



City of Richmond

Report to Development Permit Panel

To: Development Permit Panel

Date: April 15, 2015

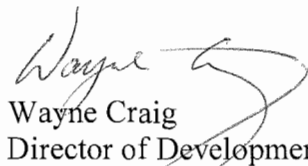
From: Wayne Craig
Director of Development

File: DP 14-677130

Re: Application by Grafton Enterprises Ltd. for a Development Permit at
20599 Westminster Highway

Staff Recommendation

That a Development Permit be issued which would permit the construction of two light industrial buildings and landscape buffers at 20599 Westminster Highway on a site zoned "Industrial Business Park (IB1)".


Wayne Craig
Director of Development

WC: mp
Att.

Staff Report

Origin

Grafton Enterprises Ltd. has applied to the City of Richmond for permission to develop two industrial buildings with the total floor area of 4,511 m² (48,558 ft²) at 20599 Westminster Highway on a site zoned “Industrial Business Park (IB1)”. A Development Permit (DP) is required to ensure that an adequate landscape buffer is provided between the subject site and adjacent lands that are located within the Agricultural Land Reserve (ALR). The site abuts the ALR to the north and east. The site is currently vacant.

Previous application (DP05-319300)

In 2006, a DP was issued for both the subject site and the adjacent site to the west at 20499 Westminster Highway for a perimeter landscape buffer. However, the owner chose to develop only the site at 20499 Westminster Highway and did not proceed with the development of the subject site. The DP for the subject site has now lapsed.

Development Information

Please refer to attached Development Application Data Sheet (Attachment 1) for a comparison of the proposed development data with the relevant bylaw requirements. No variance is requested.

Background

Development surrounding the subject site is as follows:

- To the north: Cranberry processing facility on a site zoned “Agriculture (AG4)” and located within the ALR;
- To the east: A large property zoned “Agriculture (AG1)” and separated to the adjacent site by an undeveloped road right-of-way. The site is actively farmed and is located within the ALR. The south west corner, which is directly across from the subject site, is paved and is currently used for parking and loading;
- To the south: Westminster Highway and Highway 91; and
- To the west: A light industrial development with a staging area for heavy equipment at 20499 Westminster Highway. The site is zoned “Industrial Business Park (IB1)” and is located outside of the ALR.

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the Development Permit guidelines with regard to adjacencies to the ALR by implementing landscape buffers on the north and east sides.

Agricultural Advisory Committee Comments

The Agricultural Advisory Committee (AAC) reviewed and considered the proposed industrial development and landscape buffers. The AAC noted that the proposed buffers seemed adequate considering the existing uses of the adjacent sites. The AAC approved the proposed buffer scheme and recommended that the application proceed to the Development Permit Panel. A

copy of the relevant excerpt from the March 12, 2015 AAC meeting minutes is attached for reference (Attachment 2).

Analysis

Site Planning

- The vehicular access to the site is from Westminster Highway.
- The proposed development includes a central drive aisle and combined parking and loading areas between the two buildings proposed along the east and west property lines.
- The proposed development includes 53 parking spaces and 12 large loading bays, which exceeds the minimum requirements of 46 parking spaces and 2 medium and 1 large loading bays required under the Zoning Bylaw based on the proposed gross floor area.
- The site layout has been designed to ensure larger vehicles (i.e., a WB17) can be adequately manoeuvred onto and through the site.
- The current zone does not allow for any outdoor storage and the applicant has confirmed in writing that there will be no outdoor storage use on the site.

Landscape Design and Open Space Design

- North Adjacency: The 2041 Official Community Plan (OCP) calls for landscape buffers of approximately 15 m for all developments immediately adjacent to sites within the ALR. However, considering that the existing land use of the neighbouring property to the north is an industrial (i.e., a cranberry processing facility), staff support a reduction of the buffer width to 3 m, which is consistent with the buffer width previously approved in 2006 for both the subject site and the neighbouring site at 20499 Westminster Highway.

The proposed multi-layered landscape buffer along the north property line consists of an existing chain link fence, existing cedar hedging, a single row of shrubs and double rows of groundcovers and a mix of deciduous and coniferous trees. With the existing 3 m wide contiguous landscape buffer consisting of hedging on the neighbouring site to the north, a total of 6 m landscape buffer will be established along this property line.

- East Adjacency: The agricultural uses to the east are separated by a 10-m wide undeveloped road right-of-way. The OCP encourages an appropriate landscape buffer of 6 m to buildings where there is an intervening road. The proposed buffer width of 5 m takes into account that the paved area at the southwest corner, which is currently used for parking and loading, provides a buffer to adjacent agricultural activities.

The composition of the buffer along the east property line is a row of trees (Halka Honey Locust), cedar hedging, multiple rows of shrubs and groundcovers and a group of Austrian Pines at both the northeast and southeast building corners. With the proposed 5-m wide buffer strip and the 10-m wide undeveloped road, the total separation will be 15 m.

- Along the Westminster Highway frontage, multi-layered landscaping including a mix of deciduous and coniferous trees with sodded lawn is proposed to provide visual interest along the street, and a bioswale is proposed for runoff control.

- Along the west property line adjacent to the industrial development at 20499 Westminster Highway is a gravel mulch strip.
- In order to ensure that the proposed landscaping works are completed, the applicant is required to provide a landscape security of \$54,899.9 in association with the Development Permit.

Site Servicing

- The applicant wishes to utilize the existing on-site sanitary sewer system that passes through the neighbouring site at 20499 Westminster Highway, which ties into the City's sanitary forcemain. Prior to DP issuance, the applicant is required to register a Section 219 covenant on both the sites at 20499 Westminster Highway and 20599 Westminster Highway and an easement burdening 20499 Westminster Highway and benefitting 20599 Westminster Highway for the operation, maintenance and replacement of the existing on-site private sanitary sewer system in perpetuity in accordance with all regulatory requirements. At the applicant's cost, a defined easement plan is required, subject to City's approval.
- A Servicing Agreement is not required for the proposed development. However, a Service Connection Design is required prior to issuance of a Building Permit.

Green Roof Bylaw

The Green Roofs and Other Options Involving Industrial & Office Buildings Outside the City Centre Bylaw 8385 applies to the proposed development as the proposed gross floor area exceeds 2,000 m² (21,529 ft²). The applicant must achieve a minimum of 100 points by designing, constructing, operating and maintaining a combination of building and site features or system listed in the bylaw (Attachment 3). The applicant has proposed the following two strategies to achieve a minimum of 100 points:

- Installation of a bioswale along the Westminster Highway frontage to reduce the storm water runoff (70 points)
- Purchase of LEED Green Power Credit to provide at least 50% of the building's regulated electricity from renewable energy sources by engaging in at least a 2-year renewable energy contract (30 points)

The applicant is required to register a legal agreement on title to ensure that the owner shall maintain the storm water management work, landscaping features and any structural elements in accordance with the generally accepted strategies and practices identified in the letters prepared by Recollective Consulting and MPT Engineering Co. Ltd. (Attachment 4). These features will be secured through a legal agreement to be registered on the title of the property.

