



September 29, 2017

Mr. Mark Kopinya  
 Bosa Properties (Riversky Land) Inc.  
 1201 – 838 West Hastings Street  
 Vancouver, BC V6C 0A6

Dear Mr. Kopinya:

**Re: Performance Verification Plan for Certificate of Compliance  
 1000 Quayside Drive, New Westminster, BC  
 Site ID: 16695  
 Project No. 11794**

**1. BACKGROUND**

Keystone Environmental Ltd. (Keystone Environmental) has prepared this Performance Verification Plan (PVP) in support of an application for a risk-based Certificate of Compliance (CofC) for the off-site affected parcel listed as 1000 Quayside Drive, New Westminster, BC (“the Site”).

The PVP presents additional information to the principal risk management measures (i.e., the Schedule B key risk management controls) that apply and must remain in place at the Site to ensure that the CofC remains valid. The PVP was prepared in accordance with BC Ministry of Environment (MOE) Administrative Guidance 14: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans (BC MOE, 2015). The PVP was based on the findings of the following report:

- Keystone Environmental (2017). *Report of Findings – Human Health and Ecological Risk Assessment, 1000 Quayside Drive, New Westminster, BC*. Dated September 2017.

**2. PERFORMANCE VERIFICATION PLAN**

**2.1 Determination of Remediation Type**

Based on the risk management measures for the Off-Site Affected Parcel, the Remediation Type applicable at the Site is considered to be Type 2. Remediation Type 2 sites may require the use of engineering and institutional controls to mitigate/eliminate risks at the Site, but in the event that controls were either not implemented or were implemented but were rendered ineffective, there is a lack of imminent risks.

Under a Remediation Type 2 (Case 2) scenario, BC MOE (2015) indicates that a PVP is required and that an operations and maintenance plan may be required. A contingency plan is not required.

## 2.2 Required Risk Controls

The principal risk controls which must be maintained at the Site include the following items:

- Parcels A/B of the Site must remain paved;
- Lot 3 of the Site must remain paved or covered with buildings or landscaped areas, as outlined in the Performance Verification Plan.
- Future landscaping on Lot 3 of the Site must be conducted in accordance with the Performance Verification Plan.

## 2.3 Required Actions to Implement the Required Risk Controls

The following actions are required to implement the risk controls:

- Mandatory notification provided to the owner/operator of the Site that Parcels A/B of the Site must remain paved.
- Mandatory notification provided to the owner/operator of the Site that Lot 3 of the Site must remain paved or covered with buildings or landscaped areas and that future landscaping of Lot 3 of the Site must be conducted in accordance with the attached landscaping schematic.
- Inspection by a qualified professional that vegetation have been planted in an appropriate root media and contained by planter boxes or geotextile membrane must be done to verify the installation.

Records of these actions should be maintained by the owner of the Site and submitted to the BC MOE if requested. Other reporting requirements for all performance verification records include the following:

- The Director must be notified promptly by the person(s) responsible for the Off-Site Affected Parcel if performance verification actions indicate that any of the required risk controls are not being met. The following information must be submitted to the Director with the notification, or as soon as practicable thereafter:
  - The time period over which risk controls were not in place or implemented
  - The nature of the excursion(s)
  - The temporary or permanent corrective measures implemented or to be implemented
  - An implementation schedule
  - Supporting documentation
- If requested by the Director, a report signed by an Approved Professional must be submitted for review to the Director and must include the following (as applicable):
  - An evaluation of the performance of the institutional controls
  - Supporting documentation

## 2.4 Summary Rationale

### Pavement Condition

Groundwater contamination greater than the Contaminated Sites Regulation (CSR) Schedule 6 Aquatic Life (AW) standards is present on the Parcels A/B. Residual soil contamination greater than the CSR Schedule 5 standards is present on Lot 3 and on Parcels A/B. Residual soil and groundwater contamination are presently covered under pavement. The areas requiring a paved surface are presented in the attached metes and bounds figure.

