



**Todd Richards**  
Director/Civil Engineer  
Tipepec Pty Ltd

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#### Qualifications

BEng (Hons) (Civil)

Cert 3 in Bricklaying

#### Affiliations

Engineers Australia  
IPWEAQ

### Summary of Experience

Todd has over 15 years' experience as a trade qualified Bricklayer in the building and construction industry prior to a career change to Civil Engineering. In his Civil Engineering career, he has worked on numerous projects on the Fraser Coast, Bundaberg, Brisbane, Sunshine Coast and Toowoomba. He has more than seven years' experience in the use of AutoCAD and 12D and has developed projects from the conceptual stage through to detailed design. In his current position he is responsible for the production of conceptual and detailed designs of projects, construction estimates and bill of quantities.

### Key Skills include:

- Planning and Design of Urban and Rural Infrastructure
- Proficient skills in the use of 12D for the design of bulk earthworks, roadworks and stormwater drainage.
- Preparation of design concept and complete drawings using AutoCAD.
- Preparation of bill of quantities and construction estimates.

### Signature Projects:

**Chapel Road, Maggs Hill Road, Main Street and Madsen Road** – Conceptual design of urban distributor roads at the southern extent of the urban footprint including vertical and horizontal alignment, signalised intersection and roundabout design, pedestrian crossing facilities, on-street cycle facilities, land resumption layout, bill of quantities, and estimate of cost.

**New Acland Mine, Acland** – Planning and detailed design associated with the realignment of Jondaryan-Muldu Road to provide a grade separated crossing of a mining haul road, including horizontal and vertical geometric design, stormwater drainage design, bill of quantities and 3D visualisation/flyover modelling using 12d.

**Tinnanbar Road, Tinnanbar – Between Maryborough Cooloola Road and CH3600** - Concept planning, detailed design and documentation associated with 3.6km of seal extension works and realignment for Fraser Coast Regional Council, including road design, pavement design, OS Road speed modelling, stormwater drainage design, bill of quantities and estimate of cost.

**Sawmill Road, Dundowran Beach** – Conceptual design, interim design and detailed design of a controlled distributor road on the PCN, including various layout options, pedestrian crossing facilities, footpath design, bus stop design, vertical and horizontal alignment, stormwater drainage, bill of quantities, and estimate of cost.

**PCYC, Carpark Design Pialba**- Concept planning, detailed design and documentation associated with the car park design associated with the Hervey Bay City Centre Revitalisation, including pavement design, stormwater drainage, line-marking and signage design, bill of quantities and cost estimate.

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## PLANNING AND DESIGN OF ROAD INFRASTRUCTURE PROJECTS

### Key projects include:

***Russell Street and Alice Street, Maryborough*** – Conceptual design of various crossing treatments, including a wombat crossing and two pedestrian refuge option and the detailed design of the preferred option, a pedestrian refuge. Including the footpath geometry, crossing facility design, kerb realignment, stormwater design, bill of quantities, estimate of cost and documentation.

***Tooth Street at Martin Street, Mayfair Street, Halcro Street, Hythe Street and Greenway Drive, Hervey Bay*** – Conceptual planning and detailed design of five wombat crossing treatments, including two on a roundabout and three on side streets. Including the footpath geometry, crossing facility design, kerb realignment, stormwater design, bill of quantities, estimate of cost and documentation.

***Links Corridor at Tavistock Street, Honiton Street, King Street, Chapel Road, Dayman Street, Taylor Street Stephenson Street, Queens Road, Bideford Street, Miller Street and Stockland Access Road, Hervey Bay*** – Conceptual design of various intersection and crossing treatments, including wombat crossings, zebra crossings and staged pedestrian refuge and the detailed design of the preferred option at each location, which included eight wombat crossings, two staged pedestrian refuge crossing and a zebra crossing. Including the footpath geometry, crossing facility design, kerb realignment, stormwater design, bill of quantities, estimate of cost and documentation.

***Old Maryborough Road, Pialba*** – Conceptual planning and design for an east-west connection from Maryborough-Hervey Bay Road to Pialba CBD, including traffic assessment, vertical and horizontal alignment for urban traffic and controlled distributor roads, signalised intersection, pedestrian crossing facilities, parking facilities, on-street cycle facilities, land resumption layout, bill of quantities, and estimate of cost.

