

**Territory and Municipal Services
Reference Document 7**



**REQUIREMENTS FOR
OPERATIONAL ACCEPTANCE
SUBMISSION
for
Hard Public Infrastructure Works
Issue 2 Revision 3**

APPROVED FOR ISSUE

Approved by:

Fay Steward
Executive Director
Land Management and Planning
Date: **August 2010**

TERRITORY AND MUNICIPAL SERVICES

REQUIREMENTS FOR SUBMISSION REQUESTING OPERATIONAL ACCEPTANCE

AA

Document No. AA-REF- 07

1 PURPOSE

This document establishes the Territory and Municipal Services (TAMS) mandatory operational requirements (Requirements) to be included in any Submission requesting Operational Acceptance (Submission) of hard public infrastructure works (Works).

2 SCOPE

These Requirements apply to any formal Submission for all Works.

3 OBJECTIVES

The Requirements are issued to:

- define the information required by TAMS for any Submission to be accepted, reviewed, assessed and ultimately endorsed, and
- encourage high quality Submissions with complete supporting documentation that complies with these Requirements.

4 DEFINITIONS, TERMS AND ABBREVIATIONS

Developer

In the private sector, the organisation nominated in the Deed of Agreement as the 'Developer' including its employees, contractors, successors and agents.

In the public sector, the Land Development Agency (LDA) or any other ACT Government agency responsible for development of public infrastructure works in the ACT including its employees, contractors, successors and agents.

Coordinator

The Developer, the Head Consultant or the agent nominated by the Developer as being responsible for the coordination of all disciplines of design and documentation prepared and certified by the Consultant/s and for the superintendence of the construction of the Works. The Coordinator shall be responsible for the lodgement of the Submission with TAMS and shall be the sole point of contact between Asset Acceptance, through the Project Lead, and the Developer throughout the life of the development. Asset Acceptance is not required to meet or communicate directly with any other entity or individual other than the nominated Coordinator on issues relating to the Submission.

Head Consultant

The organisation responsible on behalf of the Developer for the overall design and/or site superintendence of the whole of the Works and certification that the design and/or construction of the Works comply with these Requirements and Standards.

Consultant

The organisation responsible for the design and/or site superintendence of part or the whole of the Works and certification that the design and/or construction of that part of the Works for which it is responsible complies with the Requirements and the Standards.

Asset Acceptance

Asset Acceptance is the section of TAMS responsible for coordinating the Asset and nominated capital works design and construction acceptance process on behalf of TAMS.

Asset Acceptance Project Lead (Lead)

The Manager who will act as a single point of contact for the life of the project.

Standards

All Australian Standards, applicable Government Agency requirements, codes and guidelines and all statutory and regulatory requirements governing the design of the Works.

Works

The public infrastructure works, excluding all soft landscaping, for which TAMS will become the ultimate owner and operator on behalf of the ACT Government.

Operational Acceptance

Acceptance by TAMS of the ownership of the Works at a stage of construction when the work has reached completion and is considered as fit for occupancy. Acceptance is subject to certification by the Consultant, endorsed by the Coordinator, that all outstanding work and rectification of all defects has been satisfactorily completed.

5 GENERAL REQUIREMENTS

5.1 General

A Certificate of Operational Acceptance can only be requested by the Coordinator when there are no safety issues to the general public and where the Submission complies with the Requirements.

The request for Operational Acceptance shall be submitted by the Coordinator under cover sheet AA-SCS-07 Operational Acceptance Submission Cover Sheet (refer Attachment A).

