

# Interagency Agreement for Operation and Maintenance of the Highway 97 Rapid Bus Assets and Infrastructure

This Agreement made as of the \_\_\_\_th day of \_\_\_\_\_, 2016

By and Between:

*HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE*, (hereinafter referred to as the “Ministry” or “MoTI”)

and

*THE CORPORATION OF THE CITY OF KELOWNA*, (hereinafter referred to as “Kelowna” or “CoK”)

and

*THE CITY OF WEST KELOWNA*, (hereinafter referred to as “CWK”)

and

*THE WESTBANK FIRST NATION*, (hereinafter referred to as “WFN”)

and

*BC TRANSIT, A CROWN CORPORATION*, (hereinafter referred to as “BCT”).

Collectively referred to as the “Parties”.

WHEREAS

- (a) Kelowna, CWK and BCT entered into term sheet agreements setting out the understanding and the principles for proceeding with the design, construction, project management, delivery, risk sharing and funding for phases 2 & 3 of the Highway 97 RapidBus project, and
- (b) The Ministry and BCT entered into a Memorandum of Understanding outlining the understanding of both parties of the principles for proceeding with the design, construction, project management, delivery, risk sharing and funding for phases 2 & 3 of the Highway 97 RapidBus Project.
- (c) The project term sheet agreements and the memorandum of understanding committed the Parties to work together in good faith to develop a separate agreement specifying the roles and responsibilities of the parties with respect to the on-going operation and maintenance of the RapidBus assets, and

- (d) The Parties wish to confirm roles and responsibilities of each of the parties in operating and maintaining the RapidBus assets and infrastructure, and
- (e) The Parties wish to detail the process for allocating and approving funding for the operations and maintenance of the RapidBus assets.

THEREFORE the Parties agree as follows:

## 1. Definitions

- 1.1. **Operational cost** means the costs associated with delivering the day to day RapidBus service and includes items such as cellular charges, license fees, and permits. It does not include the cost of operating or maintaining transit vehicles.
- 1.2. **Maintenance costs** means the cost for labour and materials required to keep the assets and infrastructure in a good state of repair and fully functioning as intended in the design of the asset. Maintenance costs include regular preventative maintenance and scheduled maintenance as recommended by the suppliers, breakdown and emergency repairs. Excluded are the cost for maintenance of transit vehicles and any equipment installed on the transit vehicle including the on-board AVL and TSP equipment.
- 1.3. **TSP system** means the Transit Signal Priority system installed as part of the Highway 97 RapidBus project to improve travel time for transit vehicles running the Highway 97 RapidBus route.
- 1.4. **AVL system** means the automatic vehicle location and real time passenger information system installed as part of phases 2 & 3 of the RapidBus project and includes the passenger information displays installed at RapidBus stations and at RapidBus stops located in exchanges. It also includes the equipment and software installed on-board transit vehicles and the hosted servers and network communications equipment and software required for proper functioning of the system
- 1.5. **RapidBus Station** means the physical infrastructure built to provide a bus stop location for the Highway 97 RapidBus service and include the bus pullout, the bus pad, curbs, platform, sidewalks, stairways and ramps, shelter including fixtures, railings, furniture bike racks, bike lockers and other accessories.
- 1.6. **PID** means an electronic message display sign used to provide real time bus arrival information to users of the Highway 97 RapidBus service located at RapidBus stations.
- 1.7. **Responsible Party** means the party to the agreement charged with delivering operations or maintenance functions as detailed in Schedules A through G.

## 2. Governance

- 2.1. The parties shall establish a Highway 97 RapidBus Operations Committee to oversee the on-going operation and maintenance of the Highway 97 RapidBus service. The Operations Committee shall be charged with coordinating efforts between the Parties as they pertain to monitoring the performance of the required maintenance and monitoring the operating cost of the Highway 97 RapidBus Service.

- 2.2. Each of the Parties shall designate a member from their respective organizations to represent them on the Operations Committee.
- 2.3. The Highway 97 Operations Committee shall meet once yearly, or at some other frequency as agreed to by the parties, to review the operation of the Highway 97 RapidBus service and the performance of maintenance activities against the recommended requirements.
- 2.4. A chair of the Highway 97 RapidBus Operations Committee shall be designated by the committee members annually and shall rotate between the Parties. The Chair shall be responsible for arranging for the meetings, recording and publishing minutes of the Committee Meetings and for coordinating the production and issuing of the annual summary report.

### **3. Notices**

- 3.1. Any notice required to be given by any Party to the other will be given in writing and delivered to the other as specified below:

For the Ministry:  
Ministry of Transportation & Infrastructure  
300-1358 St. Paul Street  
Kelowna BC V1Y 2E1  
Canada  
Attention: District Manager

For Kelowna:  
City of Kelowna  
1435 Water Street  
Kelowna BC V1Y 1J4  
Canada  
Attention: Director, Regional Services

For the City of West Kelowna:  
City of West Kelowna  
2760 Cameron Rd.  
West Kelowna BC V1Z 2T6  
Canada  
Attention: Engineering Manager

For the Westbank First Nation  
Westbank First Nation  
301-515 Highway 97 South  
Kelowna BC V1Z 3J2  
Canada  
Attention: Manager of Planning and Development

For BC Transit:  
BC Transit  
520 Gorge Road East  
Victoria BC  
Attention: Director, Fixed Asset Management

## **4. Scope of Agreement**

- 4.1. This agreement includes the operational costs related to the functioning of the TSP system installed under phase 1 and under phases 2 & 3 of the Highway 97 RapidBus project. Schedule A to this Agreement details the requirements, elements, responsible party and costs associated with operation of the TSP system.
- 4.2. This agreement includes the operational costs related to the functioning of the AVL system installed as part of phases 2 & 3 of the Highway 97 RapidBus project. Schedule B to this Agreement details the requirements, elements, responsible party and costs associated with operation of the AVL system.
- 4.3. This agreement includes the maintenance costs for the TSP system installed under phase 1 and phases 2 & 3 of the Highway 97 RapidBus project. Schedule C to this Agreement details the requirements, elements, responsible party and costs associated with maintenance of the TSP system.
- 4.4. This agreement includes the maintenance costs for the AVL system installed under phases 2 & 3 of the Highway 97 RapidBus project. Schedule D to this Agreement details the requirements, elements, responsible party and costs associated with maintenance of the AVL system.
- 4.5. This agreement includes the maintenance costs for the RapidBus stations installed under phase 1 and phases 2 & 3 of the Highway 97 RapidBus project including the RapidBus stations located within exchanges. Schedule E to this Agreement details the locations, requirements, elements, responsible party and costs associated with maintenance of the RapidBus stations.
- 4.6. The responsible Party shall perform with its own forces or arrange for a contractor to perform the operations or maintenance tasks it is identified as responsible to complete as detailed in Schedules A through E of this Agreement.
- 4.7. Maintenance needs identified by any party shall be brought to the attention of the responsible party via the contact list provided as Schedule F to this Agreement

## **5. Cost Sharing / Funding**

- 5.1. The cost for operating and maintaining Highway 97 RapidBus as defined in this agreement shall be shared amongst the Parties through the Annual Operating Agreement.
- 5.2. All costs incurred in the first instance by the responsible party in performing its operations or maintenance activities shall be paid for by the responsible party. The responsible party shall recover its costs through the Annual Operating Agreement. Work performed by the Ministry of Transportation will be recovered through a letter of agreement with BC Transit.

## **6. Interpretation**

- 6.1. The captions and headings contained in this Agreement are for convenience only and do not define or in any way limit the scope or intent of this Agreement.



- 6.2. This Agreement will be interpreted according to the laws of the Province of British Columbia.
- 6.3. Each schedule to this Agreement is an integral part of this Agreement as if set out at length in the body of this agreement.
- 6.4. This Agreement constitutes the entire agreement between the parties and no understanding or agreement, oral or otherwise, exists between the parties with respect to the subject matter of this Agreement.
- 6.5. This Agreement may not be modified except by subsequent agreement in writing between the Parties.
- 6.6. Each Party will, upon the request of the other, do or cause to be done all lawful acts necessary for the performance of the provisions of this Agreement.
- 6.7. Time is of the essence in this Agreement.

The parties have executed this Agreement as of the date above.

Signed on behalf of Her Majesty The Queen in Right of the Province of British Columbia by the Minister of Transportation and Infrastructure or the Minister's authorized representative	Signed on behalf of the Westbank First Nation
Date	Date
Signed on behalf of the City of Kelowna	Signed on behalf of BC Transit
Date	Date
Signed on behalf of the City of West Kelowna	
Date	

## Schedule A

### TSP System Operational Requirements, Elements, Responsible Party and Costs

#### Scope

1. Operation of the TSP system is broken down into the following categories:
  - a. **Communication costs**: includes costs related to the network used to collect the system data and internet costs to access the data server. Included in communication costs are a portion of the costs to configure and manage the entire network.
  - b. **Software licensing costs**: includes a portion of the annual fees for software used by the system including StreetWise and Opticom CMS. One Hundred dollars (\$100.00) per intersection is allocated to the ongoing cost of the Opticom software.
  - c. **Signal timing plan updates**: includes a portion of the cost of completing a signal timing plan review and update. Included are two (2) updates per year. The TSP portion of a signal timing plan review and update is 10% of the total cost.
  - d. **Data Collection & reporting**: includes costs associated with The City of Kelowna collecting TSP data logs from all the TSP locations indicated on Table C-2 of Schedule C using Kelowna's Opticom CMS and providing a monthly data file to BC Transit. Kelowna will notify BC Transit of any potential TSP performance issues identified through its collection of TSP log data.

#### Costs

<b>System Element</b>	<b>Responsible Party / Owner</b>	<b>Cost</b>
• <b>Communications</b>		
Communications network	Ministry of Transportation	\$2,500
Internet	City of Kelowna	\$1,000
• <b>Software licensing</b>		
StreetWise	Ministry of Transportation	\$500
Opticom CMS	City of Kelowna	\$3,800
• <b>Signal Timing Plans</b>		
Updates to signal timing plans	Ministry of Transportation except intersections controlled by City of Kelowna <sup>1</sup>	\$3,000
• <b>Data Collection &amp; Reporting</b>		
Monthly data collection and preparation of a monthly data file for BC Transit <sup>2</sup>	City of Kelowna	\$2,000

<sup>1</sup> Includes Water St @ Leon; Water St @ Lawrence; Ellis St @ Leon; and Ellis St @ Lawrence

<sup>2</sup> BC Transit required data to be determined.

