

Warehouse Design and Layout

Layout

Three crucial areas:

- Receiving (inwards goods) dock,
- Shipping (outwards goods) dock,
- Storage areas.

Considerations

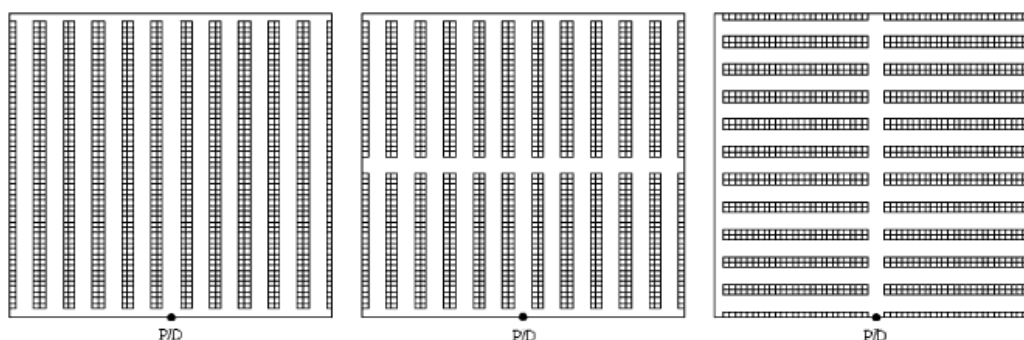
The initial feasibility study has provided a checklist of operational issues that must be considered when designing the new facility:

- Building support columns configured for optimal aisle layout,
- Adequate doors to handle volume,
- Offices and break area locations,
- Obstacles that impede the smooth flow of traffic,
- Adequate lighting throughout the facility,
- Minimal travel distances from receiving docks to storage areas and shipping docks,
- Sprinkler requirements, which include high-pressure pumps, reservoirs, in-rack sprinklers, high-density systems,
- Aerosol and/or explosion-proof rooms,
- Adequate foundation drainage,
- Knock-out expansion walls,

- Roof design that minimises maintenance,
- Building insulation,
- Heat rotation systems,
- Heavy-duty landing wheel pads,
- Computer station hook-up locations,
- Radio frequency installation issues,
- Empty pallet storage areas,
- Waste disposal dumpster staging locations,
- Security issues, which include a parking area that is not contiguous with the building,
- Considerations that will accommodate future plans for expansion, automation and/or a change in product offerings.

Warehouse Design

The feasibility study has identified three layout styles identified as suitable for John Readings:



Management recognises that order picking, that is, picking specific product items from their

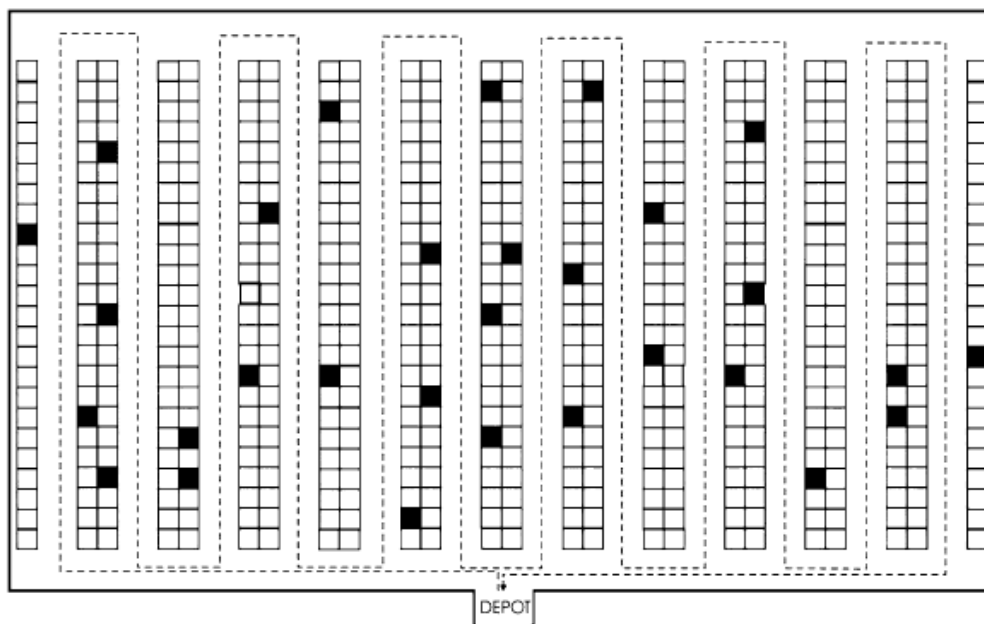
storage locations according to a customer order, is often the most costly and labour intensive operating cost experienced in a warehouse.

The current operating environment is also putting great pressure on reducing cost and improving delivery times.

Three particular activities are being focused on:

- Travel time between items,
- Time in picking an item, and
- Time consumed in associated activities.

The following diagram shows the current (S shape) picking route used in the John Readings warehouse design.



Transportation

The company has engaged four different companies to provide transportation of goods from the warehouse/distribution centre to the customer and/or retail outlet.

- Outsourced to CEVA Logistics for road transport: two-year contract – KPI = 48 hour door to door delivery,
- Outsourced to FARSTAD Shipping for sea transport: two-year contract – KPI = four-week door to door delivery,
- Outsourced to UTi Logistics for air transport: two-year contract – KPI = two-week door to door delivery,
- Australia post for online retail customers: ongoing contract – KPI = 48 hour door to door delivery.

A copy of the draft agreement can be downloaded with these documents.