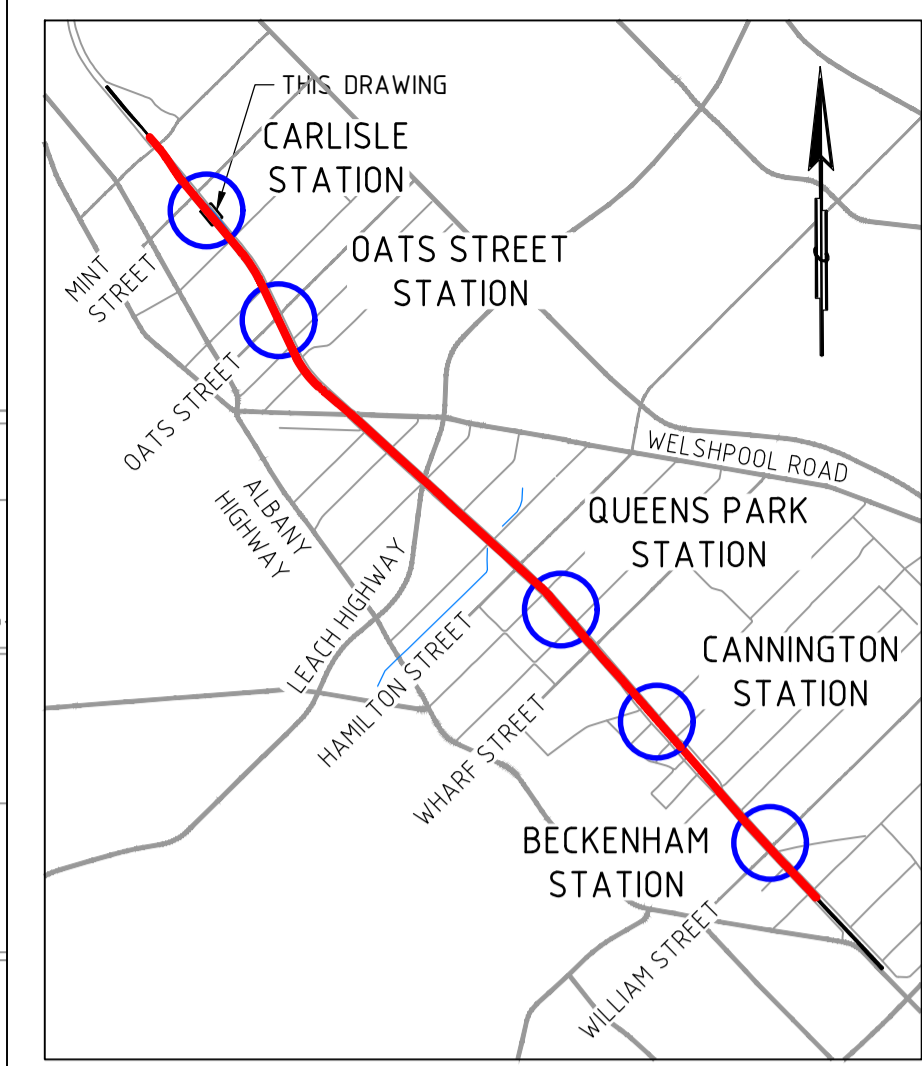
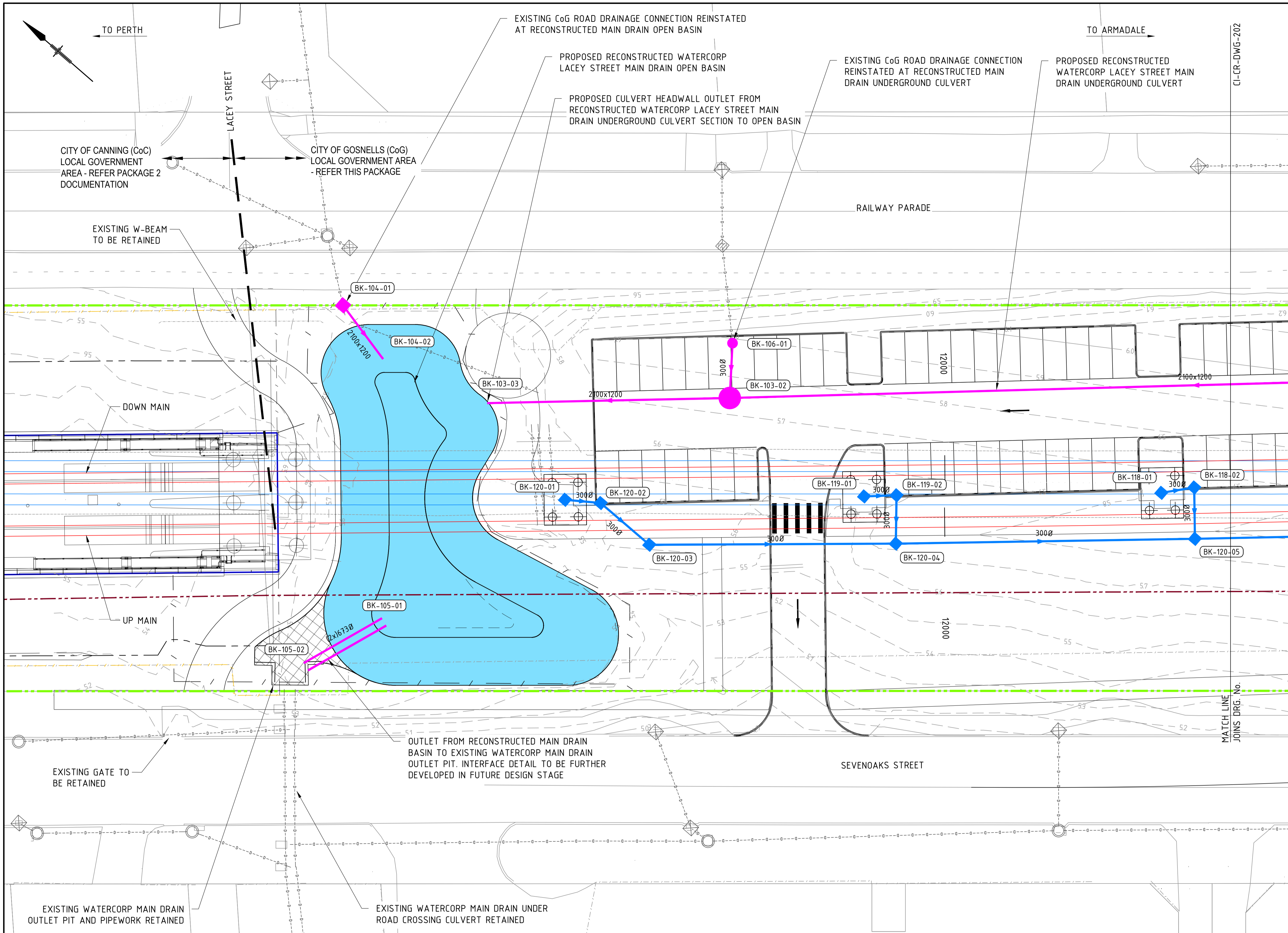


## **Appendix M – Drainage General Arrangement Plans prepared by ALUA**



LOCALITY PLAN

- NOTES**
1. ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  2. REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  3. STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - TRENCH DRAIN
    - DRAINAGE BASIN
    - ▨ BLACK ROCK FILL AREA
  - CoG DRAINAGE:
    - CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:
    - CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

REV	DATE	AMENDMENT	EC	LS	BG
A102			DSN	DRN	CHK
APP					
ORIG SIZE			AT ORIGINAL PLOT SIZE		
A1			100mm		

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ARMADALE LINE UPGRADE ALLIANCE  
Innovation to Reality

Contractor No: LXR-P4-Z5-BK-CI-DR-DWG-00201

REFERENCES	SCALE	DESIGNED
	1:200 (@A1)	E.CHEUNG1
	DATUM	DRAWN
	HORIZONTAL:	L.SHARRATT
	VERTICAL:	CHECKED
		B.GRAFFEN
		APPROVED
		DATE

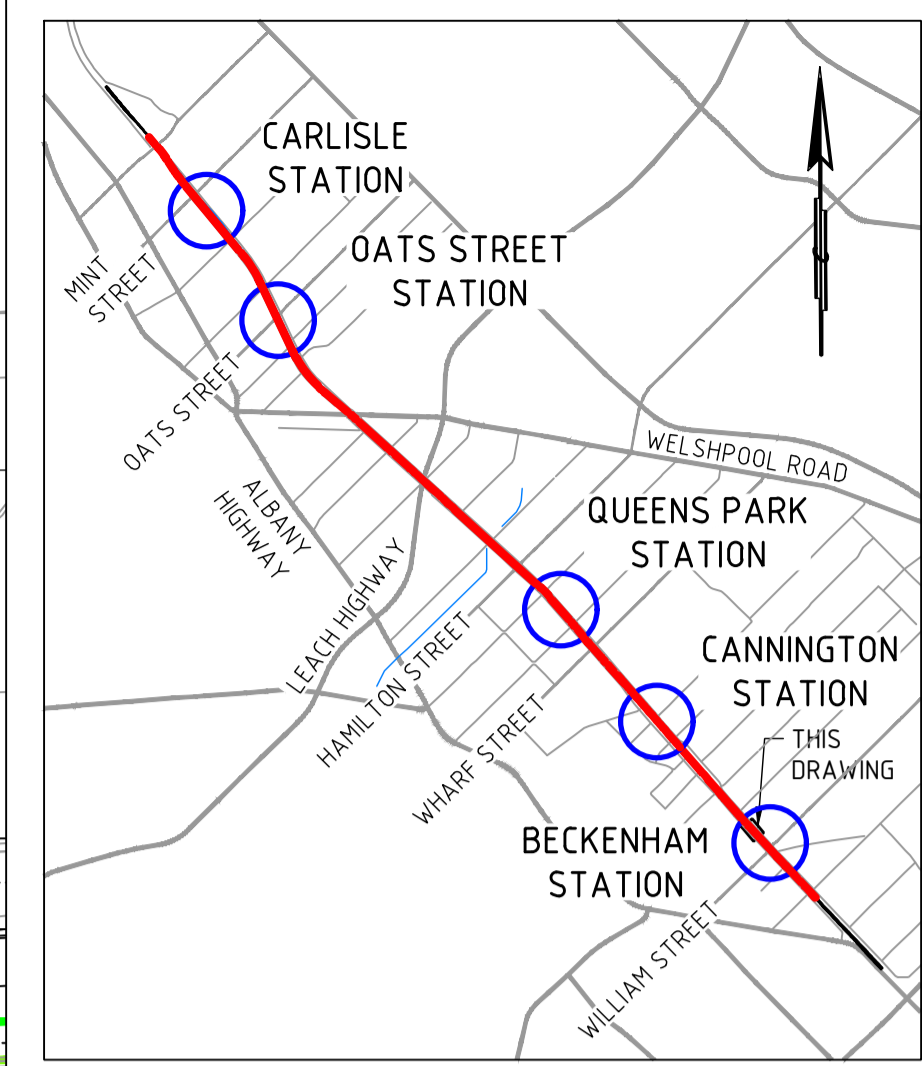
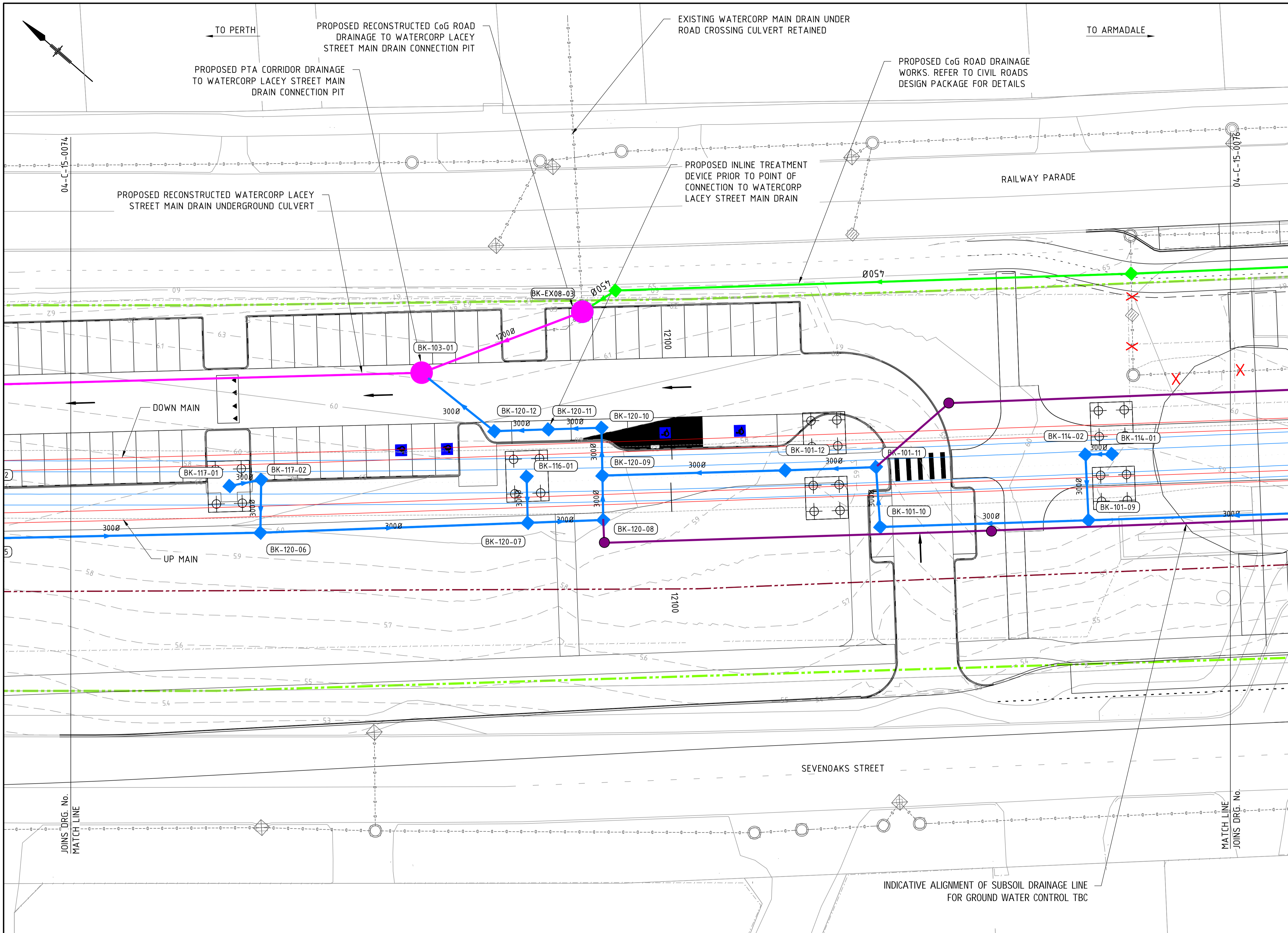
**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