## Schedule B

### AVL System Operational Requirements, Elements, Responsible Party and Costs

1. Operation of the AVL system is broken down into the following categories:
  - a. **Communication costs**: includes cellular service provider costs related to the cellular radio network used to connect the transit vehicles to the AVL system and internet costs to connect the Kelowna transit centre to the AVL system for regular data re transfer.
  - b. **Software licensing costs**: includes the annual fees for software licensing and maintenance for the INIT ITCS system.
  - c. **System Hosting costs**: includes the cost for 3<sup>rd</sup> party hosting of the system.

#### **Costs**

<b><i>System Element</i></b>	<b><i>Responsible Party / Owner</i></b>	<b><i>Annual Cost</i></b>
• <b>Communications</b>		
Cellular Communications charges	BC Transit	\$60,000.00
Internet	BC Transit	\$5,000.00
• <b>Software licensing</b>		
License / maintenance costs for the integrated INIT CAD/AVL system including MOBILEplan; MOBILEsurvey; MOBILE-ITCS; MOBILEstatistics; MOBILEic	BC Transit	\$25,000.00
• <b>System Hosting</b>		
3 <sup>rd</sup> party hosted central system maintenance	BC Transit	\$50,000.00

## Schedule C

### TSP System Maintenance Requirements, Scope, Responsible Party and Costs

#### Scope

1. The TSP System is comprised of three subsystems:
  - a. **Vehicle Subsystem**: equipment and software installed on-board the transit vehicle to accurately transmit its GPS coordinate data to the roadside subsystem when approaching a TSP equipped signalized intersection.
  - b. **Roadside Subsystem**: equipment and software to detect transit vehicles approaching an intersection, requesting priority, transmitting the request to the intersection traffic signal controller, as well as the storage and/or transmission of system log data.
  - c. **Communications Subsystem**: equipment and software associated with:
    - i. the wireless vehicle to road-side communications (between the TSP-enabled transit vehicles and signalized intersections); and
    - ii. the communications to accommodate central management of data/logs to/from each TSP roadside subsystem for efficient and effective TSP operations. The Communications Subsystem also enables the centralization of Traffic Signal equipment monitoring and log data retrieval
2. Thirty (30) Transit vehicles have been equipped with the Opticom GPS TSP vehicle subsystem. Vehicle equipment maintenance shall be integrated into BC Transit's standard fleet maintenance programs and will conform to the Original Equipment Manufacturer's recommended maintenance requirements. The maintenance of the vehicle subsystem is excluded from the scope of this agreement.
3. The roadside subsystem is comprised of equipment supplied by GTT Opticom. The Communications subsystem is comprised of equipment supplied by ENCOM. Contact information for the equipment suppliers are:

GTT Opticom Trafco Canada 9015 – 14 Street NW Edmonton, AB T6P 0C9 Canada Attention: Kirby Kother	ENCOM Wireless #7, 640 – 42 Avenue NE Calgary, AB T2E 7J9 Canada Attention: Dan Szgatti
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4. The components comprising each subsystem are listed on Table C-1 below:

**Table C-1**

	Subsystem	Equipment Make / Model #
1.	Roadside	Opticom Model 760 Card Rack Assembly
2.	Roadside	Opticom Model 1010 GPS Radio Unit including brackets and cables
3.	Roadside	Opticom Model 764 GPS Phase Selector
4.	Roadside	Opticom Model 1070 GPS Installation Cable
5.	Roadside	Opticom Model 768 Auxiliary Interface Panel
6.	Roadside	Preempt Cabinet c/w backpanel and terminal strip devices
7.	Communication	Encom Radio unit BB58INT, antenna, mounting bracket, cable
9.	Communications	TSP system data computer
10.	Communications	Managed Ethernet Switch (1 unit per preempt cabinet)

5. Table C-2 lists the TSP system locations covered by this agreement:

Table C-2

Location #	Location / Intersection Name	Subsystems	Location #	Location / Intersection Name	Subsystems	Location #	Location / Intersection Name	Subsystems
1	Elliott & Main	Roadside; Communications	15	Westside Road @ Highway 97 SB off-ramp	Roadside; Communications	29	Hwy 97 @ Cooper	Roadside; Communications
2	Elliott & Dobbin	Roadside; Communications	16	Abbott Street @ Harvey Avenue (Highway 97). Priority left turn from eastbound Harvey Avenue to northbound Abbott Street	Roadside; Communications	30	Hwy 97 @ Dilworth	Roadside; Communications
3	Brown & Main	Roadside; Communications	17	Water Street @ Harvey Avenue (Highway 97)	Roadside; Communications	31	Hwy 97 @ Leckie	Roadside; Communications
4	Brown & Dobbin	Roadside; Communications	18	Ellis Street @ Harvey Avenue (Highway 97) - Priority left turn from southbound Ellis Street to eastbound Harvey Avenue	Roadside; Communications	32	Hwy 97 @ Banks	Roadside; Communications
5	Old Okanagan Highway & Main	Roadside; Communications	19	Water Street @ Leon Avenue	Roadside; Communications	33	Hwy 97 @ Hwy 33	Roadside; Communications
6	Old Okanagan Highway & Dobbin	Roadside; Communications	20	Water Street @ Lawrence Avenue	Roadside; Communications	34	Hwy 97 @ Leathead	Roadside; Communications
7	Gosset Road / Gellatly Road @ Highway 97	Roadside; Communications	21	Ellis Street @ Leon Avenue	Roadside; Communications	35	Hwy 97 @ McCurdy	Roadside; Communications
8	Butt Road @ Highway 97	Roadside; Communications	22	Ellis Street @ Lawrence Avenue	Roadside; Communications	36	Hwy 97 @ Sexsmith	Roadside; Communications
9	Grizzly Road @ Highway 97	Communications	23	Hwy 97 @ Ellis	Roadside; Communications	37	Hwy 97 @ Edwards	Roadside; Communications
10	Daimler Road @ Highway 97	Roadside; Communications	24	Hwy 97 @ Richter	Roadside; Communications	38	West Kelowna Water Tower	Communications
11	Bartley Road @ Highway 97	Roadside; Communications	25	Hwy 97 @ Ethel	Roadside; Communications	39	Kelowna Water Tower	Communications
12	Ross Road @ Highway 97	Roadside; Communications	26	Hwy 97 @ Gordon	Roadside; Communications	40	City of Kelowna Fire Hall	Communications
13	Westlake Road @ Highway 97	Roadside; Communications	27	Hwy 97 @ Burtch	Roadside; Communications			
14	Boucherie / Horizon Drive @ Highway 97	Roadside; Communications	28	Hwy 97 @ Spall	Roadside; Communications			

**Maintenance Requirements and Budget**

- 6. The maintenance requirements for each subsystem are outlined on table C-3 below.
- 7. All maintenance work shall meet the requirements of the equipment supplier and BC Ministry of Transportation current construction standards and practices.
- 8. At intersection locations where the Roadside and Communications subsystems are co-located (locations 1 through 37 on table C-2) maintenance of both subsystems is to be performed at the same time.
- 9. The maintenance work shall take into account that both the City of Kelowna and the City of West Kelowna also run Emergency Vehicle Priority systems using the same infrastructure, and therefore must be performed in a manner that does not impact or interrupt that service.

**Table C-3**

Subsystem	Maintenance Activity	Maintenance Tasks / Requirements	Frequency	Cost per Occurrence	# of Locations	Extended Cost
Roadside and Communication	Preventative	<ul style="list-style-type: none"><li>• Verify that hardware is operating as intended</li><li>• Perform minor calibrations or modifications as required</li><li>• Update software / Firmware as required</li><li>• Update maintenance records</li></ul> . Estimated time is 3 hours per location once per year.	Once per year	\$300	37	\$11,100
	Scheduled	<ul style="list-style-type: none"><li>• Replacement under asset renewal,</li><li>• Identification of faulty equipment,</li><li>• Weather damage or</li><li>• Major reprogramming of TSP equipment</li><li>• Perform a test run at each location to ensure the device is programmed as per manufacturer requirements.</li></ul> Estimated time per location is 6-8 hours All scheduled maintenance should be completed within 3 working days of being reported / identified.	As required	\$750		\$3,000
	Emergency	In the case of an emergency such a motor vehicle accident, the repairs will be done under an emergency maintenance schedule to ensure the equipment is brought to an acceptable safe state. The budget will allow for one such incident per year.  All emergency maintenance shall be completed within 3 working days of the incident.	As required	\$2,000		\$2,000



## **Responsible Party**

10. The affected municipality shall be the responsible party for the provision of maintenance to the TSP system located within their municipal boundaries.
11. The Municipal Partners, for equipment located within their municipal boundaries, shall arrange for the delivery of the required preventative maintenance, regular scheduled maintenance and emergency maintenance (breakdown repair) of the TSP system including all subsystems in conformance with this schedule. All work is to be carried out by the Ministry of Transportation's Electrical Services Contractor<sup>3</sup> for any intersections falling within the Ministry's right of way on the Highway 97 corridor.
12. The Municipal Partners has full access to the roadside TSP control cabinets within their municipal boundaries, but are not permitted access to the Intersection Control Cabinets along the Highway 97 corridor. Should troubleshooting system failures require access to the Intersection Control Cabinets, access can only be provided by the Ministry's Electrical Services Contractor.
13. Intersection controllers for intersections located along Highway 97 are owned by the Ministry. The Ministry is solely responsible for maintenance of the intersection controllers.
14. The Municipal Partners, BCT, and the Ministry shall notify each other when they are performing maintenance activities they are the responsible party to deliver so that all parties are aware of activities that may impact the operation of the TSP system.
15. The affected municipality is responsible to arranging and maintaining their relationship with the Ministry's Electrical Services Contractor. All communications from a municipality requesting the services of the Electrical Service Contractor are to be made directly, and not through the local Ministry of Transportation Branch.
16. Appendix 1 shall be used as the guideline for trouble shooting TSP problems on site, and recovery of relevant costs.

## **Replacement**

17. All system equipment is expected to remain operational beyond 10 years from the date of installation. Replacement evaluation should be planned and reviewed beginning 10 years from the system commissioning date, in September 2024.
18. One full replacement set of roadside subsystem equipment has been provided as part of the RapidBus project. The replacement shall be stored for use in the event of an emergency replacement at the Ministry's Electrical Services Contractor.
19. The Ministry shall provide a detailed cost estimate of any and all costs required to re-connect the TSP system to an intersection control cabinet should replacement of a cabinet be required as a result of a motor vehicle accident or some other event that damages an intersection control cabinet at the locations identified on table C-2

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<sup>3</sup> Wescana is the present approved electrical services contractor in the region, however this is subject to change over time as contracts are retendered.

