City of Richmond

Report to Development Permit Panel

To:	Development Permit Panel	**Date:**	November 17, 2014
From:	Wayne Craig Director of Development	**File:**	DV 12-618411
Re:	**Application by Globalive Wireless Management Corp. for a Development Variance Permit at 13280 Mitchell Road**		

Staff Recommendation

1. That a Development Variance Permit be issued which would vary the provisions of Richmond Zoning Bylaw 8500 to increase the maximum accessory structure height in the "Industrial (I)" zoning district from 20 m (66 ft.) to 40 m (132 ft.) in order to permit the installation of a telecommunication antenna monopole at 13280 Mitchell Road; and

2. That Richmond City Council grant concurrence to the proposed telecommunication monopole installation for the site located at 13280 Mitchell Road.

Wayne Craig
Director of Development

WC:ke
Att.

Staff Report

Origin

Globalive Wireless Management Corp. has applied to the City of Richmond for permission to vary the "Industrial (I)" zoning district in Richmond Zoning Bylaw 8500 to increase the maximum height for an accessory structure from 20 m (66 ft.) to 40 m (132 ft.) to allow for development of a telecommunication antenna monopole on an "Industrial (I)" zoned property at 13280 Mitchell Road, on Mitchell Island.

Proposed Development

The proposed telecommunication antenna monopole is located at the north east portion of the subject site close to the driveway access to the site from Mitchell Road. The installation and all supporting equipment will be located in a fenced compound (100 sq. m or 1,076 sq. ft. in area). Telecommunication antenna equipment is proposed to be located within the top 5 m (16 ft.) of the installation. All antennas are proposed to be flush mounted to the monopole. The proponent has confirmed that the monopole is capable of co-locating additional telecommunication equipment for future installations.

The subject site contains an industrial operation that utilizes a majority of the 7.8 acres (31,715 sq. m) site for outdoor storage and staging. To minimize conflict between the existing industrial activities and the telecommunication installation, the north east corner of the site was selected.

Background

Development surrounding the subject site is as follows:

To the north, Mitchell Road and the highway off-ramp to Knight Street corridor.

To the east, an "Industrial (I)" zoned property.

To the south, the foreshore and north arm of the Fraser River.

To the west, an "Industrial (I)" zoned property.

Staff Comments

The subject site has an Environmentally Sensitive Area (ESA) designation on the southern portion associated with the shoreline and intertidal area of the Fraser River. The proposed telecommunication installation is located outside of the ESA and will not have any impacts to this area.

Transportation and Engineering staff have no objections to the proposal. The proponents will need to obtain the appropriate Building Permit's from the City prior to the construction of any telecommunication related antenna, structures and/or buildings.

Related City Policies

Policy 5045 – Telecommunication Antenna Consultation and Siting Protocol

Council Policy 5045 was approved on February 13, 2012, which guides the City's review and consideration of telecommunication proposals (Attachment 1 – Policy 5045). The following is a summary of applicable provisions of the Policy that apply to this proposal:

- **City Zoning** – Richmond Zoning Bylaw 8500 permits telecommunication antenna installations and related infrastructure in all zones. Individual zoning provision (i.e. setback, height) apply to telecommunication installations. The subject site is zoned "Industrial (I)", which permits a maximum accessory structure height of 20 m (66 ft.) that is applicable to telecommunication antenna towers. The proposed telecommunication monopole requires a Development Variance Permit to permit the 40 m (132 ft.) tall tower.

- **Policy Exclusions/Exemptions** – No exclusions or exemptions apply to the proposed installation.

- **Locational Siting/Criteria** – The subject site is designated Industrial in the 2041 Official Community Plan and is zoned "Industrial (I)". This land use and zoning are not defined as sensitive land uses based on Policy 5045 and the proposal does not require additional public consultation to be undertaken.

- **General Location Parameters** – The proposed installation complies with the general location parameters of Policy 5045 as it is located on Industrial OCP designated and zoned land with industrial activities in the surrounding area.

- **Public Consultation** – In accordance with the statutory notification requirements for Development Variance Permit applications, a notification sign has been posted on the subject site. To date, no public comments have been received as a result of the posted signage. The City's standard letter notifications and newspaper advertisements will be undertaken for the Development Permit Panel meeting.

- **Design Guidelines:**
  - Locating on other existing towers and structures – Based on the service providers coverage requirements for the area, the proponent undertook a review of existing towers and structures in the surrounding area to determine opportunities for co-location. Although there is an existing telecommunication tower (to the east) and structure (lattice structure for a former water tower) to the south west with telecommunication installations, the proponent has confirmed that the existing tower and structure is at capacity and cannot accommodate the equipment and/or provide the service coverage requirements of the service provider. The existing telecommunication tower (lattice structure) to the east is approximately 45 m (148 ft.) tall. The height of the former water tower is not known.
  - Co-location for other telecommunication service providers – The proposed 40 m (132 ft.) tall monopole is designed to accommodate additional telecommunication antenna to support future installations. The proponent has engaged other service providers for co-location opportunities on the proposed tower; however, at this time no arrangements have been finalized.
  - Rationale for proposed monopole height – The proponent has identified that a 40 m tall monopole can provide substantially more service coverage when compared to a monopole tower that is 20 m (66 ft.) tall and that would be in compliance with zoning regulations. By providing a taller monopole structure with greater coverage area, the service provider potentially avoids having to construct other smaller towers in the surrounding area.

- Design integration – The proposed monopole was designed to provide a significant amount of service coverage and co-location opportunities in a structure with as slim a profile as possible to minimize visual disturbance and appearance. To achieve this, antennas and all supporting equipment are flush mounted to the surface of the monopole. A number of different colour schemes were examined and it was determined that the monopole and antenna equipment should be light grey in colour to blend in with the sky and surrounding developments.

  The proponent also explored the feasibility of enclosing the top portion of the monopole in a cylindrical shroud, which would provide an additional visual screen to the antennas. The option to shroud the antennas resulted in a number of technical challenges that would limit the ability to undertake maintenance. Furthermore, given the height of the antenna, a shroud required the profile of the monopole to increase. Staff recommend that no shroud be implemented as the flush mounted antennas and monopole are able to achieve a slim, less visible profile.

- Equipment Enclosure – An 10 m (33 ft.) by 10 m (33 ft.) fenced enclosure (chain link with privacy slats) at the base of the monopole is proposed, which will contain all necessary supporting equipment for the telecommunication installation. The enclosure and location of the installation will minimize conflict with the activities of the existing industrial operation on the subject site. Landscaping proposed on the north and east perimeter of the fence (visible from the road) will provide additional screening of the compound.
- Landscaping – Landscape (double layer of pyramidal hedging and shrubs) on the outside of the fence visible from the public road is proposed.
- Photo simulations of the proposed monopole and telecommunication antenna from the west and east (along Mitchell Road) can be viewed in Attachment 2.

Analysis

The proposed 40 m tall telecommunication antenna monopole has been reviewed in coordination with Council Policy 5045 (Telecommunication Antenna Consultation and Siting Protocol) and is compliant with the following relevant components of the policy:

- Located on "Industrial (I)" zoned land and on land designated Industrial in the 2041 OCP. These land uses are not considered to be sensitive land uses in accordance with the policy and therefore no public consultation was required in addition to the normal notification requirements for Development Variance Permit applications.
- No landscaping or sensitive environmental areas will be impacted by the proposal.
- The monopole is designed as a slim profile structure, with antennas flush mounted to minimize visibility and tower bulk.
- The monopole structure will be capable of accommodating additional cellular carriers through the co-location of antenna on the same structure or expansion of the proponent's equipment/antenna on the existing tower for additional service capacity. In accordance with the policy, the proponent has contacted other service providers about co-locating on this structure. To date, no agreement has yet been finalized.
- The equipment enclosure at the base of the tower will be fenced and screened with appropriate landscaping.

The proposed location of the telecommunication installation on the subject site will also ensure that the existing industrial activities can operate without any disturbance.

Conclusions

Staff support the proposed variance from 20 m (66 ft.) to 40 m (132 ft.) accessory structure height for the telecommunication antenna monopole. The proposal complies with and has addressed relevant aspects of Council Policy 5045.

On this basis, staff recommend that:

1. Council grant concurrence to the proposed telecommunication antenna monopole installation for the subject site; and
2. A Development Variance Permit be issued to vary the maximum accessory structure height from 20 m (66 ft.) to 40 m (132 ft.) to permit installation of the telecommunication monopole.

Kevin Eng
Planner 2

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

- Receipt of a landscape letter of credit or suitable bond in the amount of $7,262

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

- 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. *For further information on the Building Permit, please contact Building Approvals Division at 604-276-4285.*
- Submission of construction traffic and parking management plan to the satisfaction of the City's Transportation Division (http://www.richmond.ca/services/ttp/special.htm).

City of Richmond

Policy Manual

Page 1 of 8	Adopted by Council: February 13, 2012	Policy 5045
File Ref: 08-4040-01-2012	Telecommunication Antenna Consultation and Siting **Protocol**	

POLICY 5045

The Federal *Radiocommunications Act* regulates the telecommunications network (e.g. antennas) and supersedes local zoning powers. Nevertheless, the *Telecommunication Antenna Consultation and Siting Protocol* (**Protocol**) identifies the City's interests in managing network elements, in order for network providers to know and follow them, as long as they do not impair the performance of the telecommunications network.

The Protocol addresses:

A. **City zoning**, acknowledging the authority of the *Radiocommunication Act* (**Act**), Industry Canada's role, policy and regulations under this Act, and that local zoning is not applied so as to impair the performance of the telecommunications network.

B. **Public consultation** requirements associated with the placement of certain telecommunication antenna installations within the City of Richmond (**City**), including completing the consultation process **within 120 days** of a Protocol application being received by the City.

C. **Siting design guidelines** applicable to all telecommunication antenna installation proposals described under this **Protocol.**

D. The City's process for Council and staff for providing recommendations of concurrence or non-concurrence under the authority of the **Act** as well as exemptions to this process.

1. Federal Authority and City Regulations

A. **Zoning** - Federal authority over telecommunication antenna **installations** provides that the **City** is not able to prohibit these uses under its zoning, and thus:

   a. **Telecommunication antenna installations (Installations)** are a permitted use in all zones.
   b. **Zoning regulations** apply to the zone in which the **installation** is located (i.e. siting, height, landscaping, etc.).
   c. **Development Variance Permit** applications to vary height or siting provisions under the zoning may be considered if necessary to the extent that they would not reasonably prohibit an Installation.

B. **Siting Design Guidelines** are included in this **Protocol** with a preference for new tower **Installations** to be located outside of the **Residential, Agriculture, Agriculture & Open Space and Public & Open Space** OCP land-use designations or associated zones.