ARMADALE LINE - CIVIL  
CORRIDOR DRAINAGE - PACKAGE 4  
GENERAL ARRANGEMENT - SHEET 1

PTA Drawing No: \_\_\_\_\_ Rev: A1.02



LOCALITY PLAN

- NOTES**
1. ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  2. REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  3. STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:**
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - ▭ DRAINAGE BASIN
    - ▨ BLACK ROCK FILL AREA
  - CoG DRAINAGE:**
    - CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:**
    - CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:**
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR**
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

A1.01		EC	LS	BG	
REV	DATE	DSN	DRN	CHK	APP
A1					

AMENDMENT

ORIG SIZE: 0 10 20 30 40 50 100mm

AT ORIGINAL PLOT SIZE

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ARMADALE LINE UPGRADE ALLIANCE  
Innovation to Reality

Contractor No: LXR-P4-Z5-BK-CI-DR-DWG-00202

REFERENCES	SCALE	DESIGNED
	1:200 (@A1)	E.CHEUNG1
	DATUM	DRAWN
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	VERTICAL:	CHECKED
		B.GRAFFEN
		APPROVED
		DATE

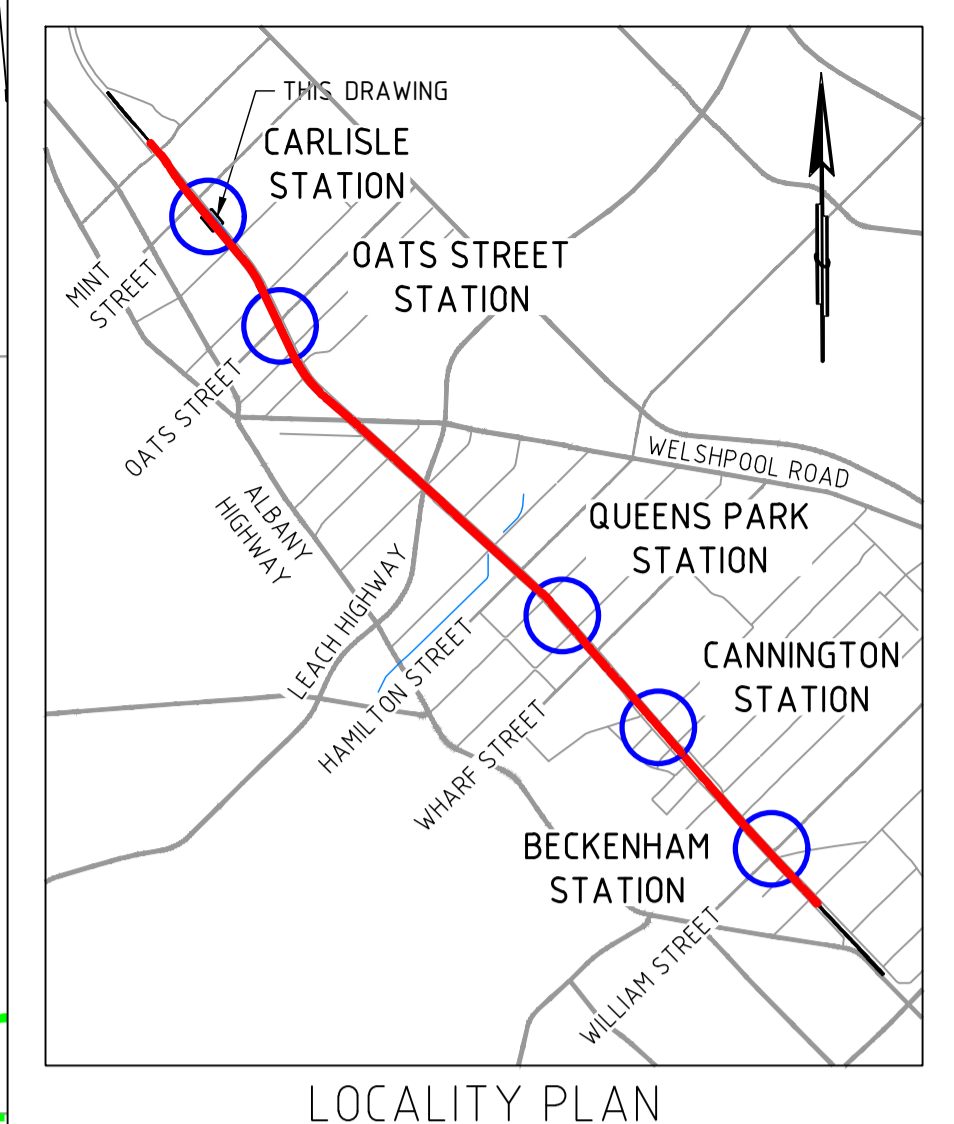
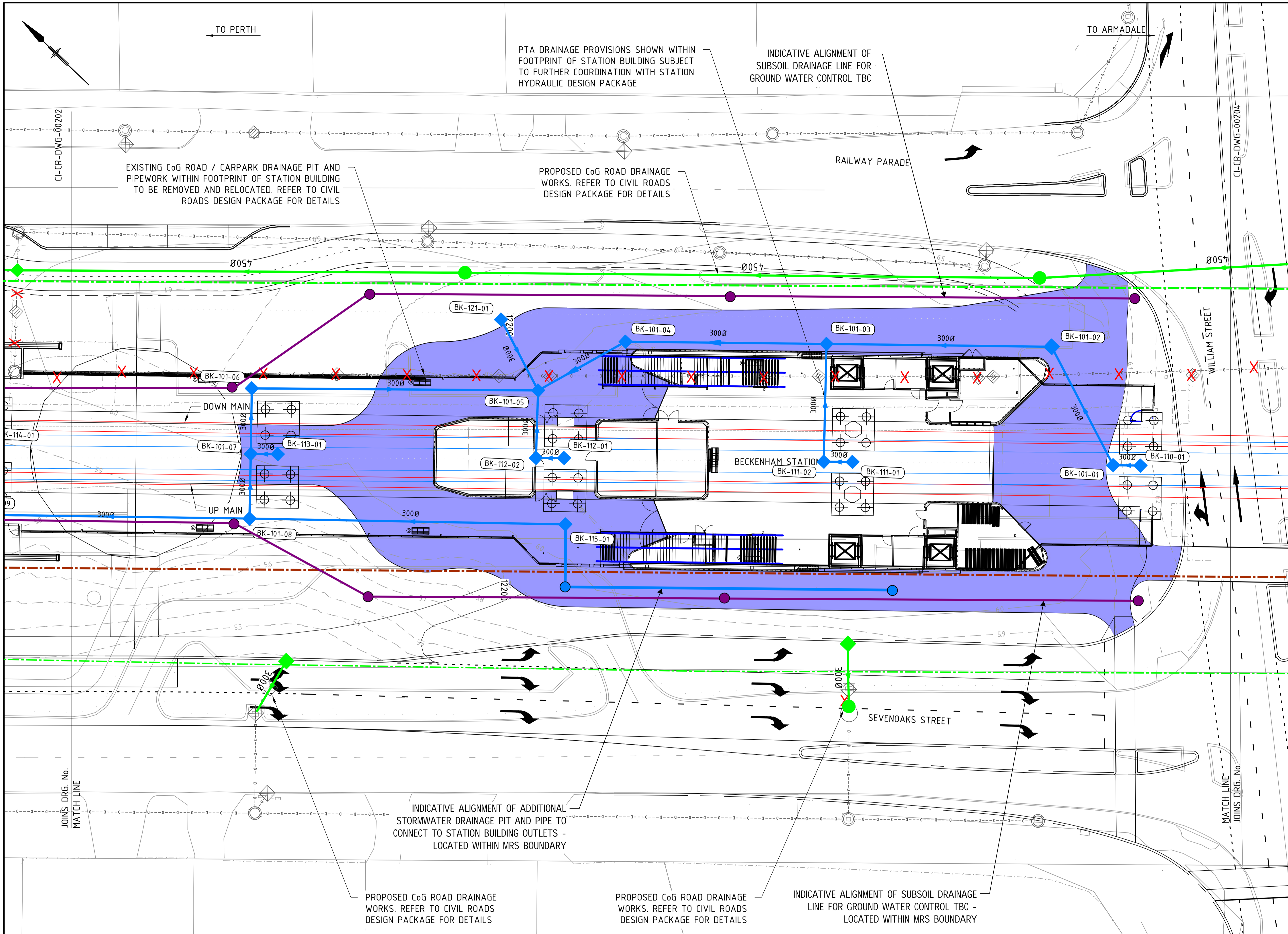
**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