Prior to issuance of a Building Permit, the applicant is required to submit a copy of a contract to purchase Green Power equivalent to at least 50% of the building's regulated electricity use over a two-year period. The amount of electricity purchased from a renewable energy provider will be added to the power grid from a renewable energy facility to support the continued development of renewable energy technology and reduce the environmental footprint of electricity consumption.

Public Art

The City's Public Art Policy recommends that the developer make a contribution of \$9,711.6 towards the City's Public Art Fund based on the 2014 rate of \$0.20/ft² applicable to industrial buildings at the time of application. The applicant has agreed to make this contribution.

Flood Construction Level

The proposed development is required to comply with the requirements of Richmond Flood Plain Designation and Protection Bylaw 8204. A Flood Plain covenant was registered on title identifying this requirement as part of the previous DP application (DP05-319300).

Conclusions

The proposed landscaping buffers adjacent to the ALR are deemed appropriate considering the existing land uses of the neighbouring ALR properties. Staff recommend issuance of the Development Permit.



Minhee Park
Planner 1

MP:cas

The following are to be met prior to forwarding this application to Council for approval:

- Receipt of a Letter-of-Credit for landscaping in the amount of \$54,899.9.
- City's acceptance of the developer's offer to voluntarily contribute \$9,711.6 based on \$0.20 per buildable square foot to the City's Public Art Fund.
- Registration of a Section 219 covenant on both 20499 Westminster Highway and 20599 Westminster Highway and an easement burdening 20499 Westminster Highway and benefitting 20599 Westminster Highway for the operation, maintenance and replacement of the existing on-site private sanitary sewer system in perpetuity in accordance with all regulatory requirements. At the applicant's cost, a defined easement plan is required, subject to City of Richmond approval.
- Registration of a legal agreement on title as per the Green Roof Bylaw No. 8385 ensuring that the owner shall maintain the storm water management work, landscaping features and any structural elements in accordance with generally accepted building, landscaping and engineering maintenance practices so that the design volume of storm water runoff from the site will, in perpetuity or until approved redevelopment, not be exceed.

Prior to future Building Permit issuance, the developer is required to complete the following:

- Submission of an acceptable Service Connection Design.
- Submission of a copy of a contract to purchase Green Power equivalent to at least 50% of the building's regulated electricity use over a two-year period.
- The applicant is required to obtain a Building Permit for any construction hoarding associated with the proposed development. If construction hoarding is required to temporarily occupy a street, or any part thereof, or occupy the air space above a street or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit.
- Submission of a construction traffic and parking management plan to the satisfaction of the City's Transportation Division (<http://www.richmond.ca/services/ttp/special.htm>).



DP DP14-677130

Attachment 1

Address: 20599 Westminster Highway

Applicant: Grafton Enterprises Ltd.

Owner: Grafton Enterprises Ltd.

Planning Area(s): East Richmond

Floor Area Gross: 4,511.2m²

	Existing	Proposed
Site Area:	10,520m ²	10,520 m ²
Land Uses:	Vacant	Light Industrial
OCP Designation:	Mixed Employment	No Change
Zoning:	Industrial Business Park (IB1)	No Change

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	1.0	0.43	none permitted
Lot Coverage:	Max. 60 %	42.9 %	None
Setback – Front Yard:	Min. 3 m	6 m	None
Setback – Side Yard (east):	Min. 5 m	5 m	None
Setback – Side Yard (west):	Min. 0 m	1.67 m	None
Setback – Rear Yard:	Min. 3 m	3 m	None
Height (m):	Max. 12 m	9.24 m	None
Off-street Parking Spaces – Industrial:	46	53	None
Off-street Parking Spaces – Accessible:	1	2	None

Excerpt from the Minutes from
The Agricultural Advisory Committee Meeting

Thursday, March 12, 2015 – 7:00 p.m.
Anderson Room
Richmond City Hall

3. Development Proposal – Development Permit Application (20599 Westminster Highway – ALR Adjacency)

Staff (Minhee Park) briefed the Committee on the Development Permit (DP) application for a light industrial development at 20599 Westminster Highway. The purpose of the DP is to ensure adequate buffers are provided on the subject site adjacent to the ALR to protect farming and identify the urban/rural interface. To the north is a cranberry processing facility and across the undeveloped road right-of-way to the east is a large agricultural property.

- Committee members noted that the proposed buffers seemed adequate considering the existing uses on the adjacent properties.
- Committee members discussed the long-term impacts of the proposed development on the ALR property on the north side, which is currently used for industrial purposes but still contained in the ALR. Some members and staff noted the cranberry processing facility was recently developed through a collaborative effort of cranberry growers in the community. As it directly supports the cranberry sector, it is unlikely it will be removed in the near future.
- Committee had a general discussion about the existing servicing infrastructure.

That the Development Permit application for 20599 Westminster Highway be supported as presented.

Carried Unanimously

Green Roof and Other Options Involving Industrial and Office Buildings Outside the City Centre Bylaw 8385			
POINT SYSTEM – 100 POINTS MINIMUM REQUIRED			
Mandatory Objective: Minimum reduction in the total annual volume of storm water runoff from the building site, equivalent to 20% of the building roof runoff (Must Be Met) by means of conventionally designed and constructed roof drains conducting storm water runoff from a totally impermeable roof of equal area			
Option (Must chose at least one)	Methods	Total Number of Points	
1. Green Roof covering at least 75% of the roof area	a) Extensive green roof or b) Intensive green roof, which could be used for local food production or outdoor amenity space	100 points	
2. Build to LEED	a) Minimum LEED Silver certification or equivalency and meet the LEED Storm Water Management Credit b) Other LEED Credits that are encouraged but not required to be met include the LEED Renewable Energy Credit, LEED Green Power Credit and LEED Optimize Energy Performance Credit	100 points	
3. Reduce Runoff by any one or combination of methods besides 1. Green Roof or 2. Build to LEED	a) Rainwater and detention cistern b) Permeable pavers or asphalt in the parking areas and manoeuvring aisles, not loading bays or drive aisles used by truck traffic c) Bioswale d) Partial green roof that does not address mandatory objective by itself e) Gravel ballast and other innovative roof structures f) Other methods	70 points	
Secondary Objective: Minimum double the amount of landscaping required in the Zoning Bylaw			
Option (May chose one or both)	Methods	Total Number of Points	
1. Rooftop Parking	a) Parking on the roof and equivalent area of intensive landscaping at grade	50 points	
2. Enhanced Landscaping by any one or combination of a) to e) methods	a) Area is used for local food production, outdoor amenity space and/or as an environmentally sensitive area b) Vertical landscaping on at least 50% of the length of the walls visible from any highway, public trail or natural watercourse (which could, but doesn't need to be used for local food production) c) Trees in the staff and visitor parking area to provide 50% canopy cover in 10 years d) Other methods e) Intensive landscaping including native species in the rainwater and detention cistern, bioswale or other methods used for runoff control and storm water management	50 points 30 points	
Bonus/Optional Objective: Encourage green building initiatives			
Non-Mandatory Option (May chose more than one)	Methods	Total Number of Points	
1. Energy & Atmosphere LEED Credits	a) LEED Renewable Energy Credit – supply at least 20% of the building's total energy use (as expressed as a fraction of annual energy cost) through the use of on-site renewable energy sources b) LEED Green Power Credit – provide at least 50% of the building's regulated electricity from renewable sources by engaging in at least a 2-year renewable energy contract c) LEED Optimize Energy Performance Credit – reduce building design energy cost compared to the energy cost of the reference building for energy systems regulated by standards stated in LEED	30 points	