***Urraween Road and Lower Mountain Road, Dundowran*** – Conceptual planning and design for an alternative east-west transport corridor in the western suburbs of Hervey Bay, including traffic assessment, vertical and horizontal alignment for urban traffic and controlled distributor roads, signalised intersection and roundabout design, pedestrian crossing facilities, on-street cycle facilities, land resumption layout, staging plans, bill of quantities, and estimate of cost.

***Bundaberg Black Spot Program 2024/25*** – Conceptual design and preparation of estimates for three projects.

***Walker Street and Russell Street, Maryborough*** – Conceptual design of various intersection and crossing treatment, including raised priority crossings, signalised intersection, pedestrian refuge, signalised pedestrian crossing and the detailed design of the preferred option, a pedestrian refuge. Including the footpath geometry, crossing facility design, kerb realignment, bill of quantities, estimate of cost and documentation.

***Links Corridor at Elizabeth Street, Hervey Bay*** – Conceptual design of various intersection and crossing treatment, including raised priority crossings, pedestrian refuge, raised signalised pedestrian crossing and the detailed design of the preferred option, a raised signalised pedestrian crossing. Including the footpath geometry, crossing facility design, kerb realignment, bill of quantities, estimate of cost and documentation.

***Nissen Street, Urraween*** – Conceptual planning and detailed design of a pedestrian and cycle link on the PCN, including various cross section options, intersection design, pedestrian crossing facilities, footpath design, bill of quantities, and estimate of cost.

***Walker Street, Maryborough*** - Planning, detailed design and documentation associated with the footpath design of the southern verge of Walker Street from Russell Street to Jupiter Street, including the footpath geometry and crossing facility at Jupiter Street.



**Woodstock Street and Neptune Street, Maryborough** – Conceptual design of various intersection layouts and detailed design of preferred option, including raised priority crossings, raised intersection, roundabout, retrofit roundabout, footpath design, bill of quantities, and estimate of cost.

**Urraween Road, Kawungan** – Planning and detailed design associated with the raised priority crossing and shared path for a section of Urraween Road including the intersection of Richard Charles Drive, including vertical and horizontal alignment, kerb and channel design, path design, bill of quantities, and estimate of cost. This project was undertaken on a secondment basis to Fraser Coast Regional Council.

**Ann Street, Torquay** – Planning, detailed design and documentation associated with the raised priority crossing for the intersection of Ann Street and Links Corridor, including vertical and horizontal alignment, kerb and channel design, path design, bill of quantities, and estimate of cost.

**Sempfs Road and Ansons Road, Dundowran Beach** – Conceptual design of pedestrian and cycle link on the PCN, including various layout options and the detailed design of the preferred option. Including the pedestrian crossing facilities, footpath design, land resumption plans, stormwater design, bill of quantities, and estimate of cost.

**Anzac Park, Carpark Design** - Concept planning, detailed design and documentation associated with the car park design and resurfacing, including pavement design, stormwater drainage, linemarking and signage design, bill of quantities and cost estimate for Fraser Coast Regional Council.

**Esplanade – Between Miller Street and Moolyyir Street** – Planning, conceptual design and documentation associated with the upgrade of Esplanade, including intersection design, roundabout design, raised priority crossing, intersection priority change design, on-street car parking and relocation of services.

**Development Assessment, Toowoomba** – Assisting in the assessment of proposed developments, including the development of conceptual design options and review of proposed designs. This includes intersection layouts, vertical and horizontal geometry, vehicle movement assessments, roundabout assessments, bill of quantities, cost estimates and associated documentation to aid development assessment for Toowoomba Regional Council.

**Grevillea Street, Hervey Bay** – Planning, detailed design and documentation associated with the footpath design, including horizontal and vertical geometric design, driveway design, bill of quantities and estimate of cost.

**Hakea Court, Hervey Bay** – Planning, detailed design and documentation associated with rectifying an existing drainage issue in a nature reserve, including horizontal and vertical geometric design, open channel design, bund design, bill of quantities and estimate of cost

**Gillhespy Street, Maryborough** – Planning, detailed design and documentation associated with the road reconstruction of Gillhespy Street, including kerb and channel design, driveway design, stormwater upgrades, downstream outlet design, bill of quantities and estimate of cost.

