

SUMMARY:

The Kelowna Mill Creek Flood Plain Bylaw designates land as Flood Plain, subject to Section 910 of the *Local Government Act*, for Mill Creek area and to regulate the development of land that is subject to flooding by Mill Creek.

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CITY OF KELOWNA

BYLAW NO. 10248

REVISED: February 14, 2011

CONSOLIDATED FOR CONVENIENCE TO INCLUDE: BYLAW NO. 10473
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A bylaw of the City of Kelowna to designate land as Flood Plain for Mill Creek and regulate the development of land that is subject to flooding by Mill Creek.

WHEREAS the City considers that flooding may occur on certain lands;

AND WHEREAS the City may, pursuant to Section 910 (1.1) of the *Local Government Act*, designate land as Flood Plain;

AND WHEREAS the City may, pursuant to Section 910 (2) of the *Local Government Act*, specify the flood construction level for the Flood Plain, and specify the setback from a watercourse, body of water or dike of any landfill or structural support required to elevate a floor system or pad above the flood construction level;

AND WHEREAS the City must, pursuant to Section 910 (3) of the *Local Government Act*, consider Provincial guidelines, and comply with the Provincial regulations and a plan or program the local government has developed under those regulations;

AND WHEREAS the City may, pursuant to Section 910 (3.1) of the *Local Government Act*, make provisions in relation to areas, land uses, types of geological or hydrological formations, and buildings or other structures;

AND WHEREAS the City may, pursuant to Section 903 (1)(c)(iii) of the *Local Government Act*, make provisions in relation to the siting of buildings and other structures;

NOW THEREFORE, Council of the City of Kelowna, in an open meeting assembled, enacts as follows:

SECTION 1 - INTRODUCTION

1.1 TITLE

This bylaw may be cited as "City of Kelowna Mill Creek Flood Plain Regulation Bylaw No. 10248".

1.2 DEFINITIONS

"Application" means a written request by an **applicant** for an exemption to the flood level or setback provisions of this Bylaw in a form and content prescribed by the **Approving Officer** and this bylaw;

"Applicant" means the **owner** or a representative of the **owner** duly authorized to act on the **owner's** behalf in relation to the **application**;

"Approving Officer" means the person appointed by the City as the **Approving Officer** under the *Land Title Act*, and includes his or her lawful deputy.

"Crawl Space" means an area between foundation level and underside of habitable floor having a maximum height from floor to underside of floor of 1.5 meters;

"Design Flood" means a flood of such magnitude as to equal a flood having a 200-year recurrence interval, based on frequency analysis of unregulated historic flood records with respect to the Mill Creek and as occurs in combination with downstream controlling water levels on Okanagan Lake.

"Design Flood Level" means the observed or calculated elevation for the **Design Flood** and is used in the calculation of the FCL;

"Flood Construction Level (FCL)" means the **Flood Construction Levels** as shown on Schedule "A" entitled "Mill Creek Flood Plain Map" which is attached to and forms part of this Bylaw;

"Flood Plain" means the area shown on Schedule "A" entitled "Mill Creek Flood Plain Map" which is attached to and forms part of this Bylaw;

"Floodproofing" means the alteration of land or structures either physically or in use to reduce flood damage and includes the use of building setbacks from water bodies to maintain a Floodway and to allow for potential erosion. **Floodproofing** may be achieved by all or a combination of the following:

- (a) building on fill, provided such fill does not interfere with flood flows of the watercourse, and is adequately protected against floodwater erosion;
- (b) building raised by structural means but not limited to, foundation walls or columns; and
- (c) a combination of fill and structural means;

"Flood Resistant Materials" means any building material capable of withstanding direct and prolonged contact with floodwaters without sustaining significant damage. Flood Resistant Materials are listed in Schedule "B" which is attached to and forms part of this Bylaw;

“Freeboard” means a vertical distance added to the *Design Flood Level* used to establish the FCL, generally 0.6m;

“Habitable Area” means any room or space within a building or structure that is or can be used for human occupancy, assembly or institutional use, commercial sales, or storage of goods, possessions or equipment including furnaces which would be subject to damage if flooded;

“Heavy Industry” means and includes such uses as manufacturing or processing of wood and paper products, metal, heavy electrical, non-metallic mineral products, petroleum and coal products, industrial chemicals and by-products, and allied products;

“Inspector of Dikes” means an official of the Ministry of Environment as defined under the *Dike Maintenance Act*;

“Institutional Use” means a use providing for public functions and includes federal, provincial, regional and municipal offices, schools, churches, colleges, hospitals, community centres, libraries, museums, jails, courts of law and similar facilities; and specifically excludes public storage and works yards, and public utility uses;

“Light or Service Industry” means and includes such uses as assembly, fabrication and light manufacturing, warehousing, wholesaling and food processing;

“Manufactured Home” means a structure manufactured as a unit, intended to be occupied in a place other than at its manufacture, and designed as a dwelling unit, and includes mobile homes, and specifically excludes **Recreation Vehicles**;

“Minimum Ponding Elevation” means a minimum construction level assigned to reduce possible flood damage due to ponding of local drainage during a severe local storm determined on a site specific basis based on topography and road elevations;

“Natural Boundary” means the visible high watermark of any lake, river, stream, or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, in respect to vegetation, as well as in respect to the nature of the soil itself;

“Natural Ground Elevation” means the average of the undisturbed ground elevations at the four (4) corners of the proposed building site;