The applicant may comply with the objectives of Bylaw 8385 and other additional objectives by means not specified above.
The point system will be reviewed as other green building initiatives are developed.



April 17, 2015

To: City of Richmond Permitting Department

Re: 20599 Westminster Highway DP14-677130 Additional Staff Comments

Further to our previous letter of November 14, 2014, we provide an update to demonstrate compliance with Bylaw 8385 for the 20599 Westminster Highway project:

1. **Reduced Runoff:** MPT Engineering have provided documentation (detailed design information and calculations are attached) that demonstrates how the Bioswaile will reduce total annual stormwater runoff from the building site, equivalent to 20% of the building roof runoff.
2. **Green Power:** Attached are two quotes for the supply of Green Power (As defined by LEED) for an equivalent of at least 50% of the building's regulated electricity use. The annual regulated electricity use was estimated using the baseline electricity use rates listed in the LEED Canada Reference Guide for Green Building Design and Construction 2009. The owner is committed to purchasing from one of these two suppliers and will provide a purchase order within a week.

Information supporting compliance with these two requirements has been attached to this letter.

Together the above strategies add to 100 points under bylaw 8385, and therefore we believe compliance at the BP stage has been achieved.

If you have any questions about our green building strategy, feel free to contact the undersigned.

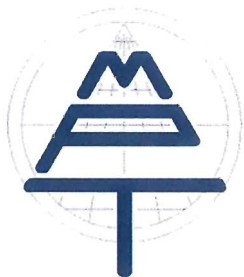
Sincerely,

A handwritten signature in black ink, appearing to read "Eesmyal Santos-Brault".

Eesmyal Santos-Brault

Principal, Recollective





MPT ENGINEERING CO. LTD.

PROFESSIONAL CIVIL ENGINEERS

CIVIL ENGINEERING – SURVEYING – MAPPING
PLANNING – DEVELOPMENT CONSULTANTS

Hans J. Troelsen, BCLS
William P. Wong, BCLS
J. Stephen Campbell, PEng, BCLS
David J. Harris, BCLS
=====

Retired
C.A.E. Matson, BCLS R.J. Peck, BCLS
H.G. Topliss, PEng, BCLS K. Kjar, BCLS
Ralph B. Turner, BCLS

17 April 2015

Our File: R15891-B

EAGLE RIDGE ENTERPRISES LTD.

20499 Westminster Highway
Richmond, BC
V6V 1B3

Attn: Mr. Wayne Grafton

Re: 20599 Westminster Highway, Richmond, BC
Storm Water Management – City Bylaw 8385

Dear Sir,

As requested, this letter provides 'Development Permit' stage input and recommendations related to the civil engineering onsite/private surface works and storm sewer designs associated with the above noted development, which we understand are required to be designed to meet or exceed the 'Runoff Control and Storm Water Management Objective' requirement from Section 6 of City Bylaw 8385.

We understand that the storm water management system shall be designed such that [for each individual building] the total annual volume of storm water runoff entering the City's [offsite/public] storm sewer or drainage system from the building site is reduced by [at least] 20% of the volume that would enter the system by means of conventionally designed and constructed roof drains conducting storm water runoff from a totally impermeable roof of equal area, directly to the storm sewer or drainage system. Further, we understand that the storm water management system design shall consider the additional information provided by City 'Permits' Bulletin #44, revision date 17 Aug/11.

Calculations

Building/Scenario	Area (m ²)	Runoff Coefficient (C)	Runoff Area (C x A)
Building 'A' Conventional Roof	2,256	0.90	2,030.4
Building 'B' Conventional Roof	2,256	0.90	2,030.4

The runoff coefficient above considers a totally impermeable roof and assumed interception/evaporation loss of 10%.

The average annual total precipitation for Richmond is 1,100mm, based on the British Columbia Building Code, Division B, Appendix C, Table C-2. Subsequently, the associated average annual runoff from each proposed rooftop is 2,233.5m³. To achieve compliance with City Bylaw 8385, the total annual volume of storm water runoff entering the City's storm sewer, from the entire site, must be reduced by 893.4m³ (i.e. 2,233.5m³ x 0.20 x 2).

Methodology

We understand the proposed methodology for achieving the required runoff reduction involves a bioswale retention and infiltration area. A portion of site runoff – originating from the building roof(s) or other impervious surfaces – that would typically be conveyed through the onsite storm sewer system will be diverted to runoff or discharge into the bioswale area. The bioswale will be designed to serve two primary functions: provide area

MPT ENGINEERING CO. LTD.

Tel: 604-270-9331

#320 – 11120 Horseshoe Way, Richmond, BC Canada V7A 5H7

Fax: 604-270-4137

to allow storm water runoff to infiltrate through the native sub-grade into the groundwater table, and provide storage volume for periods of time when the runoff rate exceeds the infiltration rate.

Conceptual Design

The design of a bioswale is generally required to incorporate an overflow outlet, typically in the form of a catch basin and/or sub-surface perforated drainage pipe, to provide storm water runoff an outlet to the onsite storm sewer during periods of high intensity rainfall (i.e. to avoid localized flooding). Based on this and other factors, the typical runoff coefficient utilized for a bioswale is 0.20 (i.e. approximately 80% of storm water runoff drained to a bioswale is retained/infiltrated onsite).

Based on the above, in order to meet the annual runoff reduction target of 893.4m³, a total area of 1,015.2m² must be drained to the bioswale (i.e. $1,015.2\text{m}^2 \times 1,100\text{mm} / 1,000 \times 0.80 = 893.4\text{m}^3$).

