties' foundations, and damage to adjacent properties and infrastructure; and
	10.6 notify the City of Edmonton of the date on which work will start but no less than 3 full business
	days in advance of work starting on the project, and any change in start date, by emailing particulars to
	SCCompliance@edmonton.ca

Further, I confirm that

- 1) I have reviewed applicable requirements on the pages above and relevant legislation;
- **2) I am aware** unauthorised intrusion onto or use of any property adjoining or adjacent the project, excavation failure or abandonment, or demolition and construction practices that pose a hazard to the public may result in enforcement measures authorised under the Safety Codes Act, including stop work, permit revocation, or order to backfill excavation;
- **3) I understand** that a (digital or paper) copy of the PIP--consisting at least of this letter and applicable documentation listed in this letter--must be **available on site** at any reasonable time for review/compliance audit by a safety codes officer or bylaw enforcement officer;
- **4) I acknowledge** that the City of Edmonton is not an active participant in the day-to-day operations of the constructor on the site, and involvement through permit issuance, site checks, audits, inspections and provision of this checklist is not misconstrued as exercising project managerial responsibility. Safety codes officers are not responsible for the means and methods of construction by the constructor or subcontractors and assume no type of responsibility for the work proposed or done which is required to be in accordance with the Safety Codes Act and its regulations including NBC(AE), and Bylaw 15894 and other relevant bylaws; and
- **5) I will comply** with the applicable requirements, and I further undertake to distribute a copy or otherwise communicate requirements to all parties involved in the project, including as applicable the property owner, permit holder, constructor and services, trades, sub-trades and labour forces for the project.

Type of application/permit House Demolition New House Home Improvement Permit Commercial Demolition Commercial Final Permit				
Project Address:	City Project No:			
Person signing this letter (indicate all that apply): Building Permit applicant Property owner Constructor				
Contact Phone No:	Contact Email:			
Name of project site supervisor: Same as above OR :				
Contact Phone No:	Contact Email:			
Type name to sign OR print form and sign	Date:			