### Landscaping Condition

The Site development plan indicates that landscaped vegetation and sidewalks would be placed on Lot 3. The extent of landscaped vegetation is presented in the attached metes and bounds figure. The risk assessment assumed that future vegetation would be placed nursery grade soils in planter boxes or in a suitable rooting media with geotextile membrane (as specified in the attached landscaping detail) to limit plant root contact with identified soil or groundwater contamination. Future vegetation may not be planted direct in Site soils. Residual soil or groundwater contamination must remain under sidewalks, buildings or a paved surface to mitigate potential human or ecological exposures. Verification by a qualified professional that landscaped vegetation has been planted in appropriate rooting media and contained by a planter box or geotextile membrane are presented in the attached metes and bounds figure.

## 2.5 Conclusion

It is our opinion that the actions identified above are sufficient to ensure performance verification of the risk controls required for the Site.

## 3. GENERAL LIMITATIONS AND CONFIDENTIALITY

The findings presented in this report are based upon the field work conducted by Keystone Environmental for Bosa Properties. Keystone Environmental has prepared this document in good faith and has relied upon information provided by others. Keystone Environmental has assumed that the information provided by third parties is both complete and accurate.

This report was completed in a manner consistent with that level of care and skill normally exercised by other environmental professionals, practicing under similar circumstances in the same locale at the time of the performance of the work.

This report has been prepared solely for the internal use of Bosa Properties and the review by the BC MOE, pursuant to the agreement between Keystone Environmental Ltd. and Bosa Properties. By using this report, Bosa Properties and the BC MOE agree(s) to review this report in its entirety. Keystone Environmental accepts no responsibility, and denies any liability whatsoever, to parties other than Bosa Properties and the BC MOE, who may obtain access to this report for any injury, loss or damage suffered by such parties arising out of, reliance upon,

or decisions or actions based on this report, except to the extent those parties have obtained a prior written consent of Keystone Environmental to use and rely upon this report and the information contained herein. Any use, reliance or decisions made based on this report by other parties without prior written approval by Keystone Environmental are the responsibility of such parties and Keystone Environmental accepts no responsibility for damages, if any, suffered by other parties as a result of decisions made or actions based on this report. The findings presented herein should be considered within the context of the scope of work and project terms of reference. The findings are time sensitive and are considered valid at the time this report was produced. The conclusions and recommendations contained in this report are based upon applicable guidelines, regulations, and legislation existing at the time this report was produced; consequently, any changes in the regulatory regime may alter the conclusions and/or recommendations.

#### 4. CLOSURE

The opinions, advice and recommendations expressed in this performance verification plan are made in accordance with generally accepted principles and practices as recognized by members of the applicable profession or discipline practising at the same time and in the same or similar locations.

If you have any questions, please do not hesitate to contact the signatories below.

Sincerely,

**Keystone Environmental Ltd.**



Brett Lucas, M.Sc., R.P.Bio.  
Risk Assessor

Adam J. Radlowski, M.Sc., R.P.Bio.  
Senior Environmental Risk Assessor

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#### ATTACHMENTS:

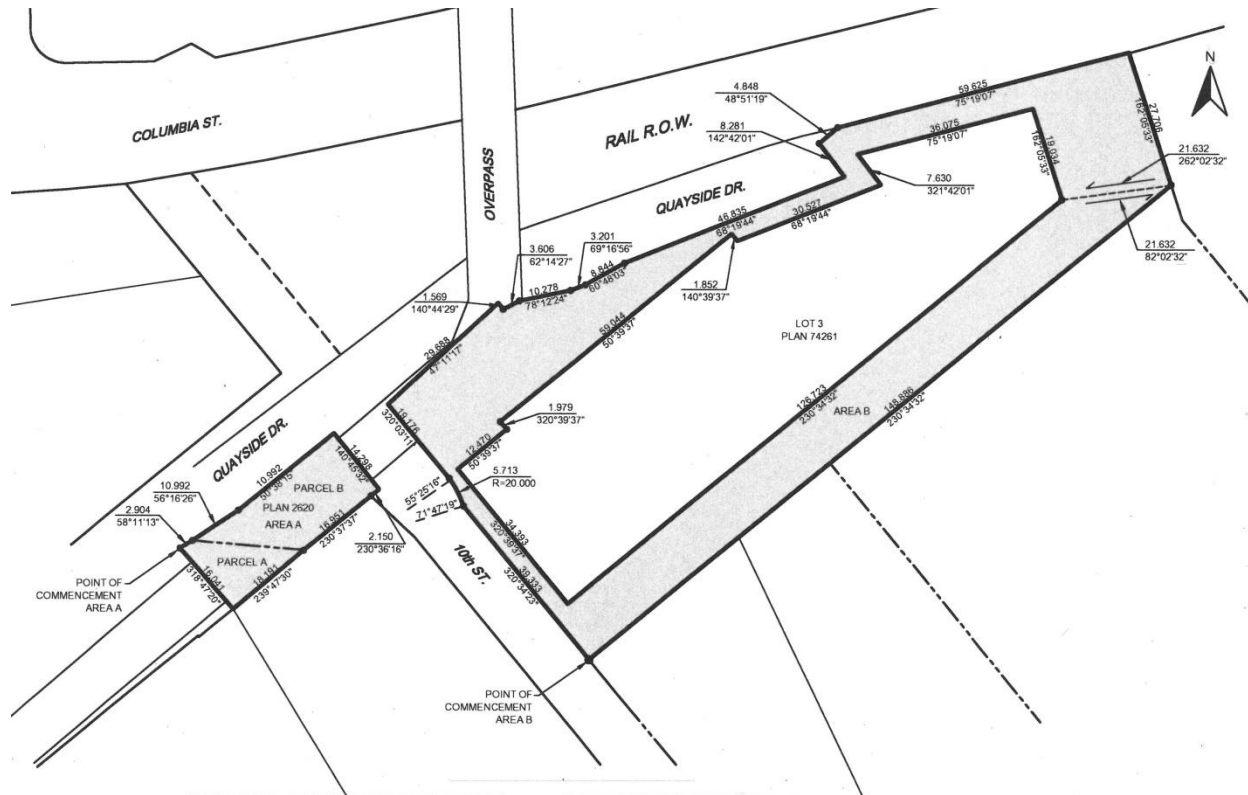
- Metes and Bounds Figure
- Landscape Detail

## 5. REFERENCES

BC MOE (2015) British Columbia Ministry of Environment. Environmental Protection Division. *Administrative Guidance 14 on Contaminated Sites: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans*. (Version 3.0). December 2015.

Keystone Environmental (2017). *Report of Findings – Human Health and Ecological Risk Assessment, 1000 Quayside Drive, New Westminster, BC*. Keystone Environmental Ltd. Dated September 2017.

## METES AND BOUNDS FIGURE



**METES & BOUNDS OF ROOTING VEGETATION EXCLUSION AREA A:**

- STARTING AT THE WEST CORNER OF NEW WEST DISTRICT GROUP 1, PLAN 2620 PARCEL A.

THE POINT OF COMMENCEMENT.

- THENCE 58° 11' 13" FOR 2.904 METRES;
- THENCE 56° 16' 26" FOR 10.992 METRES;
- THENCE 50° 38' 15" FOR 10.992 METRES;
- THENCE 140° 45' 32" FOR 14.298 METRES;
- THENCE 230° 36' 16" FOR 2.150 METRES;
- THENCE 230° 37' 37" FOR 16.951 METRES;
- THENCE 239° 47' 30" FOR 18.191 METRES;
- THENCE 318° 47' 20" FOR 16.041 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.

**METES & BOUNDS OF CONTAMINATED SOIL/GROUNDWATER EXCLUSION AREA A:**

- STARTING AT THE WEST CORNER OF NEW WEST DISTRICT GROUP 1, PLAN 2620 PARCEL A.

THE POINT OF COMMENCEMENT.

- THENCE 58° 11' 13" FOR 2.904 METRES;
- THENCE 56° 16' 26" FOR 10.992 METRES;
- THENCE 50° 38' 15" FOR 10.992 METRES;
- THENCE 140° 45' 32" FOR 14.298 METRES;
- THENCE 230° 36' 16" FOR 2.150 METRES;
- THENCE 230° 37' 37" FOR 16.951 METRES;
- THENCE 239° 47' 30" FOR 18.191 METRES;
- THENCE 318° 47' 20" FOR 16.041 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.

**METES & BOUNDS OF ROOTING VEGETATION EXCLUSIVE AREA B:**

- STARTING AT THE SOUTH CORNER OF LOT 3, DISTRICT LOT 3981 AND BED OF THE FRASER RIVER AND PART FORMERLY COLUMBIA STREET PLAN 74261:

THE POINT OF COMMENCEMENT.

