

# SPARK – North East Link – Primary Package

## Inspection and Test Plan (ITP)

ITP Title: Guard Fence Installation

ITP Number: NEL-CNT-SDC-2990-PQA-ITP-0057 Rev 0


LOT Number: \_\_\_\_\_

Primary Asset Location Code: \_\_\_\_\_

Discipline: \_\_\_\_\_

**OFFICIAL: Sensitive**

### Spark NELP Approval Record

Function	Position	Name	Signature	Date
Prepared By	Quality Representative	Abiola Olulana		
Reviewed By	Project Engineer / Site Engineer	Geoffrey Britto <del>Nancy Gatto</del>		3/11/22
Approved By	Quality Manager	Greg Iro		

*Note:*

1. Ensure all Records or Checklist References are attached and that each Inspection Requirement is clearly named, signed, and dated.
2. Ensure every Records or Checklist References attached are legible
3. This Inspection Test Plan may be generic – ensure the requirement is demographically clear to your scope of work
4. Verification Inspections where applicable for the IREA stated as "Witness" or "Hold" shall be formally notified for their engagement and with sufficient advance notice time (i.e. 3 days or as agreed with the Sub-IREA Representative and/or the Nominated Authority)
5. All Nominated Authority Hold Points are Witness Points for Sub-IREA
6. The Sub-IREA representative is not required to physically sign-off on ITPs

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<b>Project:</b> SPARK – North East Link Primary Package <b>Client:</b> State of Victoria and the North East Link State Tolling Corporation												
<b>ITP Title:</b> Guard Rail Fence Installation							<b>References:</b> CQMP, IFC Drawings, PSDR, RDN 06-04 VicRoads 708, 703, 812, 820					
<b>Description:</b> This ITP covers the installation of guard rail fence							<b>Standards:</b>					
<b>ITP No:</b> NEL-CNT-SDC-2990-PQA-ITP-0057 <b>Rev No:</b> 0												
<b>Lot No:</b> _____ <b>Location:</b> _____ <b>Ch:</b> _____ <b>to</b> _____ <b>Offset:</b> _____ <b>to</b> _____ <b>Layer:</b> _____												
Item No.	Resp. Person	Inspection and Test Activity	Specification Reference	Acceptance Criteria	Test Method	Test Freq.	Inspection/Verification (Name, signature & date)				Records/ Documents	Field Notes / Comments
							Sub-Contractor	Spark NEL Engineer	Nominated Authority	IREA		
1.0	<b>Preliminaries (Include all aspects of Materials, Approvals, IFC Drawings, etc. Ensure all required permits have been raised prior to commencing works)</b>											
1.1	PE	IFC Drawings Issued	CQMP	IFC Drawings, approved plans, technical specification issued for construction	V	PW	NR	HP	NR	NR	IFC Drawings	
1.2	PE	Crushed Rock Mix Approved	VR 812.04	Crushed Rock Mix is registered with VicRoads certificate	V	PW	NR	HP	HP	WP	Mix Registered on InEight	
1.3	PE	Concrete Mix Approved	VicRoads 703.05 VicRoads 708.05	Concrete shall comply with AS1379 and as specified in VicRoads 703 for either: - Portland cement-based concrete, N20 strength grade or - Geopolymer concrete, 20MPa strength  Use of chemical admixtures to comply with requirements of Section 703	V	PW	NR	HP	NR	NR	Mix design: _____	
1.4	PE	Guard Fence Components	VicRoads 708.05 VR708.04 VR Road Design Note 06-04	Only safety barrier products listed in VicRoads Road Design Note 06-04 shall be used. Steel w-beams, posts and all plastic components of proprietary end treatments unobtrusively and permanent in text not more than 20mm high, the following information: - name of manufacturer - batch number or date - strength grade and base metal thickness  - Test certificate demonstrating compliance of materials and components with the specification for the proprietary Guard Fence system and VicRoads 708  - Signed statement and certificates of compliance have been accepted by the Nominated Authority (14 days prior to installation)  W-beams to AS1594 Grade HA350 Posts to AS1594 Grade HA250 Steel components hot dip galvanised	R	PW	NR	HP	HP	WP	<input type="checkbox"/> Test certificates  <input type="checkbox"/> Manufacturer's compliance certificate	

