FleetLink Route System

previously known as

Route Management System (RMS)

User Guide

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About This Document

This document references version 3.20 Route Management System Software.

It is intended as an instructional aid for the FleetLink Route Management System (RMS) training presentation. The material presented here introduces the RMS and explains its general concepts, tasks, and work flows with the aim of getting users started using the system.

ⓘ The FleetLink RMS is an evolving application, with new features and enhancements introduced with each new version. As such, your installation may vary somewhat from the content presented in this guide in terms of appearance and functionality.

Potential impact of these differences may be particularly important when importing data into your system.

⚠ALWAYS REFER TO THE MOST RECENT VERSION OF THE FleetLink Route Management System User Guide (FULL MANUAL) FOR INFORMATION CONCERNING RULES FOR IMPORTING DATA.

What is the FleetLink Route Management System ?

The FleetLink Route Management System is a web-based solution that supports dispatch operations for:

•   Residential cart delivery and maintenance

•   Residential waste collection service

•   Commercial waste collection service.

•   Graffiti Cleaning service

Using the FleetLink Route Management System, you can:

•   Maintain inventory of carts

•   Maintain cart assignments and status

•   Maintain lists of trucks and drivers required to provide the services

•   Manage Customer Subscriptions

•   Create and maintain routes that will be used to deliver services

•   Import route data from a CSV file

•   Generate routes based on GeoZone screens

•   Create add-ons, extras, and on-demand tasks

•   Assign routes to trucks and drivers

•   Initiate the wireless delivery of electronic route sheets to the FleetLink Mobile system

•   Support normal dispatch operations such as re-assigning service stops to different trucks

- Export data to support reporting and analysis

In addition,the FleetLink Route Management System (RMS) supports full integration with customers' back-office Customer Care and Billing Systems, enabling communication and synchronization between the two systems, and supporting special considerations such as rates for bundled services and for usage of shared containers.

Why Use this Solution?

The FleetLink Route Management System takes the theory of optimizing route efficiencies and combines that with FleetLink Mobile's real-time fleet tracking and turn-by-turn driver direction to ensure that vehicles actually use those routes that minimize the distance, the amount of fuel used, or the amount of time required to accomplish their assignments.

By using the FleetLink Route Management System to create more efficient routing, you can realize benefits in terms of:

- reduced fuel consumption

- increased profitability

- improved service delivery

- improved vehicle utilization

- decreased travel time.

The FleetLink Route Management System can be deployed as a stand-alone dispatch solution or integrated with your existing back-office system to manage your routing. The application features the capability to import all the necessary data in comma-separated-value (CSV) files to populate your database and get you started quickly and easily.

Getting to Know RMS

Logging In

To log in to the FleetLink Route Management System:

1. Open a browser window and navigate to the URL provided by your computer system administrator
    The FleetLink Route Management System login screen displays.

2. Enter your user name and password in the text fields provided, and then press Login.

You can choose a division now or after you have logged on.

Logging Out

*   Select Logout from the Users menu.
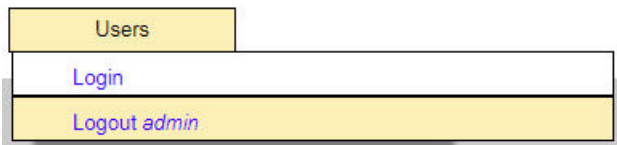
User Interface (UI)

The FleetLink Route Management System user interface is a tabbed interface that comprises all the menus required to manage your routes.

Controls and information are contained in a static area and a dynamic area.

Static Area

The upper area of the UI is the static area, which remain displayed on the UI at all times.

*   Functionality is categorized according to the following menus:

- [Routes](#)

- [Inventory](#)

- [Customers](#)

- [Reference Data](#)

- [GeoZones](#)

- [Reports](#)

- [Users](#)

- [Help](#)

Dynamic Area

The lower area of the UI is where dynamic information and form data for the currently selected menu option is displayed.

Menus

Pull-down menus represent the static part of the user interface, i.e., they are displayed at all times on every screen of the UI.

To navigate using the pull-down menus:

- Click on the desired tab, and then choose a menu option from the displayed list

Routes Menu

The Routes menu provides the tools you need for managing your routes.

Routes
✏ Edit Last Previewed Route
▦ Routes and Stops
Route List OCT/19
🖶 Print Routes
Completed Stops OCT/19
🛑 Unscheduled Stops
⛔ Close Routes
🔍 Search Stops
➕ Add Route
📄 Import Route Stops
📤 Export Routes and Stops

Menu Option	Function
Edit Last Previewed Route	Returns you to the Edit screen for the last route that you viewed or edited. Due to the close inter-dependency of the various types of data involved in route management, you may find yourself navigating back and forth among various menus, e.g., Routes, Reference Data, etc. This menu option is provided as a quick navigation tool. Similar shortcuts are provided on the other menus of the user interface.
Routes and Stops	Displays a list of all your routes in the FleetLink Route Management System.
Route List Current Date	Displays a list of all your routes for the current day.
Print Routes	Displays a list of all routes and enables you to print selected ones to a HTML file.
Completed Stops	Displays a list of stops that have been completed for the current day.
Unscheduled Stops	Displays a list of stops that are not scheduled on any route.
Close Routes	Provides Dispatch personnel the facility to close routes and ensure that stops that have not been serviced will be re-routed.
Search Stops	Displays a form where you can enter search criteria and search for a specific customer location.
Add Route	Lets you add a route to the FleetLink Route Management System.
Import Route Stops	Lets you import data collected from (or exported by) your back-office (dispatch) system.
Export Route Stops	Lets you export Combined Data for your routes and cart/container inventory for migration to another platform. The output is a text file (CSV) which can be opened and processed using Microsoft Excel.

Inventory Menu

Menu Option	Function
Search Containers	Lets you locate an item in your inventory of carts and containers. By specifying your search criteria using the text fields and menus, you can locate the cart or container and display the Edit Cart/Container screen, where you can edit its properties, and determine whether it is associated with a customer location.
Search Associations	Lets you locate associations between carts in your inventory and the customer locations to which they are assigned.
Add New Container	Lets you add a new cart or container to the system manually.
Import Carts/ Containers	Lets you import cart/container data from a file, as well as export your container inventory. The most efficient way to define cart/container data is to import a comma-separated-values (CSV) file that you have prepared off-line (or have generated using your back-office system or other software) and formatted according to the criteria defined.
Generate Carts/ Containers	Enables you to generate a series of consecutive serial numbers and RFID codes for carts and containers. Carts/Containers are generally imported from an external data file. (See Import Carts/Containers.) However, this function can be used to generate up to 5000 carts at a time, with sequential serial numbers.

Customers Menu

The Customers menu provides the tools you need for managing your customer information.

Menu Option	Function
Search Customers	Lets you locate a customer in your list of customers.
Add New Customer	Lets you add a new customer to the FleetLink Route Management System.
List of Not GeoCoded Customers	This features is provided as part of the GeoCode Management billable option. See GeoCoding Non-GeoCoded Customer Addresses for details.
List Customer Cases	This features is provided as part of the CSR Dashboard option.
Import Customer	Lets you import customer data in a text (CSV) file.
Import/Export Customer Documents	Lets you import customer documentation in a text (CSV) file for viewing within the RMS, and export that information from the RMS to a CSV file.
Unsubscribed Customers	This feature is provided as part of the CSR Dashboard option. It enables Customer Service personnel to search, view and export data for customers who have unsubscribed from service within a selectable time frame.

Reference Data Menu

The Reference Data menu provides the tools you need to manage Reference Data for your RMS.