## Schedule D

### AVL System Maintenance Requirements, Elements, Responsible Party and Costs

#### Scope

1. The AVL System is comprised of three subsystems:
  - a. **Vehicle Subsystem:** equipment and software installed on-board the transit vehicle to accurately transmit its GPS coordinate data to the on board PID signs and annunciation systems while approaching RapidBus stops and exchanges.
  - b. **RapidBus Station Subsystem:** equipment mounted on the RapidBus shelters in the form of digital PID signs.
  - c. **Dispatch & Monitoring Subsystem:** equipment supplied to monitor and update the real time information and ITS INIT system program.
2. Twenty Two (22) Transit vehicles have been equipped with the INIT vehicle AVL subsystem. Vehicle equipment maintenance shall be integrated into BCT's standard fleet maintenance programs and will conform to the Original Equipment Manufacturer's recommended maintenance requirements. The maintenance of the vehicle subsystem is excluded from the scope of this agreement.
3. The RapidBus Station subsystem is comprised of Twenty Four (24) PID signs installed along the Highway 97 RapidBus route at roadside platforms and within exchanges.
4. The Dispatch and Monitoring subsystem equipment installed at the Kelowna Transit Facility, comprised of three computer terminals and three wall mounted monitors, are supplied by BCT and are not covered under this agreement.

#### Maintenance Requirements & Budget

1. Maintenance of the AVL system is comprised of the repair or replacement of the on street PID signs due to equipment failure, vandalism or theft. These costs are covered under this agreement as per the following:
  - a. Damaged units are to be removed and replaced with a stocked replacement unit, stored at the BCT's Kelowna Transit Operations and Maintenance Facility. Any removed PID signs are to be returned to BCT's Kelowna Transit Facility for furtherance on to INIT for warranty assessment and repair.

- b. All costs incurred in the first instance by the responsible party in performing its operations or maintenance activities shall be paid for by the responsible party. The responsible party shall recover its costs through the Annual Operating Agreement.

### **Responsible Party**

1. The affected municipality shall be the responsible party for the provision of maintenance to the RapidBus Station Subsystem located within their municipal boundaries
2. The Municipal Partners, for equipment located within their municipal boundaries, shall arrange for the delivery of the required maintenance and emergency maintenance (breakdown repair) of the RapidBus Station Subsystem.
3. The Municipal Partners, BCT, and the Ministry shall notify each other when they are performing maintenance activities they are the responsible party to deliver so that all parties are aware of activities that may impact the operation of the RapidBus Station Subsystem.

### **Replacement**

1. All system equipment is expected to remain operational beyond 10 years from the date of installation. Replacement evaluation should be planned and reviewed beginning 10 years from the system commissioning date, in September 2024.
2. Two replacement PIDS for the RapidBus Station Subsystem have been provided as part of the RapidBus project. The replacements shall be stored for use in the event of an emergency replacement at the Kelowna Transit Operations and Maintenance Facility.

## Schedule E

### RapidBus Station Maintenance Requirements, Elements, Locations, Responsible Party and Costs

#### Scope

1. The stations covered by this Operations and Maintenance agreement includes only the RapidBus stop locations. Figure attached to this schedule presents a schematic of the RapidBus system map indicating those stations included in the agreement
2. Where a RapidBus stop is located within an exchange, only the RapidBus stop is included. Local bus stops located within exchanges are not included in this agreement.
3. Table E-1 lists the RapidBus stops/stations covered under this agreement:

**Table E-1**

Location #	Location Name	Description	Responsible Party
1	Westbank Exchange	One RapidBus station. See attached plan	City of West Kelowna
2	Butt Rd NB	See Attached plan	Westbank First Nation
3	Butt Rd SB	See Attached plan	Westbank First Nation
4	Boucherie Mountain Exchange	2 RapidBus stations for NB and SB direction. See attached plan	City of West Kelowna
5	Westlake-Hudson NB	See Attached plan	City of West Kelowna
6	Westlake Hudson SB	See Attached plan	City of West Kelowna
7	Westside Rd NB	See Attached plan	Westbank First Nation
8	Westside Rd SB	See Attached plan	Westbank First Nation
9	Queensway Exchange	2 RapidBus stations for NB and SB direction. See attached plan	City of Kelowna
10	Richter NB	See Attached plan	City of Kelowna
11	Richter SB	See Attached plan	City of Kelowna
12	Gordon NB	See Attached plan	City of Kelowna
13	Gordon SB	See Attached plan	City of Kelowna
14	Parkinson NB	See Attached plan	City of Kelowna
15	Parkinson SB	See Attached plan	City of Kelowna
16	Cooper NB	See Attached plan	City of Kelowna
17	Cooper SB	See Attached plan	City of Kelowna
18	Banks NB	See Attached plan	City of Kelowna
19	Banks SB	See Attached plan	City of Kelowna
20	McCurdy NB	See Attached plan	City of Kelowna
21	McCurdy SB	See Attached plan	City of Kelowna

4. Figures E1 to E17 attached to this schedule outline the extent of the area covered under this agreement for which maintenance is to be provided. Areas outside the area indicated on the figures are the sole responsibility of the authority having jurisdiction.
5. Upon vesting of the RapidBus stations to the project partners as detailed in the project term sheet, sole responsibility for the maintenance of the stations will become the responsibility of the authority having jurisdiction.

### **Maintenance Requirements and Budget**

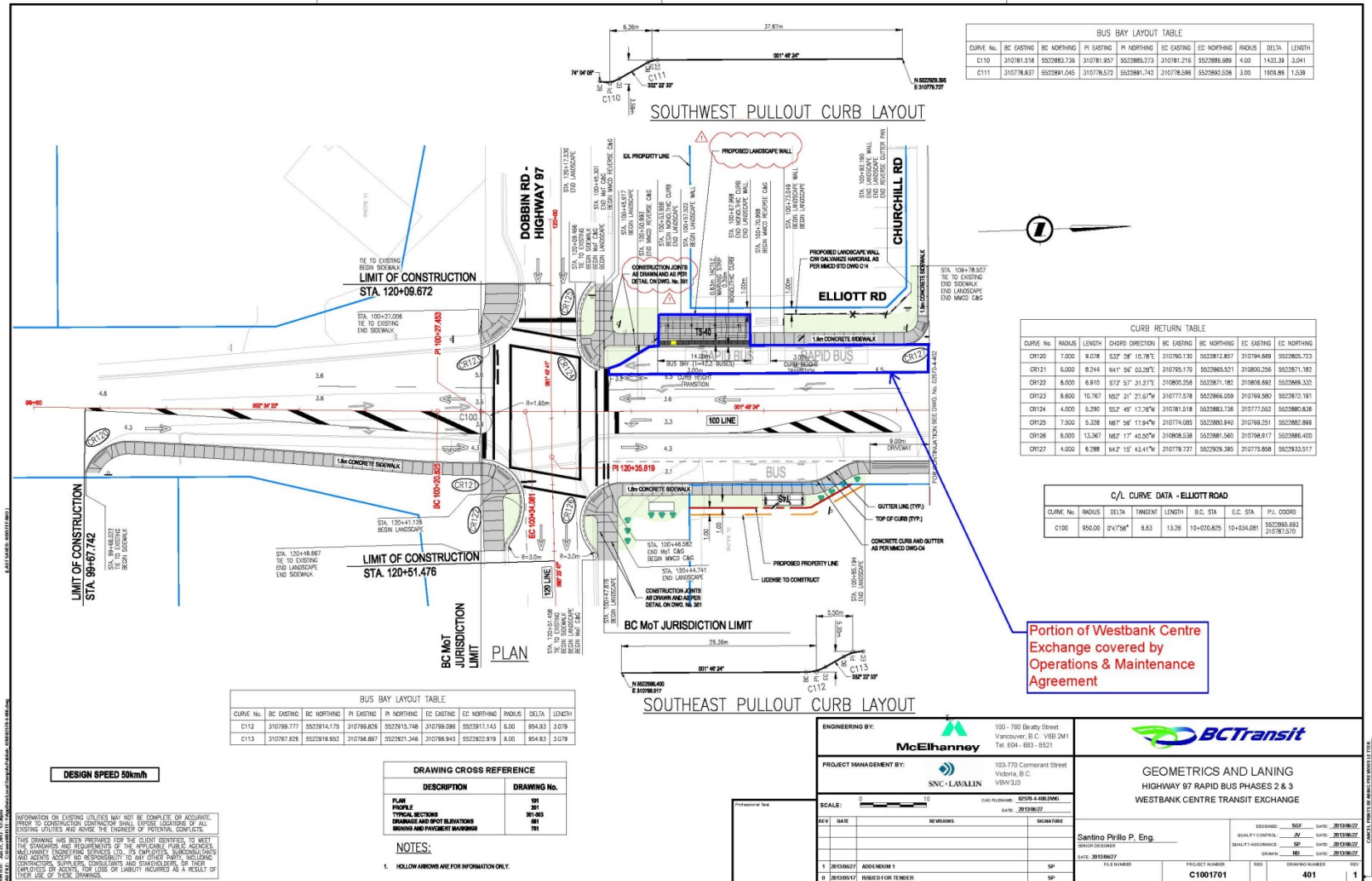
6. The maintenance requirements for each RapidBus station are outlined on table E-2 (next page).
7. All maintenance work shall meet the requirements of:
  - a. The Original Equipment Manufacturer (OEM).
  - b. BC Transit recommended Transit Stop Maintenance Guidelines.
  - c. The BC Ministry of Transportation current Highway Maintenance Specifications.
  - d. Applicable City of Kelowna Infrastructure Maintenance standards.
  - e. Applicable City of West Kelowna Maintenance Standards.
  - f. Applicable Westbank First Nation maintenance standards.