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				Non-Standard Post Lengths (if used) are to have details of the measures proposed and evidence of the effectiveness of the barrier system maintenance submitted for consideration by the NA								
1.5	SE	Material Supply inspection	VicRoads 708.06	Materials are free from distortion and damage	V	PW	NR	WP	NR	NR	Completed incoming inspection checklist	
<b>2.0</b>	<b>Operations (Include Work Execution – Installation / Manufacturing Process step-by-step)</b>											
2.1	SE	Survey of guard fence alignment	VicRoads 708.08 IFC Drawings	Confirm and visually inspect survey set out as per the IFC drawing offsets Prior to installation, the contractor shall confirm with the Nominated Authority the required location and length of all guard fence	V	PL	NR	HP	HP	WP	Survey Report	
2.2	SE	Excavation of maintenance strip	VicRoads 703.20	Excavation extents comply with IFC drawings. Extends minimum 300mm clear of the rear of the post and 300mm clear from the face of w-beam, 75mm deep	V	PL	NR	WP	NR	NR	Photos	
2.3	SE	Lay crushed rock	VicRoads 703.21 VicRoads 812	Bedding material is a compacted size 20mm 3 crushed rock (Section 812) or Class 3 crushed concrete (section 820)	V	PL	NR	WP	NR	NR	Photos, Delivery Dockets	
2.4	SE	Install posts	VicRoads 708.7 VicRoads 708.8 VicRoads 708.9	Post holes in rock shall have a 75mm minimum clearance from back of post to face of hole Post holes in rock to be backfilled with granular material. Other post holes to be backfilled with selected earth, free of rock. Backfilling compacted in 100mm layers. Variation from true plan position of posts $\pm 20$ mm Variation of posts from Vertical (measured at top of the post) $\pm 15$ mm	V	PL	NR	WP	NR	NR	Photos	
2.5	SE	Install W-beams	VicRoads 708.8 VicRoads 708.11	W-beam sections to be lapped so exposed ends face away from near-side approaching traffic. Variation of line of w-beams from specified vertical profile $\pm 10$ mm Variation of w-beams from specified horizontal	V	PL	NR	HP	NR	NR		

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				alignment ±20 mm Orientation of block and/or post to w-beam +0 mm, -15 mm Top of bolt head relative to w-beam -0 mm, +5 mm All bolts to be fully tightened									
2.6	SE	Install end-treatments	VicRoads 708.8,	Ropes are not twisted Nuts at the end of each rope is tightened to a minimum torque of 50Nm or as per manufacturers requirements	V	PL	NR	WP		NR	NR		
2.7	SE	Concrete maintenance strip	VicRoads 708.12	Edges of the infill area are boarded up prior to placing concrete or expansion joint is sawcut to 75% concrete depth.  Where concrete strip is adjacent to kerb or pavement, a cork expansion joints is produced.  Full depth expansion joints provided perpendicular to the line of steel beam guard fence, 200mm each side of every post  Concrete is as per approved mix design	V	PL	NR	WP		NR	NR	Delivery Dockets, Maintenance Strip Location Record	
<b>3.0 Post Operations (Include Inspection and Testing)</b>													
3.1	SE	Concrete Strength Results	VicRoads 703.11	Testing cylinders to be taken per 50m³, 28-day Compressive Strength = 20MPa	V	PL	NR	HP		NR	NR	Concrete Strength Results	
3.2	SE	Compliance Audit	VicRoads 708.10	Safety Barrier compliance Audit undertaken for entire project Guard Fence Installation and Certificate of Compliance signed by the Contractor and Licensed supplier provided.	V	X1	NR	HP		HP	WP	Compliance Audit Certificate of Compliance	
<b>4.0 Quality</b>													
4.1	QSR	Identification and control of non-conforming	CQMP Section 8.3	Review and confirm closure of NCR's and associated RFI's prior to closing of construction lot	R	PL		HP				NCR closed with related documentation	

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		products or services (if applicable)											
4.2	QSR	Check all quality records for lot closure	CQMP Section 8.3	All applicable quality records are complete	R	PL		HP			Compiled documents (all data reports and records)		
<b>Legend:</b>													
<b>Responsibility</b>					<b>Method</b>	<b>Inspection / Verification</b>	<b>Test Frequency</b>			<b>Other</b>			
<b>SS:</b> Site Supervisor <b>SE:</b> Site Engineer <b>PE:</b> Project Engineer <b>SPE:</b> Senior Project Engineer <b>GE:</b> Geotechnical Engineer <b>PS:</b> Project Surveyor					<b>PSM:</b> Project Systems Manager <b>QSR:</b> Quality Site Rep. <b>STR:</b> Structural Engineer <b>SSR:</b> Site Safety Rep. <b>EMR:</b> Environmental Management Rep. <b>NA:</b> Nominated Authority (Release of HP) <b>IREA:</b> Independent Reviewer (Observer)	<b>V:</b> Verify <b>I:</b> Inspection <b>R:</b> Review <b>T:</b> Test	<b>HP:</b> Hold Point <b>WP:</b> Witness Point <b>NR:</b> Not Required	<b>PW:</b> Prior to Works <b>PL:</b> Per Lot <b>F:</b> Full or 100% Inspection or Testing <b>X1:</b> Inspect or Test at Specified Frequency <b>X2:</b> Random Inspection or Test			<b>QP:</b> Quality Plan <b>RFI:</b> Request for Information <b>NCR:</b> Non-Conformance <b>VC:</b> Verification Checklist <b>XXXX:</b> Sequential Number from Doc Control		
<b>DDD – Types:</b> B – Building, C – Civil, G – General, M – Mechanical & Electrical, I – Motorway Operations System (ITS), S – Structure, O – Tolling, T – Tunnel, U – Urban Design & Landscape													
<b>Supplier/Subcontractor:</b> (If applicable)		<b>Name</b>			<b>Signature and Date</b>		<b>Spark-NELP REP</b>	<b>Name</b>			<b>Signature and Date</b>		

**Lot closure comments:**

**Spark NELP QA Rep:**

**Name** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_