C. **Building permits** are required to be issued by the **City** for foundations for antennas and associated construction of new buildings and building additions to accommodate **Installations**.

D. **Municipal Access Agreements** apply to any **Installations** within the City's roads, rights of way and other public places as defined and permitted in such Municipal Access Agreements.

Notes:

a. For the purposes of this **Protocol**, **"telecommunication antenna Installations"** (**Installations**) can take the form of either antennas mounted on stand-alone towers or building-mounted antennas along with any supporting mechanical rooms, buildings and infrastructure of telephone and data networks that serve public subscribers.

b. "**Residential**" includes all Residential, Neighbourhood Residential, Mixed Use, High-Density Mixed-Use, and Neighbourhood Service Centre land use designations in the OCP and includes all zones consistent with these OCP designations.
c. Subsequent OCP land use designations with similar uses to those described in this Protocol may be used in place of the current OCP land use designations.

d. **"Tower"** includes monopoles, stand-alone towers, masts and similar structures to which antennas are attached, but does not include building-mounted antennas under 6.0m in height.

2. Antennas Requiring Protocol Processing

A. Situations Where Protocol Consultation Provisions Do not Apply

Sections 3 (Consultation), 4A(Co-Location) of this Protocol do not apply to:

Industry Canada Exclusions

a. **Maintenance** of existing radio apparatus including the antenna system, transmission line, mast, tower or other antenna-supporting structure.

b. **Addition or modification of an antenna system** (including improving the structural integrity of its integral mast to facilitate sharing), the transmission line, antenna-supporting structure or other radio apparatus to existing infrastructure, a building, water tower, etc. provided the addition or modification does not result in an overall height increase above the existing structure of 25% of the original structure's height.

c. **Maintenance of an antenna system's painting or lighting** in order to comply with Transport Canada's requirements;

d. **Installation, for a limited duration** (typically not more than 3 months), of an antenna system that is used for a **special event**, or one that is used to support local, provincial, territorial or national **emergency operations** during the emergency, and is removed within 3 months after the emergency or special event; and

e. **New antenna systems,** including masts, towers or other antenna-supporting structure, with a height of **less than 15 metres** above ground level.

City Exclusions

f. **New building-mounted Installations** provided they do not extend more than 3.0m above highest point of the building and meet section 4B of the Design Guidelines.

g. **A new stand-alone tower that replaces an existing tower** provided it does not exceed the height of the existing tower and that the new tower is located **not more than 15m from the existing tower**; the Proponent is required to remove the existing tower along with any unused associated foundations, buildings, fencing and other structures to the extent agreed by the landowner and the **City.**

h. Land that is designated in the OCP as Airport, Business and Industry and that is more than 300m (for new towers over 30m in height) or more than 150m (for new towers between 15m and 30m in height) from land with Residential OCP land-use designations.

i. **Local government Installations** that are solely dedicated to operation of local government utilities and infrastructure.

j. Private receiving antennas and closed telecommunication networks, neither of which serve public subscribers.

B. Situations Where Both Protocol Consultation and Detailed Design Provisions Apply

Sections 3 (Consultation) and Section 4 (Design Guidelines) of this Protocol apply to all new stand-alone Installations on sites that are:

a. **Within the Agriculture and Agriculture & Open Space OCP land-use designations/associated zones[1];**

b. **Residential or Public & Open Space OCP land use designations /associated zones or are within 300m for (new towers over 30m in height) or more than 150m (for new towers between 15m and 30m in height) of such lands.**

Notes:

a. Broadcasters require licensing approval from the Canadian Radio-Television and Telecommunications (CRTC). Where a broadcaster constructs an **installation**, the broadcaster is required to provide documentation to the **City** confirming the initiation of the applicable (CRTC) licensing process and it's decision when made.

b. Where an **installation** is located on a **City** property the proponent may be required to enter into a specific agreement related to that property, or in the case of a road or SROW the proponent may be required to enter into a Municipal Access Agreement with the **City.**

c. **Transport Canada and other federal transportation regulations and policies, including the current YVR maximum height zoning, is to be followed by the Proponent.**

3. Stepped Consultation Process

A. **For those new Installations to which this Protocol applies**, the process will generally involve the following steps:

a. **Proponent** should undertake initial pre-application consultation with the City to ascertain policy and technical issues as well as alternatives to locations that require consultation.

b. **Proponent** submits the **Protocol** application along with a siting plan that addresses this **Protocol's** Design Guidelines (Section 4) and provides written confirmation of compliance with Industry Canada, Nav Canada and other federal regulations. The City confirms whether the consultation process under this Protocol applies and whether a Development Variance Permit (DVP) to relax zoning regulations is required. If neither of these are required for more minor applications, an application for **Design Review: Staff Concurrence** is made under **Process Stream No. 1** under Section 3B below.

[1] See Notes A and B on page 1.

c. **City** reviews the application based on the parameters established in this **Protocol** and provides initial comments

d. **Proponent** undertakes **initial public consultation, at his/her cost,** that includes:

   i. **Advertising** in at least two consecutive weekly issues of a local newspaper and City Hall Bulletin Board to inform the public of a proposed **installation over 30m in height**; and
   ii. **Written notification**, via direct-addressed mail, to all property owners within a radius from the base of the proposed tower equal to 6 times the tower height or adjacent property owners if no other property is located within 6 times tower height (mailing address list is provided by the City).

e. **Proponent receives any public comments, within a 10-day public comment period** commencing on the notice mailing date or second advertisement date (whichever is later), and addresses them with the public via correspondence through explanation or proposed changes to the proposal **within a 10-day Proponent reply period** commencing immediately after the public comment period.

f. Proponent documents all aspects of the public consultation process and provides a summary report to the City not more than 10 days after the end of the Proponent reply period . In addition to highlighting the details of the consultation process, the report must contain all public correspondence received and responses by the proponent to address public concerns and comments. Examples of concerns that proponents are to address, as identified by Industry Canada, include, but are not limited, to issues similar to the following:

   - Why is the use of an existing antenna system or structure not possible?
   - Why is an alternate site not possible?
   - What is the proponent doing to ensure that the antenna system is not accessible to the general public?
   - How is the proponent trying to integrate the antenna into the local surroundings?
   - What options are available to satisfy aeronautical obstruction marking requirements at this site?
   - What are the steps the proponent took to ensure compliance with the general federal requirements including the *Canadian Environmental Assessment Act* (CEAA), Safety Code 6, etc.?

g. **Proponent may be required** to hold a **first public meeting** if there are any outstanding public concerns after responding to any public comments from the initial consultation and reporting them back to the **City.** This meeting may take the form of a general public open house or invitee meeting if there are relatively few people expressing issues of concern. The notification process will be the same of that of initial notification if there is to be a public meeting or notification of only interested parties to an invitee meeting.(As necessary - determined at the discretion of the **City**'s Director of Development, based on public comments from initial mail-out consultation).

h. **Proponent addresses** public comments from the first public or invitee meeting on issues and repeats documentation process as outlined in (e) above.

i. **Proponent may need to make a DVP application** if the proposal does not meet the applicable zoning setbacks, heights or landscaping/screening provisions. The DVP process is coordinated with the **Protocol** consultation process. If the **Installation does not require public consultation as outlined above,** but requires a DVP to relax zoning provisions, the **Proponent** will need to **submit a standard DVP application** following Process Stream 3 below, but with the regular 50m DVP consultation radius.

j. If the proposed **Installation** is located within the ALR, the proposal will also be referred to the City's Agricultural Advisory Committee (AAC) concurrently with the above Proponent consultation process.

B. The application takes one of **Three Process Streams** depending on whether the above public consultation and a DVP are required.

PROCESS STREAMS

1. Staff Concurrence: Design Guidelines Only	**2. Council Concurrence: Regular Consultation Process**	**3. Council Concurrence: Consultation Process With a DVP**
a. If there is no public consultation required as set out above nor a DVP required to relax zoning requirements, City staff will view an application for siting and design.	**a. City undertakes public notification** for formal consideration of application using the consultation area as set out in this **Protocol.**	**a. City undertakes public notification** for formal consideration of a DVP following the **City DVP process,** but using the consultation area as set out in this **Protocol.**
b. Staff prepares a memo reviewing how the proposed **Installation** meets the **Design Guidelines** under Section 4	**b. City staff prepares a report to Planning Committee** that reviews how the proposal meets the **Protocol** Design Guidelines, addresses public comments and provides a recommendation (i.e. endorse; not endorse).	**b. City staff prepares a report to DP Panel** that reviews how the proposal requires a variance to zoning, meets the **Protocol** Design Guidelines, addresses public comments and provides a recommendation (i.e. endorse; not endorse).
c. The Director of Development considers the above memo and either issues a letter with **a recommendation of concurrence or requests changes to design and/or siting.**	**c. City Planning Committee reviews the application and staff report.** This will be the first meeting if no previous proponent-held meeting was required by the City or a second meeting if there was an initial public meeting.	**c. City Development Permit (DP) Panel reviews the application and staff report.** This will be the first meeting if no previous proponent-held meeting was required by the City or a second meeting if there was an initial public meeting.
	d. City Planning Committee makes a recommendation of concurrence or non-concurrence.	**d. City DP Panel makes a recommendation** of concurrence or non-concurrence.
d. Proponent may undertake possible design or siting modifications and/or provides additional documentation on design rationale if required.	**e. Proponent undertakes** possible proposal modifications and commitments, if any, requested by Planning Committee.	**e. Proponent undertakes** possible proposal modifications and commitments, if any, requested by DP Panel.
e. The Director of Planning and Development **issues a letter with a recommendation of concurrence or non-concurrence for design and siting.**	**f. Council considers Planning Committee's Recommendation of concurrence or non-concurrence** that is then forwarded to the proponent and Industry Canada to conclude processing.	**f. Council considers DP Panel Recommendation of concurrence or non-concurrence** that is then forwarded to the proponent and Industry Canada to conclude processing.

Note: The City's DVP notification area is expanded, at City cost, beyond the standard 50m-radius area to a radius of equal to 6 times the proposed tower/antenna height measured from the tower/antenna or includes adjacent properties (whichever is greater) to be consistent with the proponent notification area in this **Protocol.**

4. Design Guidelines

These design guidelines apply to all Installations - whether they involve new towers or are co-located on existing towers or erected on existing buildings. Proponents must also comply with Industry Canada design requirements, some of which are included in these guidelines (Please refer to CPC-2-0-03 – Issue 4 or subsequent Industry Canada Policies and Regulations).