5.2 Documentation

The Submission shall be accompanied by:

1. A Formal **Request for a Certificate of Operational Acceptance**.
2. **Certification** by the Consultant, endorsed by the Coordinator, that the Works for which operational acceptance is requested has been constructed according to the approved design requirement and that the Works complies with the Standards unless otherwise specified in the design.
3. A copy of the **Certificate of Design Acceptance**.
4. A **Site Inspection Report** stating:
 - Project Title
 - Extent of Work

- Contractor
- Inspection Date
- Inspection Purpose
- Attendees

The report shall be formatted to identify:

- The element inspected;
 - compliance, and
 - any action taken/proposed including the date of proposed completion of rectification.
5. **Works as Executed (WAE) Quality Records** in accordance with TAMS Document No. AA-REF-08 '*Works as Executed Quality Records*'.
 6. A list of all **approved and non-approved amendments**.
 7. A marked-up hard copy drawing highlighting and listing all **outstanding works**.
 8. **Stormwater test information** including ActewAGL inspection and test certificates, CCTV and SEWRAT data.
 9. A **Bill of Quantities and Costs** prepared in accordance with AA-REF-08 Requirements for Works as Executed Quality Records for all works that are to become TAMS asset.
 10. The completed **Audit Forms** listed in the Attachments verifying that all work has been inspected/audited and validating that the elements have been constructed in accordance with the approved design and are fit for purpose.

The Submission must be complete and include all the elements for the Works. TAMS will not accept incomplete Submissions or Submissions from individual consultants for separate elements of the Works. Where TAMS considers the Submission to be incomplete, the Coordinator will be advised by the Lead within one working day (i.e. by close of business the next working day following receipt of the Submission) to this effect and will be requested to collect the Submission from TAMS offices. Assessment will not commence until a complete Submission has been received.

6 OPERATIONAL ACCEPTANCE

Upon completion of the review process and the Submission assessed as complying with the Requirements, a Certificate of Operational Acceptance will be issued to the Consultant.

7 REFERENCES

Works as Executed Quality Records, Document No. AA-REF-08, Territory and Municipal Services.

Design Standards for Urban Infrastructure, Territory and Municipal Services. Available online at http://www.tams.act.gov.au/work/standards_and_procedures/tams_reference_documents

Standard Specification for Urban Infrastructure, Territory and Municipal Services.

Ref-11 Territory and Municipal Services Drafting Standard, Territory and Municipal Services. Available online at http://www.tams.act.gov.au/_data/assets/pdf_file/0003/34698/Ref-11_TAMS_Drafting_Standard.pdf

Development Control Code For Best Practice Waste Management In The ACT, Urban Services September 1999. Available online at http://www.tams.act.gov.au/_data/assets/pdf_file/0003/12495/wastemanagementplan.pdf

ATTACHMENTS

Attachment **A**: Document No. AA-SCS-07 Operational Acceptance Submission Cover Sheet.

Attachment **B** : Asset Audit Forms

Document Nos. AA-AAF-Roads-01(ext) Road Asset Audit Form
AA-AAF-Roads-02(ext) Public Transport Audit Form
AA-AAF-Roads-03(ext) Traffic Construction Audit Form
AA-AAF-LS-01(ext) Hard and Soft Landscape Works Asset
Audit Form
AA-AAF-SW-01(ext) Stormwater Asset Audit Form
AA-AAF-Struct-01(ext) Structures Asset

ATTACHMENT A: Operational Acceptance Submission Cover Sheet

To Senior Manager, Asset Acceptance, Territory and Municipal Services

Macarthur House, 12 Wattle Street, Lyneham ACT 2602

Project Title:

Project Description:

Submission Status:

Original Submission

Resubmission

Applicant:

Address:

Contact Name:

Telephone:

Applicant's Reference:

email:

SUBMISSION CONTENTS

Covering Letter

- Formal Request for a Certificate of Operational Acceptance:
- Certificate of Design Acceptance
- Certification by Consultant that the Works comply with approved design:
- List of Defects:
- Works as Executed Quality Records:
- List of all approved amendments:
- Marked-up hard copy drawing of all outstanding works:
- Stormwater test information:
- Bill of Quantities and Costs:
- Audit Forms

Number of sets of documents:

Date of Submission:

SUBMISSION IMPACT

SUBMISSION IMPACT		Original Submission		Resubmission	
Ref. Clauses	Elements	Circle as applicable		Circle as applicable	
5.2.4	Roads	Yes	No	Yes	No
5.2.4	Pedestrian and cycle facilities	Yes	No	Yes	No
5.2.4	Carparks	Yes	No	Yes	No
5.2.4	Street Lighting	Yes	No	Yes	No
5.2.4	Bridges and associated structures	Yes	No	Yes	No
5.2.4	Stormwater	Yes	No	Yes	No
5.2.4	TCDs and Traffic Signals	Yes	No	Yes	No
5.2.4	Waste Management	Yes	No	Yes	No
5.2.4	Landscape	Yes	No	Yes	No
5.2.4	Buildings	Yes	No	Yes	No
5.2.4	Services	Yes	No	Yes	No
5.2.4	Temporary Works	Yes	No	Yes	No
	Other	Yes	No	Yes	No

1. These Documents are submitted for review, comments and approval.

2. All Documents are in accordance with the design brief and have been prepared in accordance with the Requirements detailed in Reference Document AA-REF-07 Requirements for Submission Requesting Operational Acceptance.

Certified by:

Print name:

Signature:

Date:

ATTACHMENT B: Road Asset Audit Form

Reference No:	Project Title:
Certifier:	Consultant:

CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable	CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable
Roads Pavement				Road Geometrics			
Pavement defects				Built to plan			
• cracking				Operational defects			
• pumping				Crossfall			
• roughness				Maximum slope 17%			
• rutting				Intersection			
Quality of asphalt				Design vehicle turning paths			
Joints				Edge details			
Surface drainage				Super elevation			
Concrete Kerb				Road Design Criteria			
Damage to kerb				Design/posted speeds all roads			
Expansion joints				Minimum horizontal geometry			
Built to line and level				Maximum vertical grades			
Correct profile				Minimum vertical curve details			
No water ponding				Typical road/path cross sections			
Continuity AC/Concrete				Design vehicle			
Concrete/Asphalt paths				Road clear zone dimensions			
Correct width				Design criteria shown on plans			
Correct location				Road Furniture			
Crossfall-general 2% to 5%				Guideposts			
- wheelchairs/prams <= 2.5%				Barrier details			
Slope <= 10%				Roadside Drainage			
Expansion joints				Table drains			
Trip hazards				Suitable flow paths			
Cracks in paths				Avoids depositing silt etc.on paths			
No ponding water				Kerb Crossings			
No trapped low points				Correct location			
Concrete finish				Correct dimensions			
Drainage correct				Ramp suitable for sight impaired			
Pavement transition details							
Asphalt layer thickness							

Certified as checked:

Signature: **Date:**

ATTACHMENT B: Public Transport Audit Form

Reference No:	Project Title:
Certifier:	Consultant:

CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable	CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable
<p>Bus Routes</p> <p>Road widths</p> <p>Pavement strength</p> <p>Bus stops on arterial roads</p> <p>Turning lanes</p> <p>Swept path</p> <p>Gradients</p> <p>Route efficiency</p>				<p>Bus Priority Measures</p> <p>Transponders</p> <p>Advance detectors</p> <p>Bus lanes</p> <p>Bus signals</p> <p>Transit lanes</p> <p>Signage and line marking</p>			
<p>Bus Stops</p> <p>Peg</p> <p>Pole</p> <p>Timetable holder</p> <p>Sign</p> <p>Bench</p> <p>Disability access</p> <p>Lay-by</p> <p>Line marking</p> <p>Pedestrian hardstand</p> <p>Sight lines</p> <p>Safety</p> <p>Shelter</p> <p>Location</p>				<p>Intersections</p> <p>Turning lanes</p> <p>Turning circles</p> <p>Swept path</p> <p>Lane widths</p> <p>Sight lines</p> <p>Bus priority</p> <p>Transponders</p> <p>Bus lanes</p> <p>Bus signals</p>			
				<p>Interchanges</p> <p>Pavement strength</p> <p>Bike lockers</p> <p>Passenger services</p> <p>Bus operations</p> <p>Integration with other road users</p>			

