STANDARD OPERATING PROCEDURE

Delivery Route Planning SOP

Document no.	SOP-LOG-005
Revision	1.0
Owner	Logistics Planner
Effective date	September 15, 2026
Review cycle	Every 12 months

1. Purpose

To build delivery routes that meet customer time windows, use vehicle capacity efficiently, and give drivers a realistic and safe schedule for the day.

2. Scope

Applies to planning routes for a fleet of delivery vehicles before dispatch. Real-time dispatch tracking and last-mile delivery execution are covered by separate SOPs.

Definitions

Time window	The agreed range of time a delivery must arrive within at a customer location.
Route density	How closely packed delivery stops are within a route, affecting drive time between stops.
Vehicle capacity	The maximum weight, volume or pallet count a delivery vehicle can carry safely and legally.
Route optimization software	Software that calculates efficient stop sequences based on location, time windows and vehicle constraints.

3. Responsibilities

Logistics Planner	Builds and adjusts daily routes, balancing stop count, capacity and time windows.
Fleet Manager	Confirms vehicle and driver availability and approves route plans for the day.
Driver	Reviews the assigned route, reports impractical sequencing, and follows the planned stop order.
Customer Service Representative	Communicates confirmed delivery windows to customers and flags special requests to planning.

RACI matrix

Activity	Logistics Planner	Fleet Manager	Driver	Customer Service Representative
Collect orders for the day	R/A	I	-	C
Build stop sequence	R/A	C	I	-
Check vehicle capacity fit	R	A	C	-

Activity	Logistics Planner	Fleet Manager	Driver	Customer Service Representative
Approve final route plan	R	R/A	I	-
Adjust route for a same-day change	R/A	I	C	C

R = Responsible, A = Accountable, C = Consulted, I = Informed

4. Materials and PPE

Materials, tools and systems

- Route optimization software
- Order and delivery address list
- Vehicle capacity and equipment reference sheet
- Customer time window list
- Traffic and road closure information
- Route plan printout or driver app

5. Procedure

Step	Task	Owner	Done
5.1	**Collect confirmed orders** Pull the list of orders confirmed for delivery, including address, requested time window, weight or volume, and any special handling notes.	Logistics Planner	☐
5.2	**Confirm vehicle and driver availability** Check which vehicles and drivers are available for the day, including their capacity, equipment such as a liftgate, and scheduled hours.	Fleet Manager	☐
5.3	**Group orders by zone** Group delivery addresses into geographic zones or clusters to reduce backtracking, using the route optimization software's default clustering as a starting point.	Logistics Planner	☐
5.4	**Sequence stops within each route** Sequence stops within each zone to minimize drive time while respecting each customer's time window, placing tightest windows in their required position first. **Checkpoint:** Every stop with a fixed time window is positioned in the sequence so it can realistically be reached within that window.	Logistics Planner	☐
5.5	**Check vehicle capacity against the load** Total the weight, volume or pallet count for each route and confirm it does not exceed the assigned vehicle's rated capacity, adjusting stop assignments if it does. **Warning:** Never assign more weight or volume to a route than the vehicle's rated capacity allows, even to avoid adding an extra route.	Logistics Planner	☐
5.6	**Account for known road conditions** Check for known road closures, low bridges, weight-restricted roads or construction along the route and adjust the path or stop order to avoid them.	Logistics Planner	☐
5.7	**Build in realistic stop time and breaks** Add realistic time per stop for parking, unloading and paperwork, and schedule required driver rest breaks within the route timeline.	Logistics Planner	☐

Step	Task	Owner	Done
5.8	**Review and approve the route plan** Review the full day's routes for balance across drivers and vehicles, and approve the plan before it is sent to drivers. **Checkpoint:** The fleet manager approves each day's route plan before it is released to drivers.	Fleet Manager	☐
5.9	**Distribute routes to drivers** Send the finalized route, including stop sequence, addresses, time windows and special notes, to each driver's app or printed route sheet before their shift starts.	Logistics Planner	☐
5.10	**Confirm the route is workable** Review the assigned route before departure and report to the planner any stop that looks impractical, such as a wrong address or an unrealistic time gap.	Driver	☐
5.11	**Adjust for same-day changes** When a new urgent order, cancellation or address change comes in during the day, re-sequence the affected route and notify the driver and customer service of the update.	Logistics Planner	☐
5.12	**Review route performance after completion** Compare planned versus actual stop times and drive time after routes are completed, and use the results to refine future time-per-stop assumptions.	Logistics Planner	☐

6. Quality checks

- Every route stays within the assigned vehicle's rated capacity.
- Fixed time window stops are sequenced so they are realistically reachable.
- Fleet manager approves the route plan before it reaches drivers.
- Planned versus actual stop times are reviewed after each route to improve future planning.

7. Records

- Daily route plans
- Vehicle capacity and assignment log
- Same-day route adjustment log
- Planned versus actual route performance report

8. KPIs

- Percentage of stops delivered within their time window
- Average stops per route per day
- Vehicle capacity utilization rate
- Miles or drive time per stop

9. Common mistakes

- Sequencing stops purely by shortest distance without checking time windows.
- Overloading a route's capacity to avoid scheduling an extra vehicle.
- Not building in realistic time per stop, leading to routes that fall behind by midday.
- Sending a route to a driver without fleet manager approval.

10. Revision history

Revision	Date	Description	Reviewed by
1.0	September 15, 2026	Initial release	Ilia Pirozhenko

Approval

Prepared by	Approved by	Date

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