A. Co-Location: The First Choice for All New Installations

a. **Co-Locate on Existing Towers** - Each proponent proposing a new **tower Installation** will need to explore opportunities for co-location on existing towers as required by Industry Canada, particularly to the extent that it does not significantly increase the visible bulk of antennas of the tower. Proponents should contact all other relevant telecommunication service providers to confirm opportunities for or agreements to co-locate on an existing **tower installation.**

b. **Planning for Co-Location** - All new **Installations** should be designed and engineered to accommodate additional antennas and related supporting infrastructure (e.g., mechanical buildings) as required by Industry Canada, particularly to the extent that it does not significantly increase the visible bulk of antennas for stand-alone towers or that accommodates multiple antennas on a building consistent with these guidelines.

c. **Confirming Support for Co-Location** - The proponent is to document whether they will **be co-locating on existing towers** Installations or **providing offers to share for future co-location opportunities** if there are no current opportunities for co-location. Appropriate information from the Proponent's professional consultants, may be required to confirm the extent to which co-location is possible under the above sections.

B. Specific Siting Criteria for All New Installations

The following guidelines apply **to all new Installations** (whether completely new towers or co-located on existing towers or erected on existing structures/buildings):

a. **Comply with Existing Zoning** - All applicable zoning regulations (height, setback, lot coverage and landscaping) apply to both stand-alone and building mounted **Installations** and supporting utility structures unless a DVP is obtained, while acknowledging the *Radiocommunication Act.*

b. **Integrate With Existing Adjacent Buildings and Landscape** – Stand-alone **Installations** should be properly integrated with existing buildings/structures and landscape in a manner that does not unduly affect their technical performance and be located to minimize the visual impact of the Installation on surrounding land uses.

c. **Integrate Into Building Design** - Building-mounted **Installations** should be architecturally integrated into the design of the building with appropriate screening (that does not unduly add the appearance of building mass) in a manner that does not unduly decrease their technical performance and colour

applied to minimize and integrate their appearance to the building. The preference is to have antennas screened only when screening will:

i. Not to increase mass unless appropriately integrated into the building mass; and
ii. Reduce visibility from street level and other major nearby buildings.

d. **Coordinate With Current Building Rooflines** – Building-mounted antennas should not extend beyond 3 m above the highest point of a building nor 3 m above a parapet wall surrounding the main part of a flat-roofed building to which the antenna is affixed. In addition to this guideline, the installation must comply with the maximum permitted building height under the applicable zoning, unless a DVP to relax the height provision is issued by the City.

e. **Conform with Any Applicable Existing Development Permit (DP) and Development Permit Area (DPA) Design Guidelines – Installations** affixed to existing buildings and structures should be consistent with or not defeat the intent of the applicable DP conditions or DPA design guidelines to the extent that conformity does not hamper the functionality of the **Installation**.

C. General Location for <u>New Stand-Alone Installations</u>

The following guidelines **<u>apply to new stand-alone Installations</u>** (where they can not be co-located on existing towers or erected on existing buildings/structures).

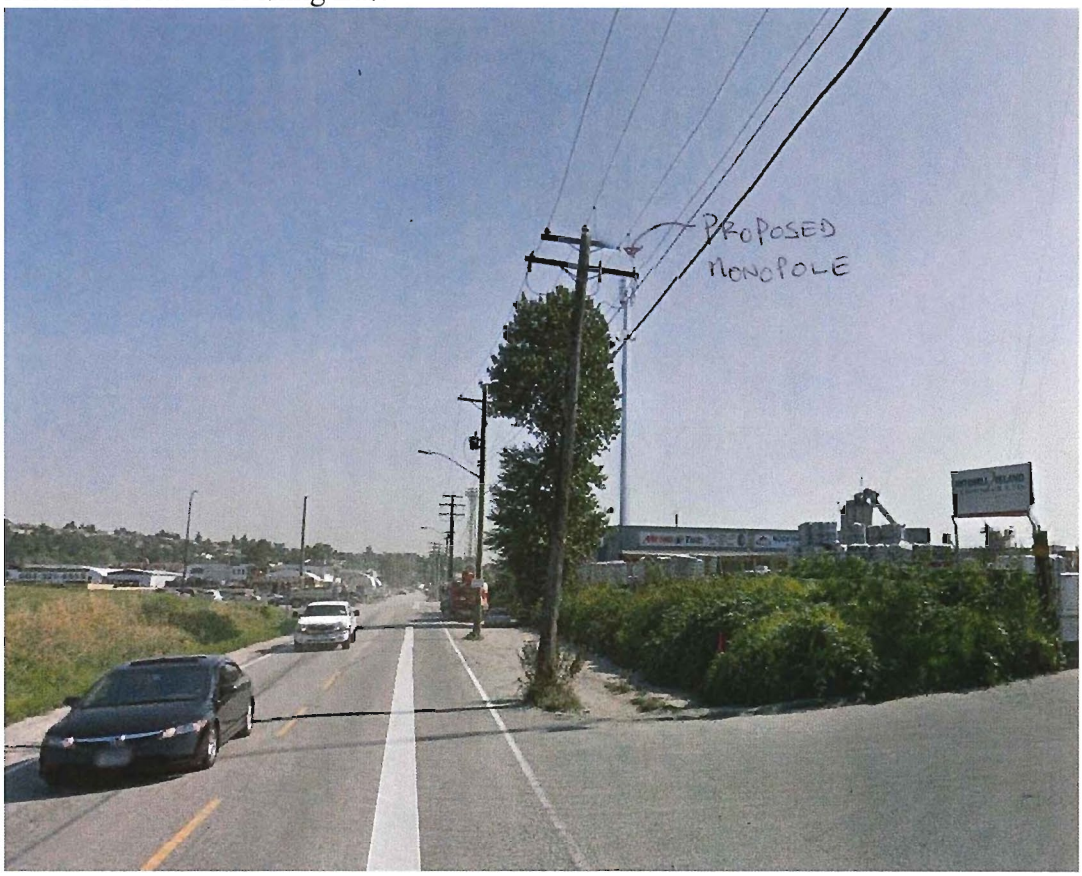
a. **Preference to Locate in OCP Industry and Business and Airport Designations** – A new stand-alone **Installation** should be located in the designated or zoned areas provided it is greater than 300m **(for new towers over 30m in height), or more than 150m (for new towers between 15m and 30m in height),** from lands with Residential or Public & Open Space land-use designations or associated zones.
b. **Minimize Environmental Impact** – Do not locate **Installations** in a manner that would negatively impact designated OCP Conservation Areas, Riparian Management Areas, and other areas with ecological habitat.
c. **Minimize Impact to Public & Open Space lands** – Do not locate **installations** in a manner that would negatively impact existing parkland and other public open spaces which include playgrounds, sports fields, trails and other similar recreational features.
d. **Protect and Utilize Existing Vegetation – Installations** should be located to minimize disturbance of and maximize screening from existing trees and landscaping with the objective of minimizing the visual impact of the **Installations**.
e. **Minimize Agricultural Impact** – Proponents should avoid locating **Installations** on land within the Agricultural Land Reserve (ALR) or in the OCP Agriculture and Agriculture & Open Space designations or associated zones. If it is deemed necessary for a proposed **installation** to be located in these areas, the following requirements apply:

i. Comply with ALR regulations, including requiring that all tower and related equipment/buildings **not exceed** a maximum footprint area of 100 sq. m.
ii. If this maximum footprint area is exceeded, a "non-farm use" application to the **City and Agricultural Land Commission will be required prior** to going through the **Protocol** consultation and any applicable DVP application processes.
iii. **Installations** should be located in a manner that maximizes land available for farming and minimize negative impacts to existing and future potential agricultural operations.

D. Screening and Landscaping For <u>New Tower Installations</u>
Proponents are **encouraged** to construct **any new tower Installations** meeting the following screening guidelines:

a. **Fencing -** Appropriate fencing is to be implemented to properly secure **Installations.**
b. **Screening Buffers-** A contiguous, solid decorative fence or planted landscape buffer, consisting of a combination of hedging, trees and shrubs, is to be implemented to screen stand-alone tower **Installations** from **Residential** areas, adjacent buildings and public roads. A minimum height of 2.0 m, and sufficient thickness for vegetation screening to obscure view of the installation, constitutes a landscape buffer.
c. **Maintenance** - Proponents should provide for long-term maintenance and upkeep of appropriate landscaping for its stand-alone telecommunication **Installations**.

Mitchell Road – Looking East



Mitchell Road – Looking West

City of Richmond

Development Variance Permit

No. DV 12-618411

To the Holder:	Globalive Wireless Management Corp.
Property Address:	13280 Mitchell Road
Address:	221 Esplanade Ave West Suite 209 North Vancouver, BC V7M 3J3

1. This Development Variance Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied by this Permit.
2. This Development Variance 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. The "Richmond Zoning Bylaw 8500" is hereby varied to increase the maximum accessory structure height of the "Industrial (I)" zoning district from 20 m (66 ft.) to 40 m (132 ft.) in order to permit the construction of a telecommunication antenna monopole as shown on the Plan #1 to #7 attached hereto.
4. The land described herein shall be developed generally in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part hereof.
5. 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.

