Mercury Gate Analytics Documentation

Generated: June 2025

Version: 1.0

# Overview

The Mercury Gate Analytics view (DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS) is a comprehensive analytical dataset that combines all ENH Mercury Gate tables into one unified view for transportation analytics and reporting.  
   
 This unified view provides a complete shipment lifecycle from creation to delivery, enabling users to focus on analysis rather than data wrangling by handling all complex joins and data type conversions automatically.

## Key Benefits

* Complete shipment lifecycle tracking from creation to delivery
* Unified reference numbers (BOL, PRO, PO, SAP BOL, etc.)
* Rate sensitivity flags including spot rate usage and overflows
* Comprehensive geographic data with origin/destination coordinates
* Detailed carrier information including SCAC, mode, and service levels
* Pricing breakdowns for line haul, fuel, accessorials, discounts, and deficits
* Pre-calculated KPIs including cost per mile metrics
* EDI214 integration for late pickup and delivery reasons
* Time-based partitioning for performance optimization and trending analysis

# Data Sources

The Mercury Gate Analytics view combines data from the following source tables:

|  |  |
| --- | --- |
| Source Table | Description |
| INTEGRATION.PUBLIC.CALENDAR | HD Fiscal Calendar data for date/period mapping |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_MASTER\_BOL | Master Bill of Lading information |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_SHIPMENT | Shipment details and weight information |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_CARRIER | Carrier information and service details |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_ADDRESS | Origin and destination address data |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_PACKAGE | Package dimensions and weights |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_PRICESHEET | Pricing and invoice information |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_MASTER\_BOL\_REFERENCE\_NUMBER | Reference numbers (BOL, PRO, PO, etc.) |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_ACTIVITY | Activity tracking and status updates |
| EDP.ENH\_MERCURY\_GATE.TRANSPORTATION\_SHIPMENT\_STATUS\_DETAIL | Detailed shipment status and tracking |
| DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.DC\_DIM\_AL | Distribution center dimension data |
| DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.REGION | Regional and divisional assignments |
| DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.CC\_CODES | Cost center codes |
| DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.VW\_DISTINCT\_FPA\_INVOICES | GL account mapping |

# Key Features

* **Comprehensive Reference Management**: Tracks all transportation reference numbers including BOL, PRO, PO, SAP BOL, Shipment Numbers, Order Numbers, and Load Numbers
* **Geographic Intelligence**: Complete origin and destination information with latitude/longitude coordinates for mapping and distance calculations
* **Carrier Performance Tracking**: Detailed carrier information including SCAC codes, modes, service levels, MC numbers, and DOT numbers
* **Financial Analytics**: Complete pricing breakdowns with line haul, fuel, accessorial charges, discounts, and deficits
* **Spot Rate Intelligence**: Flags for spot rate usage and overflow situations for rate management
* **Shipment Direction Logic**: Automatic classification of shipment direction (IB, LH, STO) regardless of mode or ownership
* **Plant-to-Plant Tracking**: Origin and destination plant IDs and business organization assignments
* **Regional Reporting**: Regional and divisional assignments for geographic reporting
* **Yard-Pull Identification**: Flags to identify yard-pull accessorial charges
* **Fiscal Calendar Integration**: Links to HD Fiscal Calendar for period-based reporting
* **Transit Time Calculations**: Calculated transit hours from actual shipped to delivery
* **Late Reason Tracking**: EDI214 integration for pickup and delivery late reasons
* **Cost Center Mapping**: Links to cost centers and GL accounts for financial reporting

# Main Output Columns

|  |  |  |
| --- | --- | --- |
| Column Category | Key Columns | Description |
| Identifiers | MASTER\_BOL\_ID, SHIPMENT\_ID | Primary keys for joining and identification |
| Reference Numbers | BOL\_NUMBER, PRO\_NUMBER, PO\_NUMBER, SAP\_BOL\_NUMBER, SHIPMENT\_NUMBER, ORDER\_NUMBER, LOAD\_NUMBER | All transportation reference numbers |
| Timing | SHIPMENT\_CREATED\_DATE, PICKUP\_EARLIEST, PICKUP\_LATEST, DROP\_EARLIEST, DROP\_LATEST | Pickup and delivery timing windows |
| Origin Information | ORIGIN\_LOCATION\_CODE, O\_PLANT\_ID, ORIGIN\_NAME, ORIGIN\_CITY, ORIGIN\_STATE, ORIGIN\_LATITUDE, ORIGIN\_LONGITUDE | Complete origin address and coordinates |
| Destination Information | DEST\_LOCATION\_CODE, D\_PLANT\_ID, DEST\_NAME, DEST\_CITY, DEST\_STATE, DEST\_LATITUDE, DEST\_LONGITUDE | Complete destination address and coordinates |
| Carrier Details | CARRIER\_NAME, SCAC, MODE, SERVICE, SERVICE\_DAYS, DISTANCE\_MILES, MC\_NUMBER, US\_DOT | Carrier information and service details |
| Weight & Packages | ACTUAL\_WEIGHT, PLANNED\_WEIGHT, DELIVERED\_WEIGHT, PACKAGE\_COUNT, TOTAL\_PACKAGE\_WEIGHT, HANDLING\_UNITS | Weight and package information |
| Pricing | TOTAL\_INVOICE\_AMOUNT, SETTLEMENT\_AMOUNT, LINE\_HAUL\_CHARGES, FUEL\_CHARGES, ACCESSORIAL\_CHARGES, DISCOUNT, DEFICIT | Complete pricing breakdown |
| Status & Tracking | MASTER\_BOL\_STATUS, SHIPMENT\_TYPE, LATEST\_ACTIVITY\_TYPE, ACTUAL\_SHIPPED, ACTUAL\_DELIVERY, TRANSIT\_HRS | Status and tracking information |
| Business Logic | SPOT\_USED, OVERFLOW, Direction, YardPull\_Charge | Business flags and classifications |
| Geographic | LANE\_STATE\_TO\_STATE, LANE\_DESCRIPTION, RP\_REGION, RP\_DIV | Lane and regional information |
| Financial | REPORTING\_CC, REPORTING\_DC, GL\_ACC | Cost center and GL account mappings |
| Calendar | FS\_YR, FS\_PR, FS\_WK, REPORT\_DT | Fiscal calendar periods |
| Calculated Metrics | COST\_PER\_MILE | Pre-calculated KPIs |

# Metrics and Calculations

## Pre-calculated Metrics

* **Cost Per Mile**: Calculated as TOTAL\_INVOICE\_AMOUNT / DISTANCE\_MILES (when both values > 0)
* **Transit Hours**: Calculated as the difference between ACTUAL\_SHIPPED and ACTUAL\_DELIVERY in hours
* **Spot Rate Percentage**: Percentage of shipments using spot rates vs contracted rates
* **Lane Performance**: State-to-state lane analysis with volume and cost metrics

## Available Calculations

The view provides the foundation for various analytical calculations including:  
   
 • Volume analysis by lane, carrier, mode, and time period  
 • Cost analysis including average costs per shipment, pound, and mile  
 • Carrier performance metrics including on-time delivery and service performance  
 • Spot rate usage trends and cost impact analysis  
 • Regional and divisional performance reporting  
 • Plant-to-plant flow analysis for distribution network optimization

# Sample Analytical Queries

## Top Lanes by Volume

SELECT   
 LANE\_STATE\_TO\_STATE,  
 MODE,  
 COUNT(\*) as SHIPMENT\_COUNT,  
 SUM(ACTUAL\_WEIGHT) as TOTAL\_WEIGHT,  
 AVG(TOTAL\_INVOICE\_AMOUNT) as AVG\_COST,  
 AVG(DISTANCE\_MILES) as AVG\_DISTANCE  
FROM DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS  
WHERE FS\_YR = 2025  
GROUP BY LANE\_STATE\_TO\_STATE, MODE  
ORDER BY SHIPMENT\_COUNT DESC  
LIMIT 20;SELECT   
 LANE\_STATE\_TO\_STATE,  
 MODE,  
 COUNT(\*) as SHIPMENT\_COUNT,  
 SUM(ACTUAL\_WEIGHT) as TOTAL\_WEIGHT,  
 AVG(TOTAL\_INVOICE\_AMOUNT) as AVG\_COST,  
 AVG(DISTANCE\_MILES) as AVG\_DISTANCE  
FROM DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS  
WHERE FS\_YR = 2025  
GROUP BY LANE\_STATE\_TO\_STATE, MODE  
ORDER BY SHIPMENT\_COUNT DESC  
LIMIT 20;

## Carrier Performance Analysis

SELECT   
 CARRIER\_NAME,  
 SCAC,  
 COUNT(\*) as SHIPMENTS,  
 AVG(COST\_PER\_MILE) as AVG\_COST\_PER\_MILE,  
 AVG(SERVICE\_DAYS) as AVG\_SERVICE\_DAYS,  
 SUM(TOTAL\_INVOICE\_AMOUNT) as TOTAL\_SPEND  
FROM DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS  
WHERE FS\_YR = 2025  
AND TOTAL\_INVOICE\_AMOUNT > 0  
GROUP BY CARRIER\_NAME, SCAC  
ORDER BY TOTAL\_SPEND DESC;SELECT   
 CARRIER\_NAME,  
 SCAC,  
 COUNT(\*) as SHIPMENTS,  
 AVG(COST\_PER\_MILE) as AVG\_COST\_PER\_MILE,  
 AVG(SERVICE\_DAYS) as AVG\_SERVICE\_DAYS,  
 SUM(TOTAL\_INVOICE\_AMOUNT) as TOTAL\_SPEND  
FROM DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS  
WHERE FS\_YR = 2025  
AND TOTAL\_INVOICE\_AMOUNT > 0  
GROUP BY CARRIER\_NAME, SCAC  
ORDER BY TOTAL\_SPEND DESC;

## Spot Rate Analysis

SELECT   
 FS\_YR as Fiscal\_Yr,  
 FS\_PR as FS\_Period,  
 SUM(CASE WHEN SPOT\_USED = TRUE THEN 1 ELSE 0 END) AS Spot\_Used,  
 COUNT(\*) AS Total\_Shipments,  
 ROUND((SUM(CASE WHEN SPOT\_USED = TRUE THEN 1 ELSE 0 END) /   
 NULLIF(COUNT(\*), 0)::FLOAT) \* 100, 2) AS "Spot\_Used\_%",  
 SUM(CASE WHEN SPOT\_USED = TRUE THEN SETTLEMENT\_AMOUNT ELSE 0 END) AS "Spot\_Total"  
FROM DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS  
WHERE DROP\_LATEST >= '01/01/2024'   
AND MODE = 'Truckload'   
AND MASTER\_BOL\_STATUS = 'Delivered'  
GROUP BY Fiscal\_Yr, FS\_Period  
ORDER BY Fiscal\_Yr, FS\_Period;SELECT   
 FS\_YR as Fiscal\_Yr,  
 FS\_PR as FS\_Period,  
 SUM(CASE WHEN SPOT\_USED = TRUE THEN 1 ELSE 0 END) AS Spot\_Used,  
 COUNT(\*) AS Total\_Shipments,  
 ROUND((SUM(CASE WHEN SPOT\_USED = TRUE THEN 1 ELSE 0 END) /   
 NULLIF(COUNT(\*), 0)::FLOAT) \* 100, 2) AS "Spot\_Used\_%",  
 SUM(CASE WHEN SPOT\_USED = TRUE THEN SETTLEMENT\_AMOUNT ELSE 0 END) AS "Spot\_Total"  
FROM DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS  
WHERE DROP\_LATEST >= '01/01/2024'   
AND MODE = 'Truckload'   
AND MASTER\_BOL\_STATUS = 'Delivered'  
GROUP BY Fiscal\_Yr, FS\_Period  
ORDER BY Fiscal\_Yr, FS\_Period;

# Update & Enhancement Roadmap

Last Update: June 29, 2025

## Completed Enhancements (\*)

* ✓ Add Report Date
* ✓ Link to lanes for easy reporting (Truck Load & STO)
* ✓ Link to HD Fiscal Calendar
* ✓ Logic to break out direction as IB, LH & STO irrespective of Mode or Ownership
* ✓ Add origin plant id/dest plant id (fru number, plant\_sk), plant names where relevant
* ✓ Add Cost Center for the DC location and GL account that invoice posted into
* ✓ Add Regional and Divisional assignment
* ✓ Add flag to call out Yard-Pull accessorial charges

## Pending Enhancements

* ○ Add Vendor & Vendor Code integration
* ○ Find Bad Compliance for Locations and Dates
* ○ Additional KPI calculations (cost per pound, pounds per mile)
* ○ Enhanced activity tracking and status details
* ○ Additional geographic and routing intelligence

# Usage Notes

* **Performance**: The view includes time-based partitioning for optimal performance. Use fiscal year (FS\_YR) or report date (REPORT\_DT) filters when possible.
* **Data Freshness**: Check SNOWFLAKE\_LAST\_UPDATED\_TIMESTAMP for data currency. The view is updated regularly with fresh Mercury Gate data.
* **Filtering**: Always filter for valid shipments using appropriate status filters (e.g., MASTER\_BOL\_STATUS = 'Delivered' for completed shipments).
* **Reference Numbers**: PO\_NUMBER field may contain multiple values separated by commas. Use LIKE operations for searching specific PO numbers.
* **Geographic Data**: Latitude and longitude coordinates are provided in decimal degrees format, suitable for mapping applications.
* **Pricing Data**: The view shows the most recent invoice per BOL. Historical pricing data requires separate queries to the base pricing tables.
* **Spot Rates**: SPOT\_USED field indicates whether spot rates were used. Combine with OVERFLOW field for complete rate analysis.
* **Direction Logic**: The Direction field (IB, LH, STO) is derived from BOL number patterns and provides consistent classification regardless of mode.
* **Weight Data**: Multiple weight fields are available (ACTUAL\_WEIGHT, PLANNED\_WEIGHT, DELIVERED\_WEIGHT). Use ACTUAL\_WEIGHT for most analyses.
* **Null Handling**: The view includes comprehensive null handling. Check for IS NOT NULL conditions on critical fields for your analysis.

# Support & Ownership

## View Location

**Primary View:** DM\_SUPPLYCHAIN.TRANSPORTATION\_REPORTING.MERCURY\_GATE\_ANALYTICS

**Alternative Path:** DM\_DECISION\_ANALYTICS.TRANSPORTATION

## Data Sources

**Source System:** Mercury Gate TMS via EDP.ENH\_MERCURY\_GATE schema

**Calendar Integration:** INTEGRATION.PUBLIC.CALENDAR

## Update Schedule

**Frequency:** Regular updates from Mercury Gate source system

**Last Updated:** June 29, 2025

## Usage Guidelines

* Use appropriate filters for performance optimization
* Reference the SNOWFLAKE\_LAST\_UPDATED\_TIMESTAMP for data currency
* Contact the data team for enhancement requests or issues
* Follow established naming conventions when creating derived views or tables

## Contact Information

For questions, enhancements, or issues related to this view, please contact the Transportation Analytics team or submit a request through the established data governance process.