“Non-Conforming” means any existing building located on flood prone land that does not meet **floodproofing** requirements set out in any pertinent bylaw, regulation or covenant;

“Owner” means a person listed in the land title office as the **owner** of a parcel;

“Pad” means a *compacted gravel*, paved or concrete surface on which blocks, posts, runners or strip footings are placed for the purpose of supporting a **Manufactured Home** or unit;

“Parcel” means any lot, block or other area of land that is the subject of an **application**;

“Ponding Elevation” means the water surface elevation as controlled by the lowest ground or road elevation of the area, which would act as the outlet to that area, if a storm runoff exceeds the capacity of culverts or other in-ground drainage works, as certified by a professional engineer;

“Professional Engineer” means a person who is registered or licensed under the provisions of the *Engineers and Geoscientists Act*;

“Provincial Guidelines” means the policies, strategies, objectives, standards, guidelines and environmental management plans, in relation to flood control, flood hazard management and development of land that is subject to flooding, as contained within the Province of British Columbia, Ministry of Environment, Flood Hazard Area Land Use Management Guidelines dated May 2004.

“Recreation Use” means a use providing for indoor or outdoor recreation and includes parks, playgrounds, and sports facilities;

“Recreation Vehicle” means any structure, trailer or vehicle used or designed to be used for living or sleeping purposes and which is designed or intended to be mobile on land, whether or not self-propelled;

“Restrictive Covenant”, in the context of this Bylaw, means a **restrictive covenant** under Section 219 of the *Land Title Act*, absolving the City of Kelowna of any liability with respect to the flooding of the property or flood damage to land, structures and contents thereof;

“Riparian Area”, means the area adjacent to a stream that may be subject to temporary, frequent or seasonal inundation, and supports plant species that are typical of an area of inundated or saturated soil conditions, and that are distinct from species on freely drained adjacent upland sites because of the presence of water.

“Standard Dike” means those dikes built to a minimum crest elevation equal to the FCL and meeting standards of design and construction approved in writing by the Ministry of Environment as amended time to time and maintained by an ongoing authority such as a local government body;

“Top of the Ravine Bank” means the first significant break in a ravine slope where the break occurs such that the grade beyond the break is flatter than 3:1 for a minimum distance of 15 meters measured perpendicularly from the

break, and the break does not include a bench within the ravine that could be developed.

“Watercourse” means any natural or man-made depression with well defined banks and a bed 0.6 meters or more below the surrounding land serving to give direction to a current of water at least 6 months of the year or having a drainage area of 2 square kilometres or more upstream of the point of consideration.

1.3 GENERAL PROVISIONS

1.3.1 Unless otherwise defined herein, all words and phrases in this Bylaw shall have the meaning given to them in the *Local Government Act* and the *Community Charter*.

1.3.2 Words in this Bylaw directing or empowering any officer or employee of the City to do any act or thing, or to otherwise applying to him by name of office, include his successors in such office and his lawful deputy, and any person the Council may from time to time by bylaw or resolution designate to act in his place.

1.3.3 A reference in this Bylaw to any enactment of British Columbia is a reference to the enactment as amended, revised, consolidated or replaced from time to time, and a reference to any bylaw of the City is a reference to the bylaw as amended, revised, consolidated or replaced from time to time.

1.3.4 No person shall construct, build, erect or place, or allow to be built, erected, or placed any building or structure contrary to the provisions of this Bylaw.

1.4 COMPLIANCE WITH OTHER BYLAWS OR ENACTMENTS

Compliance with this Bylaw or an exemption authorized by the City, in relation to a specific parcel of land or a use, building or other structure on a parcel of land, shall not be deemed to be a representation by the City that the use of land, building or other structure on a parcel of land complies with all applicable bylaws or other enactments. The owner of the land, building or other structure remains responsible to ensure compliance with all bylaws and other enactments.

SECTION 2 - DESIGNATION OF FLOOD PLAIN

The land designated as the Flood Plain for Mill Creek is as identified on the attached Schedule “A1, “A2, “A3”, “A4”, “A5” and “A6” Mill Creek Flood Plain Map (Hereafter referred to as Schedule “A”);

SECTION 3 - FLOOD CONSTRUCTION LEVEL FOR THE FLOOD PLAIN

The flood construction levels for the Mill Creek Flood Plain are the higher of:

- a) 600 mm above the elevation of the storm main invert, known or anticipated high ground water table or 100-year Hydraulic Grade Line within the storm main, whichever is higher, as enacted in the City of Kelowna Subdivision, Development and Servicing Bylaw 7900;
- b) as identified on the attached Schedule "A" Mill Creek Flood Plain Map.

Unless specified elsewhere in this Bylaw, no building, **Manufactured Home** or unit, shall be constructed, reconstructed, moved, extended or located with the underside of a wooden floor system or top of a concrete slab of any area used for basement, entrance foyer, habitation, **institutional use**, assembly use, tourist accommodation use, business, or storage of goods damageable by floodwaters or in the case of a **Manufactured Home** or unit the **Pad** on which it is located, no lower than as defined by the higher of a) or b) above.

SECTION 4 - SETBACK FROM A WATERCOURSE, BODY OF WATER OR DIKE

4.1 Pursuant to Section 910 (2)(b) of the *Local Government Act*, the minimum setback from a **watercourse**, body of water, or dike of any landfill or structural support required to elevate a floor system or **pad** above the flood level is:

- a) as defined by the City of Kelowna 2020 Official Community Plan Bylaw 7600 for the Mill Creek main stem as:
 - i) 15 meters downstream of Hardy Road;
 - ii) 30 meters upstream of Hardy Road.