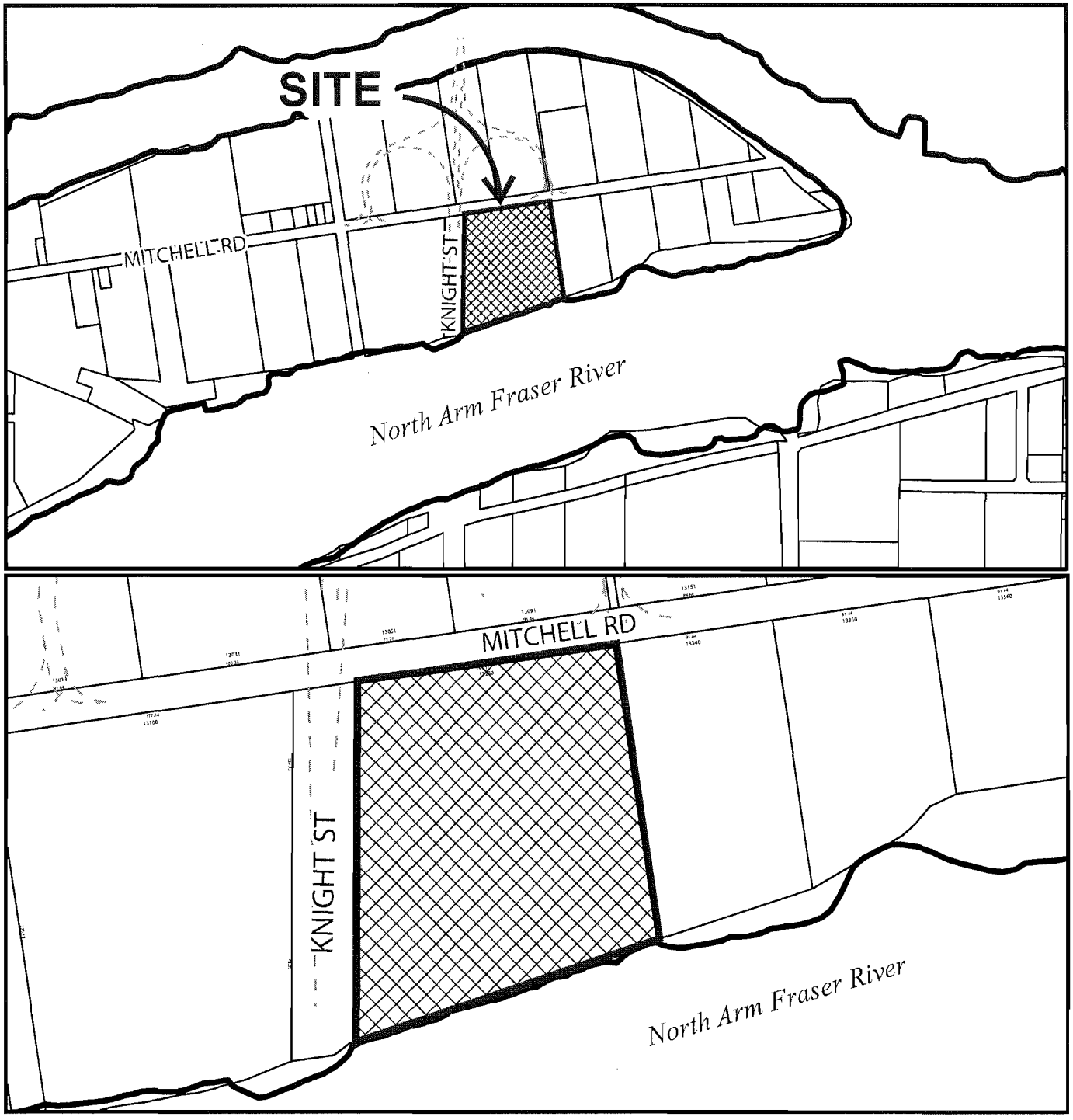
This Permit is not a Building Permit.

AUTHORIZING RESOLUTION NO. ISSUED BY THE COUNCIL THE DAY OF , .

DELIVERED THIS DAY OF , .

MAYOR

City of
Richmond



DV 12-618411
SCHEDULE "A"

Original Date: 11/18/14

Revision Date:

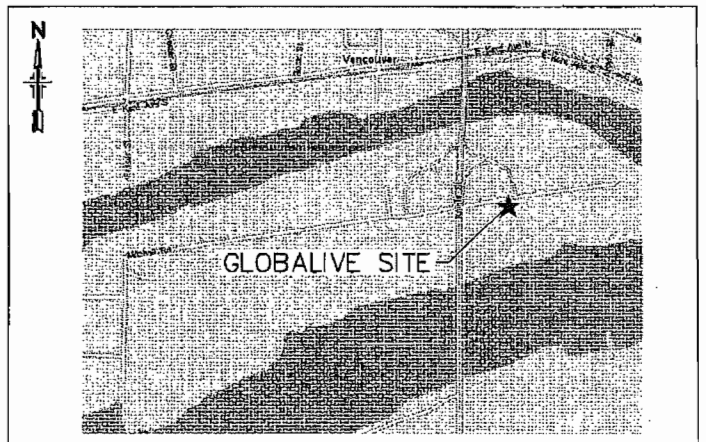
Note: Dimensions are in METRES

DRAWING INDEX		
DWG	REV	TITLE
A-1	5	COVER SHEET
A-2	4	SPECIFICATIONS
A-3	3	SITE PLAN
A-4	3	COMPOUND LAYOUT
A-5	3	NORTH ELEVATIONS AND ANTENNA LAYOUTS
A-6	3	CIVIL PLAN
A-7	2	ANTENNA SCHEDULE AND RRH INSTALLATION SCHEMATIC
S-1	2	STRUCTURAL DETAILS
S-2	2	CONCRETE PAD DETAILS
S-3	3	CHAINLINK FENCE DETAILS
E-1	2	SINGLE LINE DIAGRAM
E-2	2	ELECTRICAL SPECIFICATIONS
E-3	3	ELECTRICAL SITE PLAN
E-4	3	ELECTRICAL LAYOUT
E-5	2	ELECTRICAL ROOM LAYOUT
E-6	3	COMPOUND GROUNDING LAYOUT
E-7	2	GROUNDING DETAILS
E-8	3	CHAINLINK FENCE GROUNDING DETAILS
E-9	2	GROUNDING SCHEMATIC

Plan 1 NOV 17 2014

DV 12-618411

globalive



KEY PLAN
NOT TO SCALE

SITE CODE:	BVA0099
SITE NAME:	MITCHELL ISLAND
SITE ADDRESS:	13280 MITCHELL RD RICHMOND, BRITISH COLUMBIA
CONFIGURATION:	40.0m MONOPOLE AND OUTDOOR EQUIPMENT CABINETS ON CONCRETE PAD
SITE TYPE:	UMTS
PROJECT NUMBER:	1042-019
LATITUDE (NAD 83):	49.205326°
LONGTITUDE (NAD 83):	-123.075432°

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. B. MARKS
#21377

NOV 21 2014

REV.	DESCRIPTION	BY	DATE
5	REVISED PER WIND/TRK	RM	NOV 20/14
4	GENERAL REVISIONS	RM	OCT 09/12
3	GENERAL REVISIONS	RM	OCT 01/12
2	RE-ISSUED FOR B.P./CONST.	RM	AUG 16/12
1	REVISED PER GLOBALIVE	RM	AUG 14/12
0	ISSUED FOR B.P./CONST.	RM	JUL 13/12
B	SURVEY ADDED	RM	OCT 04/10
A	ISSUED FOR REVIEW	RM	AUG 20/10

CLIENT:
globalive

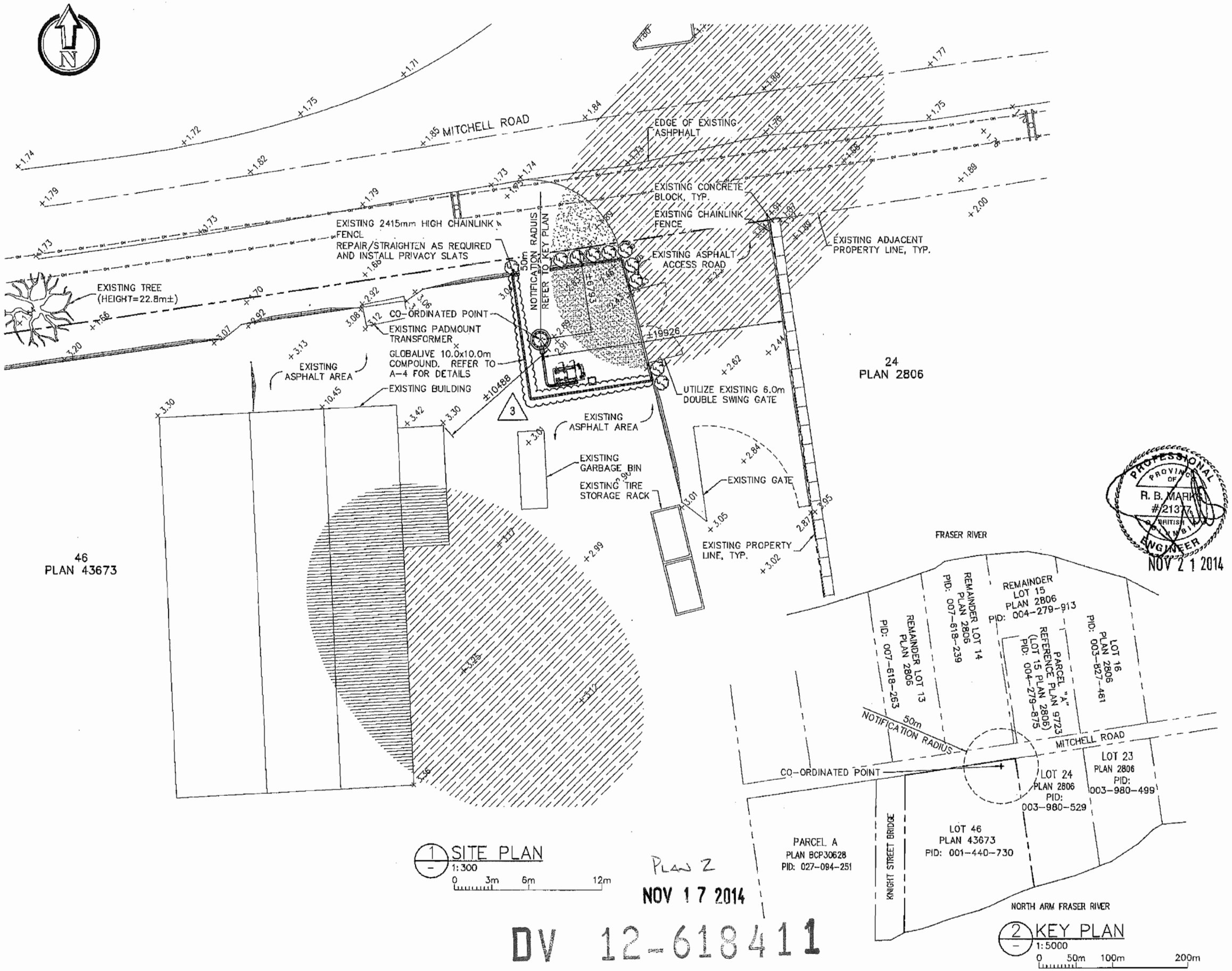
TRK ENGINEERING
HANGAR 9 5225 216TH ST.
LANGLEY, BC V2Y 2N3
TEL: (604) 574-6432
FAX: (604) 574-6431
EMAIL: mail@trkeng.com
WEB: www.trkeng.com

PROJECT:
BVA0099
MITCHELL ISLAND
13280 MITCHELL RD
RICHMOND BRITISH COLUMBIA

DRAWING TITLE:
COVER SHEET

SCALE:	N/A
CHECK BY:	R.M.
DRAWN BY:	D.M.
DATE:	AUG 20/10
CAD FILE:	1042-019A1
PROJECT NUMBER:	1042-019

DRAWING NO.
A-1



1 SITE PLAN
1:300
0 3m 6m 12m

2 KEY PLAN
1:5000
0 50m 100m 200m

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. B. MARKS
#21377
NOV 2 1 2014

Plan 2
NOV 1 7 2014

DV 12-618411

NOTES:

1. SITE PLAN INFORMATION WAS OBTAINED FROM A SURVEY PERFORMED BY "McELHANNEY ASSOCIATES LAND SURVEYING LTD.", DATED SEPTEMBER 30, 2010 AND SITE MEASUREMENTS TAKEN BY TRK ENGINEERING DATED JUNE 4, 2010.
2. DISTANCES ARE IN METERS.
3. ELEVATIONS ARE GEODETIC, IN METERS DERIVED FROM DELTA INTEGRATED.
   MONUMENT NO. V-611
   ELEVATION = 17.515m
4. GEOGRAPHIC CO-ORDINATES ARE NAD83, DERIVED FROM INTEGRATED MONUMENT NO. V-611.