- THENCE 320° 34' 23" FOR 39.333 METRES;
- THENCE NORTHERLY BEING AN ARC OF A 20 000 METRE RADIUS CURVE HAVING A RADIAL BEARING OF 71° 47' 19" TO THE CENTRE OF SAID CURVE AND A RADIAL BEARING OF 55° 25' 16" TO THE END OF SAID CURVE AN ARC DISTANCE OF 5.713 METRES
- THENCE 320° 03' 11" FOR 19.176 METRES;
- THENCE 47° 11' 17" FOR 29.688 METRES;
- THENCE 140° 44' 29" FOR 1.569 METRES;
- THENCE 62° 14' 27" FOR 3.606 METRES;
- THENCE 78° 12' 24" FOR 10.278 METRES;
- THENCE 69° 16' 56" FOR 3.201 METRES;
- THENCE 60° 48' 03" FOR 8.844 METRES;
- THENCE 68° 19' 44" FOR 46.835 METRES;
- THENCE 142° 42' 01" FOR 8.281 METRES;
- THENCE 48° 51' 19" FOR 4.848 METRES;
- THENCE 75° 19' 07" FOR 59.625 METRES;
- THENCE 162° 05' 33" FOR 27.706 METRES;
- THENCE 262° 02' 32" FOR 21.632 METRES;
- THENCE 162° 05' 33" FOR 19.034 METRES;
- THENCE 75° 19' 07" FOR 36.075 METRES;
- THENCE 321° 42' 01" FOR 7.630 METRES;
- THENCE 68° 19' 44" FOR 30.527 METRES;
- THENCE 140° 39' 37" FOR 1.852 METRES;
- THENCE 50° 39' 37" FOR 59.044 METRES;
- THENCE 320° 39' 37" FOR 1.979 METRES;
- THENCE 50° 39' 37" FOR 12.470 METRES;
- THENCE 320° 39' 37" FOR 34.393 METRES;
- THENCE 230° 34' 32" FOR 126.723 METRES;
- THENCE 82° 02' 32" FOR 21.632 METRES;
- THENCE 230° 34' 32" FOR 148.886 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.

**METES & BOUNDS OF CONTAMINATED SOIL EXCLUSIVE AREA B:**

- STARTING AT THE SOUTH CORNER OF LOT 3, DISTRICT LOT 3981 AND BED OF THE FRASER RIVER AND PART FORMERLY COLUMBIA STREET PLAN 74261:

THE POINT OF COMMENCEMENT.

- THENCE 320° 34' 23" FOR 39.333 METRES;
- THENCE NORTHERLY BEING AN ARC OF A 20 000 METRE RADIUS CURVE HAVING A RADIAL BEARING OF 71° 47' 19" TO THE CENTRE OF SAID CURVE AND A RADIAL BEARING OF 55° 25' 16" TO THE END OF SAID CURVE AN ARC DISTANCE OF 5.713 METRES
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- THENCE 230° 34' 32" FOR 148.886 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.



**LEGEND**

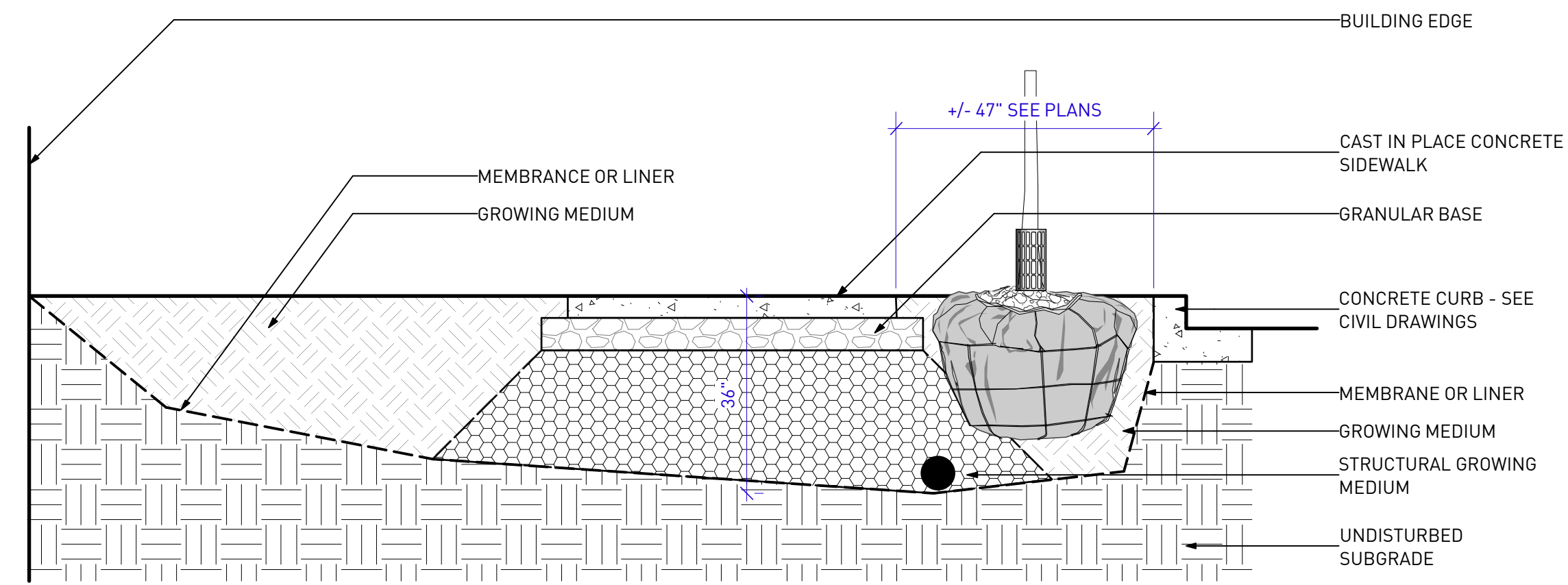
--- PROPERTY LINE

— METES & BOUNDS

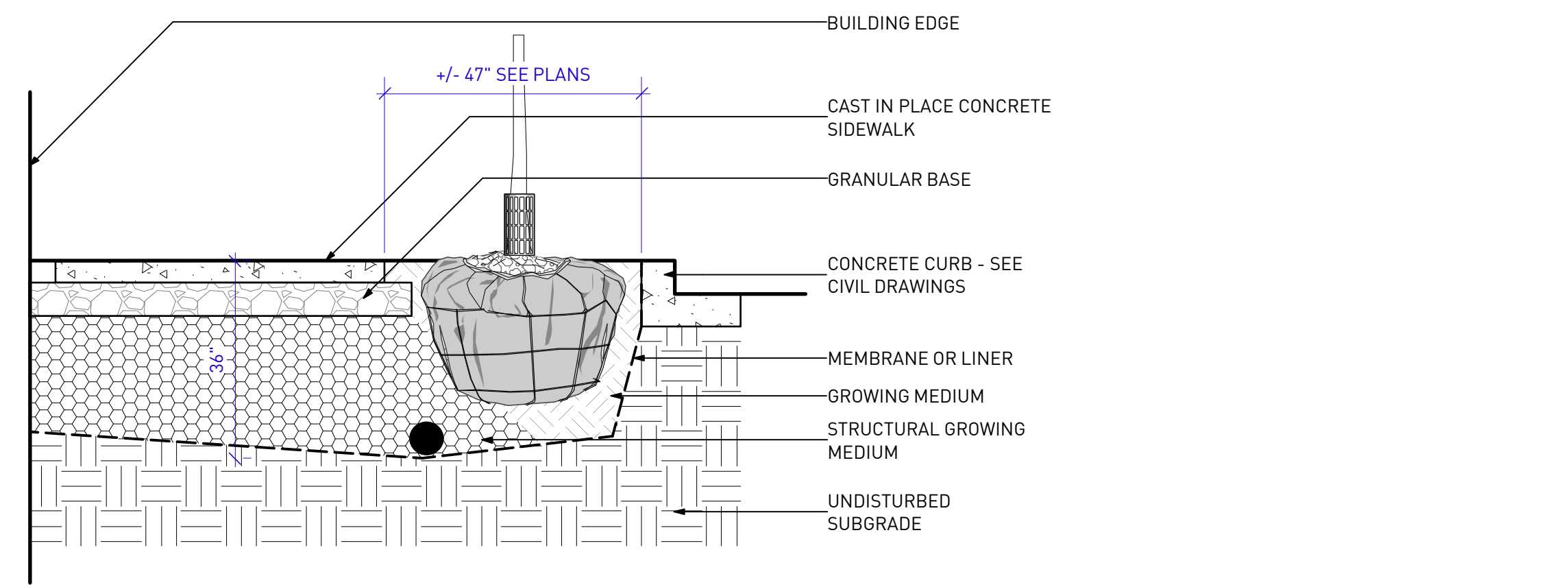
## LANDSCAPING DETAIL



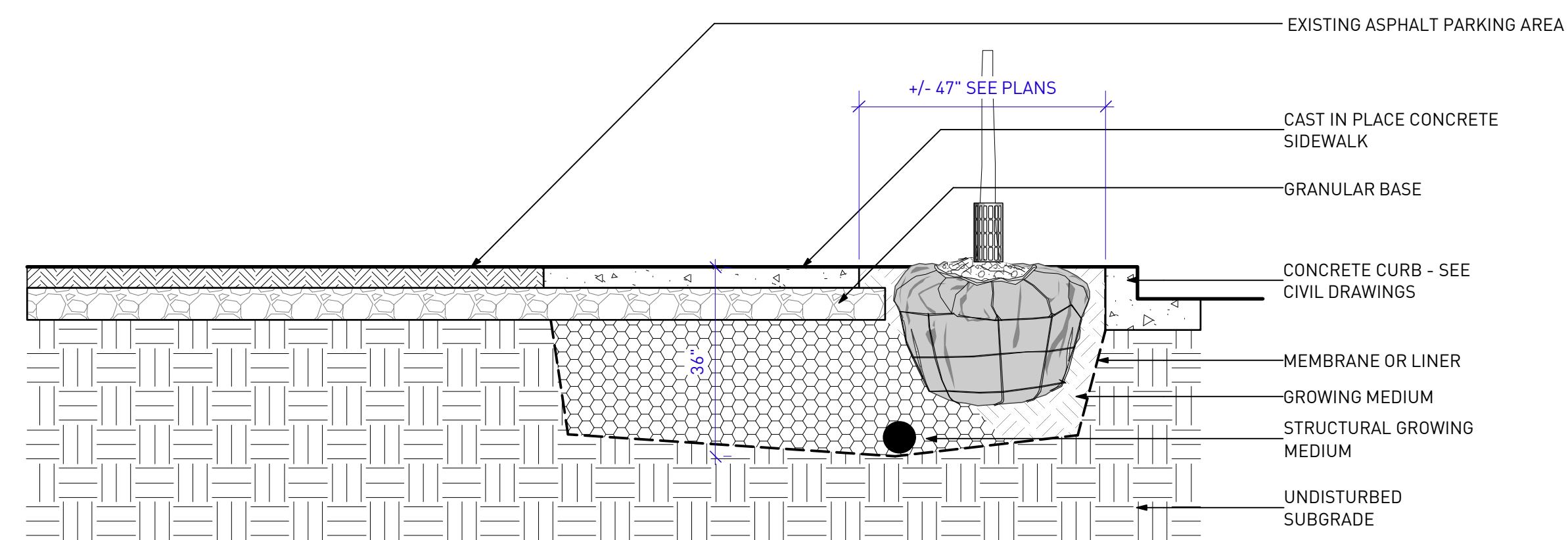
Date	Issue / Revisions
January 6, 2015	Issued for Coordination
January 30, 2015	Issued for IFT Check-set 2
March 20, 2015	Check Set
April 17, 2015	Progress Set Issued for Tender



1 STRUCTURAL SOIL AND LINER DETAIL ALONG QUAYSIDE DRIVE - NORTH OF BREEZEWAY  
Scale: 1/2" = 1'-0"



2 STRUCTURAL SOIL AND LINER DETAIL ALONG QUAYSIDE DRIVE - EAST OF BREEZEWAY  
Scale: 1/2" = 1'-0"



3 STRUCTURAL SOIL AND LINER DETAIL ALONG QUAYSIDE DRIVE - WEST OF BREEZEWAY  
Scale: 1/2" = 1'-0"

NOTE: FOR REFERENCE ONLY

Seal



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Project

QUAYSIDE DRIVE  
NEW WESTMINSTER  
BRITISH COLUMBIA

Sheet Title

TYPICAL DETAILS

Project Number

13103

Scale

Sheet Number

L5.05