The specified setback distance shall be measured from the **top-of-ravine bank**, top-of-bank, or from the **natural boundary** where the top-of-bank is not clearly defined. The specified setback distance shall be measured to the nearest part of the building or structure including roofs, eaves, and any over-hanging components or cantilevered portions of a building, or to the toe of a fill slope.

- b) for all other **water courses**, drainage channels and waterbodies as defined in the City of Kelowna 2020 Official Community Plan Bylaw 7600 and the City of Kelowna Zoning Bylaw No. 8000.

SECTION 5 - EXEMPTION

5.1 GENERAL EXEMPTION TO THE FLOOD LEVEL IN A FLOOD PLAIN

Despite Section 3 of this Bylaw, but subject to Provincial regulations and a plan or program the City has developed under those regulations, the underside of any floor system, or the top of any **pad** supporting any space or room, including a **manufactured home** that is used for dwelling purposes, business, or the

storage of goods which are susceptible to damage by floodwater, may be below the applicable flood level specified in this Bylaw, in the following cases:

- a) where a building or other structure is legally **non-conforming** to the flood level provisions of this bylaw, and the use and density of the building or other structure conforms to the Zoning Bylaw, the building or other structure may be renovated or repaired, at the original **non-conforming** floor elevation such that the increase in the size of the building or structure totals less than 25 percent of the building footprint existing at the time of enactment of this bylaw, provided that the degree of non-conformity regarding setback is not increased;

BL10473 amended 5.1(b):

- b) that portion of a building or structure that is to be used as a carport, garage or entryway;
- c) parking areas, including enclosed underground parking areas, except that in the case of an enclosed underground parking area, an unobstructed means of pedestrian ingress and egress must be provided above the flood level, and a sign must be posted at all points of entry notifying users that the parking area is not protected from inundation by floodwaters;

BL10473 amended 5.1(d):

- d) minor buildings such as storage buildings, porches and domestic greenhouses;
- e) porches;
- f) open-sided livestock buildings on lands zoned for agriculture;
- g) closed sided livestock buildings on lands zoned for agriculture, protected by a standard dike;

BL10473 amended 5.1(d):

- h) subject to sub-section 5.1 f) and g), farm buildings, other than a building used or intended to be used for human habitation;
- i) open-sided recreation shelters, stands, washhouses, washrooms, docks and other outdoor facilities on lands zoned for park or recreation uses;
- j) on-loading and off-loading facilities associated with water oriented industry and portable sawmills provided the main electrical switchgear is placed above the applicable flood level;
- k) buildings or other structures containing heavy **industrial** uses behind standard dikes;
- l) that portion of a building or other structure used or intended to be used only as a mechanical room, including furnaces and hot water heaters, in

a building or other structure protected by a standard dike; provided the electrical switchgear is above the flood level; and

- m) **Industrial uses** on lands identified as **Flood Plain** in Schedule "A" of this bylaw, other than main electrical switchgear, no lower than the flood level for the **Flood Plain** specified in Section 3 of this bylaw minus the applicable freeboard.

5.2 GENERAL EXEMPTION TO THE MINIMUM SETBACK FROM A WATERCOURSE, BODY OF WATER OR DIKE

Despite Section 4.1 of this Bylaw, but subject to Provincial regulations and a plan or program the City has developed under those regulations, the setback from a **watercourse**, body of water or dike of any landfill or structural support required to elevate a floor system or **pad** above the flood level may be less than the applicable setback specified in this Bylaw in the following cases:

- a) where a building or other structure is legally **non-conforming** to the setback provisions of this bylaw, and the use and density of the building or other structure conforms to the Zoning Bylaw, the building or other structure may be renovated or repaired only to the extent that the renovation or repair would, when complete, involve no further contravention to the setback regulations of this Bylaw than existing at the time the renovation or repair was started; and
- b) where protected by a standard dike, buildings shall have a minimum setback of 7.5 metres from any structure for flood protections or seepage control or any dike right-of-way used for protections works.

5.3 SITE-SPECIFIC EXEMPTIONS TO THE FLOOD LEVEL OR SETBACK

5.3.1 An **applicant** who intends to seek a site-specific exemption from this Bylaw shall complete an **application**.

5.3.2 The **applicant** must provide the following information, at the **applicant's** expense, to the **Approving Officer** at the time of **application** submission, except to the extent that the **Approving Officer** determines that the provision of the information is not required to assist Council or the **Approving Officer** in their consideration of the **application**:

- a) name, address and signature of the **owner**;
- b) name, address signature of the **applicant**, if different from the **owner**;
- c) legal description of the parcel;

- d) civic address of the parcel;
- e) legal title search for the parcel dated no more than 5 business days from the date of **application** submission;
- f) copy of all relevant charges registered on the legal title of the parcel;
- g) a scaled plan prepared by a British Columbia Land Surveyor showing the:
 - i) designated **Flood Plain**, flood level and setback as prescribed by this Bylaw;
 - ii) legal boundaries of the parcel;
 - iii) existing and proposed buildings or other structures on the parcel, including the requested flood construction level;
 - iv) location of existing and proposed landfill or structural support required to elevate a floor system or **pad** above the flood level;
 - v) natural boundary of adjacent **watercourse**, body of water or dike;
 - vi) location of drainage control works;
 - vii) location of easements and rights of way;
 - viii) the existing vertical contours of the parcel, and any relevant adjacent lands, at a scale of 1:1000 or larger, with a contour interval of 1 metre or less.
- h) documents and plans which describe and justify the proposal;
- i) a report, certified by a Professional Engineer or geoscientist with experience in geotechnical engineering, or a person in a class prescribed by the minister under Section 910 (7) of the *Local Government Act*, that the land may be used safely for the use intended; and
- j) any additional information the **Approving Officer** reasonably determines is required to assist Council or the **Approving Officer** in their consideration of the **Application**.

SECTION 6 - DELEGATION

BL10473 amended 6.1:

- 6.1 Council delegates to the **Approving Officer** the power of Council to exempt a person from the **application** of Section 910 (4) of the *Local Government Act* and this Bylaw, in relation to a specific parcel of land or a use, building or other structure on the parcel of land, in accordance with Section 910 (5) of the *Local Government Act*, and subject to any terms or conditions the **Approving Officer** considers necessary or advisable in accordance with Section 910 (6) of the *Local Government Act*, except where an **application** is made for a variance to Section 4 of this Bylaw.
- 6.2 Within 30 days of the **Approving Officer's** decision to grant or refuse an exemption, the **applicant** may request that Council reconsider the decision subject to the following:
- a) the request shall be in writing, and include reason(s) in support of the reconsideration;
 - b) upon receipt of a complete written request for Council's reconsideration, the **Approving Officer** shall prepare and forward a report to Council attaching the **Application** and setting out the reasons for the decision;
 - c) at a date and time set by Council the **Applicant** shall have the opportunity to appear before Council and be heard regarding the decision of the **Approving Officer**; and
 - d) following this, Council shall reconsider the decision of the **Approving Officer** and either uphold the decision or substitute the Council's decision for the **Approving Officer's**.

SECTION 7 - SEVERABILITY

If any section, subsection, clause, sub-clause or phrase of this Bylaw is for any reason held to be invalid by the decision of any Court of competent jurisdiction, that section, subsection, clause, sub-clause or phrase shall be struck from the Bylaw and any decision shall not affect the validity of the remaining portions of this Bylaw.

SECTION 8 - OFFENCE AND PENALTY

8.1 OFFENCE

8.1.1 No person shall contravene, cause, or permit a contravention of this bylaw.

8.1.2 No person shall interfere with or obstruct the entry of the **Approving Officer** or a Bylaw Enforcement Officer or any other authorized City representative onto any land or into any building or structure to which entry is made or attempted.

8.2 PENALTY

Any person contravening or committing any breach of or committing any offence against any provision of this bylaw or who suffers or permits any act or thing to be done in contravention of in violation of any of the provisions of this bylaw or refuses, omits, or neglects to fulfill, observe, carry out or perform any duty, obligation, matter or thing whatsoever by the bylaw prescribed or imposed or required to be done is liable on summary conviction, to a fine not exceeding \$10, 000 and the cost of prosecution. Each day during which any violation, contravention or breach shall continue shall be deemed a separate offence.

9.0 EFFECTIVE DATE

9.1 This bylaw shall come into full force and effect and be binding on all persons on the date of adoption.

Read a first, second and third time by the Municipal Council this 26th day of July, 2010.

Adopted by the Municipal Council of the City of Kelowna this 9th day of August, 2010.

“Sharon Shepherd”