LEGAL DESCRIPTION:

PID NO. 001-440-730
LOT 46 DISTRIC LOT 527 GROUP 1
NEW WESTMINSTER DISTRICT PLAN 43673

REV.	DESCRIPTION	BY	DATE
3	REVISED PER WIND/TRK	RM	NOV 20/14
2	RE-ISSUED FOR B.P./CONST.	RM	AUG 16/12
1	REVISED PER GLOBALIVE	RM	AUG 14/12
0	ISSUED FOR B.P./CONST.	RM	JUL 13/12
B	SURVEY ADDED	RM	OCT 04/10
A	ISSUED FOR REVIEW	RM	AUG 20/10

CLIENT: globalive

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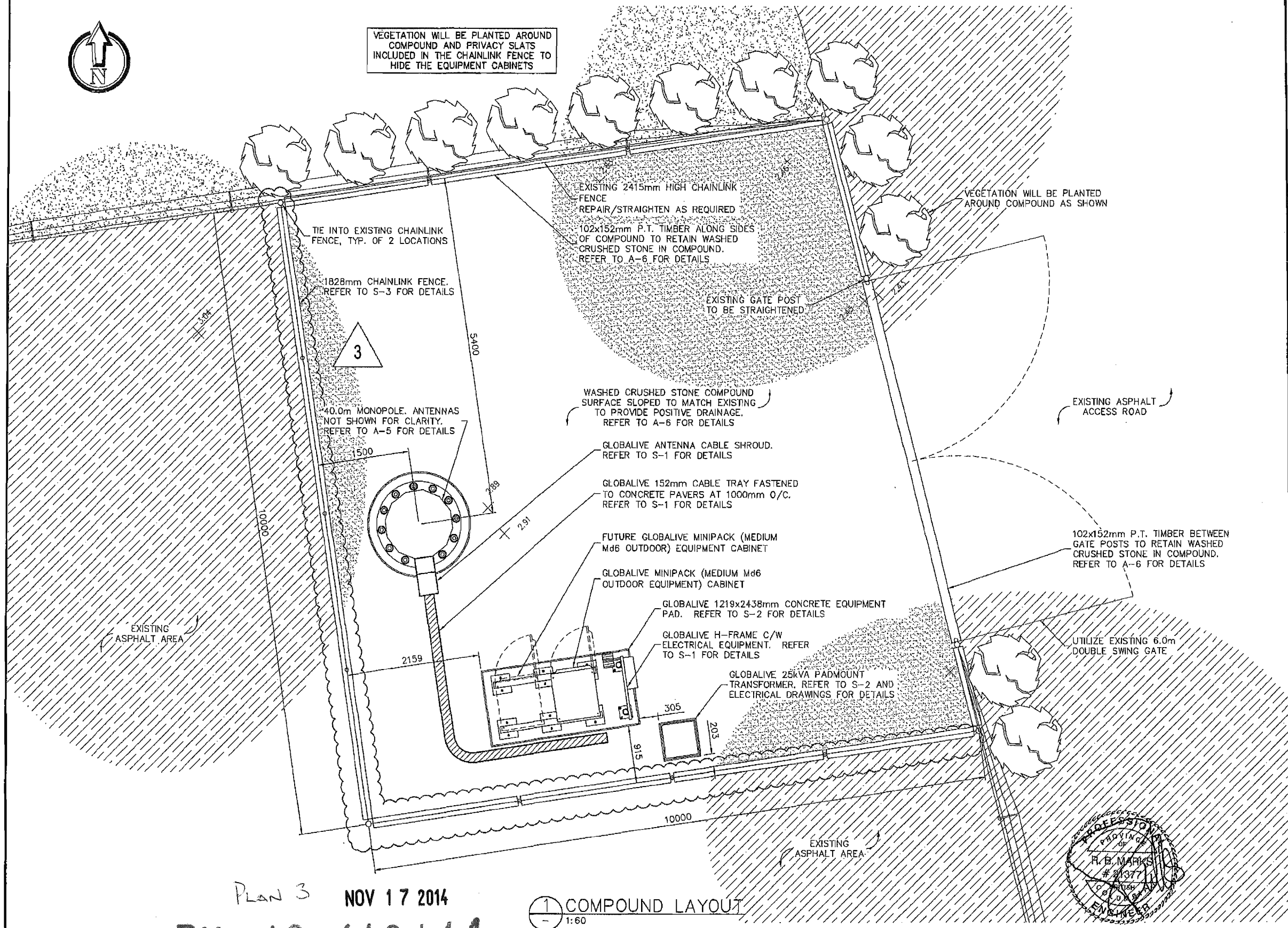
EMAIL: mail@trkeng.com
WEB: www.trkeng.com

PROJECT:
BVA0099
MITCHELL ISLAND
13280 MITCHELL RD
RICHMOND BRITISH COLUMBIA

DRAWING TITLE:
SITE PLAN

SCALE:	AS NOTED
CHECK BY:	R.M.
DRAWN BY:	D.M.
DATE:	AUG 20/10
CAD FILE:	1042-019A3
PROJECT NUMBER:	1042-019

DRAWING NO.
A-3



1 COMPOUND LAYOUT
1:60
0 600 1.2m 2.4m

PLAN 3 NOV 17 2014

DV 12-618411

NOV 21 2014

REV.	DESCRIPTION	BY	DATE
3	REVISED PER WIND/TRK	RM	NOV 20/14
2	RE-ISSUED FOR B.P./CONST.	RM	AUG 15/12
1	REVISED PER GLOBALIVE	RM	AUG 14/12
0	ISSUED FOR B.P./CONST.	RM	JUL 13/12
B	SURVEY ADDED	RM	OCT 04/10
A	ISSUED FOR REVIEW	RM	AUG 20/10

CLIENT:

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FAX: (604) 574-6431
EMAIL: mail@trkeng.com
WEB: www.trkeng.com

PROJECT:

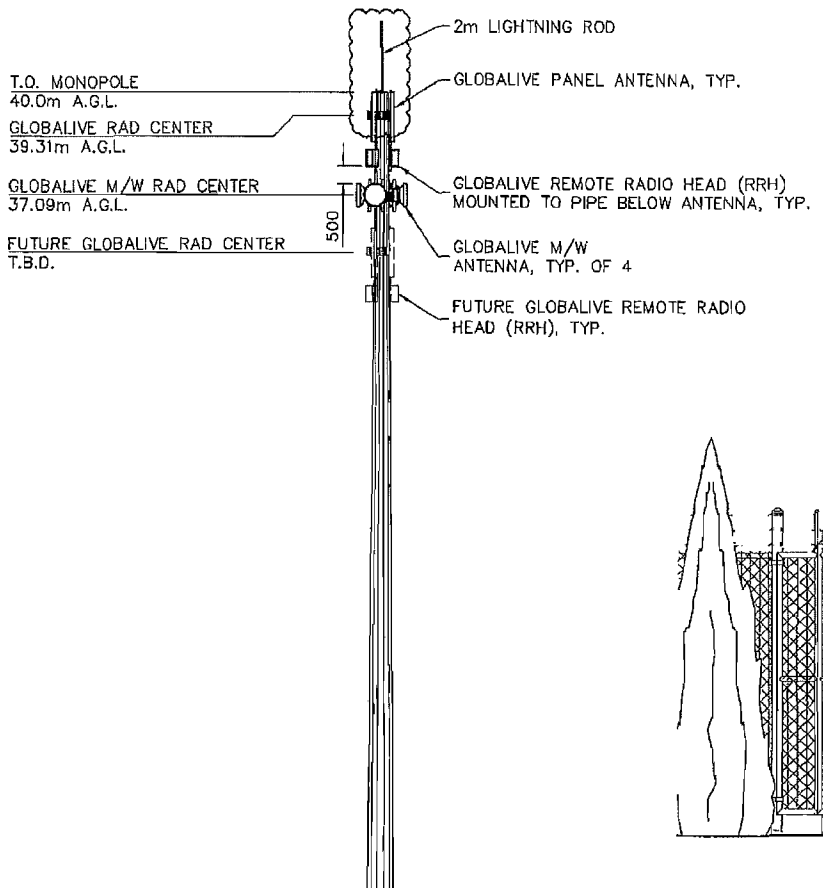
BVA0099
MITCHELL ISLAND
13280 MITCHELL RD

RICHMOND BRITISH COLUMBIA

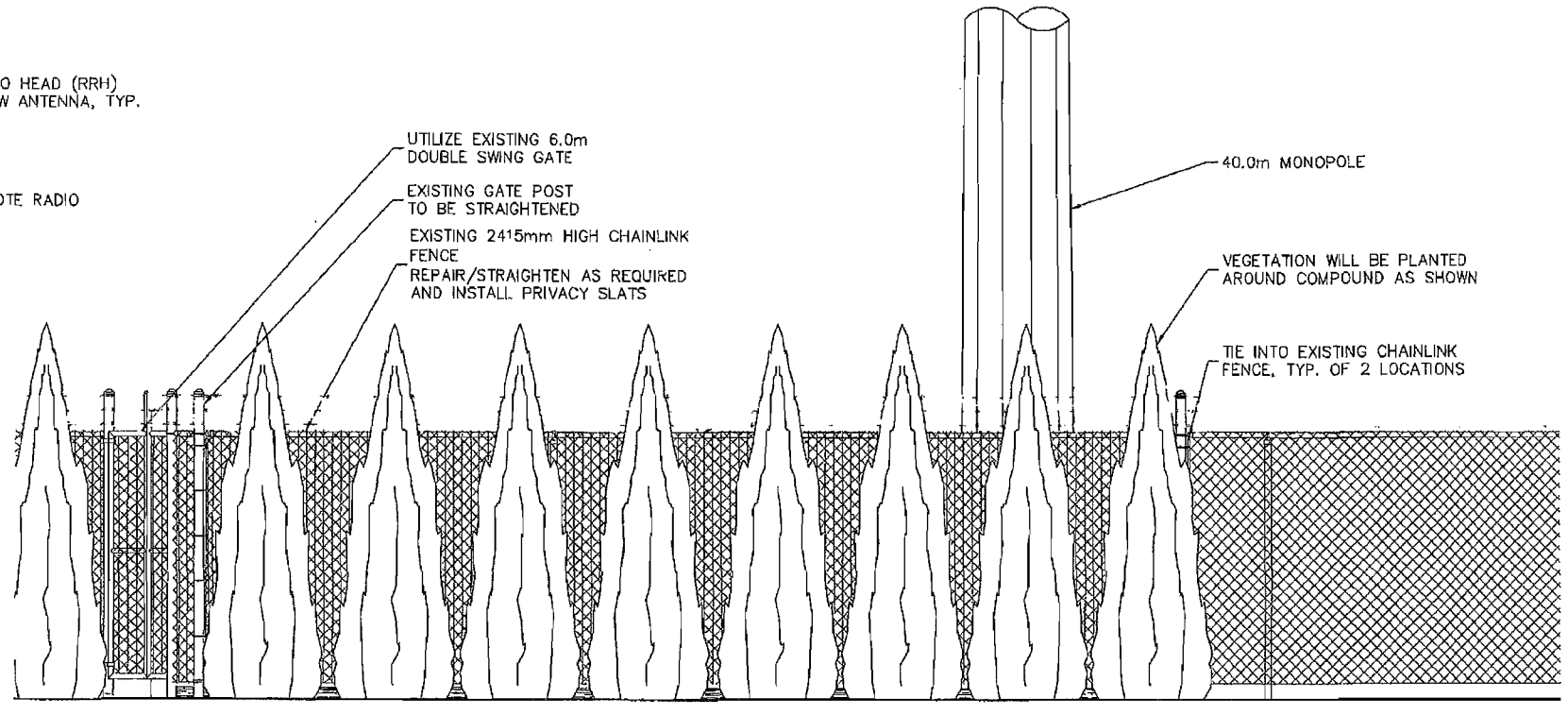
DRAWING TITLE:

COMPOUND LAYOUT

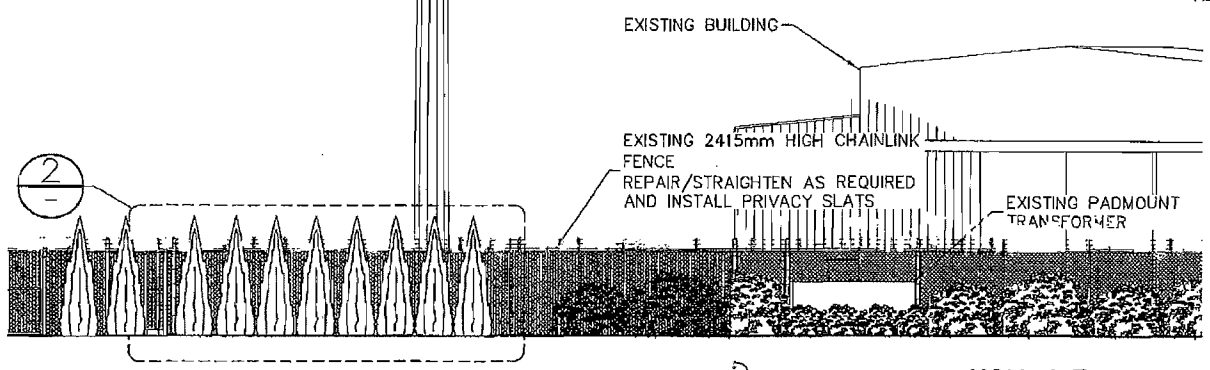
SCALE: AS NOTED	DRAWING NO.
CHECK BY: R.M.	
DRAWN BY: D.M.	
DATE: AUG 18/10	A-4
CAD FILE: 1042-019A4	
PROJECT NUMBER: 1042-019	

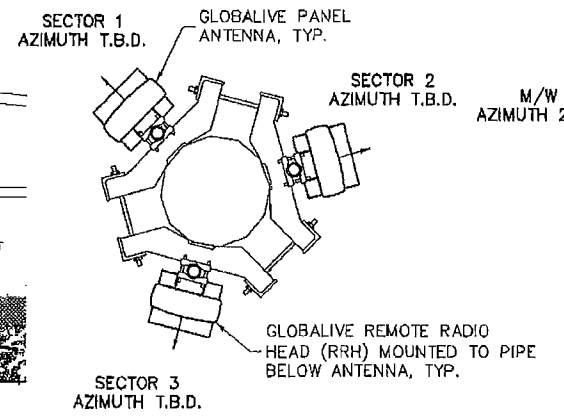


1 NORTH ELEVATION
1:200
0 2m 4m 8m

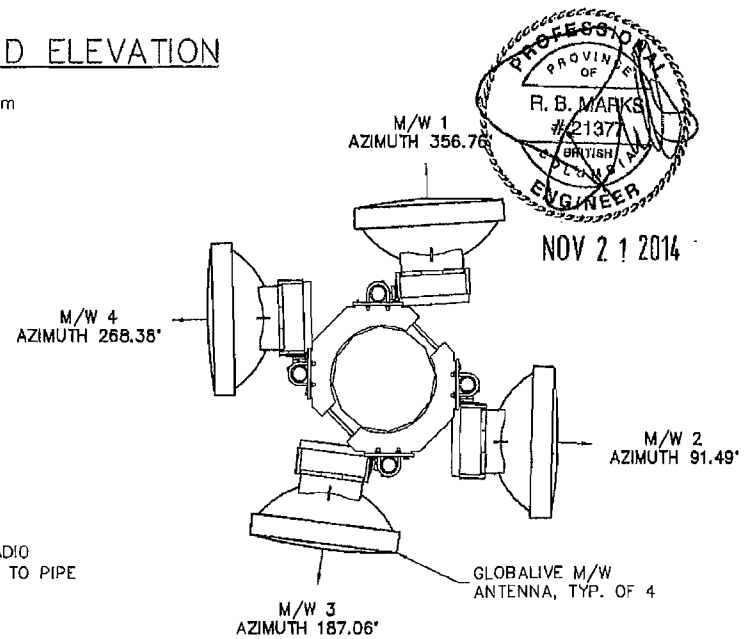


2 NORTH COMPOUND ELEVATION
1:60
0 600 1.2m 2.4m





3 PANEL ANTENNA LAYOUT
1:30
0 300 600 1.2m



4 M/W ANTENNA LAYOUT
1:30
0 300 600 1.2m

Plan 4 NOV 17 2014

DV 12-618411

NOV 21 2014

NOTES:

1. MONOPOLE ELEVATION IS DIAGRAMMATIC ONLY.
2. IF REQUIRED, PROVIDE OBSTRUCTION LIGHTNING AND PAINTING IN ACCORDANCE WITH TRANSPORT CANADA REQUIREMENTS.

REV.	DESCRIPTION	BY	DATE
3	REVISED PER WIND/TRK	RM	NOV 20/14
2	RE-ISSUED FOR B.P./CONST.	RM	AUG 16/12
1	REVISED PER GLOBALIVE	RM	AUG 14/12
0	ISSUED FOR B.P./CONST.	RM	JUL 13/12
B	SURVEY ADDED	RM	OCT 04/10
A	ISSUED FOR REVIEW	RM	AUG 20/10

CLIENT:

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LANGLEY, BC V2Y 2N3
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FAX: (604) 574-6431
EMAIL: mail@trkeng.com
WEB: www.trkeng.com

PROJECT:

BVA0099
MITCHELL ISLAND
13280 MITCHELL RD

RICHMOND BRITISH COLUMBIA

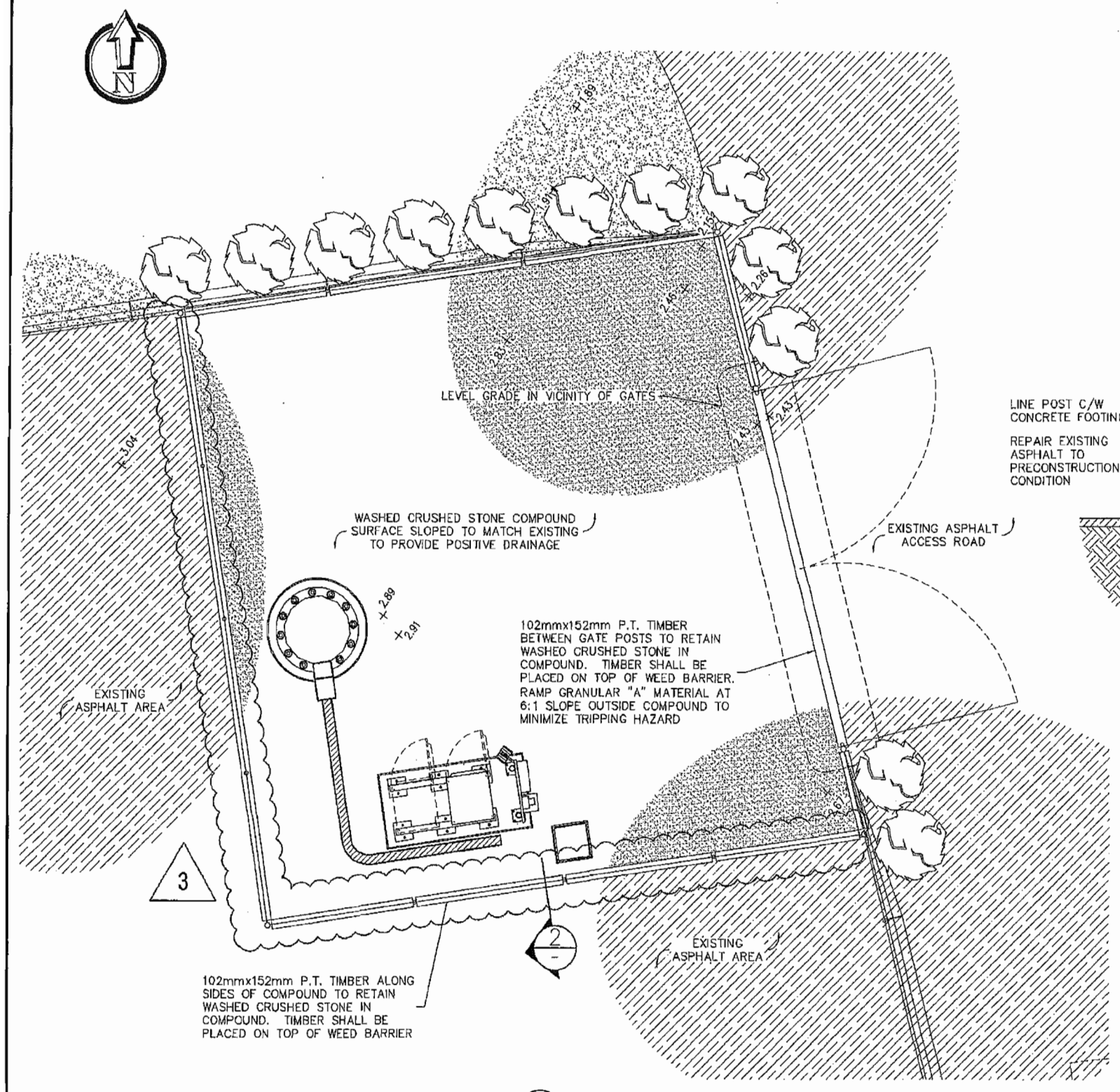
DRAWING TITLE:

NORTH ELEVATIONS AND
ANTENNA LAYOUTS

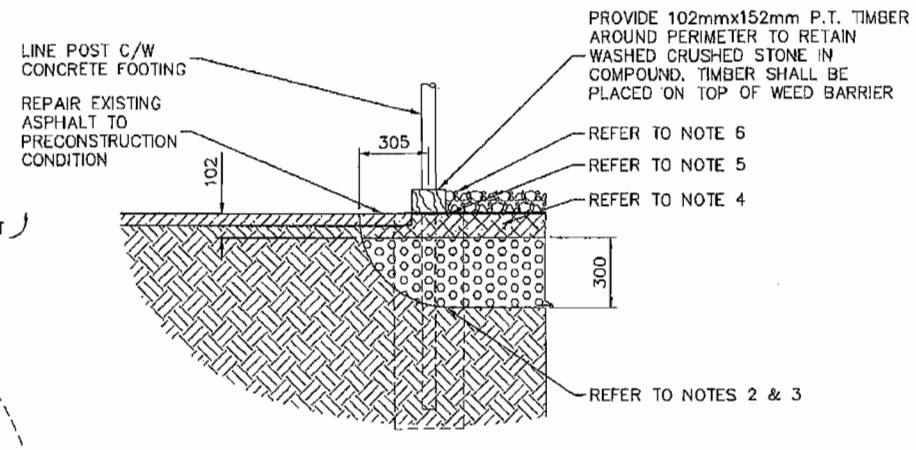
SCALE:	AS NOTED
CHECK BY:	R.M.
DRAWN BY:	D.M.
DATE:	AUG 20/10
CAD FILE:	1042-019A5
PROJECT NUMBER:	1042-019

DRAWING NO.

A-5



1 CIVIL PLAN
1:80
0 800 1.6m 3.4m



2 SECTION
1:30
0 300 600 1.2m

CIVIL NOTES:

1. CONTRACTOR TO CONTACT ALL UTILITIES FOR LOCATION OF UNDERGROUND SERVICES. SERVICE LOCATIONS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PROPOSED AREAS SHOULD BE STRIPPED OF ALL SOFT/WET MATERIAL, TOPSOIL, ORGANICS AND/OR OTHER DELETERIOUS MATERIALS. OBTAIN SERVICES OF GEO PACIFIC CONSULTANTS TO REVIEW SUBGRADE AT THIS POINT. ANY SOFT AREAS FOUND DURING SUBGRADE REVIEW AND/OR PROOFING SHOULD BE REMOVED AND REPLACED WITH SUBGRADE FILL.
3. SUBGRADE FILL: NON-ORGANIC NATIVE SOIL PLACED WITHIN 2% OF OMC OR GRANULAR MATERIAL COMPACTED TO AT LEAST 95% SPMDD. COORDINATE REQUIREMENTS WITH GEO PACIFIC CONSULTANTS. LIFT THICKNESS OF FILL SHOULD NOT BE IN EXCESS OF 300mm.
4. BASE GRAVEL: 200mm OF 20mm MINUS CRUSHED SAND AND GRAVEL. IT SHOULD BE A HIGH FINES SURFACING AGGREGATE WITH 8-15% PASSING THE 0.075mm SIEVE. THE FINES SHOULD HAVE SOME PLASTICITY (PLASTICITY INDEX 4-8) FOR BINDING COMPACTED TO 98% SPMDD.
5. PROVIDE DEWITT PRO-5 (5 MIL) WEED BARRIER UNDER WASHED CRUSHED STONE COMPOUND UNLESS NOTED OTHERWISE.
6. PROVIDE 102mm LAYER OF 19mm WASHED CRUSHED STONE WITH NO FINES ON WEED BARRIER.

REV.	DESCRIPTION	BY	DATE
3	REVISED PER WIND/TRK	RM	NOV 20/14
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0	ISSUED FOR B.P./CONST.	RM	JUL 13/12
B	SURVEY ADDED	RM	OCT 04/10
A	ISSUED FOR REVIEW	RM	AUG 20/10

CLIENT:

globalive

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LANGLEY, BC V2Y 2N3
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FAX: (604) 574-6431
EMAIL: mail@trkeng.com
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PROJECT:

BVA0099
MITCHELL ISLAND
13280 MITCHELL RD

RICHMOND BRITISH COLUMBIA

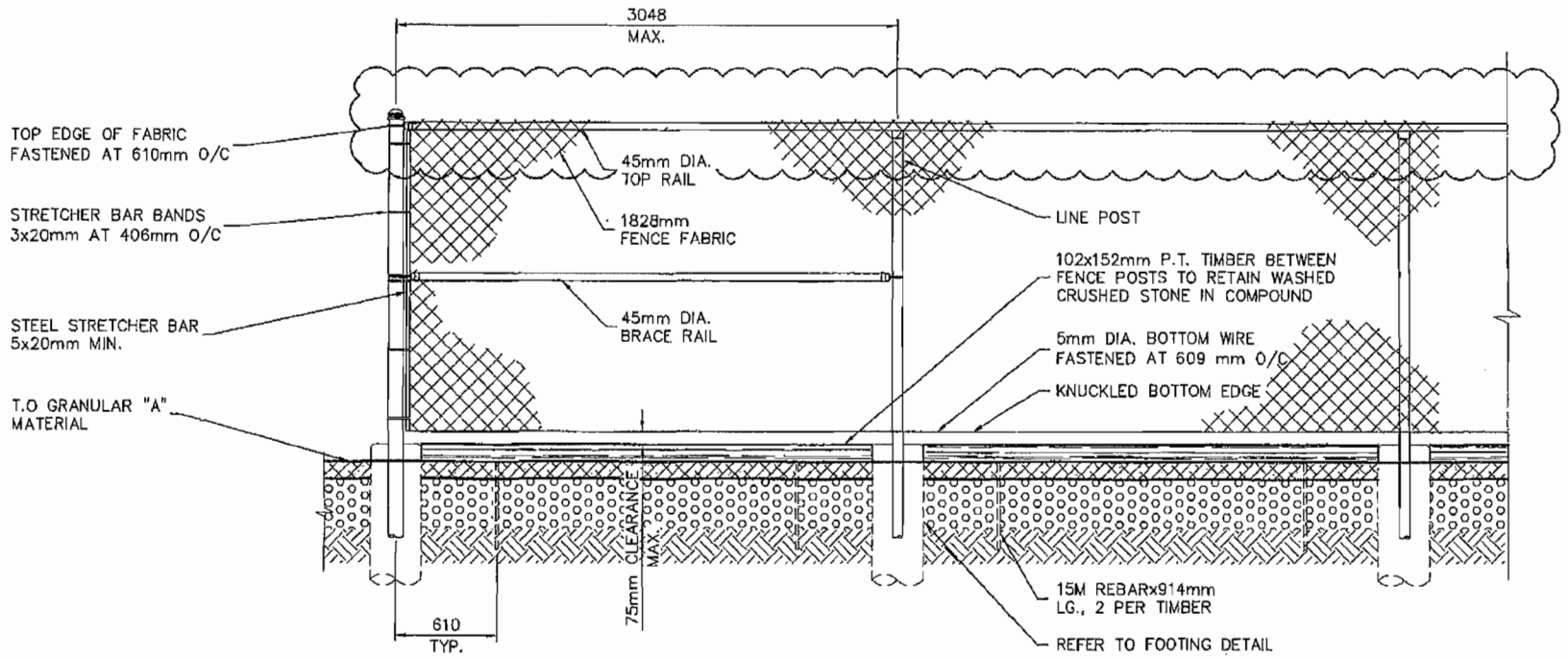
DRAWING TITLE:

CIVIL PLAN

SCALE: AS NOTED	DRAWING NO.
CHECK BY: R.M.	
DRAWN BY: D.M.	
DATE: AUG 20/10	A-6
CAD FILE: 1042-019A6	
PROJECT NUMBER: 1042-019	

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. B. MARKS # 21377
NOV 21 2014

Plan 5
NOV 17 2014
DV 12-618411



TYPICAL CHAINLINK
1 FENCE CORNER ELEVATION
1: 40
0 400 800 1.6m

POST DETAILS		
POST TYPE	OUTSIDE DIAMETER	POST LENGTH STANDARD
LINE POST	60mm	SIZE TO SUIT
GATE, CORNER, END OR PULL POST	89mm	SIZE TO SUIT

TYPICAL FENCING NOTES:

(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)

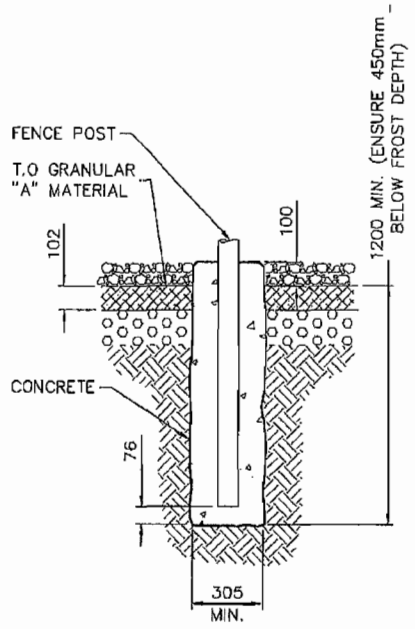
1. GATE POST, CORNER, END OR PULL POST 79mm NOMINAL (88.9mm O.D.) SCHEDULE 40, FOR GATE WIDTHS UP TO 1829mm OR 3658mm FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POSTS: 50mm (60.325mm O.D.) SCHEDULE 40 PER ASTM-F1083.
3. GATE FRAME: 45mm DIA.
4. TOP RAIL AND BRACE RAIL: 45mm DIA.
5. FABRIC: 9 GA. CORE WIRE SIZE 50mm MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL. PROVIDE A SINGLE WRAP OF FABRIC TIE AT POSTS, RAILS, AND AT TENSION WIRE BY HOG RINGS. MAX. SPACING 609mm O/C.
7. TENSION WIRE: MINIMUM 5mm DIA. GALVANIZED STEEL.
8. GATE LATCH: 35mm O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH.