**ARMADALE LINE - CIVIL**  
CORRIDOR DRAINAGE - PACKAGE 4  
GENERAL ARRANGEMENT - SHEET 2

PTA Drawing No: \_\_\_\_\_ Rev: A1.01



- NOTES**
- ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  - REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  - STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:**
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - TRENCH DRAIN
    - DRAINAGE BASIN
    - BLACK ROCK FILL AREA
  - CoG DRAINAGE:**
    - 300Ø CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:**
    - 300Ø CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:**
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR**
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

REV	DATE	AMENDMENT	EC	LS	B.G
A1.02			DSN	DRN	CHK
ORIG SIZE	AT ORIGINAL PLOT SIZE		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.		

REFERENCES	SCALE
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DATUM	HORIZONTAL:
	VERTICAL:

DESIGNED	E.CHEUNG1
DRAWN	L.SHARRATT
CHECKED	B.GRAFFEN
APPROVED	
DATE	

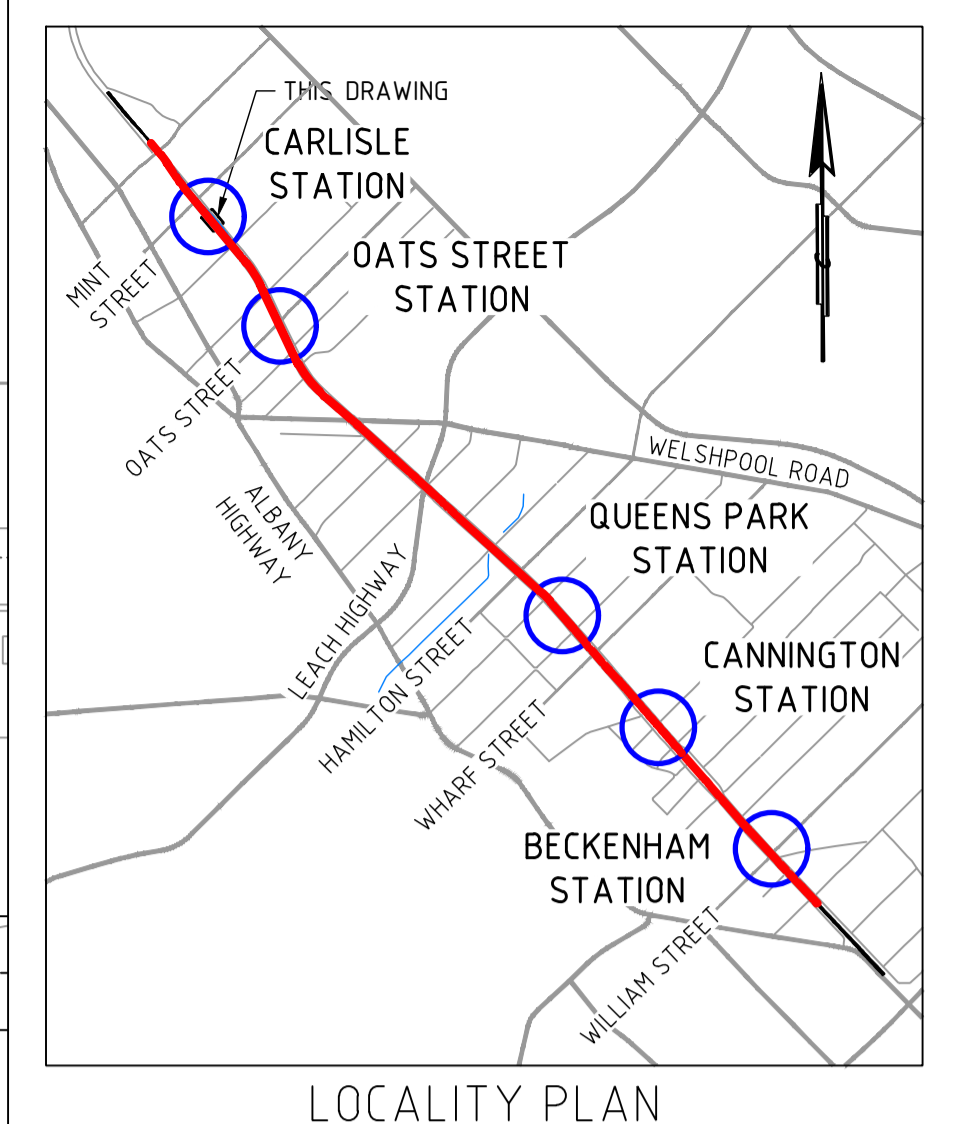
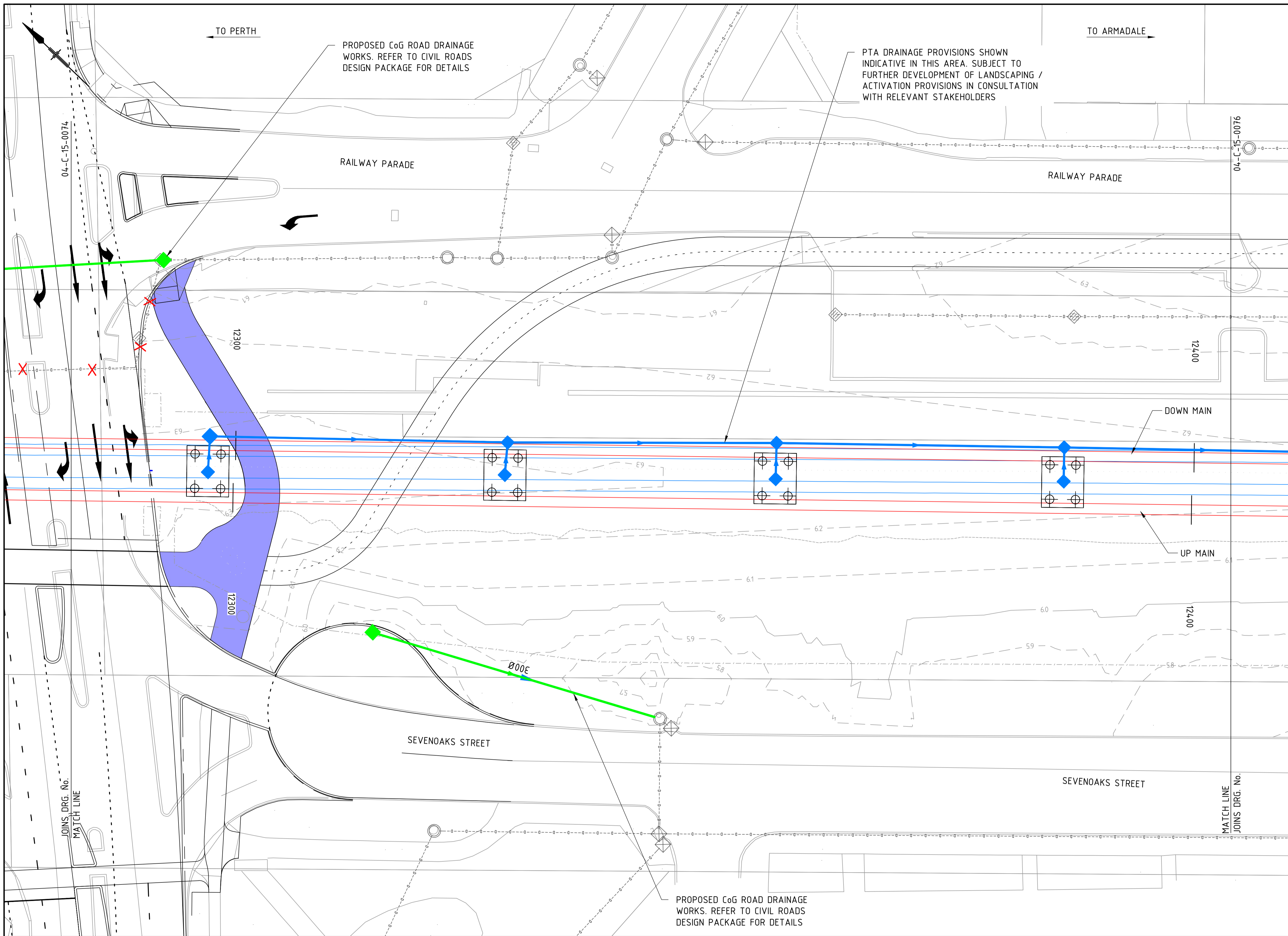
**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