Certified as checked:

Signature: **Date:**

ATTACHMENT B: Traffic Construction Audit Form

Reference No: Project Title:

Certifier: Consultant:

CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable	CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable
Check Elements				In Accordance with Approved Drawings			
Devices on Roads				Signs			
Speed humps				• street			
Thresholds				• guide			
Traffic Islands				• regulatory			
Road width				• warning			
Cross section				Sign material and class			
Driveway locations				Road marking			
Access visibility				• lines			
Vertical curves				• arrows			
Lighting at pedestrian crossing				• messages			
Road reinstatement				• durability level			
Cycle rest rails				• RPMS/CPMS			
Appropriateness of TCD's for Arrangements				• reflectivity			
Roundabouts				• skid resistance			
Intersections							
Speed zones							
School zones							
Traffic calming							
Pedestrian provision							
Taxi provision							
Disabled							
Buses							
Cycles							
Loading zones							

Notes: i) Check arrangements against approved drawings.
 ii) Check arrangements are safe in operation.

Certified as checked: Signature: Date:

ATTACHMENT B: Hard and Soft Landscape Works Asset Audit Form

Reference No: Project Title:

Certifier: Consultant:

CHECK ELEMENTS	Audit			CHECK ELEMENTS	Audit		
	Unsatisfactory	Satisfactory			Unsatisfactory	Satisfactory	
Trees				Paving			
Condition				Construction details			
Species				Material details			
Spacing				Gradients			
Planting Details				Parking			
Root barriers				Retaining Walls			
Winter shade considered				Construction details			
Clearances				Material details			
• utilities				Safety rails			
• fencing				Earthworks			
• kerbs				Side slopes max. 1:4			
• footpaths				Cover material			
• buildings				Clearance from structures			
Planted Areas				Water Features			
Condition				Sewer connection			
Details				Landscape integration			
Species				Appropriate species			
Spacing				Planting clearances			
Surface treatment				Water pump			
Edges				Water supply			
Avoid driver sight lines				Backflow prevention			
Distance from structures				Water containment			
Lawns/Grass				Irrigation			
Condition				Commissioned			
Gradients				Performance			
Species				Meter pit detail			
Playgrounds				Backflow prevention			
Softfall materials				Pipe sizes			
Softfall containment				Sprinkler type			
Structures to Australian Standards				Sprinkler orientation			
Paint/coating				Controller			
Spacing of structures				Drainage			
Clearances				Contours			
				Overland flows			

Certified as checked:

Signature: **Date:**

ATTACHMENT B: Structures Asset Audit Form

Reference No: Project Title:

Certifier: Consultant:

CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable	CHECK ELEMENTS	Complies - Yes	Complies - No	Not applicable
Design Factors				Retaining Walls			
Flood levels				Geometry			
Lanes				Material			
Design loads				Drainage			
Spans				Backfill			
Pedestrians				Footing stability			
Cycles				Geotechnical report			
Lighting				Soil bearing pressure			
Min. vertical clearance over roads				Rails for heights "x"m			
Bridges and large culverts				Safety Barriers			
Bridge number				Hazards			
Drainage				Type			
Cross fall				Length			
Long fall				Galvanising			
Barriers				Posts			
Type				Terminal treatments			
Height				Materials			
Length				Concrete			
Transitions/terminals (safety)				Workmanship			
Bolting arrangements				Cracks			
Structural system				Rust			
Joints				Surface finish			
Welding				Formwork removed			
Bearings				Steel			
Superstructure				Correct welds			
Slab				Weld treatments			
Beams				Member sizes			
Approach slabs				Rust			
Substructure				Fixtures			
Footings				Ponding at joints			
Piers				Paint			
Abutments				Layers			
Erosion protection				Thickness			
Stone pitching				Type			
				Bearings			
				Type			
				Orientation			

Certified as checked:

Signature: Date: