APPENDIX B. BASIS OF ESTIMATE REPORT

Basis of Estimate Report

Fare Gate Retrofit Pilot Design Study

Contract Number RTA/OA 0037-23B

Class 4 Estimate

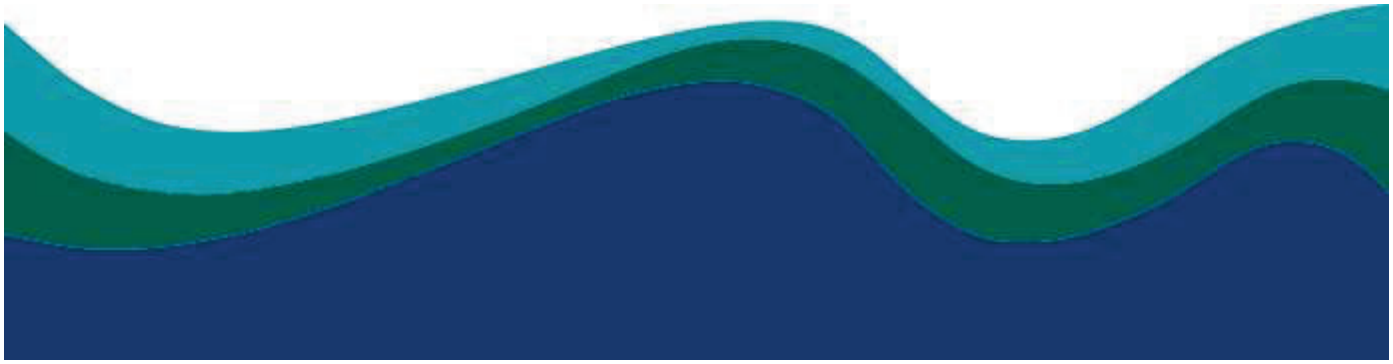
CONCEPTUAL COST ESTIMATE

Read 1

Company Name: OTT SAKAI

Lead Cost Estimator: Tim Kamper

Date Submitted: May 13, 2025



Basis of Estimate (BOE) Table of Contents

1 – Introduction:

This Basis of Estimate (BOE) and construction cost estimate report follows Program Control Policies & Procedures PCPP-02 (7/18/2025). Any updates to the estimating method are detailed below. The Cost Estimator Responsibility Matrix outlines all contributors and their roles for this report.

Company	Name	Title	Roles & Responsibilities
WSP	Mike Colyn	Project Manager	Project Manager
WSP	Henry Shanks	VP, Fare Collection Systems	Designer
WSP	Laura Marrero	Sr Architect	Architect
OTT SAKAI	Tim Kamper	Sr Cost Estimator	Estimating

1.1 – Cost Estimate Classification

This estimate is considered a Class 4 cost estimate per AACE International's Recommended Practice No. 17R-97. Class 4 estimates are typically prepared during the preliminary design phase, when project definition is approximately 1%–15% complete. These estimates are suitable for budget authorization, project planning, and establishing control baselines. The expected accuracy range for a Class 4 estimate is generally –10% to +30%, reflecting a concept level of project definition and design detail.

1.2 – Scope of Work

The Fare Gate Retrofit Pilot Design Study to support life cycle cost analysis for the implementation of fare gates at select stations. The scope includes:

- Evaluation of selected stations for the implementation of fare gates
- Conduit and cable
- Fare Gates
- Passenger phones at fare gates
- Relocation of Ticket Vending machines (TVM's)
- Removal of existing fare validators
- Power and data connections
- Architectural canopies
- Architectural finishes where affected
- Commissioning and cutover
- Documentation and handover

The project covers 14 stations.

2 – General Cost Estimate Information

2.1 – Design Basis

This cost estimate is based on conceptual design documents for the Fare Gate Retrofit Pilot Design Study, including high level station layout plans, product data, and technical requirements for. Quantities and scope are derived from these documents and reviewed by the estimating team.

The estimate is grounded in the following design documents:

- Station plans
- Technical requirements for the fare gates and TVM's, and site infrastructure
- Site lists

Contract No.	Document Type	Volume	Book	Date
RTA/OA 0037-23B	Fare Gate Assessment Report	N/A	N/A	5/2026
RTA/OA 0037-23B	Fare Gate Exhibits	N/A	N/A	5/2026
RTA/OA 0037-23B	ST-StationCostBuildFile – takeoff	N/A	N/A	5/2026

Table 1 - List of Contract Documents

2.2 – Schedule & Escalation Basis

The estimate is based on start of construction Jan 2028 with completion Dec 2028 and commissioning the first quarter of 2029.

2.3 – Cost Estimate Organization

The estimate organizes and cross-codes cost items according to the appropriate Federal Transit Administration (FTA) Standard Cost Categories (SCCs).

2.4 – Planning Basis

For estimating purposes, it was assumed that the contractor will work a 10-hour shift 5 days a week or for a total of 50 hours of work per week. All new infrastructure is included to keep the current fare validators to remain functional during construction.

2.5 – Cost Basis

Labor rates are based on rounded prevailing wage rates published by Washington State Department of Labor & Industries. 14.15% for payroll taxes such as FUTA, SUTA. FICA, etc. were added to the hourly crew rates to capture these payroll taxes. Hourly equipment rental and operating rates are based on "blue book rates" published by EquipmentWatch.com modified with appropriate usage factors. Crews and production rates were developed from lead estimator experience and historical production rates for similar work activities.

Direct construction costs (SCC 10-50) are based on a mix of subcontract unit pricing and bottom-up estimates using union labor rates, equipment blue book values, and material quotes where design details

allow. Some rates are sourced from recent Puget Sound projects, factoring in labor, equipment, and mobilization assumptions. Unit prices are increased to cover indirect costs, bonds, insurance, and profit.

The cost for contractor overhead, indirect, and profit mark-ups are included to calculate bid level unit pricing that would typically be expected in a competitive bid contracting method.

3 – Specific Cost Estimate Information

3.1 - Deliverables

Deliverable Description	Reference	File Type
Basis of Estimate (BOE)		PDF & Word
Estimate Summary		PDF & Excel
Estimate Details		PDF & Excel
HCSS Estimate Details		PDF

3.2 – Allowances, Contingencies, and Provisional Sums

- 30% design allowance of direct items has been applied to construction items (SCC 10-50)
- Allocated Contingency of 15% on SCC 10-50 costs
- Unallocated Contingency of 8% has been applied to construction items (SCC 10-50)
- 40% total Contingency combined for the project

3.3 – Qualifications & Assumptions

- Programmatic costs for Professional Services (SCC 80) are based on the July 24, 2025 estimate normalization memo applied to direct construction items (SCC 10-50)
- Indirect costs are calculated at 30% of direct costs of construction in addition to the fare gate specific integration and commissioning costs estimate by WSP
- Contractor profit margin is 20%
- No ROW takes assumed
- Modifications to architectural finishes are in kind with existing station finishes
- Conduit is routed in the station ceilings using rigid conduit where at all possible
- 200lf of wayfinding tile included for each gate location
- Wayfinding signage assumed removed and replaced for each gate location

3.4 – Exclusions

- Time and materials included to accommodate new cabling with minor equipment, no scope included for room expansion.

3.5 - Exceptions

- None currently