The bioswale should be designed in accordance with Metro Vancouver's 'Stormwater Source Control Design Guidelines 2012' document, and general good engineering practice. In this particular circumstance, it is anticipated that, at minimum, the 'Full Infiltration with Reservoir' style design will be required.

We understand that the subject site will provide two bioswales with an approximate total surface area of 203.0m² (i.e. approximately 2.4m x 42.3m x 2). The bioswale structure should consist of 300mm Topsoil overlaying a minimum of 300mm 19mm Clear Gravel overlaying native sub-grade. The bioswale cross section should be generally trapezoidal, consisting of a depressed central flat section approximately 0.60m wide, with 0.90m wide side slopes ranging from 2H:1V to 3H:1V. A bioswale designed in this manner should provide approximately 24.0m³ of storage volume in the gravel layer, based on 40% void space. Depending on the configuration of the overflow outlet, additional storage volume ranging from 12.0m³ to 36.0m³ may be available within the bioswale during periods of intense rainfall.

Based on the project specific 'Geotechnical Report' completed by GeoPacific, dated 6 November 2014, the existing sub-surface soil conditions, from the ground elevation to the groundwater table, consist primarily of fill, including sand, sand and gravel, and silty sand and gravel. The existing sub-surface soil conditions are anticipated to provide high saturated hydraulic conductivity (i.e. soil infiltration rates in the range of 15-30mm/hr) and subsequently the 'Full Infiltration with Reservoir' design described above is anticipated to meet or exceed the infiltration rates required for the calculated area to be drained to the bioswale.

For example, assuming a soil infiltration rate of 15mm/hr, the proposed bioswale area (203.0m²) can accommodate runoff from the 1,015.2m² drainage area at a rainfall intensity of 3 mm/hr, without utilizing storage volume. This rainfall intensity is higher than the average '6-Month, 24 Hour' and '2-Year, 24 Hour' hourly rainfall intensities for Richmond (1.5mm/hr and 2.1mm/hr, respectively).

Conclusion

The above provides general input and recommendations relating to the subject site meeting or exceeding the 'Runoff Control and Storm Water Management Objective' requirement from Section 6 of City Bylaw 8385. The above does not provide detailed design. The City typically requires confirmation, at the Building Permit stage, that the detailed civil engineering onsite/private surface works and storm sewer designs associated with the development are designed to meet or exceed the 'Runoff Control and Storm Water Management Objective' requirement from Section 6 of City Bylaw 8385.

We trust this provides you with the information required at this time. If you have any questions or require further information, please do not hesitate to contact us.

Yours truly,

MPT ENGINEERING CO. LTD.

Jeff Crawford, P.Eng.

MPT ENGINEERING CO. LTD.

Tel: 604-270-9331

#210 - 8171 Cook Road, Richmond, BC Canada V6Y 3T8

Fax: 604-270-4137

GREEN POWER

	NC	CS
Credit	EA Credit 6	EA Credit 6
Points	2 points	2 points

INTENT

To encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.

REQUIREMENTS: NC & CS

Engage in at least a 2-year renewable energy contract to provide at least 35% of the building's electricity from renewable sources. Renewable sources are those that meet the Environmental Choice EcoLogo Program requirements for renewable, low-impact generation.

All purchases of green power shall be based on the quantity of energy consumed, not the cost.

CS ADDITIONAL REQUIREMENT:

The core and shell building's electricity is defined as the electricity usage of the core and shell floor area, but not less than 15% of the total proposed building electricity consumption.

OPTION 1. DETERMINE BASELINE ELECTRICITY USE

Use the annual electricity consumption from the results of EA Credit 1: Optimize Energy Performance.

OR

OPTION 2. ESTIMATE BASELINE ELECTRICITY USE

Use the U.S. Department of Energy's Commercial Buildings Energy Consumption Survey database to determine the estimated electricity use.

INTERPRETATIONS

Green-e is an acceptable alternative to EcoLogo. The Green-e program was established by the Center for Resource Solutions to promote green electricity and provide consumers with a rigorous method to identify green electricity products.

EA	
NC	Credit 6
CS	Credit 6

EA	
NC	Credit 6
CS	Credit 6

2. DEFAULT ELECTRICITY CONSUMPTION (OPTION 2)

If an energy model was not performed in EA Credit 1, use the U.S. Department of Energy's Commercial Buildings Energy Consumption Survey database to determine the estimated electricity use. This database provides electricity intensity factors (kWh/sf/yr) for various building types in the United States.

Table 1 summarizes median annual electrical intensities in kWh/m²/yr and kWh/sf/yr for different building types, based on data from the latest survey. The energy intensity multiplied by the floor area (square metres) of the project represents the total amount of electricity consumption. Total electricity consumption X 35% X 2 years represents the total green power (in kWh) that would need to be purchased over a 2-year period to qualify for EA Credit 6 using this option.

TABLE 1: COMMERCIAL BUILDINGS ENERGY CONSUMPTION SURVEY (CBECS) DATA, FROM U.S. DOE ENERGY INFORMATION ADMINISTRATION

BUILDING TYPE	MEDIAN ELECTRICAL INTENSITY(kWh/m ² -yr)	MEDIAN ELECTRICAL INTENSITY(kWh/ft ² -yr)
Education	71.0	6.6
Food Sales	634.0	58.9
Food Service	308.9	28.7
Health Care Inpatient	231.4	21.5
Health Care Outpatient	104.4	9.7
Lodging	135.6	12.6
Retail (Other than Mall)	86.1	8.0
Enclosed and Strip Malls	156.1	14.5
Office	125.9	11.7
Public Assembly	73.2	6.8
Public Order and Safety	44.1	4.1
Religious Worship	26.9	2.5
Service	65.7	6.1
Warehouse and Storage	32.3	3.0
Other	148.5	13.8



LEED Canada 2009 EAc6 Green Power Option 2. Estimated Baseline Electricity Use Calculations

20599 Westminster Highway
Richmond, BC

A. LEED Canada 2009 - EAc6 Default Electricity Consumption Figure from the U.S. Department of Energy's Commercial Buildings Energy Consumption Survey database.	32.3 kWh/m ² /yr
B. Total Building area (Refer to Drawing 14-018-A1).	4512 m ²
Estimated Annual Electricity consumption (AxB)	145738 kWh/yr
50% Green Power supply required per year for 2 years	72869 kWh/yr
Total Green Power Purchase required	145738 kWh/yr



No. DP 14-677130

To the Holder: GRAFTON ENTERPRISES LTD.