Table E-2

Maintenance Task	Description / Requirements	Performance Standard	Frequency	Cost per Occurrence	# of Locations or Occurrences per year	Extended Cost
Snow & Ice control	<ul style="list-style-type: none"> <li>Plow and remove of snow from entire pull out including inlet and outlet tapers</li> <li>Sanding / de-icing of pull out</li> <li>Removal of ice build-up adjacent to platform curb</li> <li>Snow removal from sidewalk platform and shelter area</li> <li>Sanding &amp; de-icing of sidewalk, platform and shelter area</li> <li>Clear snow and ice to maintain clear access to platform &amp; shelter</li> </ul>	<p>For locations 9 through 21 as identified on table E-1 as per City of Kelowna Policy 332 – Snow and Ice Control</p> <p>For Locations 1,4,5 and 6 as identified on Table E-1 as per City of West Kelowna Winter Roadway Maintenance Policy and Snow Clearing policy for Sidewalks, Walkways and Stairways.</p> <p>For locations 2,3,7 and 8 as identified on Table E-1 as per Westbank First Nation snow clearing policy</p>	As required – Budget 600 hrs/yr	\$75 per hour		\$45,000
Litter control & Pick-up	<ul style="list-style-type: none"> <li>Empty trash receptacle</li> <li>Pick up litter present on the platform and within shelter</li> <li>Document any identified repairs required to shelter, benches, passenger information display sign, flag post, etc. to key contacts provided in schedule F</li> <li>Check for graffiti and notify contact provided in schedule F</li> </ul>	Recommended BC Transit Stop Maintenance Guidelines.	Weekly	\$537.36 per week for 21 locations	52	\$28,000
Graffiti Removal	<ul style="list-style-type: none"> <li>Removal of graffiti on shelter structure and fixtures</li> <li>Removal of graffiti on sidewalk, platform, bus pull out, curbs etc.</li> <li>Repair and/or restoration of the finishes.</li> </ul>	Recommended BC Transit Stop Maintenance Guidelines.	6 hrs/week	\$50/hr	52	\$15,600
Station / Platform Cleaning	<ul style="list-style-type: none"> <li>Wash down of shelter and platform to remove accumulated surface dirt and debris</li> <li>Pressure wash stained areas</li> <li>Remove adhered stickers / labels / substances from shelter, benches and platform</li> <li>Document any identified repairs required to shelter, benches, passenger information display sign, flag post, etc. to key contacts provided in schedule F</li> <li></li> </ul>	Recommended BC Transit Stop Maintenance Guidelines	Twice/month Per location	\$300/yr/location	21	\$6,300
Station / Platform Sweeping	Sweep sidewalk, platform and pull out / bus pad to remove debris and grit	Recommended BC Transit Stop Maintenance Guidelines	15 hr/month	\$1,200 per month	12	\$14,400
Miscellaneous Minor Repairs	Complete repairs to damage on shelters, benches, screens, flag post, rub strips	Completed within 5 working days of identification unless specialized repair labor required or long lead time parts are required	As required			\$2000



**Figure E1  
Westbank Exchange**





**Figure E2  
Butt Road NB**

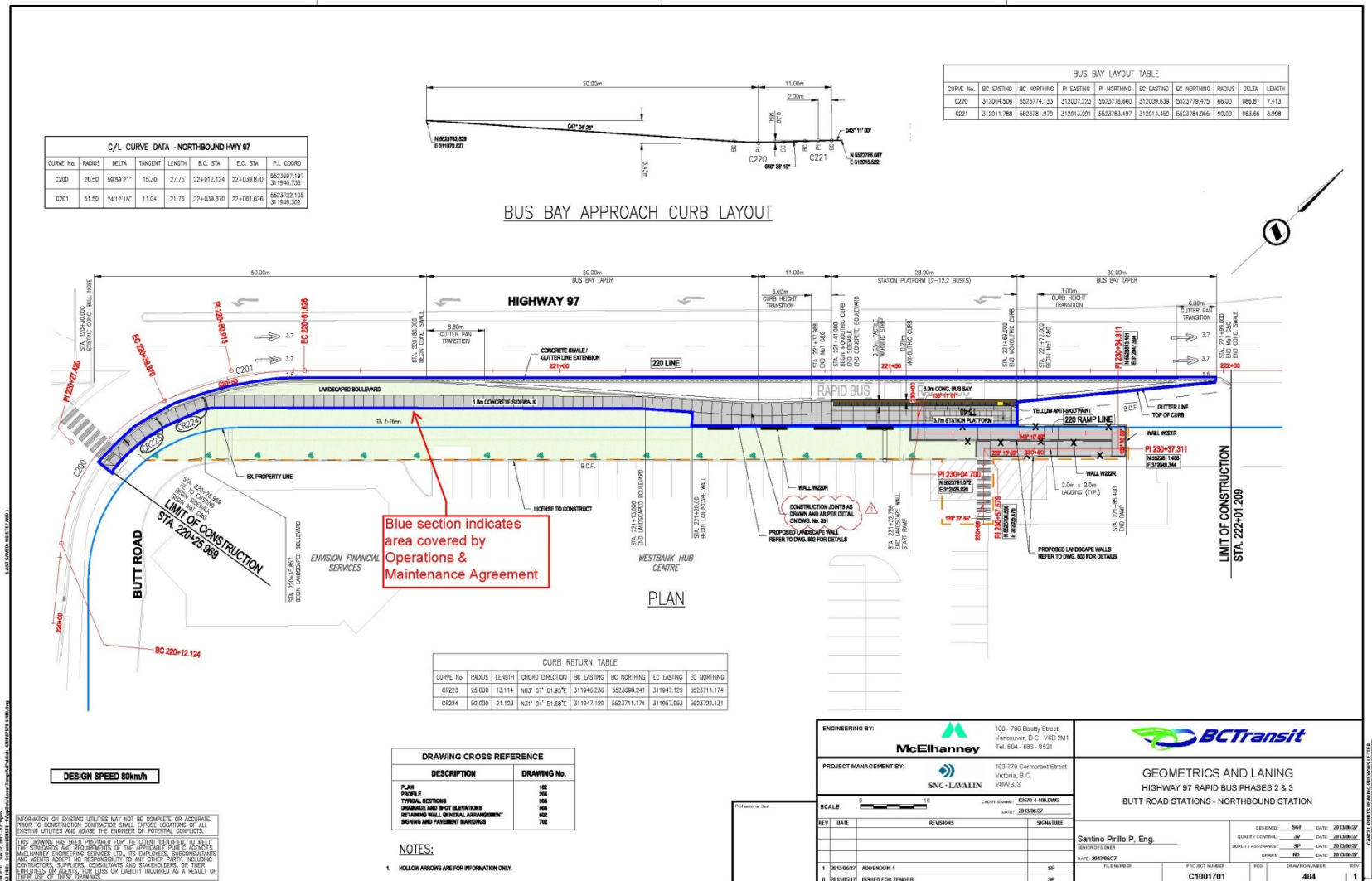
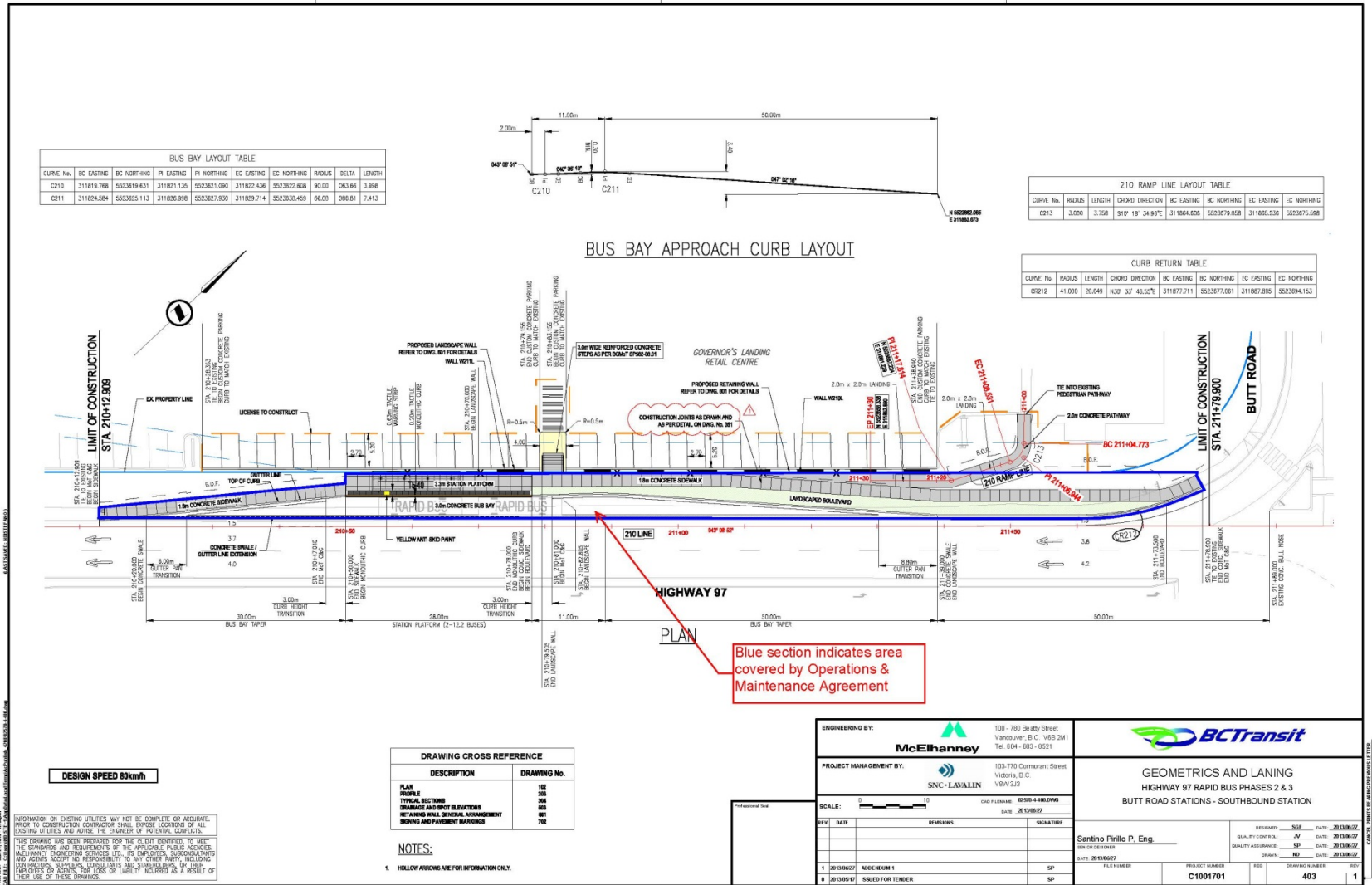