NOTES:

1. REFER TO GLOBALIVE CONSTRUCTION SPECIFICATIONS SECTION B FOR FENCING REQUIREMENTS.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE EXECUTED IN CONFORMITY WITH THE CSA A23.1-94 STANDARD.
2. CONCRETE STRENGTH AT 28 DAYS: 30 MPa
3. ENTRAINED AIR: 5 TO 8%
4. USE CSA TYPE 50 SULPHATE RESISTING CEMENT
5. REINFORCING STEEL SHALL CONFORM WITH CSA G30.18 STANDARD, GRADE 400 MPa
6. COVERING OF THE REINFORCED STEEL SHALL BE IN ACCORDANCE WITH THE ACNOR A23.3 STANDARD AND THE MINIMUM THICKNESS SHALL BE:
   -POURED CONCRETE IN CONTACT WITH SOIL: 75mm
   -CONCRETE EXPOSED TO SOIL OR WEATHER: 75mm
7. EXPOSED CONCRETE FACES SHALL BE SMOOTHED WITH A STEEL TROWEL AND THE EDGES SHALL BE CHAMFERED 19mm @ 45°.
8. GRAVEL BACKFILL: CRUSHED STONE OR GRAVEL 0-20 GAUGE ACCORDING TO PROVINCIAL DEPARTMENT OF TRANSPORTATION.



2 FOOTING DETAIL
1: 30
0 300 600 1.2m

PLAN 6

NOV 17 2014

DV 12-618411

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. B. MARKS
21377

NOV 21 2014

REV.	DESCRIPTION	BY	DATE
3	REVISED PER WIND/TRK	RM	NOV 20/14
2	RE-ISSUED FOR B.P./CONST.	RM	AUG 16/12
1	REVISED PER GLOBALIVE	RM	AUG 14/12
0	ISSUED FOR B.P./CONST.	RM	JUL 13/12
B	SURVEY ADDED	RM	OCT 04/10
A	ISSUED FOR REVIEW	RM	AUG 20/10

CLIENT:

globalive

TRK ENGINEERING
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LANGLEY, BC V2Y 2N3
TEL: (604) 574-6432
FAX: (604) 574-6431
EMAIL: mail@trkeng.com
WEB: www.trkeng.com

PROJECT:

BVA0099
MITCHELL ISLAND
13280 MITCHELL RD

RICHMOND BRITISH COLUMBIA

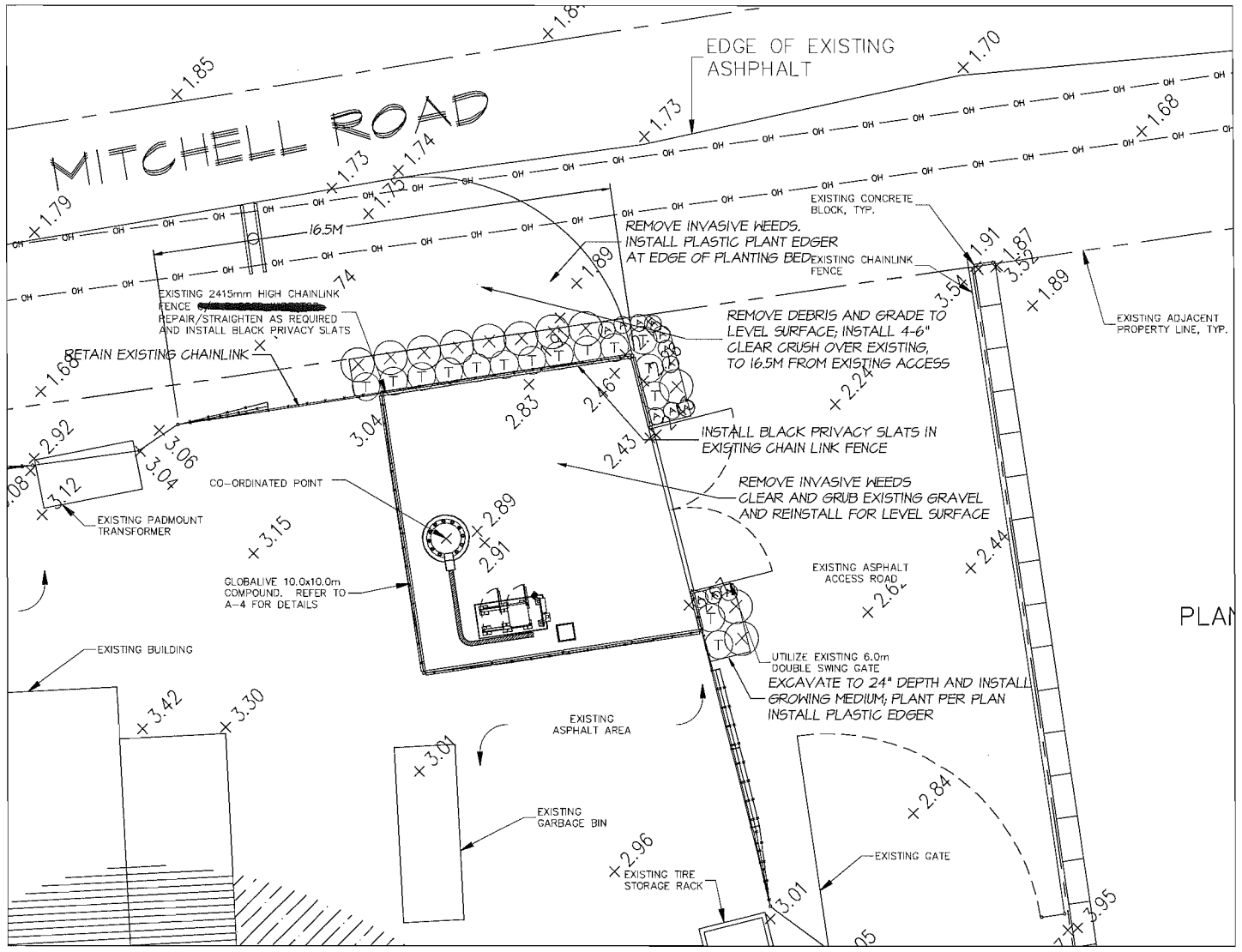
DRAWING TITLE:

CHAINLINK FENCE DETAILS

SCALE:	AS NOTED
CHECK BY:	R.M.
DRAWN BY:	D.M.
DATE:	AUG 20/10
CAD FILE:	1042-019S3
PROJECT NUMBER:	1042-019

DRAWING NO.

S-3



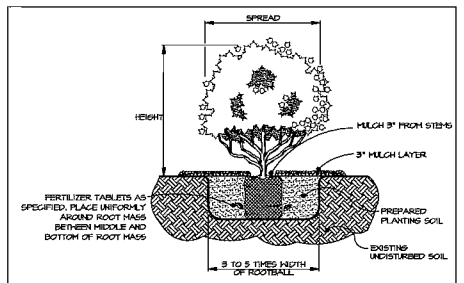
LANDSCAPE PLAN
SCALE : 1:100

LEGAL DESCRIPTION:

PID NO. 001-440-730
LOT 46 DISTRIC LOT 527 GROUP 1
NEW WESTMINSTER DISTRICT PLAN 43673

NOTES:

1. SITE PLAN INFORMATION WAS OBTAINED FROM A SURVEY PERFORMED BY "McELHANEY ASSOCIATE'S LAND SURVEYING LTD.", DATED SEPTEMBER 30, 2010 AND SITE MEASUREMENTS TAKEN BY TRK ENGINEERING DATED JUNE 4, 2010.
2. DISTANCES ARE IN METERS.
3. ELEVATIONS ARE GEODETIC IN METERS DERIVED FROM DELTA INTEGRATED MONUMENT NO. V-611 ELEVATION = 17.515m.
4. GEOGRAPHIC CO-ORDINATES ARE NAD83, DERIVED FROM INTEGRATED MONUMENT NO. V-611.



SHRUB & GROUNDCOVER PLANTING DETAIL
N.T.S.

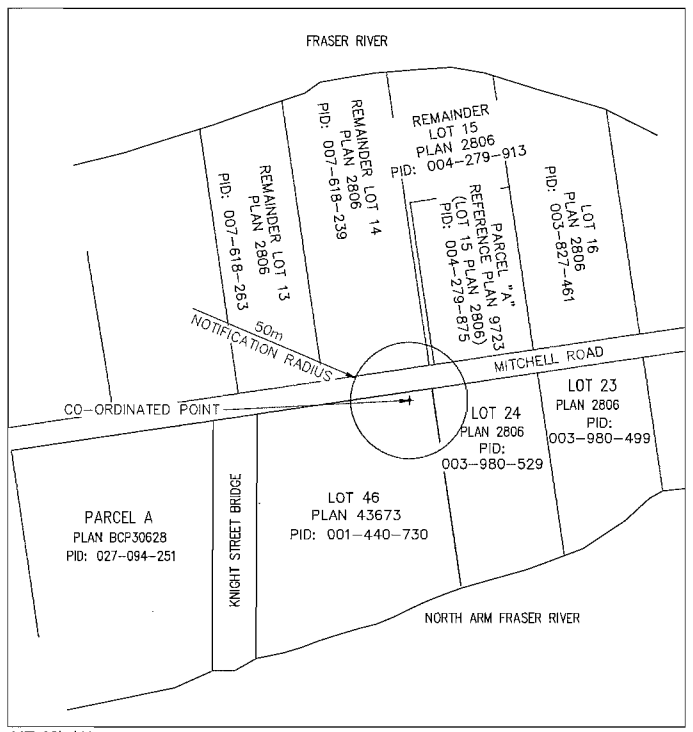
PLANT SCHEDULE

M2 JOB NUMBER: 13-077

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
SHRUB				
X	11	BERBERIS VERRUCULOSA	WARTY BARBERRY	#2 POT; 25CM
T	15	THUJA OCCIDENTALIS 'EMERALD GIANT'	PYRAMIDAL CEDAR	1.5M HT; B&B
GRASS				
A	13	BRIZA MEDIA	QUAKING GRASS	#1 POT

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNTA STANDARDS. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS. TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY.

ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. PROVIDE CERTIFICATION UPON REQUEST.



KEYPLAN
SCALE : N.T.S.

PLAN 7 NOV 17 2014

DV 12-618411

13074-01.ZIP

M2 LANDSCAPE ARCHITECTURE
#220 - 26 Lorne Mews
New Westminster, British Columbia
V3M 3L7
Tel: 604.553.0044
Fax: 604.553.0045
Email: office@m2la.com

NO.	DATE	REVISION DESCRIPTION	DR.

SEAL:

PROJECT:

BVA0099
MITCHELL ISLAND
13280 MITCHELL RD.
RICHMOND, B.C.

DRAWING TITLE:

LANDSCAPE PLAN

DATE:	13.DEC.12	DRAWING NUMBER:	L1
SCALE:	1:100		
DRAWN:	MTLM		
DESIGN:	MTLM		
CHK'D:			OF 2
M2LA PROJECT NUMBER:			13-074