Property Address: 20599 Westminster Highway

Address: 20499 Westminster Highway,
Richmond BC V6V 1B3

1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. Subject to Section 692 of the Local Government Act, R.S.B.C.: landscaping and screening shall be constructed generally in accordance with Plans #1 to #3 attached hereto.
4. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
5. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$54,899.9 to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Holder if the security is returned. The condition of the posting of the security is that should the Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the City may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Holder. Should the Holder carry out the development permitted by this permit within the time set out herein, the security shall be returned to the Holder. The City may retain the security for up to one year after inspection of the completed landscaping in order to ensure that plant material has survived.
6. If the Holder does not commence the construction permitted by this Permit within 24 months of the date of this Permit, this Permit shall lapse and the security shall be returned in full.

This Permit is not a Building Permit.

ISSUED BY THE COUNCIL THE

DELIVERED THIS DAY OF ,

MAYOR







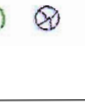









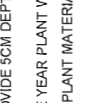

LANDSCAPE DESIGN CONSULTANTS
1000 WEST 10TH AVENUE, SUITE 100
DENVER, CO 80202
TEL: 303.733.1111
WWW.LANDSCAPEDESIGNCONSULTANTS.COM

THESE PLANS ARE THE PROPERTY OF LANDSCAPE DESIGN CONSULTANTS AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF LANDSCAPE DESIGN CONSULTANTS.

NO PART OF THESE PLANS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF LANDSCAPE DESIGN CONSULTANTS.

THESE PLANS ARE THE PROPERTY OF LANDSCAPE DESIGN CONSULTANTS AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF LANDSCAPE DESIGN CONSULTANTS.

PLANT LIST

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	9	Gledisia tria. Inermis 'Halka'	Halka Honey Locust	6cm cal., B&B	
	4	Magnolia stellata	Star Magnolia	6cm cal., B&B	
	6	Picea omorika	Serbian Spruce	2.0m ht. B&B	
	15	Pinus nigra 'Arnold's Sentinal'	Arnold's Sentinal Austrian Pine	2.0m ht. B&B	
SHRUBS					
	21	Arbutus unedo	Strawberry Bush	#3 Cont.	
	7	Cornus alba 'Elegantissima'	Silver Leaf Dogwood	#3 Cont.	
	29	Photinia fraseri	Photinia	#3 Cont.	
	32	Potentilla 'Klondike'	Klondike Potentilla	#2 Cont.	
	280	Prunus l. 'Zabelliana'	Zabel's Laurel	#2 Cont., 90cm O.C.	
	8	Ribes sanguineum	Fragrant Currant	#3 Cont.	
	91	Rosa meidland 'White'	White Meidland Rose	#2 Cont., 90cm O.C.	
	66	Sarcococca hookerana humilis	Fragrant Sweet Box	#2 Cont., 90cm O.C.	
	156	Thuja occidentalis 'Smaragd'	Smaragd Cedar	1.0m ht. 0.75m O.C.	
GROUNDCOVERS AND PERENNIALS					
	196	Carex comans 'Bronze'	Bronze Hair Sedge	#1 Cont. 0.60m O.C.	
	196	Cornus canadensis	Bunchberry	#1 Cont. 0.60m O.C.	
	570	Colonsasler dammeri	Baaberry Colonsasler	#1 Cont. 0.60m O.C.	
	25	Erica carnea 'Springwood White'	Springwood White Heather	#1 Cont. 0.60m O.C.	
	26	Helleborichon sempervirens	Blue Oatgrass	#1 Cont. 0.60m O.C.	

REVISIONS

NO.	DATE	DESCRIPTION
1	10/10/14	ISSUED FOR PERMIT
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PROJECT
PROPOSED
MULTI-TENANT
OFFICE/WAREHOUSE
20599
WESTMINSTER HWY.
RICHMOND, B.C.

SHEET TITLE
LANDSCAPE PLAN

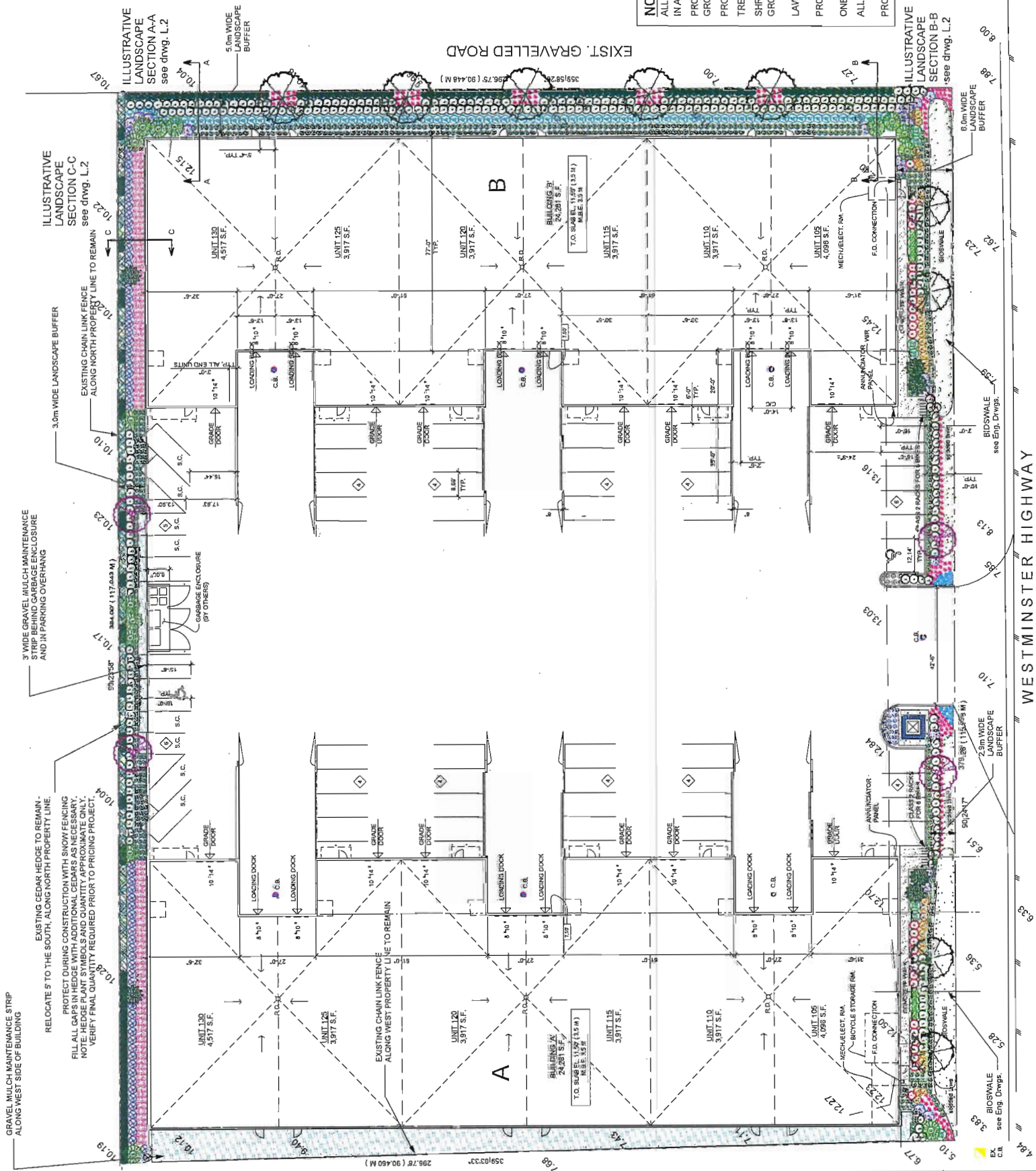
DATE
November 10, 2014
DRAWN R.D.
CHECKED R.D.
SCALE: 1"=20'-0"

