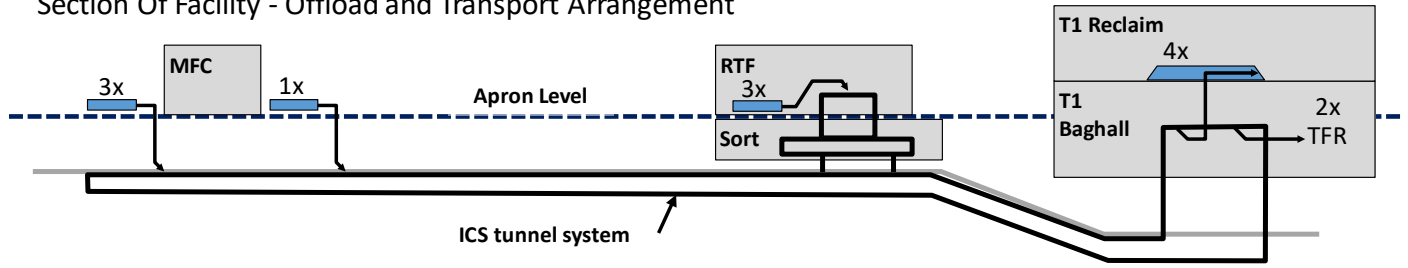


Section Of Facility - Offload and Transport Arrangement



HONG KONG INTERNATIONAL AIRPORT

Hong Kong

Automated Arrival Baggage Delivery System

Airport Authority of Hong Kong | 2015 – 2019

To support the increasing passenger 100MPPA traffic at HKIA and to ease increasing traffic congestion on the apron, the Airport Authority of Hong Kong will construct a high-speed arrivals baggage transport system between the recently opened Midfield Concourse (MFC) and the main baghall of Terminal 1. The new system will be called the Automated Arrivals Baggage Delivery (AABD) system and will provide remote terminating and transfer baggage offload facilities. This project was particularly challenging because the original infrastructure that was built for the MFC does not include specific allowance for the arrivals baggage offloading areas or connection to the existing tunnels so a significant feasibility stage was required to determine how to create the operational facilities required.

BNP was part of a multi-disciplinary team for design and procurement of the project and lead the development of the solution for the AABD. At the commencement of the project, BNP carried out demand analysis, operational review and feasibility study to define the requirements and strategy to provide the new arrivals baggage facility and delivery system for the recently completed MFC. Study of not just the baggage system, but the apron operation, vehicle flow and road alignments were a significant part of the solution assessment.

A second major part of the feasibility and design development was the integration of the new arrivals delivery system into Terminal 1. The new system will enter the main baghall from a tunnel beneath the floor and is then routed through the existing BHS to connect with the existing terminating and transfer bag input lines. Significant design development was required to fit the new system into the available space while achieving the performance, function and redundancy required of the new system. Planning for construction was central to the design approach, taking careful consideration of the existing operation in the increasing busy main baghall.

To further reduce apron traffic, an additional arrivals baggage input facility was created at an existing short-connect transfer screening facility in the central pier of the main terminal. The resulting system provides a distributed offload facility for the airport, with high-speed connection to the main baghall.

A full 3D simulation model of the reference design was prepared and analyzed to demonstrate achievement of key performance criteria of the baggage processing times and the system resilience to ad-hoc and extended outages of the transport system. The modelling analysis refined and confirmed the findings of the initial analysis during the development of the system design. The simulation modelling data was used in the stakeholder approval process enabling the project to proceed to the construction stage.



ASSOCIATES, INC.

BNP PROJECT TEAM

Damien Breier, Principal
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BHS CONSTRUCTION AMOUNT

\$\$\$ To be Determined

REFERENCE

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SCOPE OF SERVICES

Feasibility Study
Scheme Design
Detailed Design
Procurement Documentation
Construction Stage Support