Figure E3  
Butt Road SB



**Figure E4  
Boucherie Mountain Exchange**

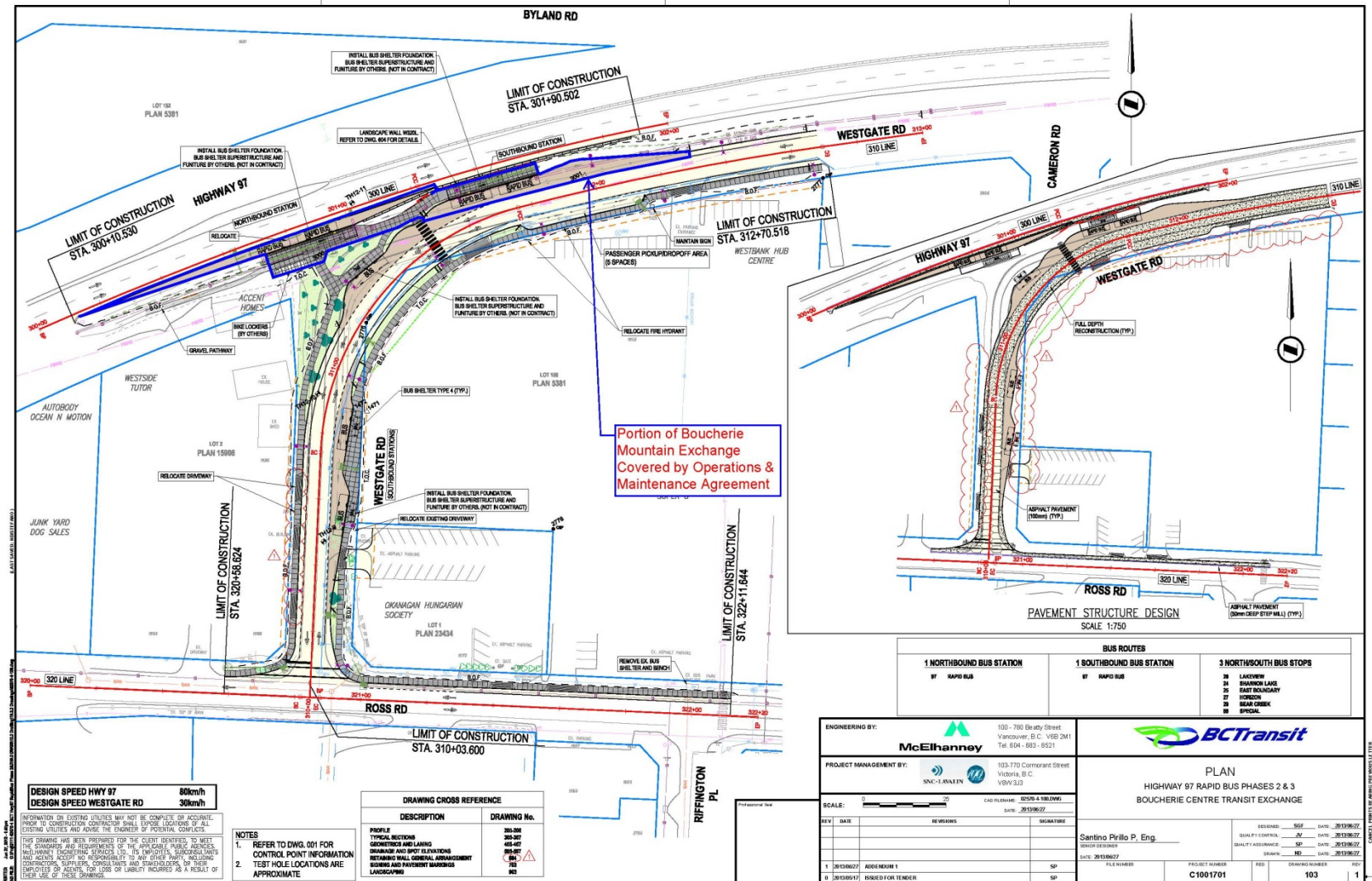
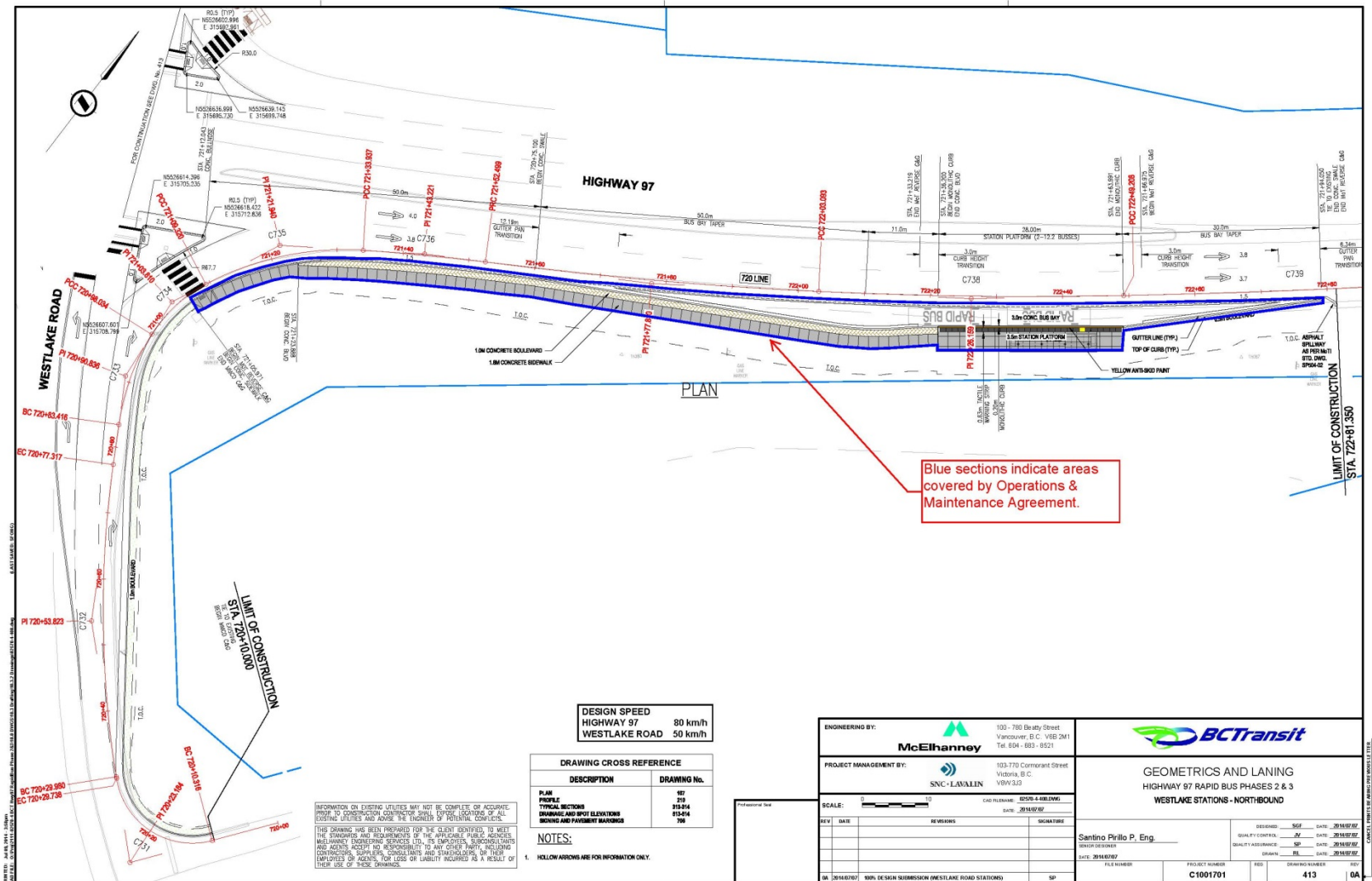
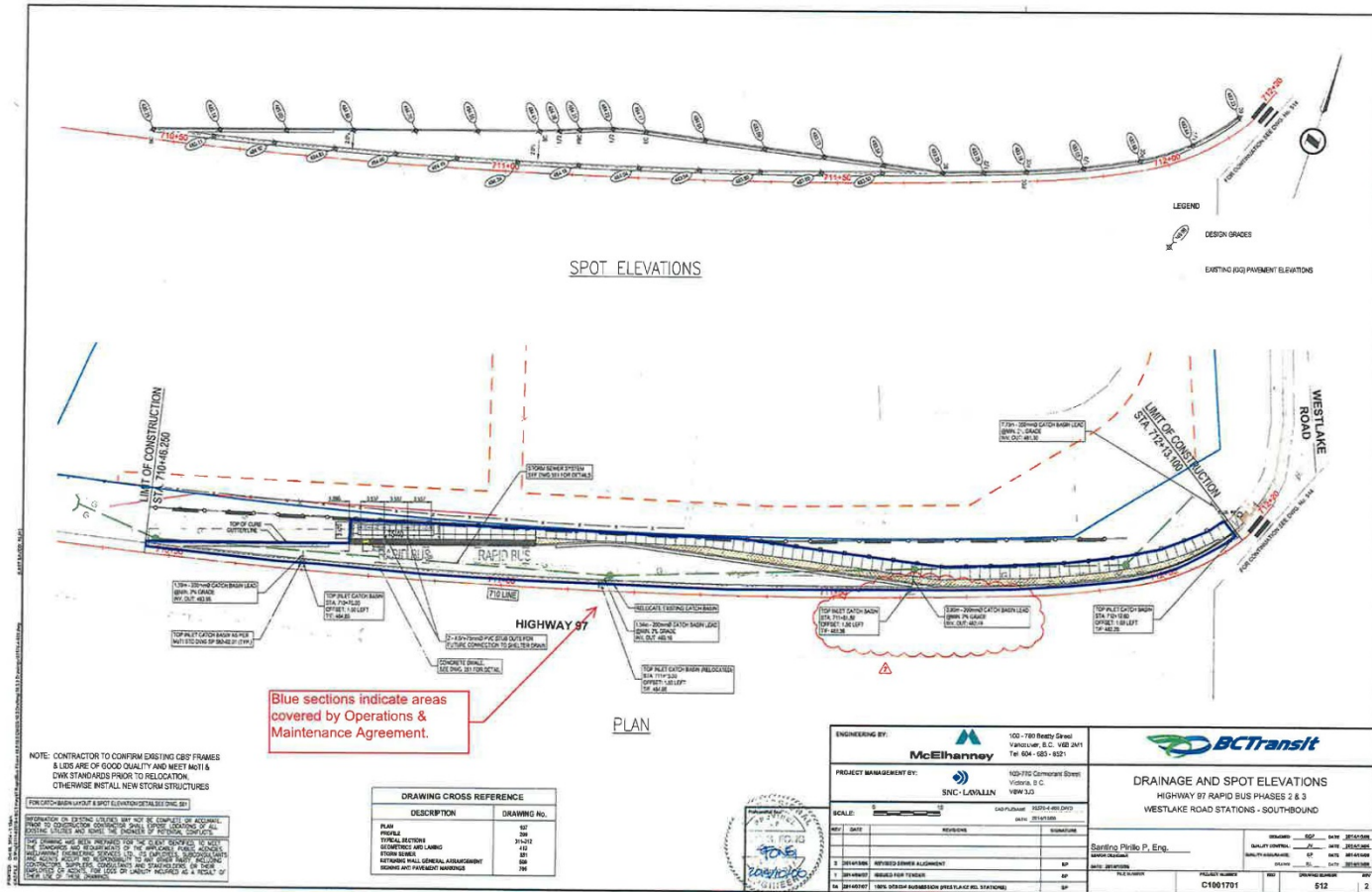