SHEET NUMBER
L.1 of 2

plan #2

DP 14-677130

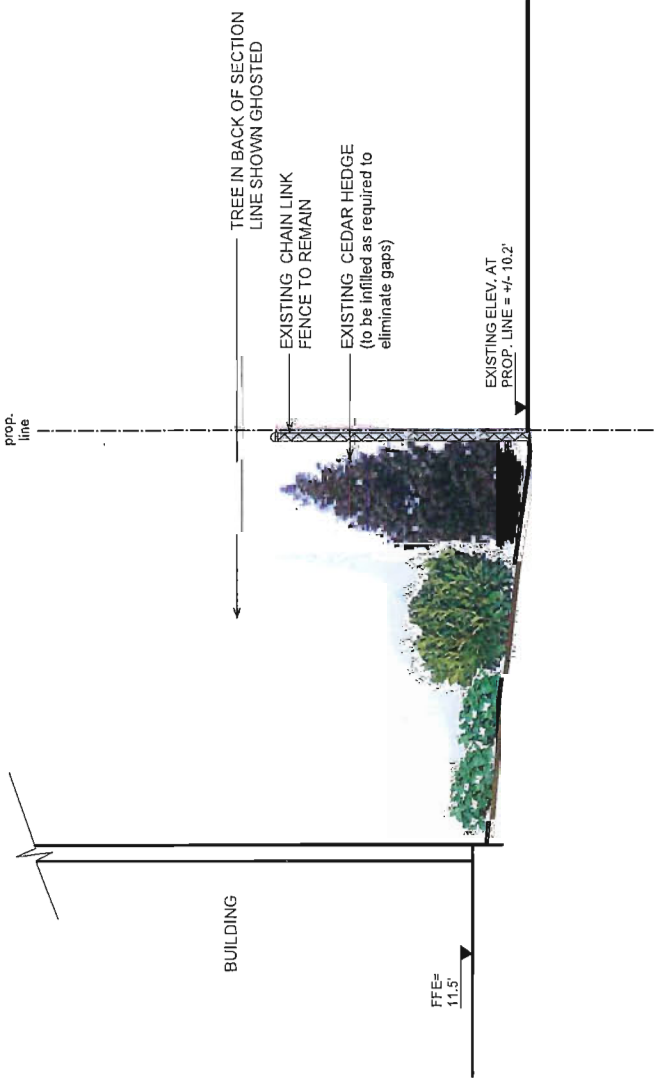
for parking stall dimensions, see site plan



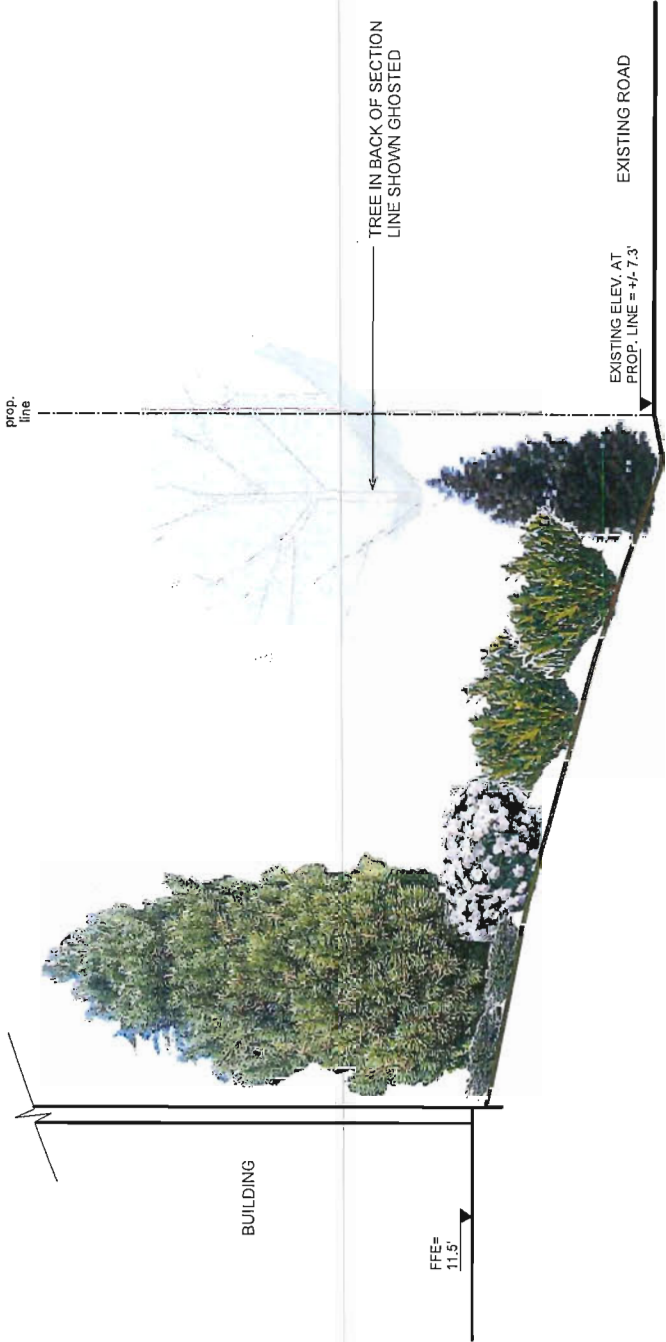
NOTES:
LANDSCAPE PLANS FORM PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND CONDITIONS OF THE CONTRACT.
THESE PLANS WERE PREPARED BY THE ARCHITECT AND THE LANDSCAPE ARCHITECT AND SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND CONDITIONS OF THE CONTRACT.
THE LANDSCAPE ARCHITECT'S RESPONSIBILITY IS LIMITED TO THE DESIGN OF THE LANDSCAPE AND DOES NOT INCLUDE THE DESIGN OF THE BUILDING OR THE STRUCTURAL DESIGN OF THE LANDSCAPE.
THE LANDSCAPE ARCHITECT'S DESIGN IS BASED ON THE INFORMATION PROVIDED BY THE ARCHITECT AND THE LANDSCAPE ARCHITECT AND DOES NOT INCLUDE THE DESIGN OF THE BUILDING OR THE STRUCTURAL DESIGN OF THE LANDSCAPE.
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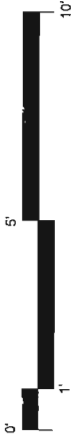
SECTION A-A LANDSCAPE BUFFER AT NORTH EAST