**ARMADALE LINE - CIVIL  
CORRIDOR DRAINAGE - PACKAGE 4  
GENERAL ARRANGEMENT - SHEET 1**

PTA Drawing No: \_\_\_\_\_ Rev: A1.02



- NOTES**
1. ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  2. REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  3. STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:**
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - TRENCH DRAIN
    - DRAINAGE BASIN
    - ▨ BLACK ROCK FILL AREA
  - CoG DRAINAGE:**
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:**
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:**
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR**
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

**ARMADALE LINE - CIVIL  
CORRIDOR DRAINAGE - PACKAGE 4  
GENERAL ARRANGEMENT - SHEET 4**

PTA Drawing No: \_\_\_\_\_ Rev: A1.02

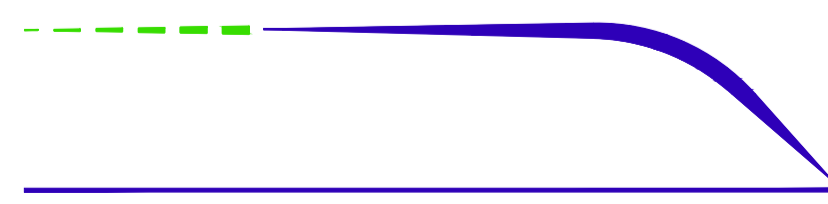
REV	DATE	AMENDMENT	EC	LS	B.G
A1.02			DSN	DRN	CHK
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ORIG SIZE: A1

Scale: 0 10 20 30 40 50 100mm

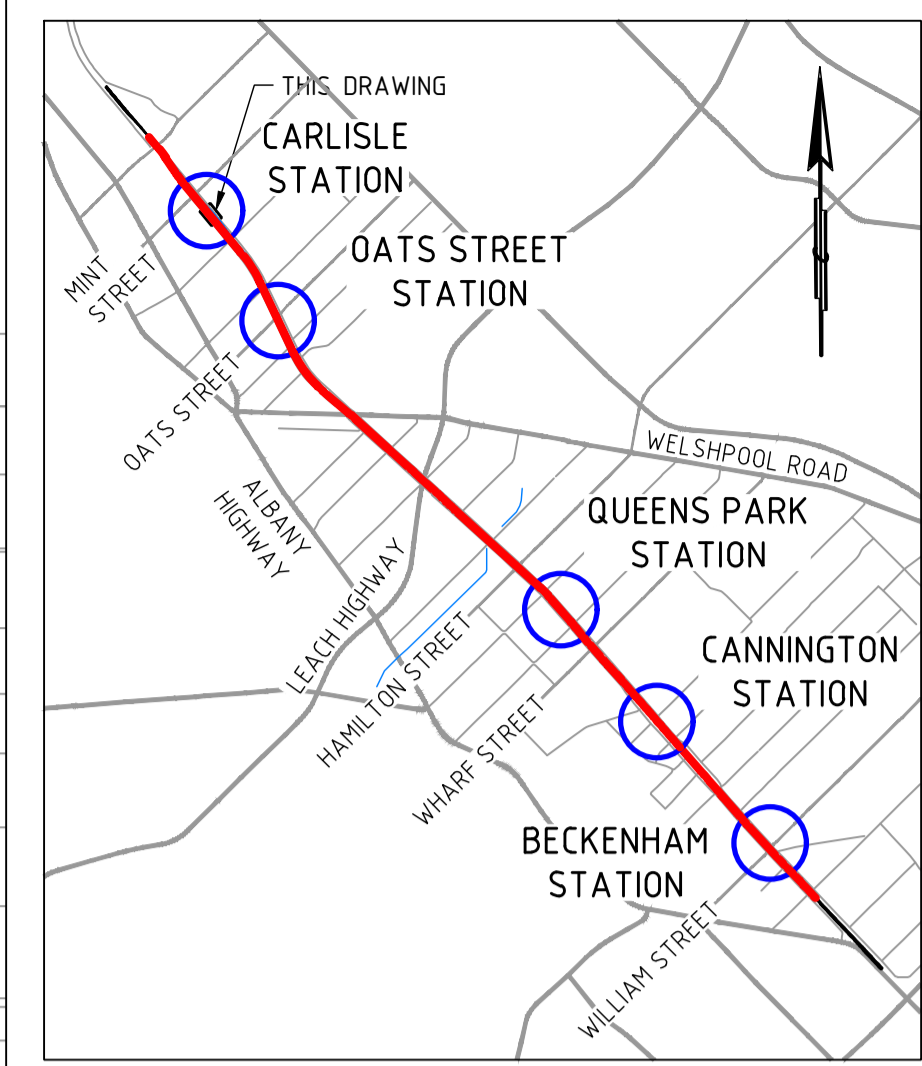
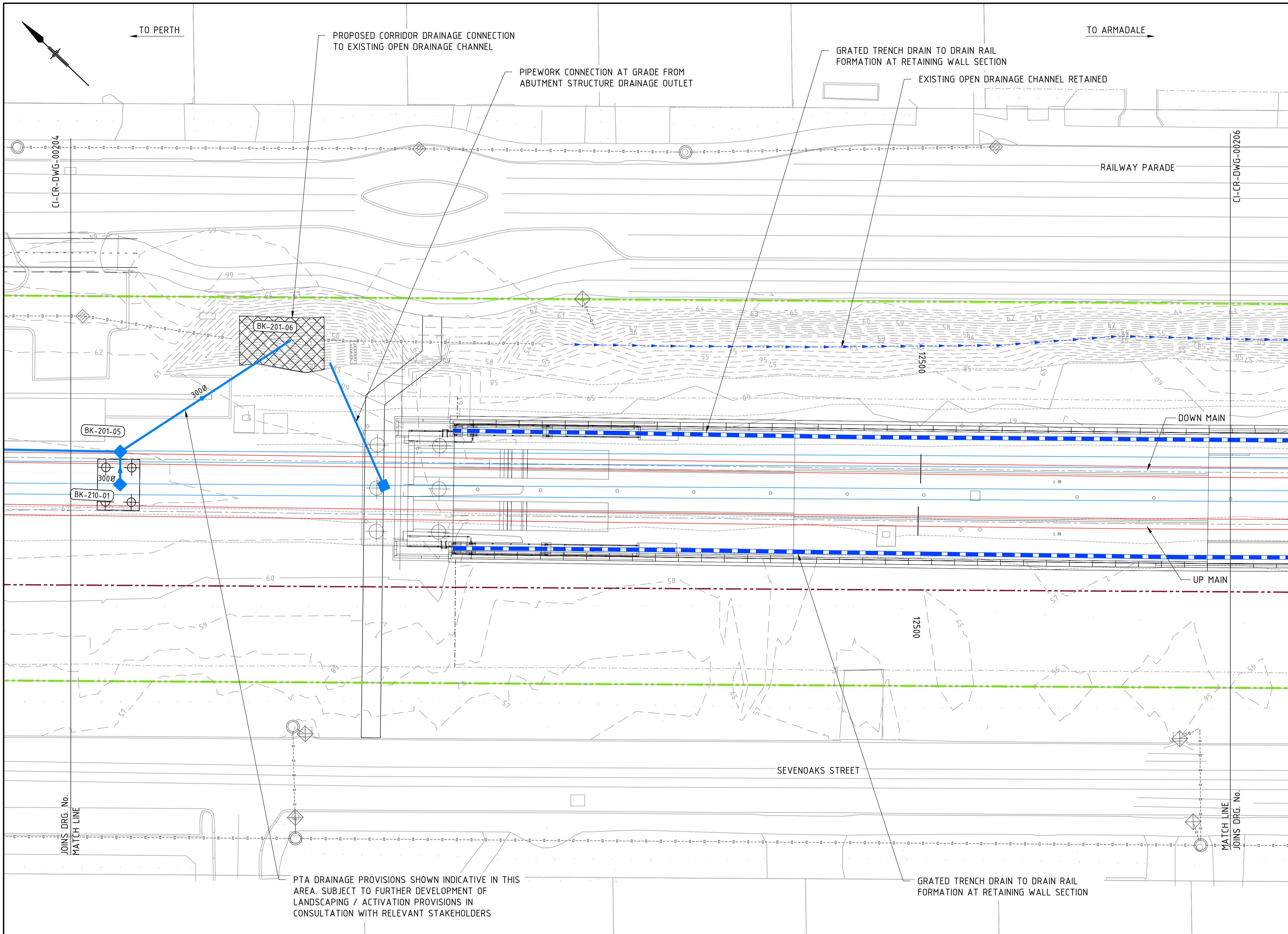
AT ORIGINAL PLOT SIZE