Reference Data defines the real-world entities and their properties for your business, and represents information that is available for use by all routes in your system.
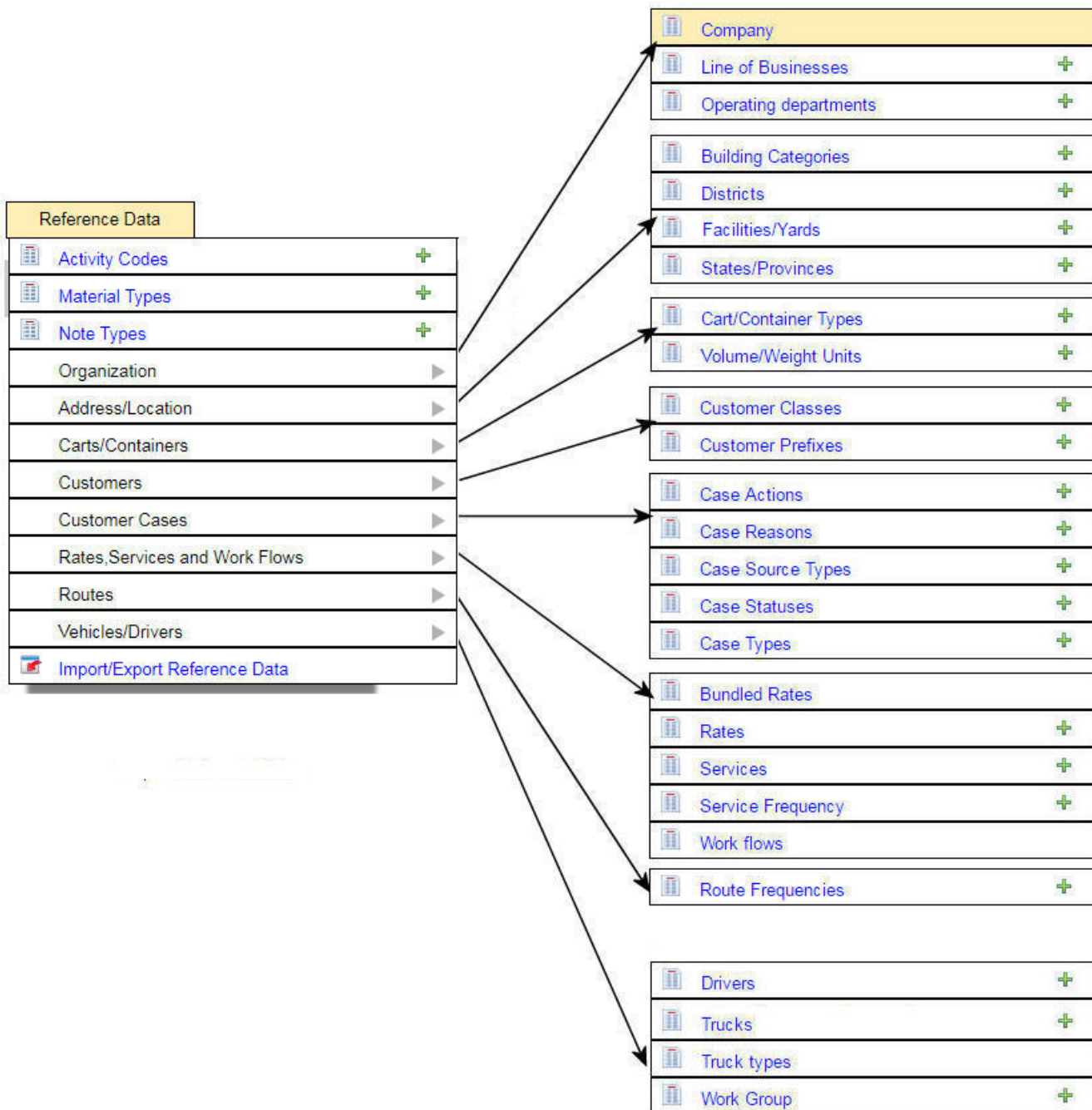
Menu Option	Function
Activity Codes	Defines the codes that indicate the completion status for stops on your routes; they are completion codes that are included in the activity master list that is sent to the mobile. Examples include Completed (normal completion), UTS (unable to service)—bin not out, access blocked, cart misplaced, and so on.
Material Types	Specifies the types of disposal material for your business. Examples include Recyclable Materials, Compostable Yard Waste, Organics, Garbage, and so on.
Note Types	Refers to the codes defined in the Note Type Codes (NTC) master list that is sent to the mobile units. These codes are used to define lists of recipients for messages sent between the mobiles and the server
Company	Defines the properties of your company. Used primarily for Customer Service Report generation, Company reference data has the following hierarchy: • Company • Region • Division • Site • Service Area
Lines of Business	Specifies the types of waste management services for your business, and hence, the functionalities offered on the FleetLink Mobile WasteApp user interface. The standard FleetMind LOBs are Commercial, Industrial, Residential, and Cart Delivery.
Districts	Specifies the geographic areas serviced by your business.
Facilities/Yards	Facilities Specify the Disposal Facilities utilized by your business . Information includes contact information and Facility location, which the application can translate into geographic coordinates for use by the FleetLink Mobile WasteApp. Yards identify the Truck Yards utilized by your business.
States/Provinces	Specifies the U.S. states and/or Canadian provinces serviced by your business.
Carts/Containers	Specifies the types of waste receptacles used by your business, and hence, the cart/container types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface.
Customer Classes	Provided as an optional data element for integration with a company's billing system. Examples include school, business, government, residential. You associate a Customer Class with a customer via the Edit Customer screen.
Customer Prefixes	Any alphanumeric string that is meaningful to your business for purposes of sorting or categorization of customers. Customer Prefixes are used to make customers linkable/groupable, and may be used in the future for billing purposes
Case Actions	The actions that can be taken to process or resolve a Customer Case.
Case Reasons	Predefined descriptions of the case that the Customer Service Representative will be able to select from a pull-down menu when entering or editing a case.
Case Source Types	Identifies sources of Customer Cases. Examples may include email, telephone, web interface, driver.

Menu Option	Function
Case Statuses	Indicates the current state of a customer case within the CSR's work flow. Three statuses are predefined in the CSR Dashboard: • Open - Unassigned • Open - Assigned • Closed
Case Types	Indicates the nature of the customer case, as different types will determine the course(s) of action and may be accorded different priorities. Examples include complaint, work order, information request.
Bundled Rates	Special discounted rates available to customers who subscribe to a package comprising multiple service subscriptions.
Rates	Rates charged to customers for subscribed services.
Services	Specifies the types of waste management services provided by your company and, hence, the service types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface.
Service Frequency	Specifies the frequency with which services are rendered at a Customer Location, for example, Daily, Twice a Week, On-Demand.
Work Flows	The sequence of actions performed in order to render a service.
Route Frequencies	Defines the frequency with which your routes are run.
Drivers	Defines the personnel authorized to drive the vehicles in your fleet.
Trucks	Defines the vehicles used on your routes.
Truck Types	Defines the purposes of the vehicles used on your routes.
Work Groups	Collections of vehicles working as a team to complete work assigned to them.

GeoZones Menu

The GeoZones menu provides the tools you need to view, edit, import, and export GeoZones in RMS.

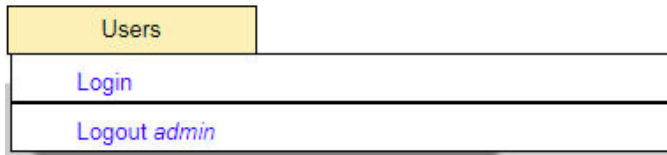| Menu Option	Function
List GeoZones	Displays a list of all GeoZones in RMS. List items can be selected and edited.
Export GeoZones	Enables you to export RMS GeoZones in the form of a CSV file containing polygon coordinates.
Import GeoZones	Enables you to import GeoZones into RMS in the form of a CSV file containing polygon coordinates.

Reports Menu

The GeoZones menu provides the tools you need to view, edit, import, and export GeoZones in RMS.
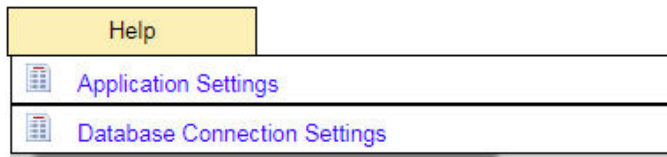

Menu Option	Function
Rolloff Revenue/ Disposal Charges	Tracks the history of roll-off revenue and disposal costs per material for each disposal facility.
Billing Charges	Tracks the history of billing charges for services provided.
Prospects	Displays a list of all prospective (non-active) customers and services in the Route Management System.
Audit Trail Log	Enables you to query and view operations performed on the RMS database(s) over a range of dates, and by whom (RMS user name) the operations were done.
Customer Service Reports	Enables you to generate Curbside CSR and Multi-Family CSR reports.

Users Menu

The Users menu simply provides a quick means to log into and out of the RMS.

Help Menu

The Help menu enables you to configure system-related parameters and RMS database settings.

Menu Option	Function
Application Settings	Enables you to specify various system parameter values and configure the color scheme used on the RMS user interface.
Database connection settings	Enables you to specify database URL, test the connection with the database, and view log files.

Preliminaries - Data Preparation and Migration

As is the case with any software application, it is the integrity of the data entered into a system that determines its level of success (or failure).

The data migration process includes planning, preparing for, and performing the data migration from your existing back-office/dispatch system to the FleetLink Route Manager.

The FleetLink Route Management System features data import capabilities that can give you a head start with setting up your system, minimizing the need for time-consuming manual data entry and its inherent potential for error.

In addition, FleetMind offers value-added assistance with migration of your data. Using data migration tools, FleetMind can combine your imported data and manipulate it for use in the FleetLink Route Management System. See Generating Combined Data.

In general terms, getting the most from your FleetLink Route Management System will involve two phases:

1. Initial Setup: This phase begins immediately, and involves assembling the data from your current back-office/ dispatch system and migrating it to the route management system, defining the necessary data elements (Reference Data) used by the application, and generating your routes.

2. Optimizing Route Sequencing using Vehicular Data: This phase occurs after your deployment has been in place long enough (usually within two weeks) to collect "real-world" data using FleetLink Mobile, analyze the data collected using FleetLink Reports, and make the necessary improvements to the sequencing of your routes.

## Phase 1 - Initial Setup

Creating or Importing GeoZones

GeoZones are user-defined geographical zones of the earth that can be used for a variety of purposes, including shipping, taxation, and route management.


GeoZones play an important role in the FleetLink Route Management System. Not only do they provide a convenient graphic representation of your operating territory, they can used by the system to create your routes and rebuild them as you add stops or fine-tune property coordinates.

You may already have GeoZone files on hand, if your current dispatch system uses them. If so, you can easily import them into the FleetLink Route Management System as .wkt (well-known text) files.

Alternatively, you may be able to acquire GeoZone files or city street geometry/Geographic Information System (GIS) data through your local municipal government offices.

Once you have imported GeoZones, you can edit them as required in the FleetLink Route Management System by "drawing" them on the user interface.
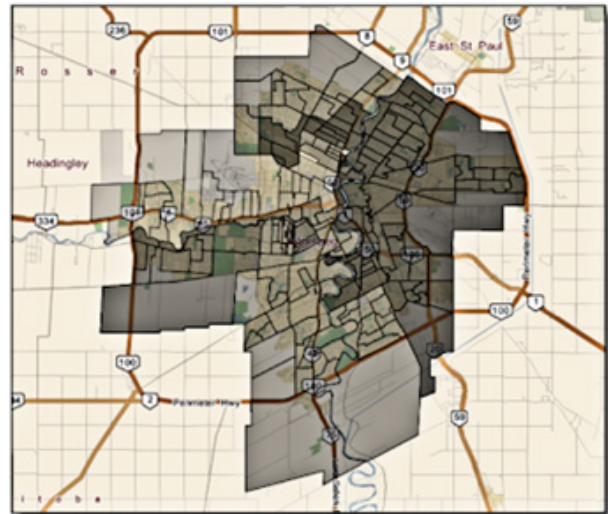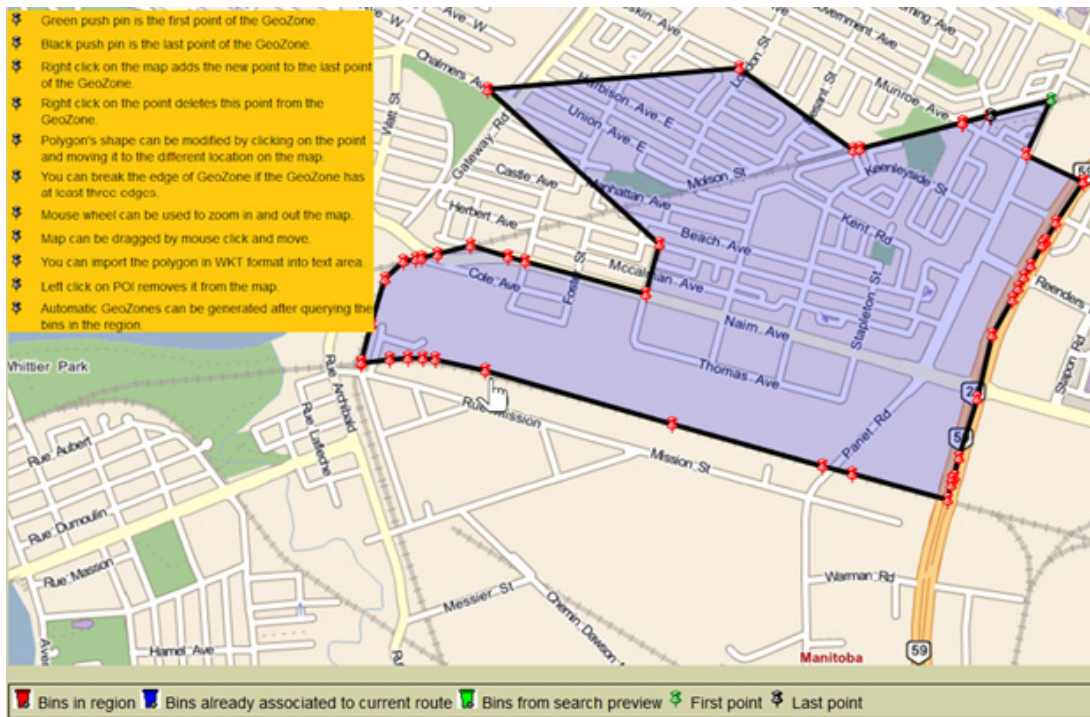
The application's GeoZone management features enable you to generate routes, populating them with assignments whose property coordinates are within the defined area.
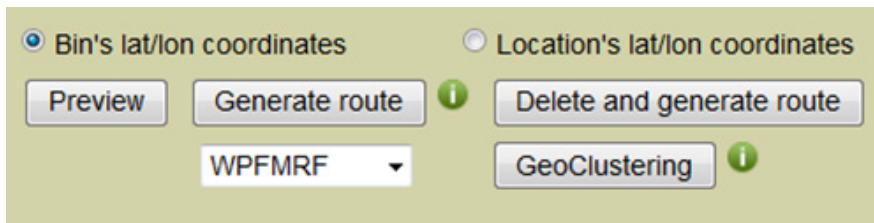
⚠ Generated routes are not optimally sequenced. The application provides a feature (Geoclustering) that will sequence the route based on the stops' proximity to a given reference point, for example, your company's yard.