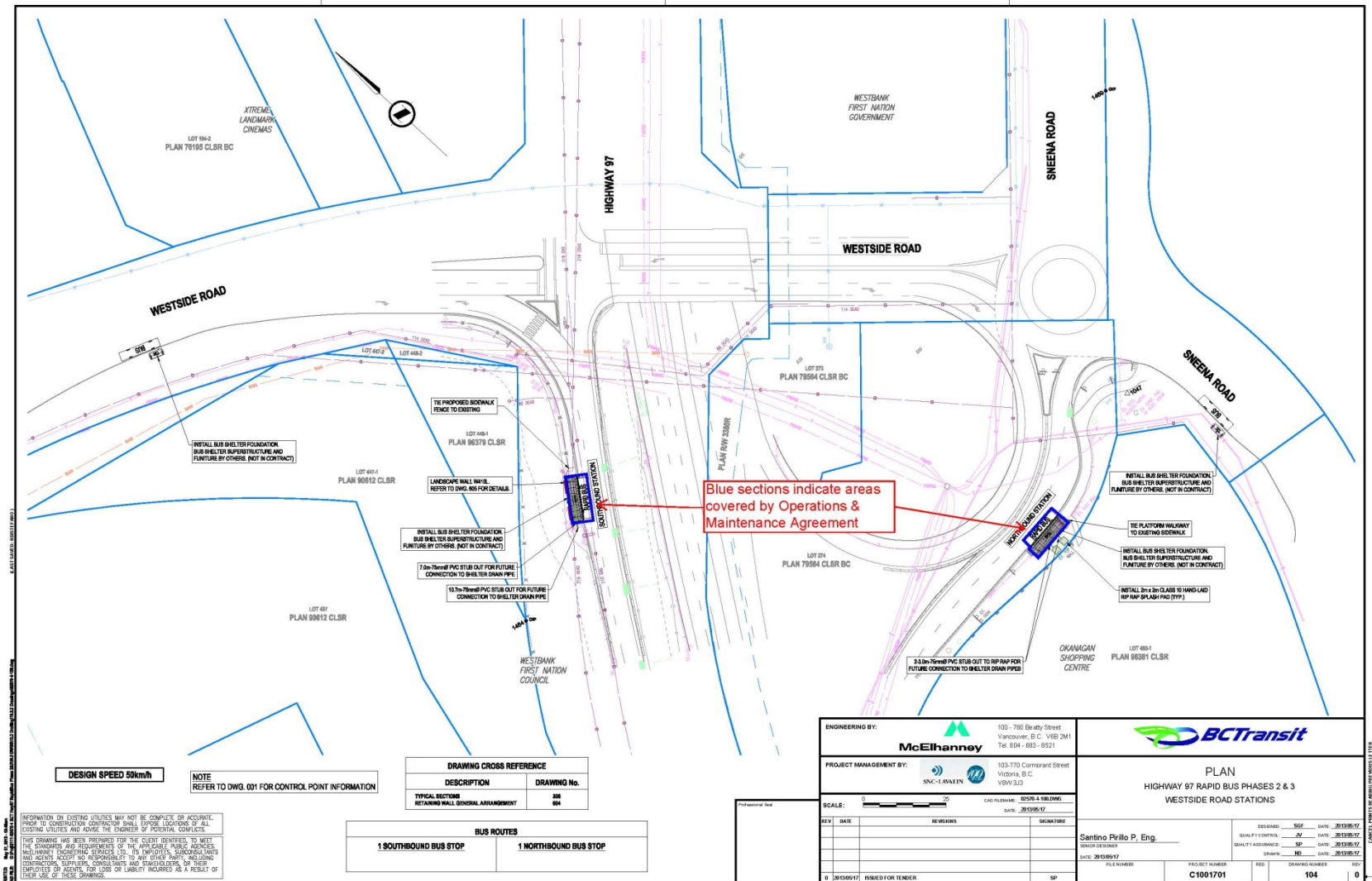
Figure E5  
Westlake-Hudson NB



**Figure E-6  
Westlake Hudson SB**



**Figure E-7  
Westside Road NB & SB**



**Figure E-8  
Queensway Exchange**

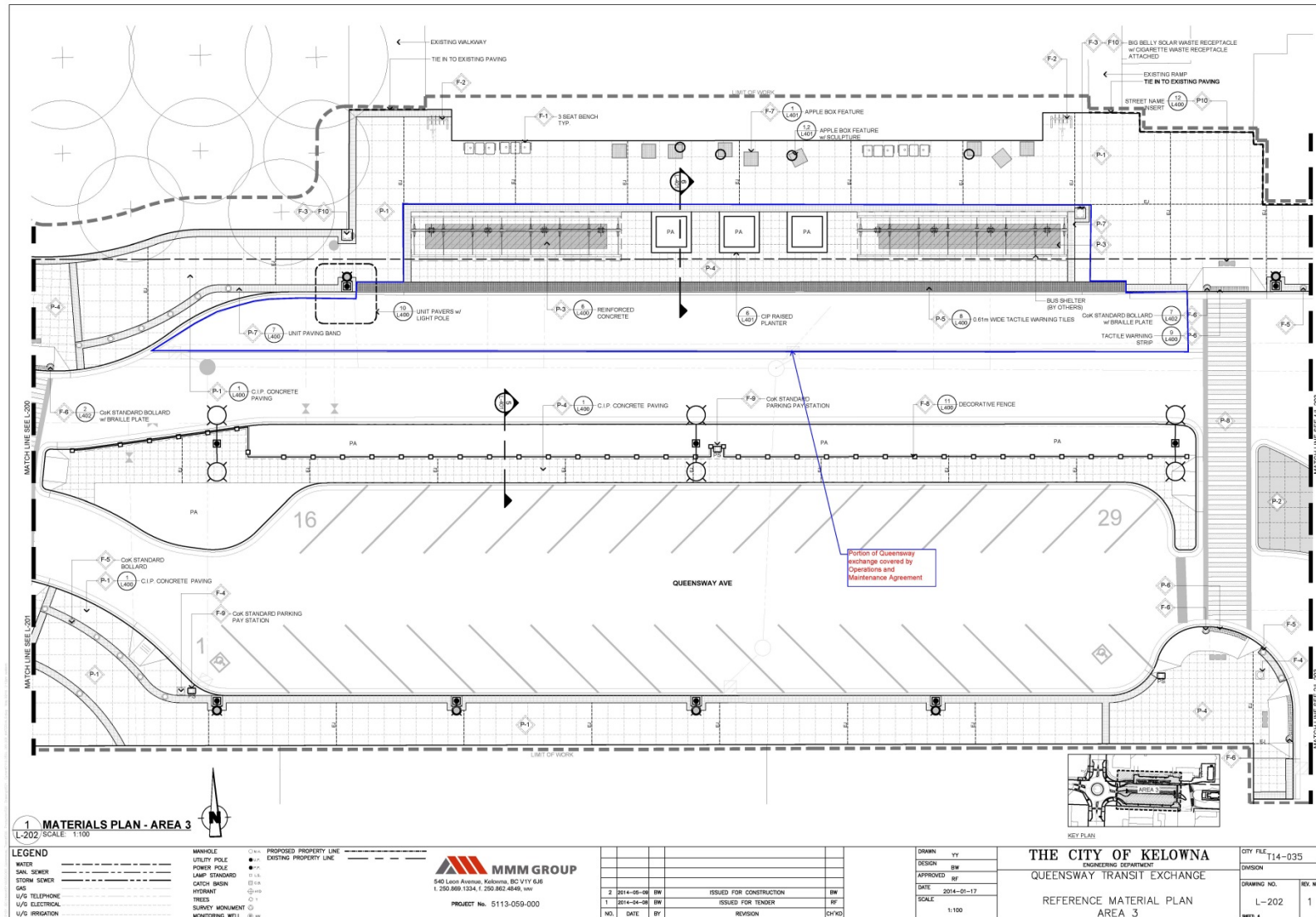
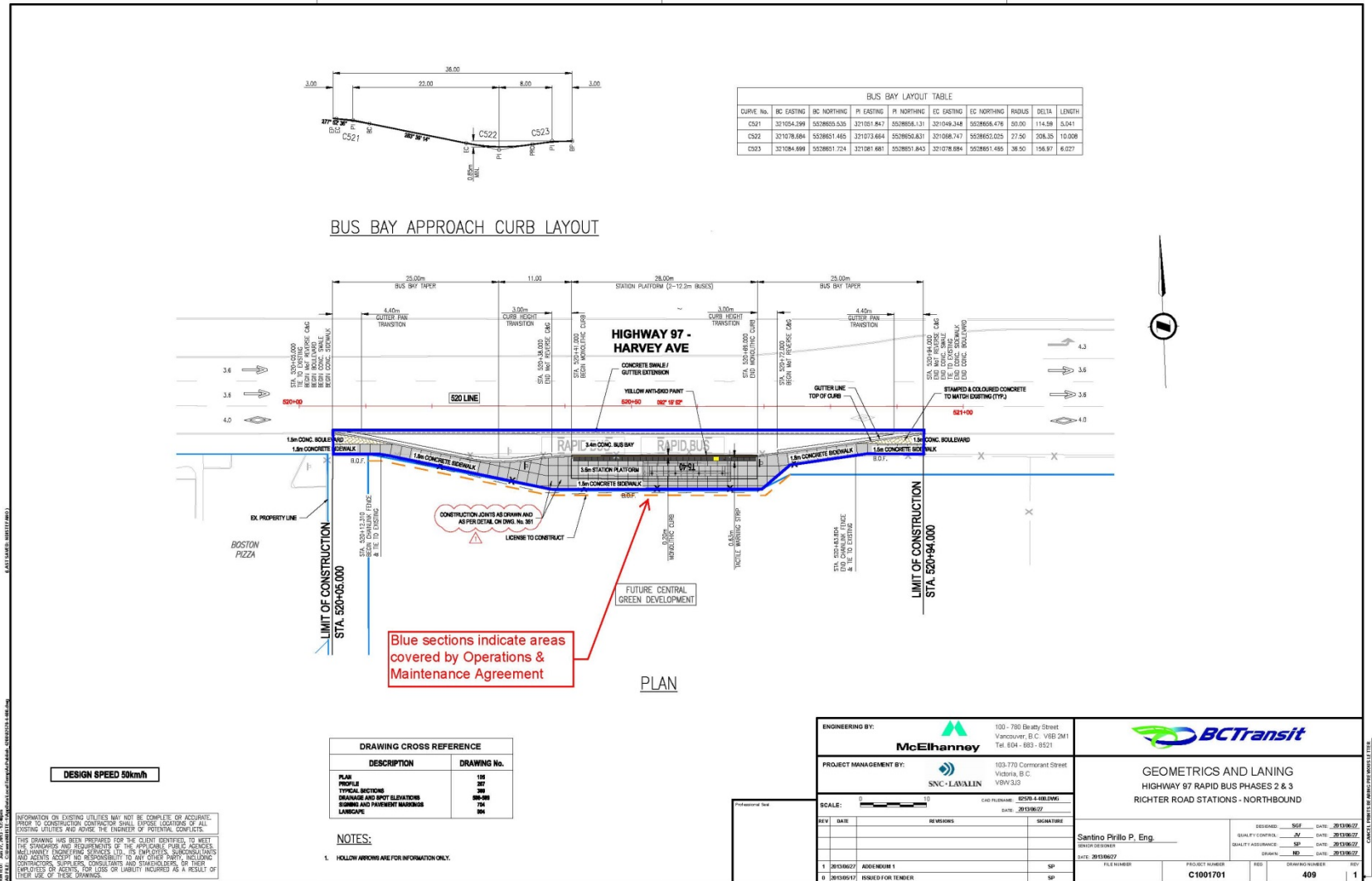