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**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

Contractor No: LXR-P4-Z5-BK-CI-DR-DWG-00204

REFERENCES	SCALE	DESIGNED
	1:200 (@A1)	E.CHEUNG1
	DATUM	DRAWN
	HORIZONTAL:	L.SHARRATT
	VERTICAL:	CHECKED
		B.GRAFFEN
		APPROVED
		DATE



LOCALITY PLAN

- NOTES**
1. ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  2. REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  3. STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:**
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - TRENCH DRAIN
    - DRAINAGE BASIN
    - ▨ BLACK ROCK FILL AREA
  - CoG DRAINAGE:**
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:**
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:**
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR**
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

**REFERENCE DESIGN**

VICTORIA PARK TO CANNING  
 LEVEL CROSSING REMOVAL

**ARMADALE LINE - CIVIL**  
**CORRIDOR DRAINAGE - PACKAGE 4**  
**GENERAL ARRANGEMENT - SHEET 5**

PTA Drawing No: \_\_\_\_\_ Rev: **A1.02**

A102		EC	LS	BG	
REV	DATE	DSN	DRN	CHK	APP
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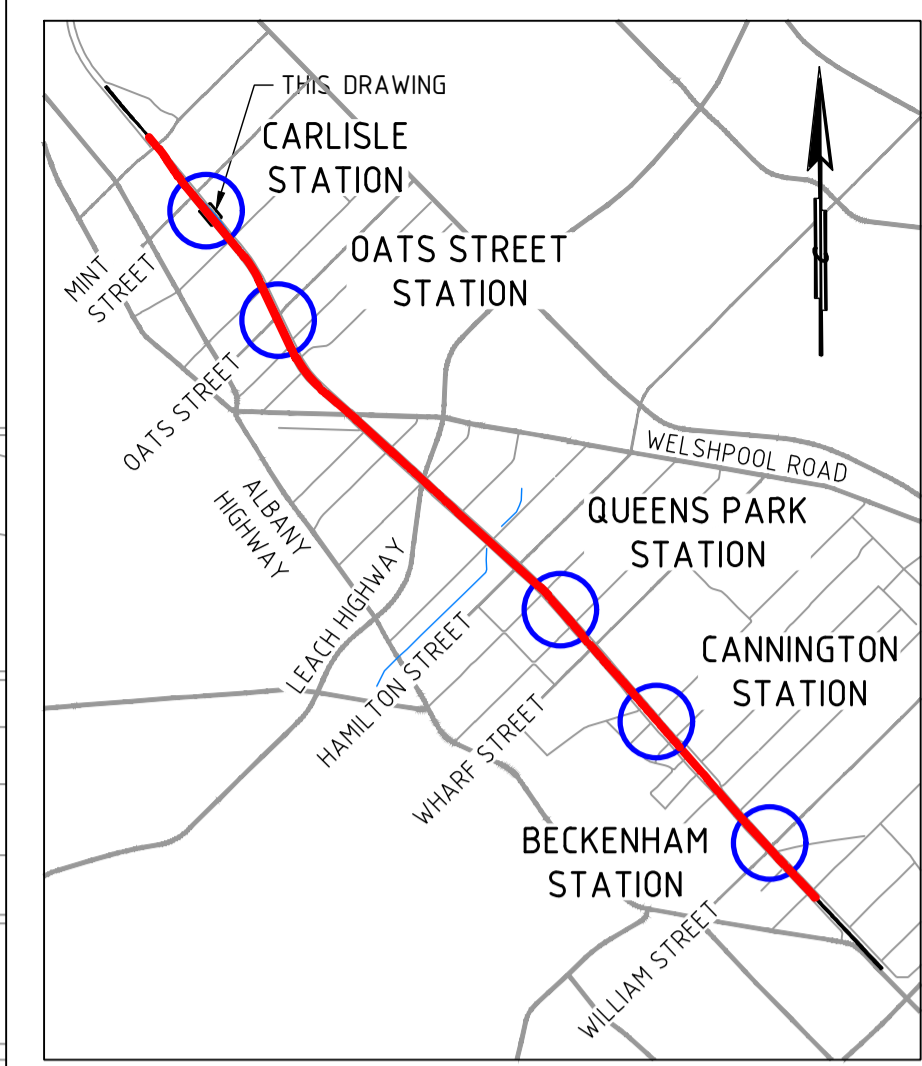
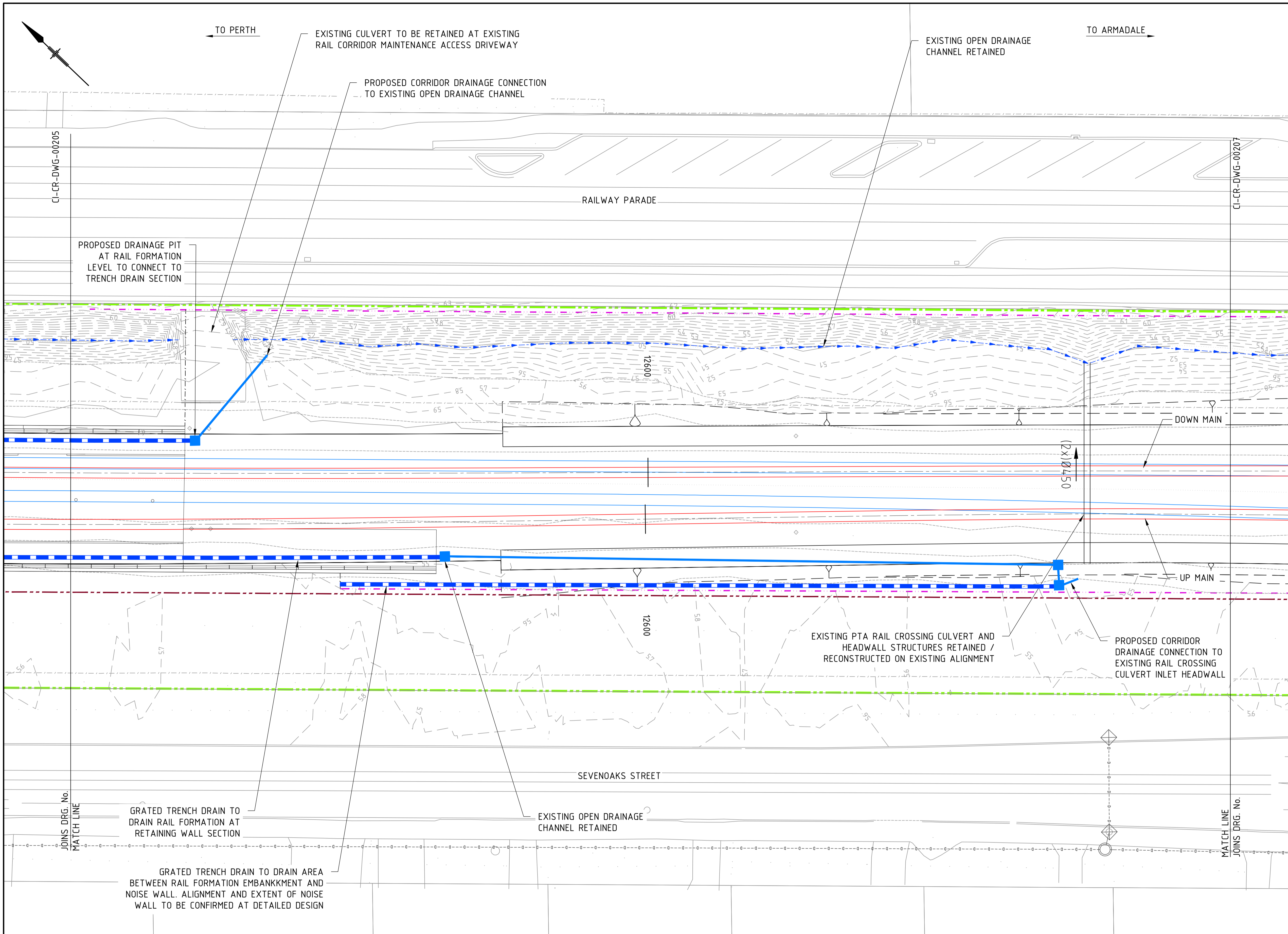
AMENDMENT  
 AT ORIGINAL PLOT SIZE

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**ARMADALE LINE UPGRADE ALLIANCE**  
*Innovation to Reality*

Contractor No: LXR-P4-Z5-BK-CI-DR-DWG-00205

REFERENCES	SCALE	DESIGNED
	1:200 (@A1)	E.CHEUNG1
	DATUM	DRAWN
	HORIZONTAL:	L.SHARRATT
	VERTICAL:	CHECKED
		B.GRAFFEN
		APPROVED
		DATE



LOCALITY PLAN

- NOTES**
1. ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  2. REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  3. STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:**
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - TRENCH DRAIN
    - DRAINAGE BASIN
    - ▨ BLACK ROCK FILL AREA
  - CoG DRAINAGE:**
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:**
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:**
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR**
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

REV	DATE	AMENDMENT	EC	LS	BG	
			DSN	DRN	CHK	APP
A102						
ORIG SIZE	0 10 20 30 40 50 100mm		This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.			
A1	AT ORIGINAL PLOT SIZE		Contractor No: LXR-P4-Z5-BK-CI-DR-DWG-00206			