**Brisbane City Standard Drawings** – Assisted Brisbane City Council (BCC) in updating Standard Drawings for Walking and Cycling Safety and Accessibility improvements.

**Brolga Theatre Car Parking Facility Extension, Maryborough** – Planning, detailed design, stormwater design, linemarking and signage design, bill of quantities and cost estimate associated with the extension of Brolga Theatre car park.

**Doolong South Road, Wondunna** – Planning, detailed design and documentation associated with the road widening of Doolong South Road, including kerb and channel design, intersection design, stormwater upgrades, pedestrian refuge design, on-street parking design, bus stop design, bill of quantities and estimate of cost.

**Dundowran Road, Dundowran – Between Pialba Burrum Heads Road and Lower Mountain Road** - Concept planning, detailed design and documentation associated with the rural road upgrade for Fraser Coast Regional Council, including road design, pavement design, and stormwater drainage design.



**Frangipanni Avenue, Hervey Bay** - Planning, detailed design and documentation associated with the footpath design along the southern verge of Frangipanni Avenue and the western side of Eugenia Way, including horizontal and vertical geometric design, driveway design, crossing facility, bill of quantities and estimate of cost.

**Development Assessment, Fernleigh Development Toowoomba** – Planning, intersection layout, geometry design, stormwater catchments and analysis, vehicle movement assessments and associated documentation to aid development assessment for Toowoomba Regional Council.

**Driftwood Court, Urangan** – Planning, detailed design and documentation associated with the road reconstruction of Driftwood Court, including kerb and channel design, driveway design, downstream outlet design, bill of quantities, and estimate of cost.

**Old Gympie Road, Paterson** – Detailed design and documentation associated with the upgrade of a portion of road containing horizontal curves and superelevation, table drain design and estimate of cost.

**Crossing Facilities, Bundaberg** - Detailed design and documentation associated with the upgrade of pedestrian facilities at 12 intersections. Includes intersection design, footpath design, pedestrian refuge design, kerb side blister design, vehicle movement assessment, bill of quantities, and estimate of cost.

**Poona Road, Poona Carpark Design** – Conceptual design for a Car and Trailer Unit Carpark, including 2D layout design, footpath design, intersection design, vehicle movement assessment, bill of quantities, and estimate of cost.

**Howard Street, Burrum Heads**– Planning, detailed design and documentation associated with the urban road upgrade of Howard Street, including the road geometry, intersection design, pedestrian refuge design, on-street parking design, bill of quantities, and estimate of cost.

**Arborten Road, Glenwood**– Concept planning, detailed design and documentation associated with the rural road upgrade for Fraser Coast Regional Council, including road design, footpath design, guardrail design, bill of quantities, and estimate of cost.

**Boundary Road – Between Denmans Camp Road and Booral Road** – Planning, conceptual design and intersection design. Including various intersection options, pedestrian crossing facilities, on-street cycle facilities, relocation of services, bill of quantities, and estimate of cost.

## SOFTWARE CAPABILITY

- 12d Model
- 12d Model Dynamic (1d)
- 12d Model TUFLOW (2d)
- 12d Synergy
- AutoCAD
- AutoTURN
- QGSI
- ARNDT, RISC (TMR)

## EMPLOYMENT HISTORY

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|----------------------------|---------------------------------------------------------|
| November 2024 – current    | Tipec Pty Ltd Mackay - Director/Civil Engineer          |
| April 2024 – November 2024 | Tipec Pty Ltd Mackay - Director/Senior Designer         |
| April 2022 – April 2024    | Tipec Pty Ltd Mackay - Student Engineer/Senior Designer |
| April 2019 – April 2022    | Tipec Pty Ltd Hervey Bay - Student Engineer/Designer    |



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|----------------------------|---------------------------------------------------|
| November 2017 – April 2019 | Ramage Construction - Concreter/Steel fixer       |
| April 2015 – November 2017 | IRP Masonry - Bricklayer/Blocklayer               |
| February 2014 – April 2015 | McConnell Dowell HPX3 Project - Grouter/Concreter |
| June 2011 – July 2014      | Lyndons - Block Estimator                         |
| April 2004 – February 2014 | Sommerfeld & Sons - Bricklayer/Supervisor         |