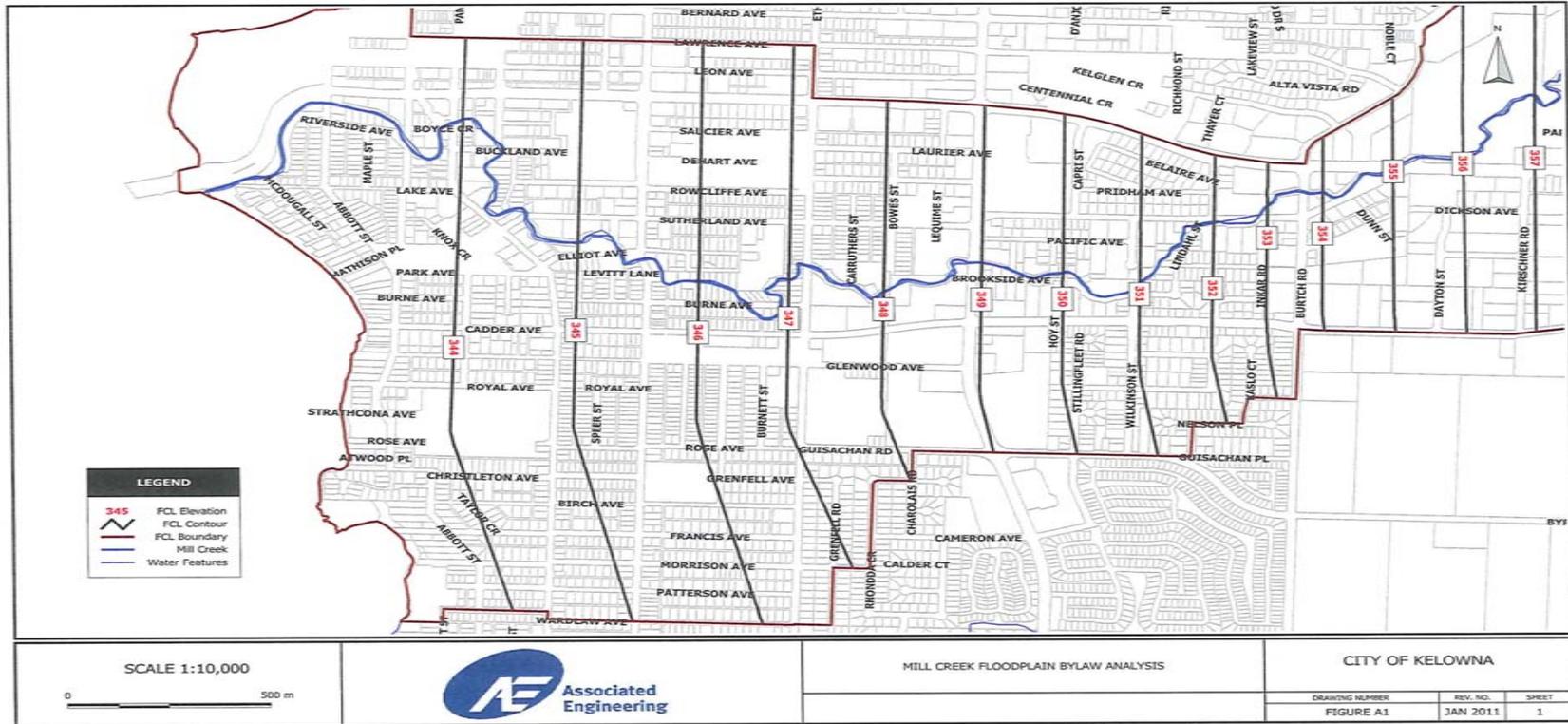
Mayor

“Stephen Fleming”

City Clerk

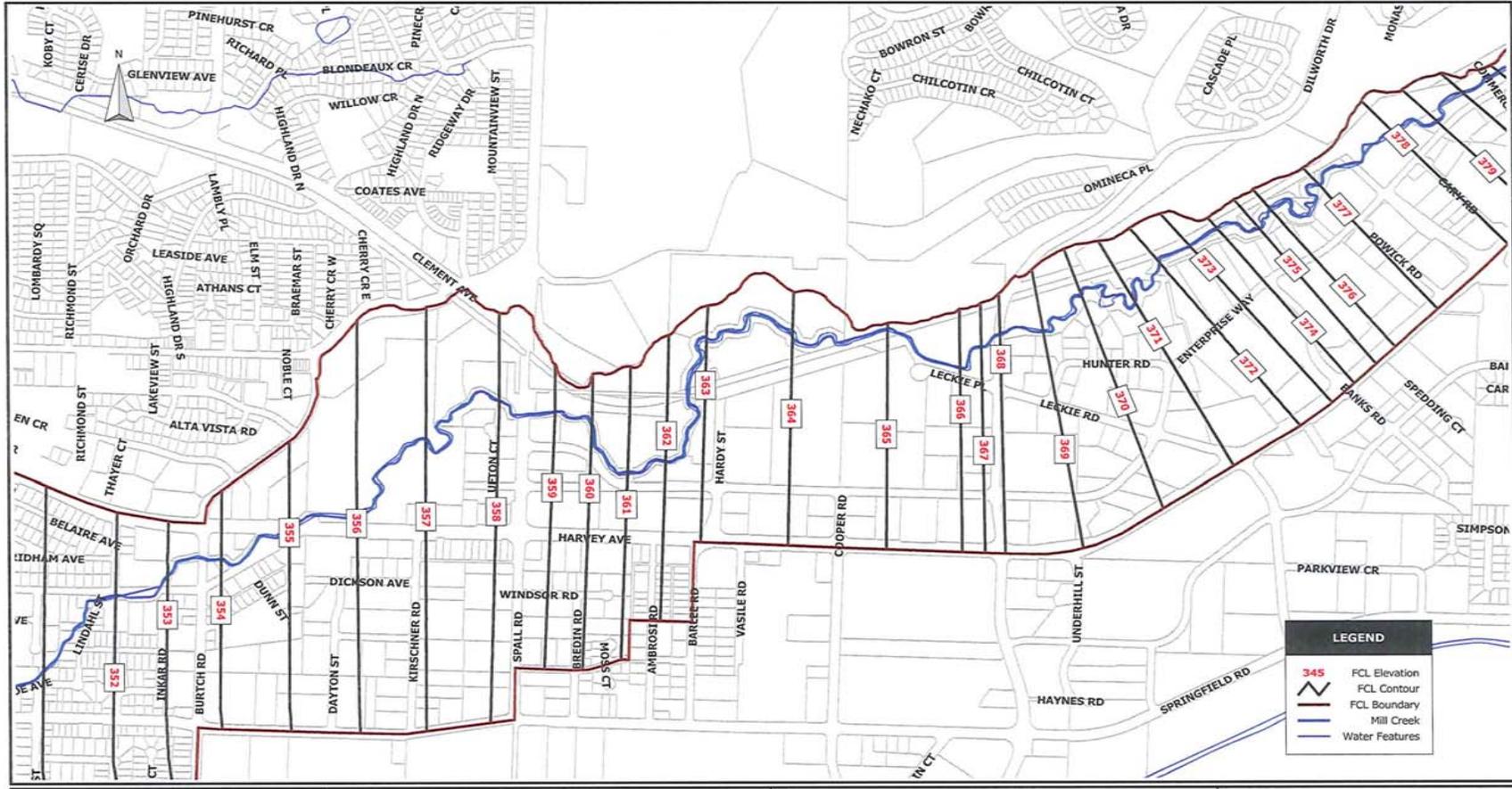
BL10473 replaced Figures A1, A2, A3, A4, A5 and A6:

Schedule "A"



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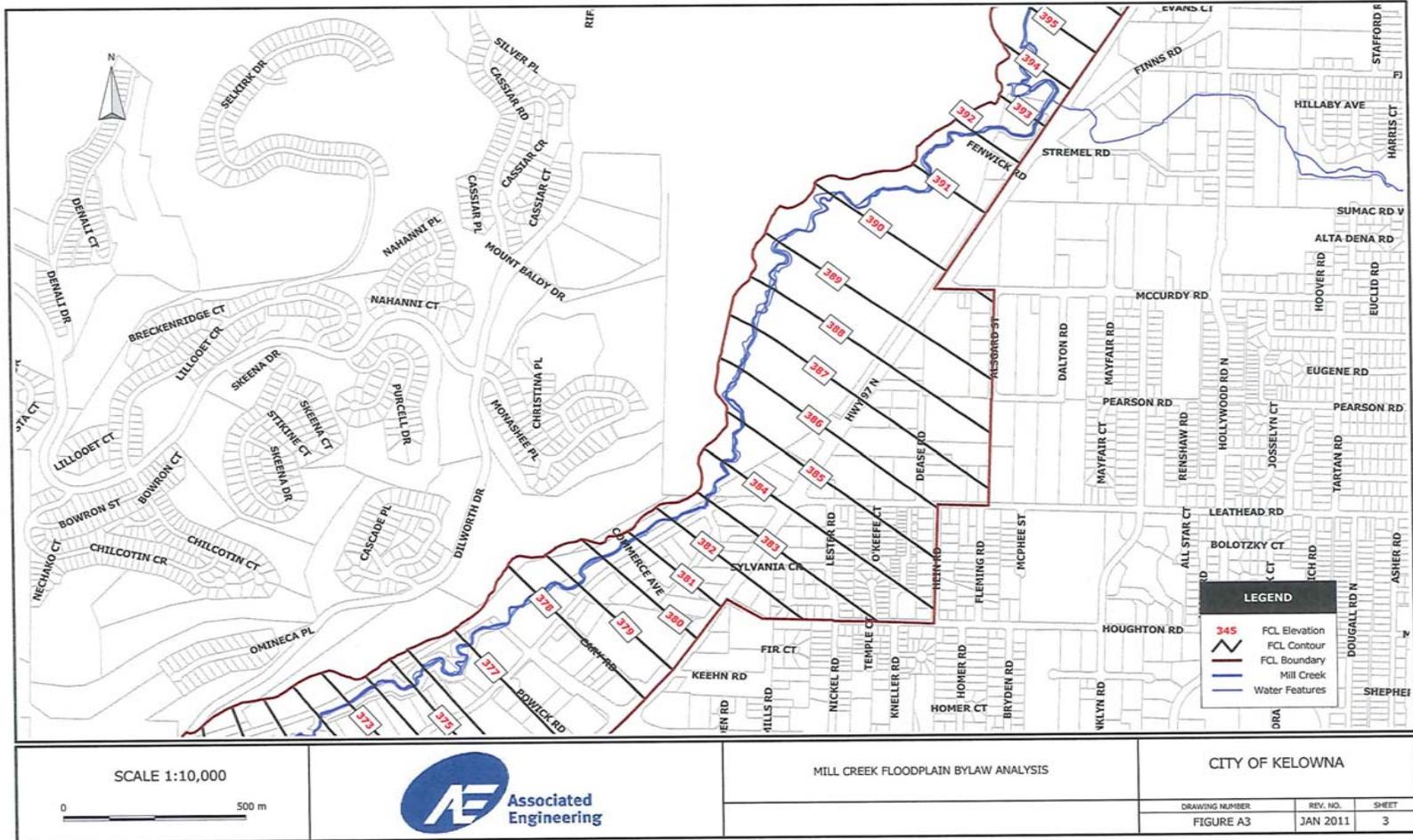
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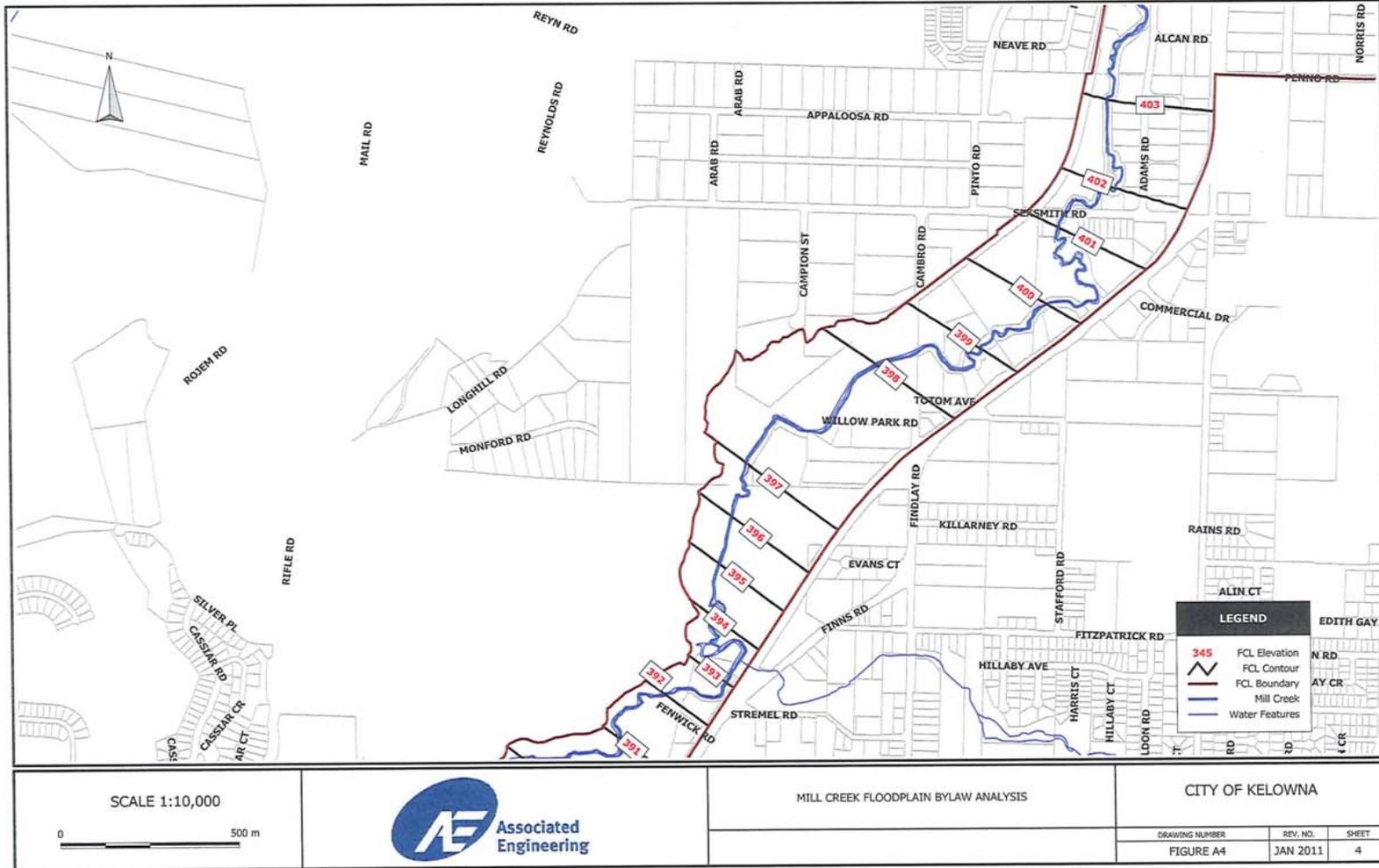
MILL CREEK FLOODPLAIN BYLAW ANALYSIS

CITY OF KELOWNA		
DRAWING NUMBER	REV. NO.	SHEET
FIGURE A2	JAN 2011	2

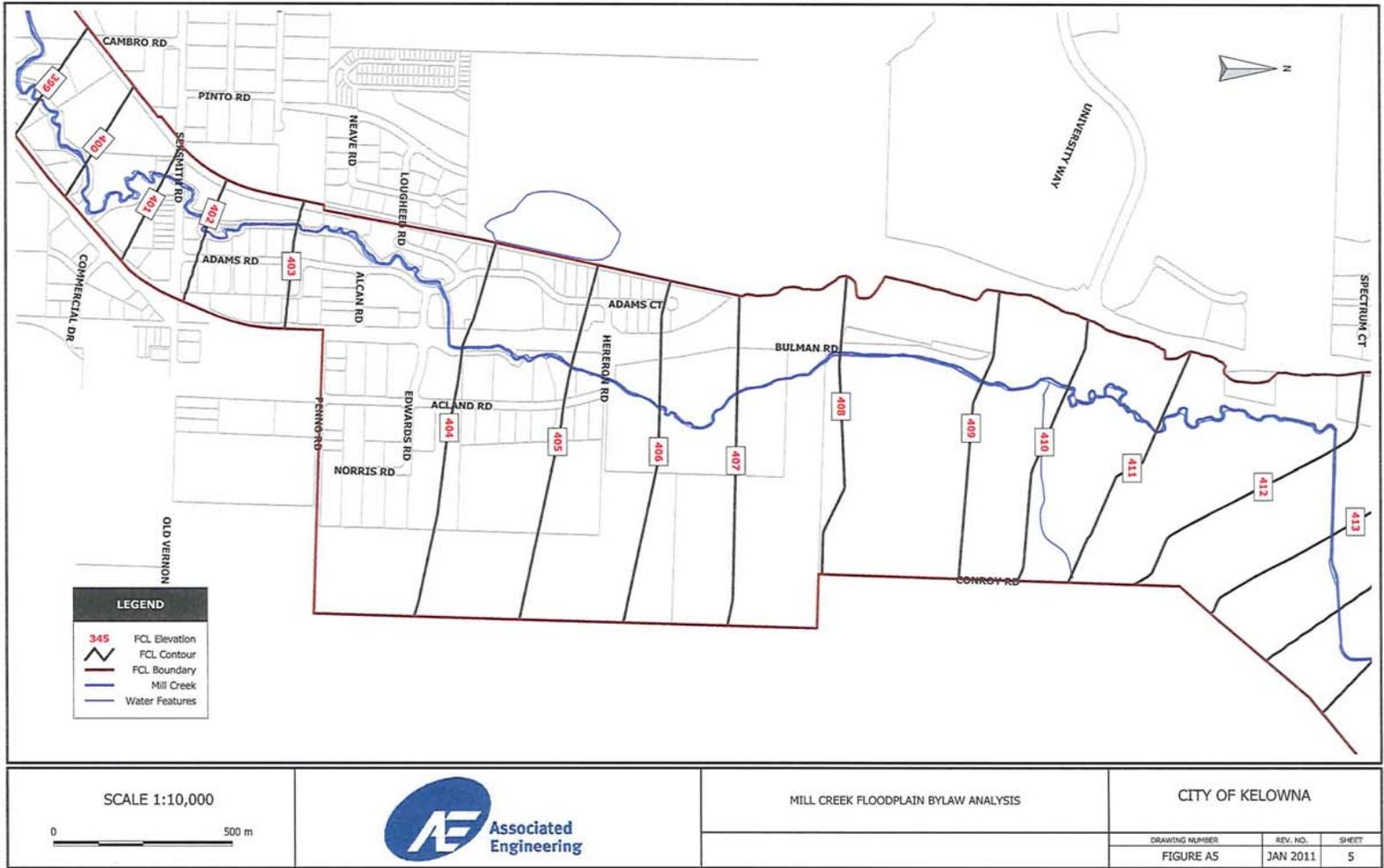
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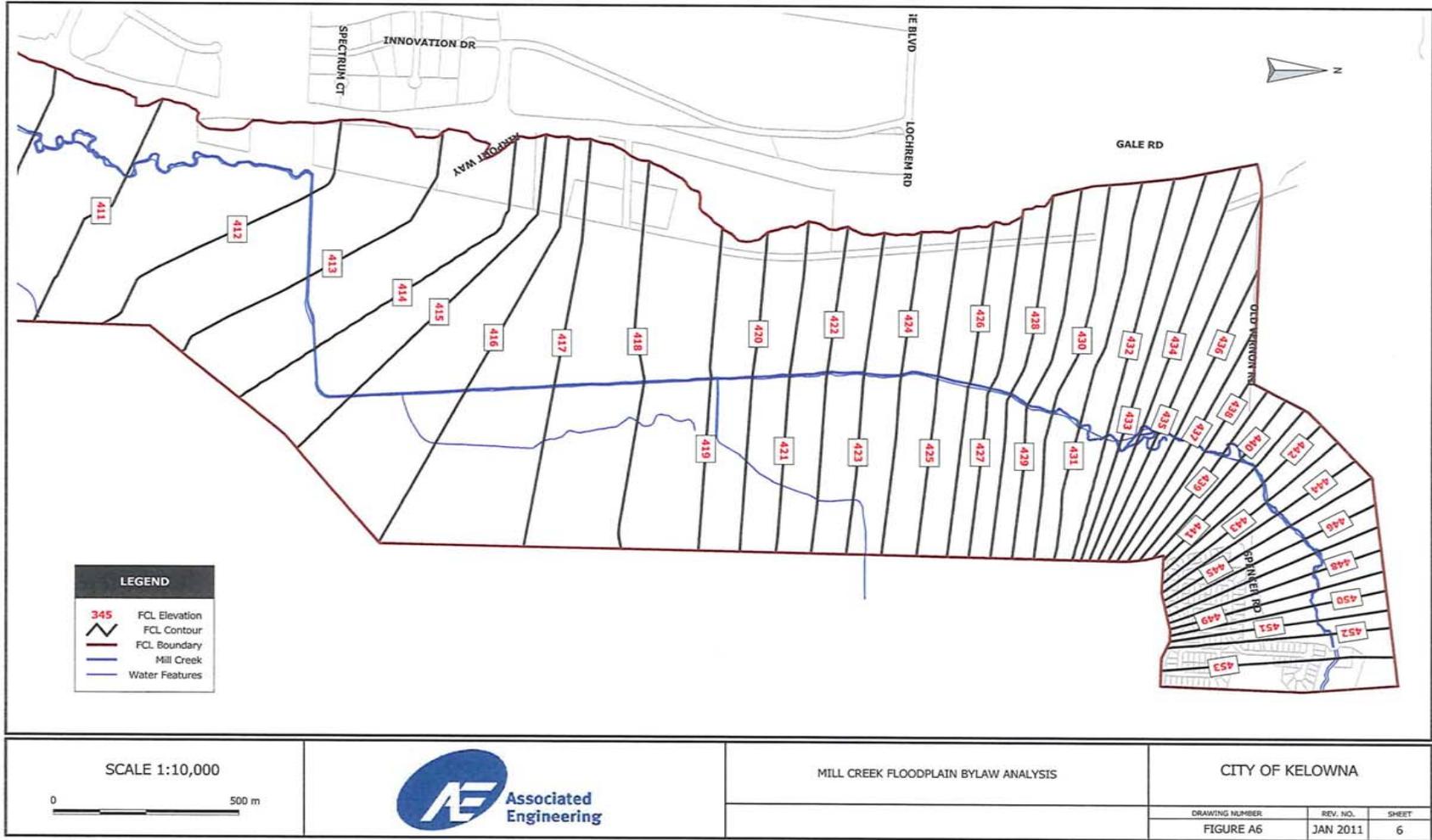
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SCHEDULE "B"
FLOOD RESISTANT MATERIALS

- (1) Asphalt
- (2) Brick
- (3) Clay Tile
- (4) Concrete
- (5) Epoxy
- (6) Glass
- (7) Exterior Grade Plywood
- (8) Mastic Flooring
- (9) Metal
- (10) Polyurethane
- (11) Pressure Treated Wood (for external applications only)
- (12) Rubber
- (13) Silicone
- (14) Stone
- (15) Styrofoam Insulation
- (16) High Density Poly-Ethylene (HDPE)
- (17) Poly Vinyl Chloride (PVC)
- (18) UV stabilized Fiber Reinforced Plastic (FRP)