SECTION C-C LANDSCAPE BUFFER NORTH



SECTION B-B LANDSCAPE BUFFER AT SOUTH EAST

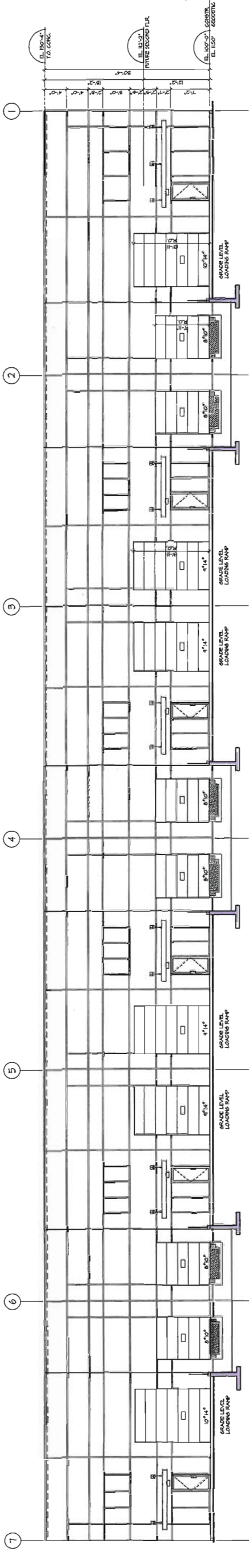


REFER TO DRAWING L.1 FOR LOCATIONS OF LANDSCAPE SECTIONS

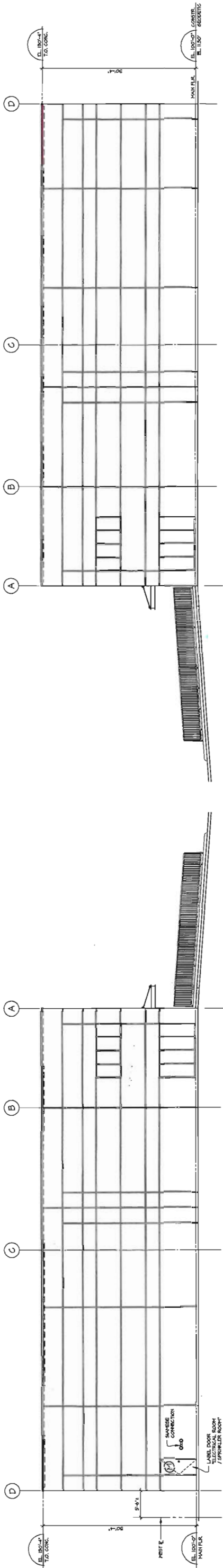
DP 14-677130

plan #3

REVISIONS	
NO.	DESCRIPTION
A	ISSUED FOR PERMIT PRESENT

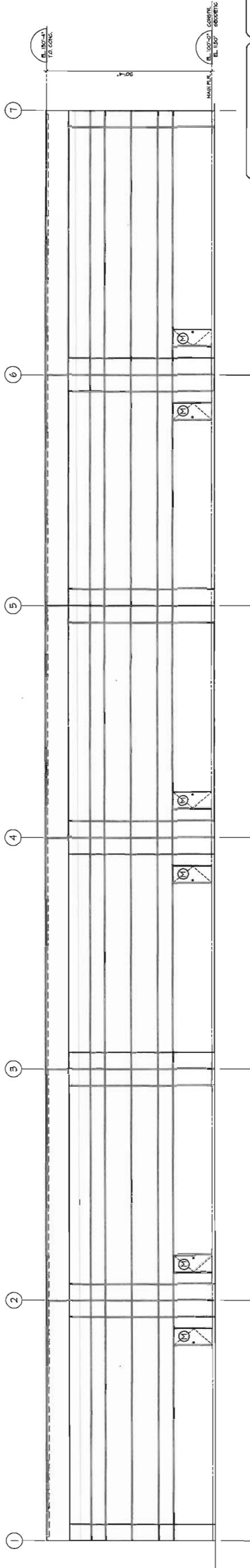


EAST ELEVATION - BUILDING 'A' - 20549
FACED SOUTH SIDE - 2049
BUILDING 'B' - 20649
SIM. BUT OPPOSITE HAND



SOUTH ELEVATION - BUILDING 'A' - 20549
FACED WESTERN SIDE
BUILDING 'B' - 20649
SIM. BUT OPPOSITE HAND

NORTH ELEVATION - BUILDING 'A' - 20549
FACED NORTH PROPERTY LINE
BUILDING 'B' - 20649
SIM. BUT OPPOSITE HAND



WEST ELEVATION - BUILDING 'A' - 20549
FACED WEST PROPERTY LINE
BUILDING 'B' - 20649
SIM. BUT OPPOSITE HAND

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LO STUDIO
ARCHITECTURE
#205 - 3751 JACOBES ROAD - RICHMOND, B.C.
V6V 2R4 - TEL: 604-278-0114 - CELL: 778-380-0262

PROJECT
PROPOSED MULTI-TENANT OFFICE /
WAREHOUSE FOR:
GRAFTON GROUP
ELEVATIONS BLDG. 'A' - 20549

Plot date: Nov 14, 2014 - 3:05pm

SCALE	1/8" = 1'-0"	DRAWN BY:	ED	20549 & 20649 WESTMINSTER HIGHWAY	DWG. NO.	14-018-A3	REV.	A
DATE	NOV. 2014	CHECKED BY:	DSS	RICHMOND, B.C.				

