

FHWA Freight Transportation Industry Internship

Motor Carriers



This internship is designed to enable public sector participants to better understand: 1) how and why the motor carrier industry makes transportation decisions; 2) who makes the decisions; 3) how the industry manages or contends with problems and issues; 4) what critical situations require immediate changes to modes, routes, or schedules; 5) the impact of transportation infrastructure conditions; 6) the importance of on-time performance to industry's supply chains and distribution networks; and 7) the economic and policy environments that shape these networks. This may be accomplished through focused questions and discussions with responsible industry staff and through firsthand observation.

Industry Description – Motor carriers / trucking

companies: This industry includes the thousands of businesses that own and operate freight vehicles that haul commodities and materials. Motor carriers include “for hire” carriers that may be dedicated to one business or used for multiple businesses, private fleets that transport products only for their own company, and independent owner-operators. Motor carrier companies vary in number of vehicles, purpose, and type of vehicle used. Motor carriers who operate in interstate commerce are governed by Federal Motor Carrier Safety Administration (FMCSA) regulations. The Federal Highway Administration (FHWA) has oversight over vehicle size and weight regulations.

Prior to the Internship: Gather general information on the motor carrier industry and host company; be familiar with the Federal Motor Carrier Safety Regulations (FMCSRs) and allowable sizes and weights for commercial vehicles on the National Network (23 CFR 657 and 658).

Research and contact the host company to identify their type of operation

- Truckload, less than truckload, drayage
- Parcel (small package) or courier
- Other (tanker, refrigerated, flatbed, oversize/heavy haul, etc.)
- For-hire, private, or owner-operator
- City pickup and delivery (peddle operations)
- Over-the-road (line-haul operations)
- Terminals (endline, local, or satellite), cross dock (hub/breakbulk terminal), warehouse, or storage facility

Coordinate and clear proposed activities with the host company

- Schedule and clear all internship activities with host company official, including participation in

meetings, observations, rides with drivers, and interviews, prior to the internship

During Internship:

Meet with manager of the host facility

- What types of supply chains do they handle: products moved, pickup and delivery locations
- How are they staffed:
 - Management staff, administrative, technical
 - Drivers (Employee, for-hire, or owner-operator; union or non-union)
- Who makes what decisions about routes, schedules, etc.
- What types of technology do they use (in-vehicle; communications; routing; shipment and vehicle tracking; other)
- What transportation issues impact their business and its operations: fuel prices, product demand, seasonality
- What types of changes could the business experience in the short term; long term
- How does the current highway infrastructure hinder or optimize productivity
- How can the participant or public sector agency better communicate with this company
- Discuss the participant's job responsibilities and authority
- Is the host familiar with the public sector agencies and organizations that make transportation decisions; do they understand how these decisions can affect their operation
 - If yes, does the host interact with the public transportation agencies/organizations and how and why
 - If no, frame a discussion around this point to determine if there is a benefit to the host interacting with the public transportation agencies/organizations.
- Does host participate in an organization or association such as the American Trucking Associations (ATA) that may interact with public sector transportation agencies; do they know what the benefits are

Discuss the intern's public sector job function

- What types of decisions are made by the FTII participant; how may these decisions impact this company's performance
- How can participant or agency better communicate with this company and vice versa
- What can be done to improve transportation efficiency for the industry

Meet with the dispatcher or operations manager

- How are pickup stops assigned; how does dispatch assist drivers
 - Boundaries of service territory determined; e.g., stop density, volume, geography
 - Equipment type assignments
 - Driver assignments: do assignments change daily; are there guidelines
 - Weather as a factor
 - Do tolls impact route selections; does company approve the use of toll roads? Who pays tolls?
 - How do hours of service regulations affect the selection and assignment of over-the-road drivers
- When are changes in operations required; who makes this decision and why (e.g., route changes, city delivery coverage area changes, use of toll ways, equipment types and utilization on a given route)
- How are operational changes implemented, and how quickly
- How are changes communicated
- What metrics are used to evaluate operations: productivity (e.g., stops per hour, bills per hour, miles between stops), time per stop (stem time/miles, total miles, etc.)
- What metrics are used to evaluate productivity (e.g., load factor, bills per trailer/schedule, empty miles, departure/arrival compliance, runtime compliance, etc.)

Understand the driver's perspective (if approved, attend a drivers meeting or ask the dispatcher or operations manager)

- Do drivers work in the same or similar area daily; how often do drivers go out and return in a day (turns per day); how many miles do drivers drive daily; how many deliveries and pickups does the driver make daily on average
- What is the most difficult stop to service successfully; why; what happens if deliveries cannot be made
- How does weather or other events impact schedule and/or route
- What are obstacles to driving, e.g., low bridge, sharp turn, slow traffic light, one-way streets, construction, congestion
- What causes delays, e.g., infrastructure issues, hours of service, accommodating recurring congestion in urban area; facility design such as cul-de-sacs; loading space issues
- How do local regulations and land use challenges impact urban delivery, e.g., limits on delivery times, idling, parking, size and weight limits, truck routing, cul-de-sacs and other roadway geometrics, configuration of loading and unloading space, lack of such space

- Are there limitations on idle time
- How does the overall roadway system condition (pot holes, etc.) affect the routes taken, the long-term condition and maintenance needs of their vehicles, the condition of the products they ship or receive
- How easy are intermodal connections: do they transfer their load to other or multiple modes; how good is their access to intermodal facilities; how can intermodal access, including international and national gateways, e.g., air and water ports and border crossings, be improved

Observe

- Inbound and outbound operations
 - Physical handling of shipments during loading and unloading
 - Type of equipment being used based on the routes
- Methods for assigning pickup stops and assisting drivers as they work
- Methods for dispatching the drivers: automated, software, manual

Ride-along: observe pickup and delivery¹

- How do driver and equipment interact with other vehicles
- Infrastructure design, signage, or signalization that impact the driver
- Delivery times and parking restrictions
- Technology available in the cab, e.g., handheld computer

Conclusion of Internship:

- Lessons learned from the internship experience should be shared by both the host and participant with the public agency and host company
- Identify opportunities for collaboration in the future

Contact:

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¹ With permission of the host company, and authorization from participant's insurance provider.