Figure E-9  
Richter NB



**Figure E-10  
Richter SB**

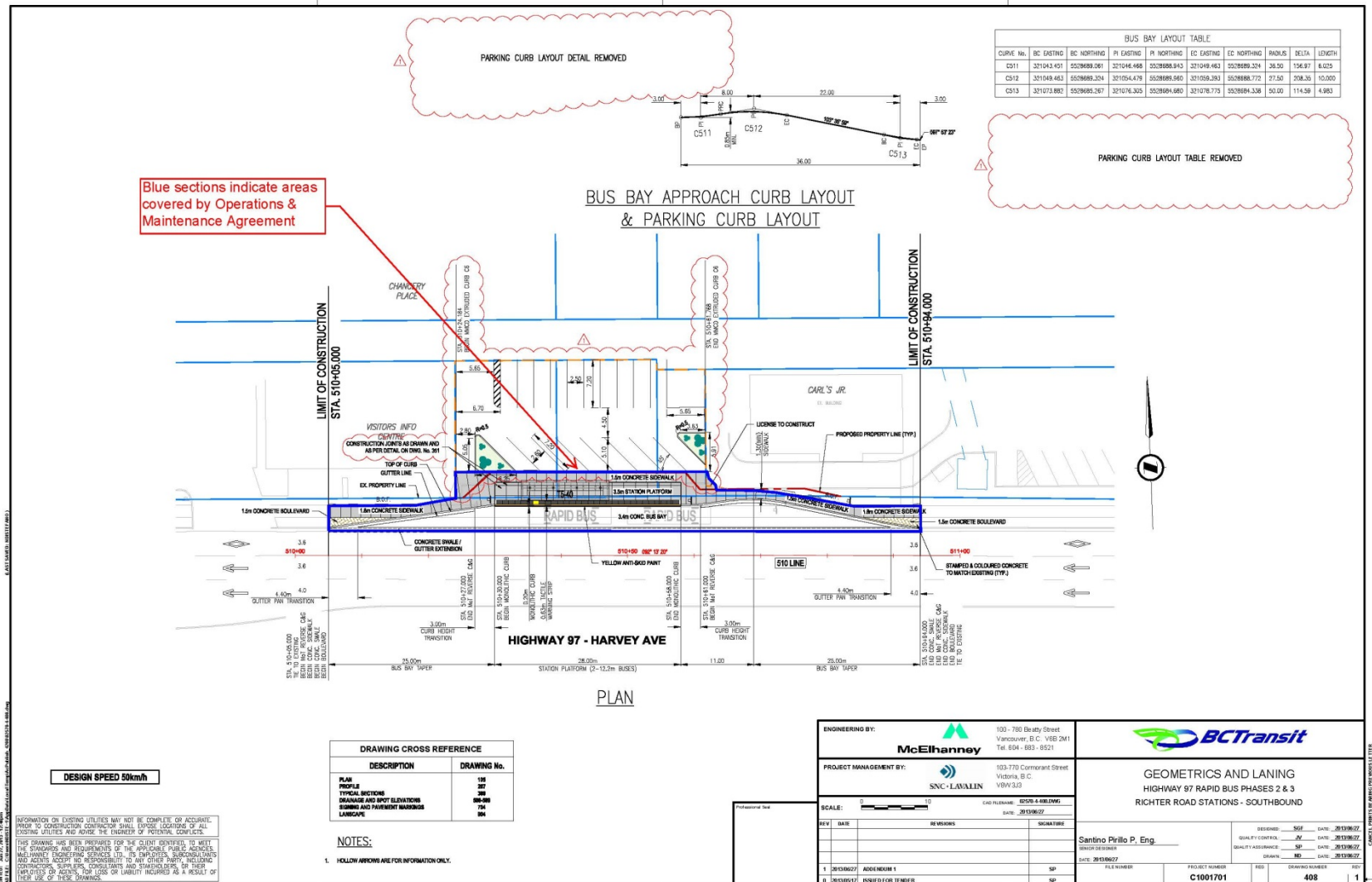
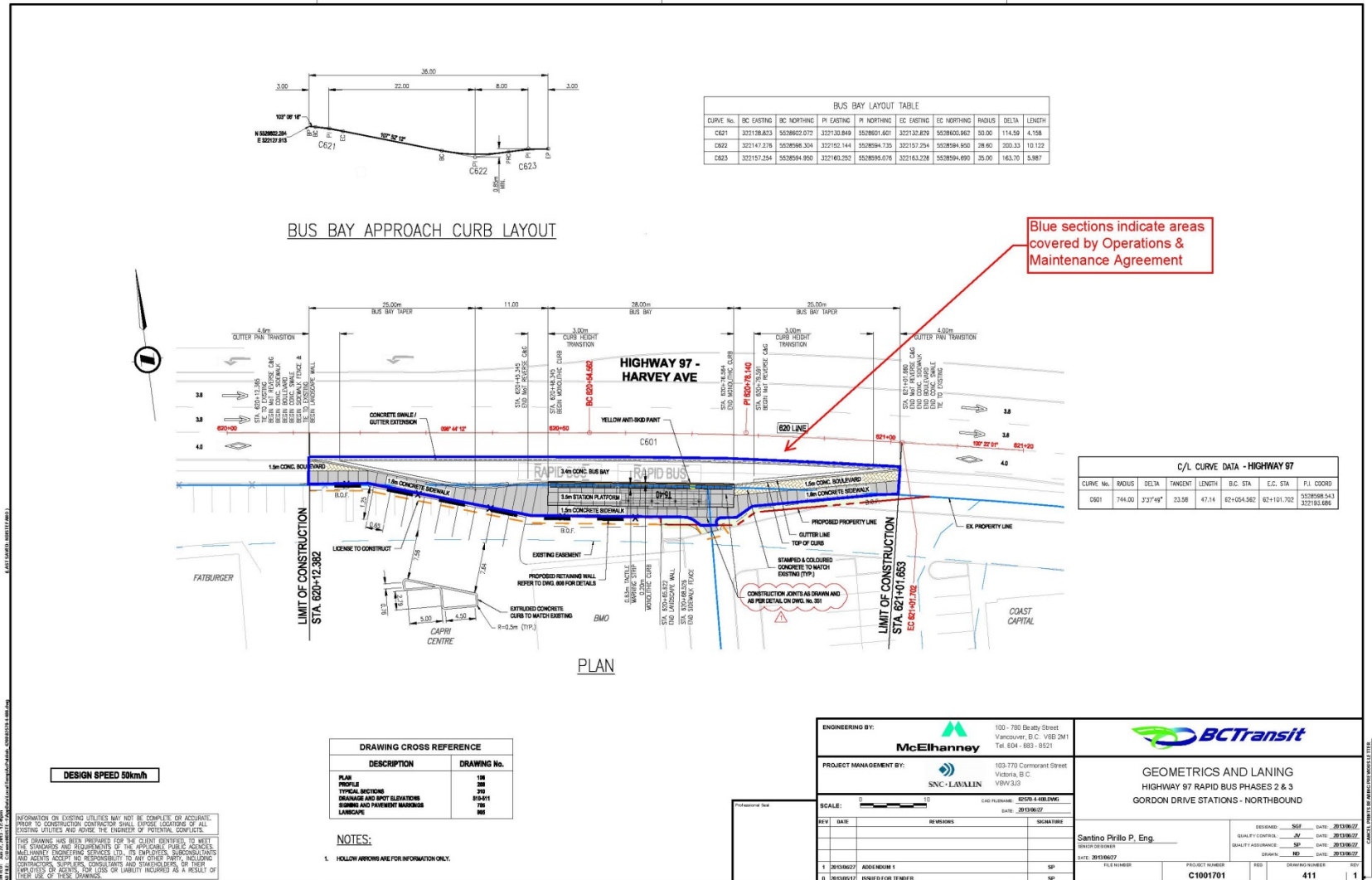