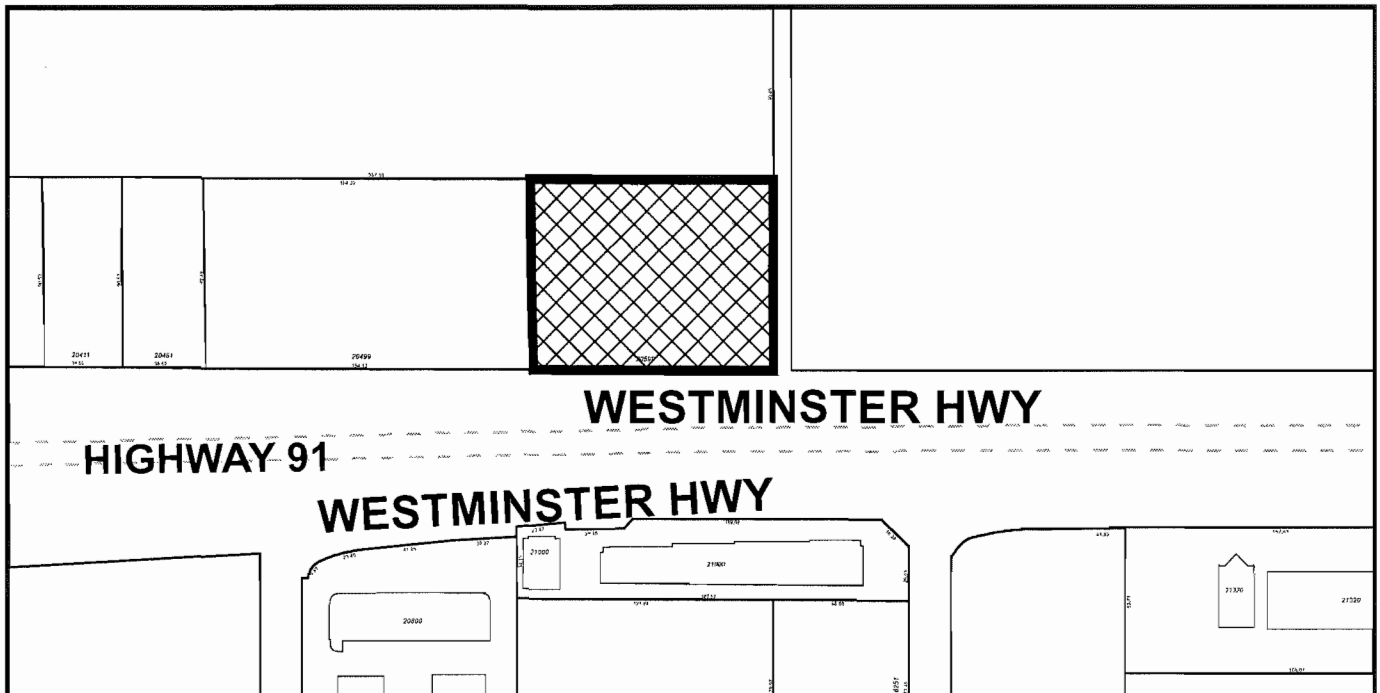
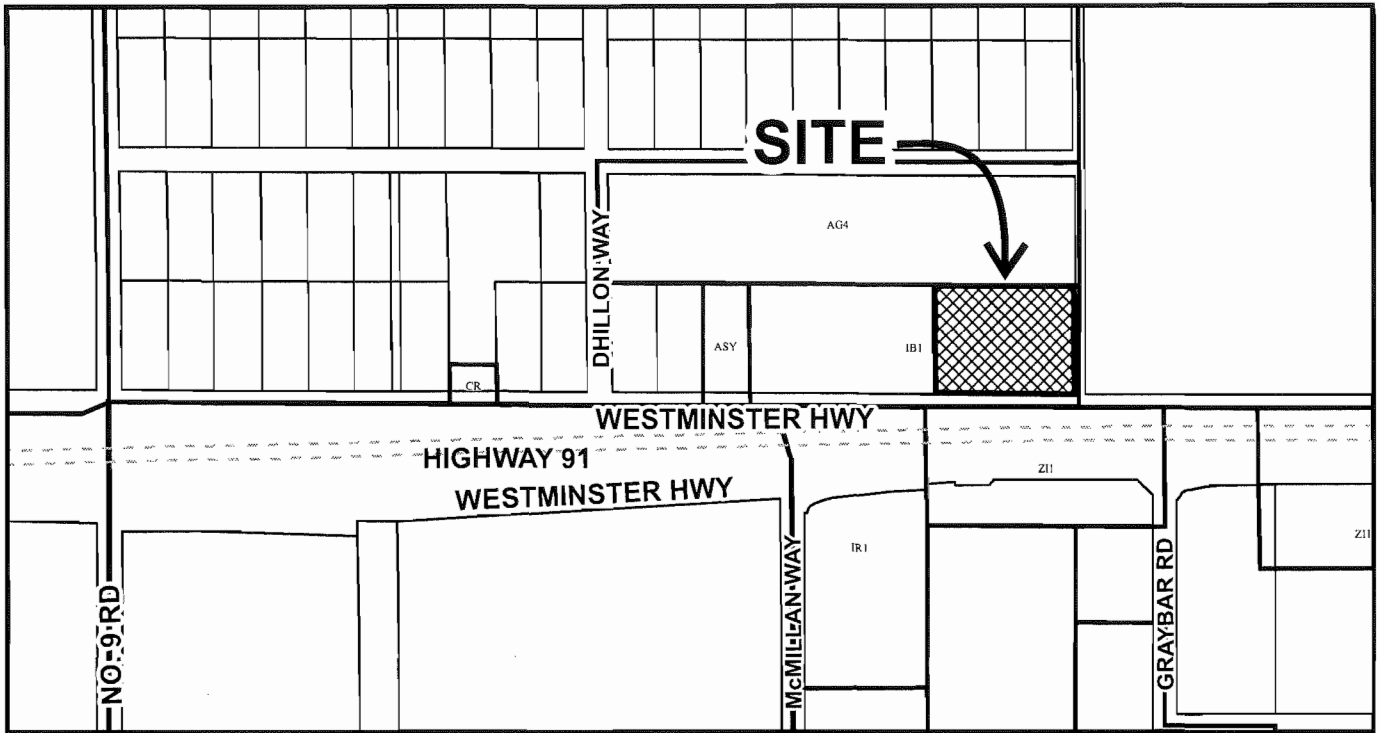
BUILDING & INTERIOR DESIGN CONSULTANTS
IN COLLABORATION WITH LO STUDIO ARCHITECTURE
#205 - 3751 JACOBES ROAD - RICHMOND, B.C. V6V 2R4 - TEL: 604-278-0114 - FAX: 604-278-9850 - E-MAIL: office@sanford-designs.com

sanford design group

Elevations - reference only



City of Richmond



DP 14-677130

Original Date: 11/27/14

Revision Date:

Note: Dimensions are in METRES



City of
Richmond



DP 14-677130

Original Date: 11/27/14

Revision Date

Note: Dimensions are in METRES