REFERENCES	SCALE	DESIGNED	E.CHEUNG1
	NA	DRAWN	L.SHARRATT
	DATUM	CHECKED	B.GRAFFEN
	HORIZONTAL:	APPROVED	
	VERTICAL:	DATE	

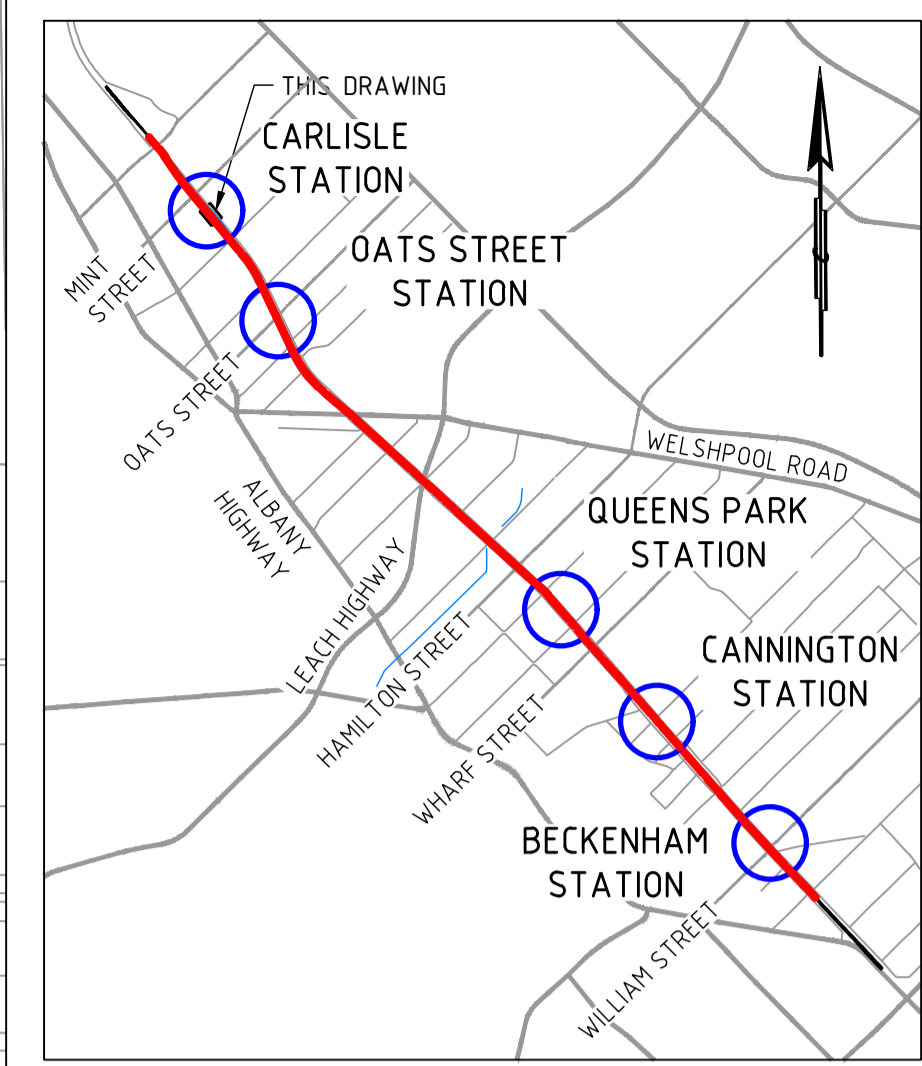
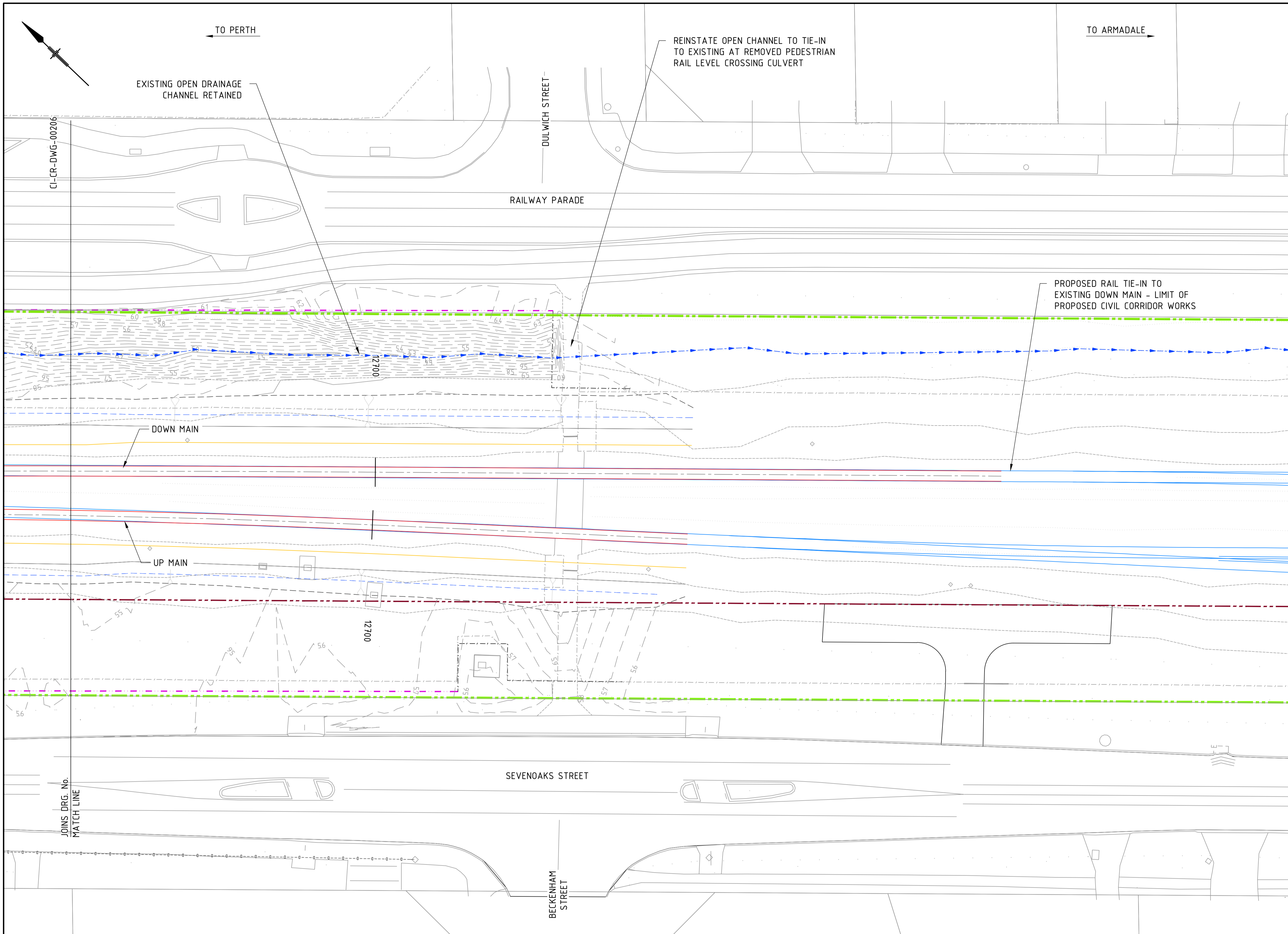
**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

**ARMADALE LINE - CIVIL**  
CORRIDOR DRAINAGE - PACKAGE 4  
GENERAL ARRANGEMENT - SHEET 6

PTA Drawing No: \_\_\_\_\_ Rev: A1.02



LOCALITY PLAN

- NOTES**
1. ALL LEVELS ARE DESIGNED TO TOP OF ASPHALT.
  2. REFER TO STATION HYDRAULIC SERVICES PACKAGE FOR HYDRAULIC SERVICES DESIGN.
  3. STATION VIADUCT DRAINAGE EMERGENCY OVERFLOW SYSTEM DESIGN TO BE CONFIRMED AT THE NEXT DESIGN STAGE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
  - RAIL RESERVE BOUNDARY
  - RAIL CORRIDOR DRAINAGE:
    - DRAINAGE PIPE
    - MANHOLE
    - GULLY PIT
    - DRAINAGE BASIN
    - ▨ BLACK ROCK FILL AREA
  - CoG DRAINAGE:
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - WATERCORP ASSET DRAINAGE:
    - 3000 CoG DRAINAGE PIPE
    - CoG MANHOLE
    - CoG COMBINATION PIT
  - EXISTING DRAINAGE:
    - EXISTING PIT AND PIPE
    - EXISTING DRAINAGE TO BE REMOVED
  - DESIGN CONTOUR:
    - 20 DESIGN MAJOR CONTOUR
    - 20.1 DESIGN MINOR CONTOUR

A1.01	REV	DATE	AMENDMENT	EC	LS	BG	
				DSN	DRN	CHK	APP
ORIG SIZE							
A1			AT ORIGINAL PLOT SIZE				

ARMADALE LINE UPGRADE ALLIANCE  
Innovation to Reality

REFERENCES	SCALE
	1:200 (@A1)
DATUM	
HORIZONTAL:	
VERTICAL:	

DESIGNED	E.CHEUNG1
DRAWN	L.SHARRATT
CHECKED	B.GRAFFEN
APPROVED	
DATE	

**REFERENCE DESIGN**

Government of Western Australia  
Public Transport Authority

VICTORIA PARK TO CANNING  
LEVEL CROSSING REMOVAL

ARMADALE LINE - CIVIL  
CORRIDOR DRAINAGE - PACKAGE 4  
GENERAL ARRANGEMENT - SHEET 7

PTA Drawing No: \_\_\_\_\_ Rev: A1.01

Contractor No: LXR-P4-Z5-BK-CI-DR-DWG-00207