Figure E-11  
Gordon NB



**Figure E-12  
Gordon SB**

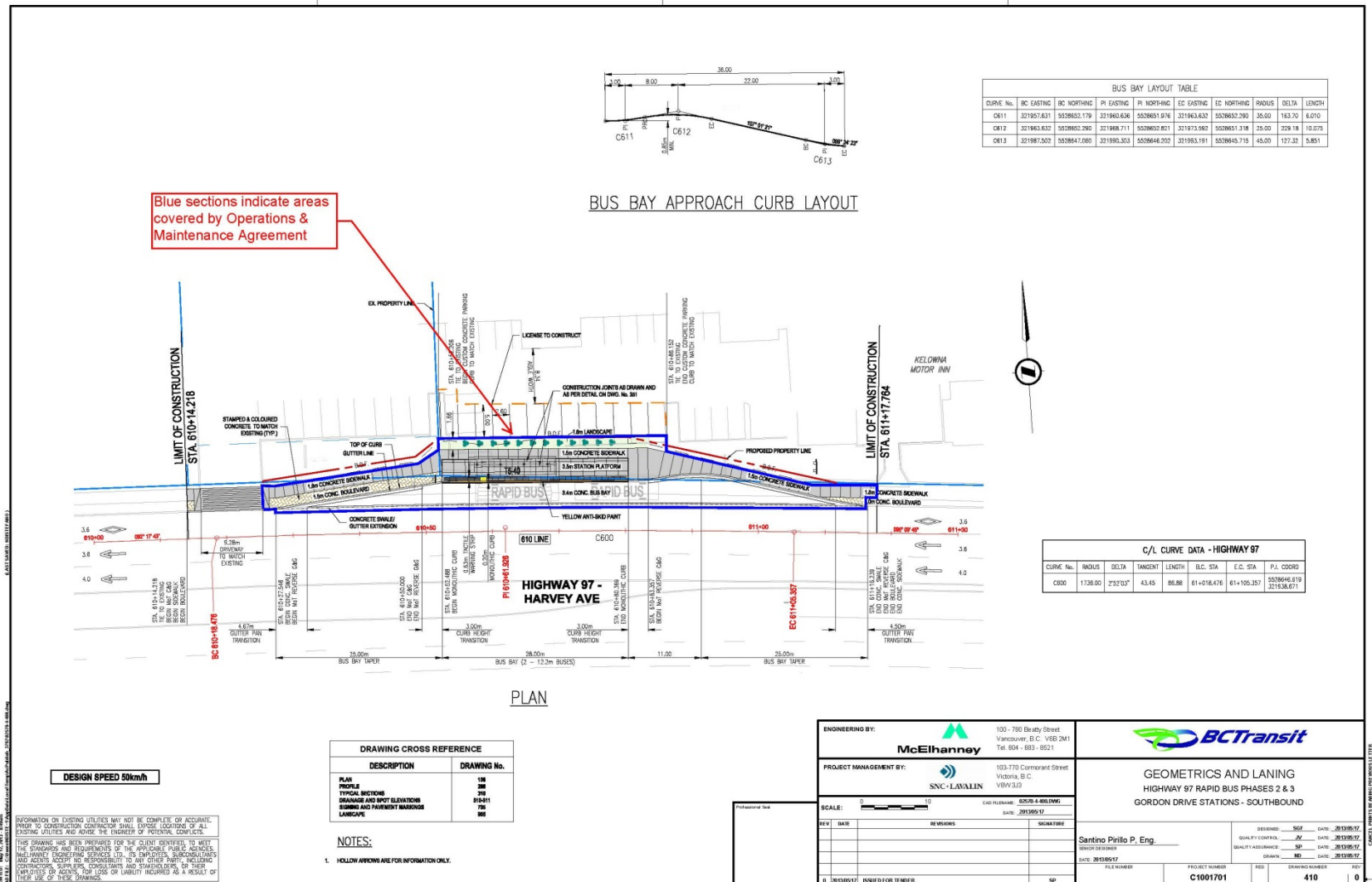






Figure E-14  
Cooper NB & SB

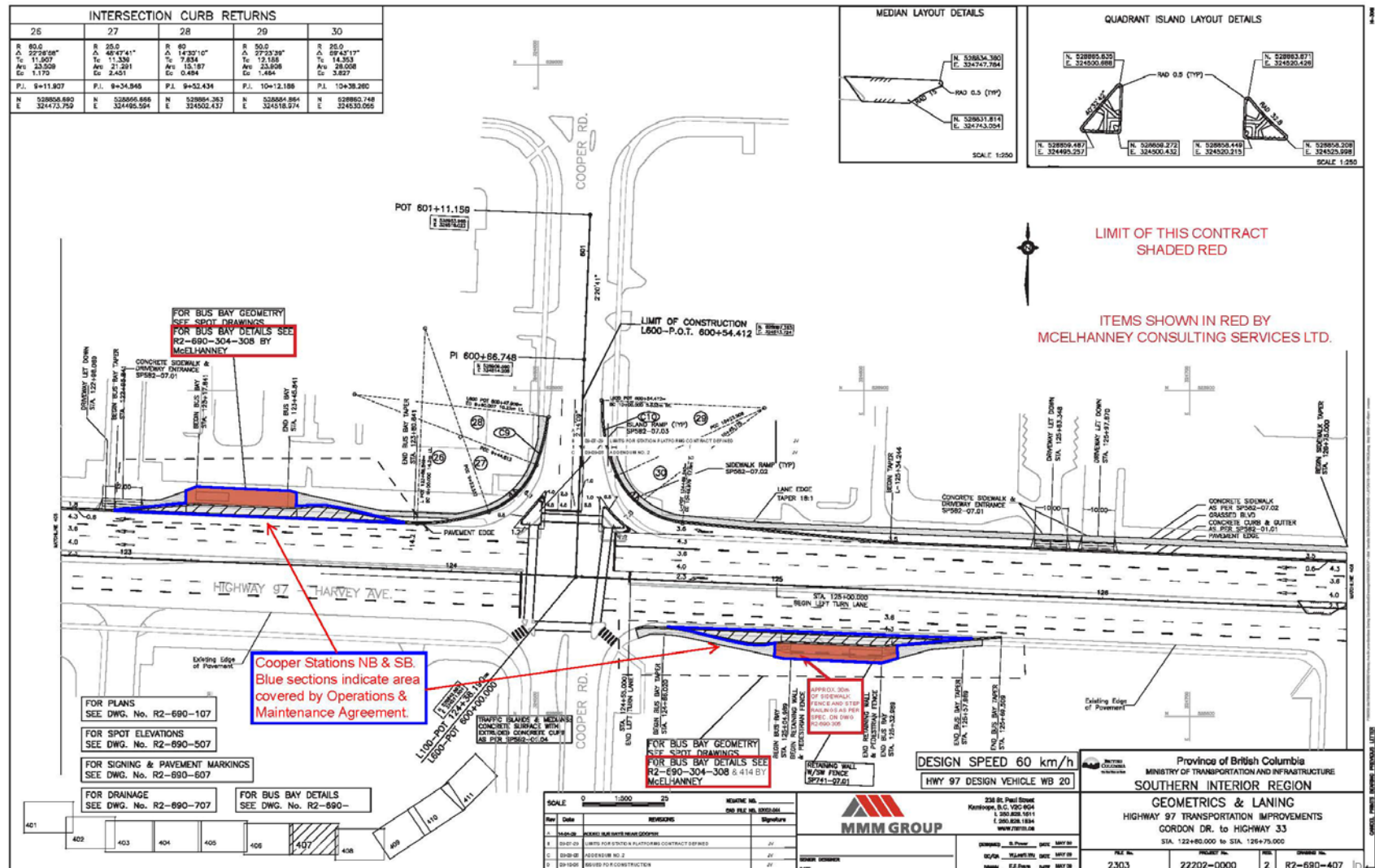
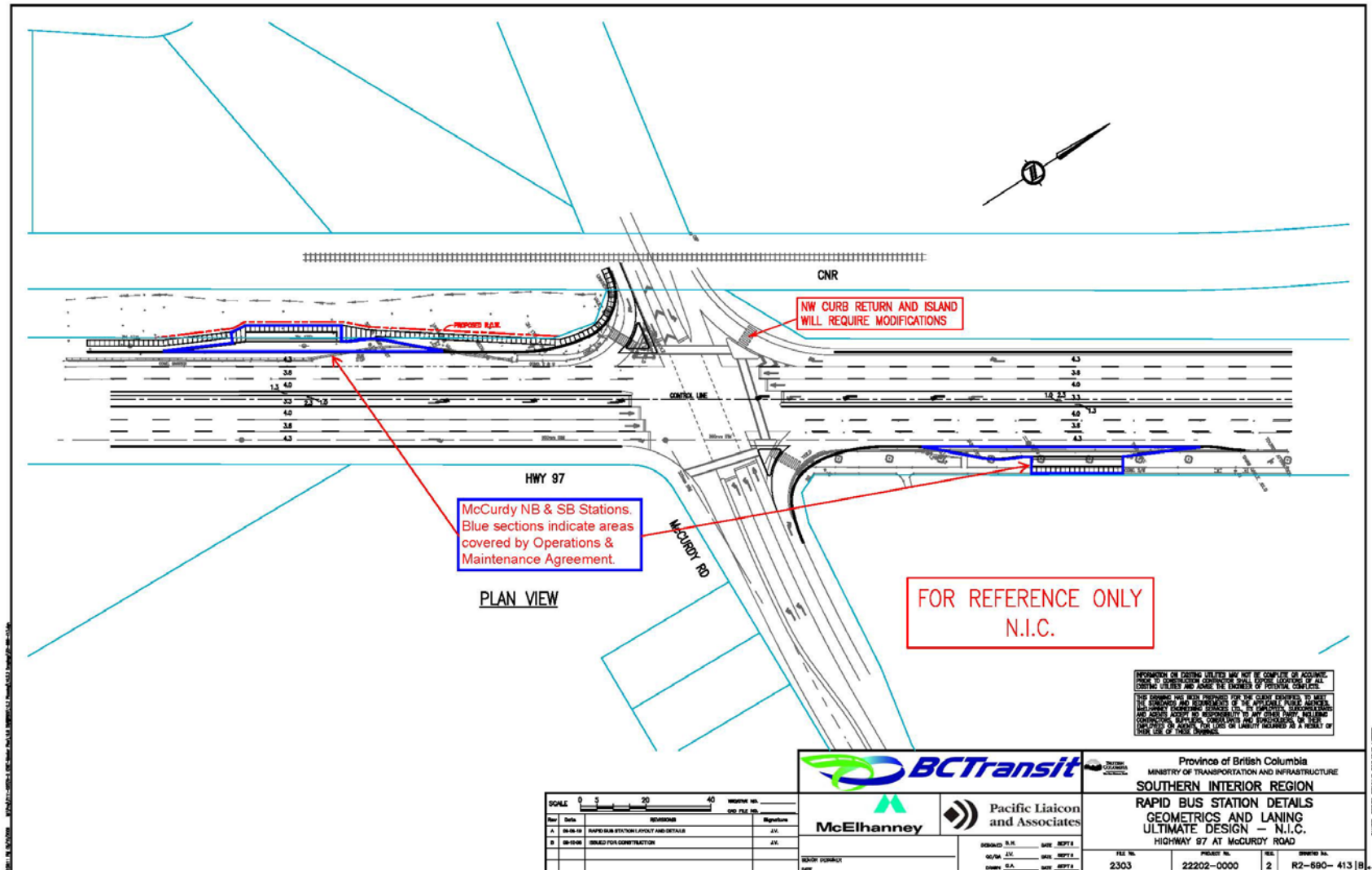








Figure E-17  
McCurdy NB & SB



## **Schedule F Contact Information**

### **BC Transit**

Senior Regional Transit Manager, Kelowna  
520 Gorge Road  
Victoria, BC V8W 2P3  
250-385-2551

### **City of Kelowna**

#### RapidBus Stations

Roadway Operations Supervisor  
1435 Water Street,  
Kelowna, BC V1Y 1J4  
250-469-8923

#### TSP

Traffic Signals & Systems Supervisor  
250-469-8481

### **City of West Kelowna**

Roads & Contract Supervisor  
2570 Bartley Road,  
West Kelowna, BC V1Z 2T6  
778-797-8842

### **Ministry of Transportation**

District Manager, Transportation  
Okanagan – Shuswap District  
#300, 1358 St. Paul Street  
Kelowna, BC V1Y 2E1  
250-712-3660

### **Westbank First Nation**

Director of Development Services  
#202-515 Hwy. 97 South,  
Kelowna, BC V1Z 3J2  
250-769-4999

## APPENDIX 1 – TSP Roadside Repair Process Flow