Note, however, that such sequencing will yield consecutive stops on alternating sides of the street—not an efficient sequence for residential service, where (normally) one side of the street at a time is serviced.

Fine tuning of your route sequencing can be done easily after your new system has been in place for a sufficient time to perform a meaningful data analysis, for example, an analysis of how your drivers are actually running their routes.

Using FleetMind-Generated Location Reference File

FleetMind can provide, as a value-added extra, a service that generates a reference file that increases the reliability of a cart/container's starting point (latitude and longitude). This enhanced level of accuracy may have a significant impact on the optimization of your route(s), as the coordinates for delivery of a cart (e.g., curb) may different significantly from those in which it is serviced (e.g., alley).

If the optimal servicing coordinates cannot be determined easily, then the property centroid may be used as a reference.

These coordinates can be adjusted later, as required.

The FleetLink Route Management System provides options that will update the cart's coordinates and other associated data (RFID, serial number) when the lift is performed.

Using Company-Generated Location/Inventory Reference File

The source of this information is your current back-office/dispatch system, and will include the types of material, container location, and container size.

A combination of this data is used to establish the Service Codes master list. Where walk-up service is provided, Driver Notes indicating the container's location (curb, alley, back yard) can be included in the call information on the FleetLink Mobile unit.

⚠ Carts/containers have associated serial numbers and RFIDs, usually assigned by the manufacturer providing their delivery. The FleetLink Route Management System can rebuild the RFID database based on the data collected during lifts.

Generating Reference Data

Reference Data can either be entered manually or, optimally, imported into the FleetLink Route Management System as a comma-separated value (CSV) file.

⚠ **IMPORTANT**: All reference data must be created/imported into the system before you import any Combined Data, which includes assignment-specific details such as containers, customer locations, and services.

When importing Combined Data:

Any data item in the Combined Data that corresponds to a Reference Data element must first be defined in the Route Management System's Reference Data prior to import or errors will be generated stating what is missing and needs to be added.

Missing reference data list

Line of Businesses	Building Categories	States/Provinces	Volume/Weight Units	Cart/Container Colors	Cart/Container Types	Material Types	Services
Blank field	Blank field	Blank field	Blank field	Blank field	Blank field	Blank field	Blank field

File [Browse...] No file selected.   [Evaluate]

Verify Mode ☐ Verify the file without updating the database

Start date format yyyy-MM-dd ▾

End date format yyyy-MM-dd ▾

[Import]

Any missing Reference Data will result is entries being rejected and gaps in routes.

1. The spelling must be an exact match.

2. Capitalization must be an exact match—the relationship between Combined Data and Reference is case-sensitive.

3. The maximum field size must not be exceeded.

Generating Combined Data

Once you have generated Location reference data and Inventory reference data, you can combine this data using various programming tools used to manipulate CSV text file formats.

Manipulation of this data includes:

- Parsing the source address (Civic Number, Street Address, Unit Number) to enable the generation of a unique location key and facilitate assignment generation.

- Determining the appropriate container location (either Curb or Alley) LAT/LON; replacing with property centroid when deemed appropriate.

- Generating the appropriate Service Code for each stop.

- Maintaining current route sequencing (if available), and updating entries when required.

- Consolidating a Cart Serial Number to RFID inventory.

Though the FleetLink Route Management System imports CSV files—usually generated in Excel—using a data migration application such as FileMaker can resolve unique data problems more reliably.

⚠️ For rules on importing Combined Data, see Rules for Importing Combined Data, which describes the properties for all data fields.

Generating Routes using GeoZones

Once you have created or imported GeoZones, you can generate routes in the FleetLink Route Management System using the Edit List of GeoZones features.
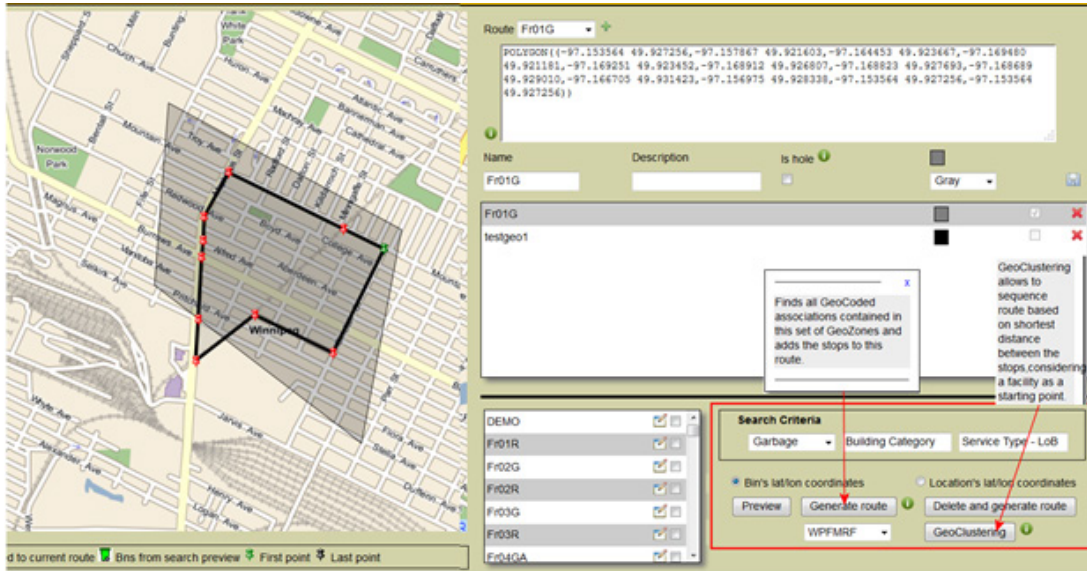
When generating routes, you can define the profile for the first route (for example, container types such as Cart, list of Building Categories, list of Services) and reuse the profile for subsequent routes. By doing so, you can quickly regenerate the entire suite of GeoZone-derived routes.

✅ Specify the location's coordinates (property centroid) when generating a route to ensure that the stops are placed in the correct route—if container location is used, those containers located near route boundaries may end up in the wrong routes.

You then use the GeoClustering option to generate a sequence based on proximity of each stop using your yard's coordinates as the starting point.

ℹ️ Using this approach will yield a proximity-based sequence that will likely cause consecutive stops on opposite sides of the street. A reliable fix is to have your drivers use Proximity Mode or Autopilot Mode during the first few weeks of your deployment, analyze the actual data collected, and make the necessary improvements to the sequence.

Phase 2 - Optimizing Route Sequencing using Vehicular Data

Resequencing Based on Driver's Execution of Route

The FleetLink Route Management System provides a mechanism to edit and save the sequence of a route, for example, as it has been executed by the driver.

This feature is accessible while viewing/editing a route status on the List of Routes interface.

⚠️ **ATTENTION**

In order for this mechanism to yield effective results, the driver must be diligent, ensuring that lifts are recorded for the correct address and validating RFID assignments (where applicable).

Reviewing Historical Breadcrumb Data using FleetWeb

⚠️ The success of this procedure assumes that the driver has selected the route he was working on at logon. Otherwise, you will need to identify for each day which truck actually ran each route.

The FleetWeb application's breadcrumb data enables you to identify a specific day that corresponds to how a route should be run. Using an intermediate tool such as SQL Studio, and a FleetWeb data table for the desired truck and day, you can export this data to a CSV file and, in turn, import it into the FleetLink Route Management System.

Options for refining your route sequencing using FleetWeb include:

•   Identifying Route Segments based on Start and End Addresses

•   Matching Property Centroids to Closest Driver Breadcrumb

Option 1 - Identify Route Segments based on Start and End Addresses

A route can be broken down into a series of street segments, where a segment represents an uninterrupted list of addresses on the same street until a turn is made into a new street.

- By determining the addresses at the beginning and end of the street segment, you can establish whether they are odd or even addresses, and in which direction the sequencing needs to be established—low to high or high to low.

- By establishing the latitude and longitude of each new street block at the point where the truck turned, you can get the starting and ending addresses for each street segment from the Telogis NAVTEQ data.

- Once the start and end addresses of each street segment have been established, along with the ODD/EVEN and INCREASING/DECREASING civic numbers, you can sequence every stop within each street segment, reviewing each entry one at a time based on the address and not the latitude and longitude.

Option 2 - Match Property Centroids to Closest Driver Breadcrumb

Matching is done based on the property centroid located closest to the breadcrumb.

The breadcrumb sequence is used to assign a sequence number to every stop in the route.

If a street is only serviced in one direction, the assumption can safely be made that this is an alley, and both sides need to be serviced as part of the sequencing. Stops that cannot be matched are given a sequence number of 0 or 1, and thus flagged for review.

Preparing Reference Data Off-line

What is Reference Data?

Reference data is specific to your enterprise. It defines the properties for your business and represents information that is available for use by all routes in your system.

Defining reference data is the starting point for your project. The most efficient way to define reference data is to import a comma-separated-values (CSV) file that you have prepared off-line (or have generated using your back-office system or other software) and formatted according to the criteria defined for each type of data.

Preparing data from your existing dispatch system is the first step in getting started with the FleetLink Route Management System. Once prepared, the data can be entered manually or stored in a comma-separated-value (CSV) file so that you can import large amounts of data in a single operation.

The following sections describe the information you will need to define Reference Data .

⚠️ **IMPORTANT FILE FORMAT NOTE**

1. The first two rows of your CSV files are ignored! Do not enter valid data here!

2. Field format and sequence are critical to successful import. Use the CSV samples here as a reference.

Material Types

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Material type	alphanumeric	10 Must not contain spaces.	Yes	A unique identifier indicating the type of waste material collected at a route stop, for example, Garbage, Recycling.
Sequence	numeric	5 digits (maximum value 32767)	Yes	Determines the order in which the list is presented to the driver.
Description	alphanumeric	20	Yes	A meaningful description for the material type. Do not include a comma in this or any other description field.
Disposal Rate	alphanumeric	N/A		Cost per unit for disposal of material
Unit of Measurement	alphanumeric	10		Reference Data element
Dispatch Type	alphanumeric	20	Yes	Reference Data element (Line of Business)

Excel/CSV File Format

Note Types

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Name	alphanumeric	10 Must not contain spaces.	Yes	A unique identifier indicating the recipient group for notes from mobile.
Sequence	numeric	5 digits (maximum value 32767)	Yes	Determines the order in which the list is presented to the driver.
Description	alphanumeric	20	Yes	A meaningful description for the note type.
Dispatch Type	alphanumeric	20	Yes	Corresponds to Line of Business reference data element

Excel/CSV File Format

	A	B	C	D	E
1	#Note				
2	name	description	sequence	dispatchType	
3	RMS1486-test	sequence 1	1	COMM	
4	RMS1486-test	sequence 2	2	RESI	

Lines of Business

◀ ▶   Edit Line of business *RESI*

Line of Business

Name: RESI

Description: Residential

💾 Save Line of Business

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Line of Business Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier indicating the type of waste collection, for example, CDLV for Cart Delivery, FL for Commercial Front-Load.
Description	alphanumeric	128	Yes	A meaningful description for the line of business, for example, Commercial, Industrial, Residential, Cart Delivery.

Excel/CSV File Format

lineofbusiness.csv

	A	B	C
1	Line of business		
2	name	description	
3	RESI	Residential	
4	COMM	Commercial	
5	IND	Industrial	
6	CDLV	Cart-Delivery	
7	TLOB1	Test LOB 1	
8	lob3	lob3	

Customer Classes

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Line of Business Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the Customer Class.
Description	alphanumeric	50	Yes	A meaningful description of the Customer Class, for example, Municipal Government.

Excel/CSV File Format

Route Frequencies

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Name	alphanumeric	40 Must not contain spaces.	Yes	Defines how often a route is run. Choose a meaningful (unique) identifier, for example, EveryFriday, or DailyWeekDay.
Sunday - Saturday	numeric (1 or 0)	1	Yes	Must be 1 or 0 to make up the service provisioning frequency code. No column can be left blank.
Every week	numeric (1 or 0)	1	Yes	Radio button: determines whether route is run weekly. Must be 1 or 0.
Even weeks only	numeric (1 or 0)	1	Yes	Radio button: determines whether route is run only on even weeks. Must be 1 or 0.
Odd weeks only	numeric (1 or 0)	1	Yes	Radio button: determines whether route is run only on odd weeks. Must be 1 or 0.

Excel/CSV File Format

Service Frequencies

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Name	alphanumeric	40 Must not contain spaces.	Yes	A unique identifier indicating the frequency with which the service is performed.
Description	numeric	5 digits (maximum value 32767)	Yes	A meaningful description for the frequency.
Daily	alphanumeric (TRUE or FALSE)	5	Yes	Daily service
Weekly	alphanumeric (TRUE or FALSE)	5	Yes	Weekly service
Monthly	alphanumeric (TRUE or FALSE)	5	Yes	Monthly service
On demand	alphanumeric (TRUE or FALSE)	5	Yes	On-demand service
Frequency Type	alphanumeric	1	Yes	W, M, O (Weekly, monthly, every other week

Excel/CSV File Format

	A	B	C	D	E	F	G
1	name	descriptio	on-demand	frequency	interval	ocurrence	week of the month
2	ONWK	Once a we	FALSE	Weekly	1	1	
3	1xWk	1xWeek		Weekly	1	1	
4	2xWk	2xWeek		Weekly	1	2	
5	3xWk	3xWeek		Weekly	1	3	
6	4xWk	4xWeek		Weekly	1	4	

Cart and Container Types

Data Fields (3 files required)

Types

Data Item	Data Type	Max. Field size	Mandatory	Notes
Container Type	alphanumeric	20 Must not contain spaces	Yes	A unique identifier indicating the type of waste collection, for example, CDLV for Cart Delivery, FL for Commercial Front-Load.
Description	alphanumeric	128	Yes	A meaningful description for the line of business, for example, Commercial, Industrial, Residential, Cart Delivery.

Colors

Data Item	Data Type	Max. Field size	Mandatory	Notes
Color	alphanumeric	40	Yes	A unique identifier for the container color.
Description	alphanumeric	128		A meaningful description for the container color.

Manufacturers

Data Item	Data Type	Max. Field size	Mandatory	Notes
Manufacturer	alphanumeric	30	Yes	A unique identifier for the manufacturer.
Description	alphanumeric	128		Full company name or description

Excel/CSV File Format

Types

container_type.csv

	A	B
1	Container Type	
2	name	description
3	__NONE__	This type is used in locations where there is no container to be serviced
4	Recycling	
5	180LTote	180LTote
6	240LTote	240LTote
7	360LTote	360LTote
8	Bearresistantcan	Bearresistantcan
9	BlueBoxKingSize	BlueBoxKingSize

Colors

container_manufacturers.csv

	A	B
1	Container Manufacturers	
2	name	description
3	Ameri-Kart	Ameri-Kart Corp
4	Busch	Busch Systems Intl. Inc.
5	Cascade	Cascade Cart Solutions
6	CleanRiver	CleanRiver Recycling Solutions
7	Diamondback	Diamondback Products"c" Inc.

Manufacturers

Truck Types

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Truck Type	alphanumeric	4 Must not contain spaces.	Yes	A unique identifier for the Truck Type
Description	alphanumeric	50	Yes	A meaningful description for the Truck Type.

Excel/CSV File Format

Building Categories

Data Fields
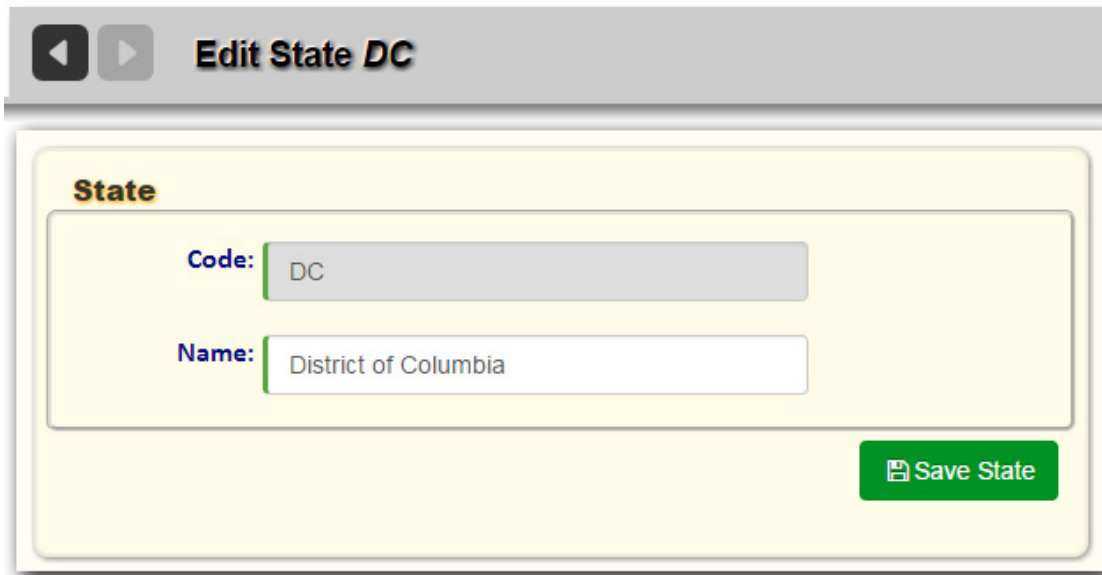
Data Item	Data Type	Max. Field size	Mandatory	Notes
Building Category	alphanumeric	20 Must not contain spaces.	Yes	A unique code identifying the type of building serviced, for example, Bank, Condo, Apartments.
Description	alphanumeric	128		A meaningful description for the Building Category identifier .

Excel/CSV File Format

States and Provinces
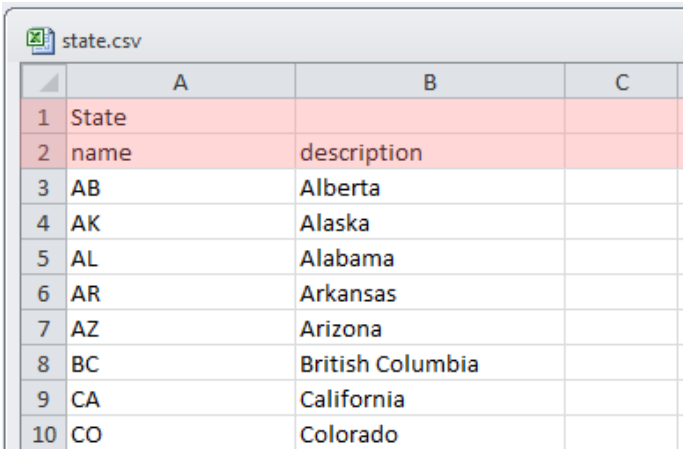
Data Fields
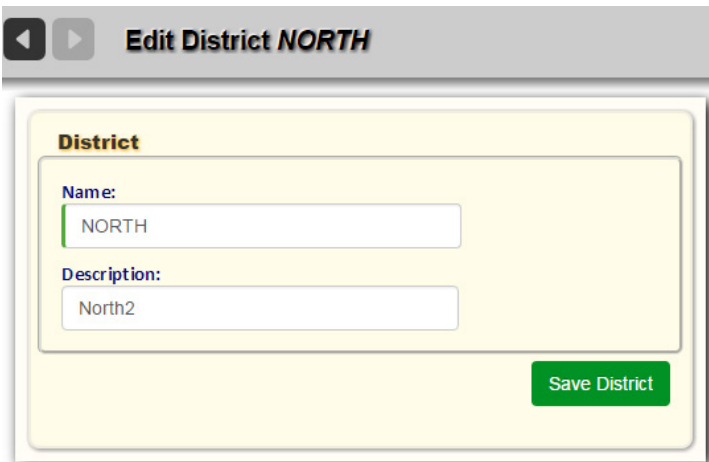
Data Item	Data Type	Max. Field size	Mandatory	Notes
Code	alphanumeric	2 Must not contain spaces.	Yes	The official abbreviation for the state or province, for example, OH, or ON. These values are already hard-coded in the application
Name	alphanumeric	0		The name of the state or province, for example, Ohio, or Ontario.

Excel/CSV File Format

	A	B	C
1	State		
2	name	description	
3	AB	Alberta	
4	AK	Alaska	
5	AL	Alabama	
6	AR	Arkansas	
7	AZ	Arizona	
8	BC	British Columbia	
9	CA	California	
10	CO	Colorado	

state.csv

Districts

Edit District *NORTH*

District

Name:

NORTH

Description:

North2

Save District

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
District	alphanumeric	40	Yes	A unique code identifying the district serviced.
Description	alphanumeric	40		The name of the district, for example, SouthSide.

Excel/CSV File Format

Volume and Weight Units
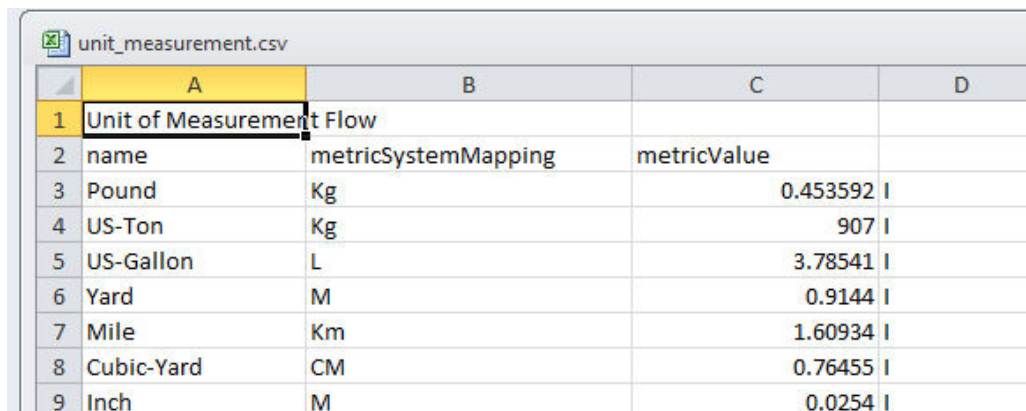
Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Name	alphanumeric	10 Must not contain spaces.	Yes	A unique identifier for the unit of measurement, for example, US-Ton.
Equivalent Metric Value	numeric	10	Yes	A numeric value which when multiplied by Metric Unit Type, yields the equivalent weight in the metric system. The application uses the metric system as its base; non-metric units are converted to metric.
Metric Unit Type	alphanumeric	100	Yes	Metric unit used to specify the equivalent weight using the metric system. See Equivalent Metric Value.
Measurement type	alphanumeric (I or M)	1	Yes	Specifies whether units are Imperial or Metric.

Excel/CSV File Format

Customer Prefixes

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Code	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the Customer prefix.
Description	alphanumeric	128		A meaningful description for the Customer prefix.

Excel/CSV File Format

Case Actions

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Case Action	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the Case Action
Description	alphanumeric	128		A meaningful description for the Case Action.

Excel/CSV File Format

Case Types

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Case Type	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the Case Type
Description	alphanumeric	128		A meaningful description for the Case Type.

Excel/CSV File Format

Rates

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Rate Type	alphanumeric	Reference data element.	Yes	A unique identifier for the Rate Type
Description	alphanumeric	Reference data element.		A meaningful description for the RateType.
Basic Rate	double	128	Yes	Regular service rate.
Extra pickup	double	n/a	Yes	Rate for servicing an extra.
Extra weight	double	n/a	Yes	Rate for extra weight picked up.
Refused service	double	n/a	Yes	Rate charged when unable to service the location.
Rate/weight unit	double	n/a		Rates per unit of weight.
Start date	date	n/a	Yes	Date rate takes effect.
End date	date	yyyy-mm-dd		Date rate expires.
Cancellation rate	double	yyyy-mm-dd		Rate for customer cancellation of service request.
Container Dependency	alphanumeric	n/a		Determines whether rate can be applied only to services/workflows

Data Item	Data Type	Max. Field size	Mandatory	Notes
Container type	alphanumeric	True, False (check box)		associated with specified container type.
Container size	numeric	20		Reference data element.
Units	alphanumeric	10		Volume in units specified.
Customer type (LOB)	alphanumeric	10		Reference data element.
District	alphanumeric	20		Reference data element.
Frequency	alphanumeric	40		Reference data element.

Excel/CSV File Format

Bundled Rates

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Name	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the Bundled Rate
Amount	double	n/a	Yes	Service Rate
Quantity (1-5)	integer	n/a	Yes	Number of services in bundle
Code (1-5)	alphanumeric	20 Must not contain spaces.	Yes	Service code. Must correspond to a Service Reference Data element

Excel/CSV File Format

bundle_rate.csv

	A	B	C	D	E	F	G	H	I	J	K	L
1	Bundle Rate											
2	Bundle Rate Code	Price	Qty1	Code1	Qty2	Code2	Qty3	Code3	Qty4	Code4	Qty5	Code5
3	918	0	1	F322T2	10	F326T3						
4	9058	0	4	F326T2	1	F326T3	1	F328T4				
5	9205	0	2	F324T2	1	F326T2						
6	9206	0	2	F326T1	1	F328T3						
7	9207	0	2	F323T2	1	F326T2						
8	9208	0	1	F356T2	1	F358T2						

Case Reasons

Edit Case Reason *A1 Missed Collection*

Case Reason

Description:
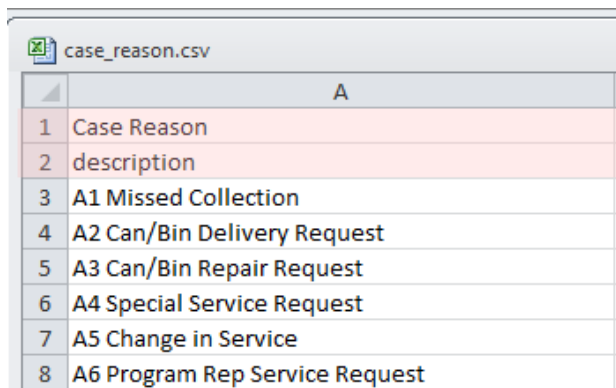
A1 Missed Collection

Save Case Reason

Data Fields
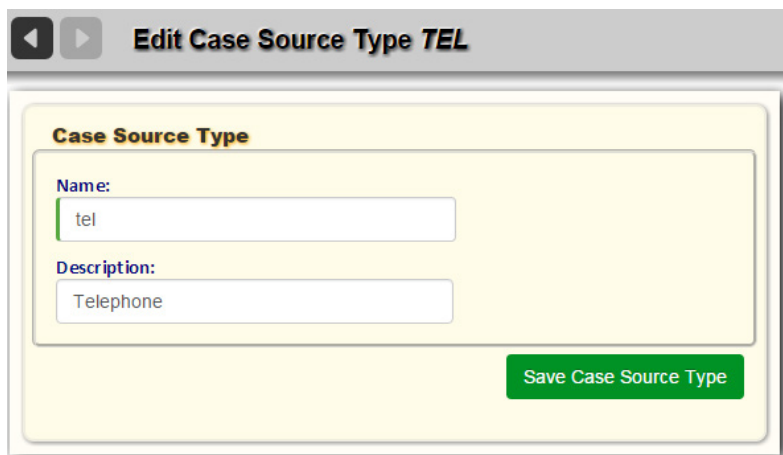
Data Item	Data Type	Max. Field size	Mandatory	Notes
Case Reason	alphanumeric	128 Must not contain spaces.	Yes	A meaningful description for the Case Reason. Must be a unique identifier.

Excel/CSV File Format

Case Source Types

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Case Source Type	alphanumeric	20 Must not contain spaces.	Yes	A unique identifier for the Case Source Type
Description	alphanumeric	128		A meaningful description for the Case Source Type.

Excel/CSV File Format

Case Statuses

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Case Reason	alphanumeric	128 Must not contain spaces.	Yes	A meaningful description for the Case Reason. Must be a unique identifier.

Trucks

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Truck ID	alphanumeric	10	Yes	Each of the vehicles in your fleet must be assigned a unique identifier. The Truck ID can consist of numbers, letters, or a combination of the two.
Truck type	alphanumeric	4		Must correspond to a Truck Type reference data element
Container Limit	alphanumeric	N/A		The maximum number of containers a truck can accommodate when delivering containers to customers.
Description	alphanumeric	40		Enter a description for the vehicle. Doing so will make it more readily identifiable and meaningful to users.
Comments	alphanumeric	256		Additional comments regarding the vehicle

Excel/CSV File Format

	A	B	C	D	E	F	G	H	I	J
1	Truck									
2	name	containerTypeId1	containerTypeId2	containerTypeId3	description	notes	truckTypeAutoId	containerLimit	containerUsage	divisionId
3	3028	Garbage	Garbage	Garbage	SL (1 Tip)		FB	20	0	
4	3031	Garbage	Garbage	Garbage	SLM		FB	50	0	
5	3037	Garbage	Garbage	Garbage	SLM		RE		0	
6	3041	Garbage	Garbage	Garbage	SLM		RE		0	
7	3042	Garbage	Garbage	Garbage	SLM		RE		0	
8	3045	Garbage	Garbage	Garbage	SLM		RE		0	
9	3046	Garbage	Garbage	Garbage	SLM		RE		0	
10	4006	Garbage	Garbage	Garbage	RL (1 Tip)		RE		0	-762496764
11	4009	Garbage	Garbage	Garbage	RL (1 Tip)		RE		0	-762496764

Drivers

Modify Driver: 6   ✕

Code	License Id	License Class
12828	License Id	License Class

First Name	Last Name	Title
Jerry M	Gonzales	Equipment Operator III

Hourly Cost	Notes
Hourly Cost	Notes

Active ☑   Crew Member ☑

Cancel   Save

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Code	alphanumeric	20	Yes	The driver's employee number. In the unlikely event that your organization does not assign employee codes, you must create and assign one for each driver for purposes of the application.
First Name	alphanumeric	15	Yes	Driver's first name
Last Name	alphanumeric	15	Yes	Driver's last name
Start Date	Date YYYY-MM-DD HH:MM:SS	18	Yes	Driver's start date
End Date	Date YYYY-MM-DD HH:MM:SS	18		Driver's end date

Data Item	Data Type	Max. Field size	Mandatory	Notes
License ID	alphanumeric	30		The unique identification number for the driver's permit.
License Class	alphanumeric	30		The code indicating the type(s) of vehicles the driver is permitted to operate, for example, Class 3 With Air.
Hourly Cost	numeric	n/a		Driver's rate
Notes	alphanumeric	256		Optional notes field
Crew member	alphanumeric	True, false (check box)		Indicates whether driver is a regular crew crew member.
Title	alphanumeric	30		Driver title, e.g., Senior Driver

Excel/CSV File Format

driver.csv

	A	B	C	D	E	F	G	H	I	J	K
1	Driver										
2	code	firstname	lastname	driversLicenceId	driversLicenceClass	notes	startDate	endDate	crewMember	title	driverTeamAutoId
3	83	Adam	Chouinard		3 with air	Contracto	########		TRUE		
4	105	Ajay	Mann		1F		########		FALSE		
5	17	Albert	Prince		1 3 with air	Dept-08CS	########		FALSE		
6	136	Alex	Venegas	ddd			########		FALSE	www	
7	8	Allen	Cook		1A		########		FALSE		
8	77	Areil	Capiendo		3 with air		########		FALSE		
9	89	Brad	Wiebe		Class 3 with Air	Wiebe	########		FALSE		
10	112	Brian	Kaplan		1A	Contracto	########		FALSE		

Driver Teams

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Driver Team	alphanumeric	12	Yes	A unique identifier for the Work Group
Description	alphanumeric	128	Yes	A meaningful description for the Work Group.

Excel/CSV File Format

Activity Codes

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Code	alphanumeric		Yes	A unique identifier that denotes the completion status for stops on your routes. Examples may include C for Completed, B for Blocked Access.
Sequence	numeric		Yes	Determines the order in which the list is presented to the driver.
Completion	alphanumeric uppercase Y or N		Yes	Determines whether the route stop is considered completed or not completed for the activity code used. Completed means that the route stop executed with the user code will be removed from the driver's call list.
Description	alphanumeric		Yes	Note that these descriptions are used as labels for the buttons in the WasteApp, which can accommodate maximum of 2 lines of 10 characters.

Data Item	Data Type	Max. Field size	Mandatory	Notes
Reroutable	boolean			Determines whether the stop can be reassigned to another route. Must contain Y or N.
Successful	boolean			Determines whether the service is considered successfully delivered. An assignment

may have a Completion status of False and a Success status of True. |

Excel/CSV File Format

activity_code.csv

	A	B	C	D	E	F	G
1	Activitiy Code						
2	name	Completion[cmpl	description	sequence	isReroutable	isSuccessful	
3	C	Y	Completed	1	FALSE		
4	D	Y	UTS - Not Out	2	FALSE		
5	M	Y	Misplaced	3	FALSE		
6	Y	Y	UTS - No Acces	5	FALSE		
7	Z	Y	UTS - Damaged	6	FALSE		

Facilities

◄ ► **Facility**

Code	AMER
Description	
Address	740 W Broadway Rd
Phone	robot
Fax	480-834-1923
Latitude	33.408088
Longitude	-111.847956
GeoZone	
Sequence	
Integrated	☐

👉 Right click on map to pin facility position. 👉 Drag the pin icon to change the position of facility.

Show Catalog Save Facility

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Code	alphanumeric	10	Yes	A unique code identifying the waste disposal facility, for example, WPGWaste.
Sequence	numeric	5 (max. value 32767)	Yes	Order in which option is presented to driver.
Description	alphanumeric	20	Yes	The name of the facility, for example, Winnipeg Waste.
Address	alphanumeric	256	Yes	The full address and postal code/zip code of the facility. This information enables the application to determine the latitude and longitude of the facility.
Phone	alphanumeric	25		Phone number of the facility
Fax	alphanumeric	25		Fax number of the facility
Latitude	numeric	10		Latitude of the facility in degrees, for example 45.483985. If this information is omitted, it will be set automatically by the application if the full address of the facility is specified.
Longitude	numeric	10		Longitude of the facility in degrees, for example -73.562072. If this information is omitted, it will be set automatically by the application if the full address of the facility is specified.
GeoZone	alphanumeric	N/A		Well-known text (WKT) file representing the facility's geozone.
Integrated	boolean	(1 or 0)		Specifies whether Facility has integrated weigh scales

Excel/CSV File Format

facility.csv

	A	B	C	D	E	F	G	H	I
1	Facility								
2	name	latitude	longitude	address	Geozone	telephone	fax	description	sequence
3	WPFMRF	49.913689	-97.1665	1029 Henry Avenue Winnipeg MB R3E3L6	Tu13G			WIN PROC Fac	1
4	WPGBGD			Brady Road Winnipeg MB R0G1N0				WPG Bradys G	2
5	WPGBYW	0	0	Brady Road Winnipeg MB R0G1N0				WPG Brady YV	3
6	FM888	35.787688	-78.669	1751 rue richardon montreal qc canada h3k1g6	FM office	123-098-1433		Fleetmind Dis	42
7	NCPR	35.910999	-78.7435	9216 Miranda Drive Raleigh NC 27617	DDO	(919) 625-0807		NC Pallet Rec	13
8	NYWS	35.718211	-78.6754	3109 Inwood Road Raleigh NC 27603	DDO	(919)515-9421		NCSU Yard Wa	12

Work Groups

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Work Group	alphanumeric	10		A unique identifier for the Work Group
Description	alphanumeric	128		A meaningful description for the Work Group.
Truck Type	alphanumeric	4		Must correspond to a Truck Types reference data element.
Truck ID	alphanumeric	10		The Truck ID. Must match a corresponding data element in Trucks Reference Data.

Excel/CSV File Format

Route Groups

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Route Group	alphanumeric	12	Yes	A unique identifier for the Route Group
Description	alphanumeric	128		A meaningful description for the Route Group.
Route	alphanumeric	10	Yes	A unique code identifying the member Route.

Excel/CSV File Format

Services

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Code	alphanumeric	20	Yes	A unique identifier indicating the type of waste collection, for example, CDLV for Cart Delivery, FL for Commercial Front-Load.
Sequence	numeric	5 digits (maximum value 32767)	Yes	Useful for service codes used by the driver to service Extras, call-ins, etc. If no sequencing is required, each field still needs to be populated with a 0.
Extra	numeric (1 or 0)	1	Yes	Indicates whether the service type can be provisioned by the driver as an Extra.
On-demand	numeric (1 or 0)	1	Yes	Indicates whether the service type can be provisioned by the driver as an On-demand.
Recurring	numeric (1 or 0)	1		Indicates whether the service is recurring.
Description	alphanumeric	20	Yes	A meaningful description for the code.
Dispatch type	alphanumeric	Residential, Front-load, Roll-off		Determines the stop type (and, hence, workflow and truck type) for the assignment.
Work flow	alphanumeric	Must be populated with a Work Flow reference data element	Yes	A description of the task, for example, Cart to be replaced. See APPENDIX B - WORKFLOWS for more information about workflows.
Line of Business	alphanumeric	See description.	Yes	The line of business; must match values defined in Lines of Business.

Data Item	Data Type	Max. Field size	Mandatory	Notes
Material	alphanumeric	See description.	Yes	The waste material to be collected; must match values defined in Material Types.
Weight limit	numeric	4; must be populated with "1000"	Yes	Weight capacity of the bin or cart.
Minimum weight	numeric	N/A		Used for calculation of billing charges for roll-off service.
Weight Unit	alphanumeric	6; must be populated with "Pounds"	Yes	Unit of measurement; must match values defined in Volume and Weight Units.

Excel/CSV File Format

service.csv

	A	B	C	D	E	F	G	H	I	J	K	L
1	Service											
2	name	description	customerType	material	weight	weightUnit	onDemand	extra	sequence	dispatchType	defaultWorkFlo	recurring
3	AGWU240	Walk-Up ALLEY Garbage	RESI	Garbage	1000	Pounds	TRUE	TRUE	1	RESI	RESI^CSRV^Cart	TRUE
4	AGWU360	Walk-Up ALLEY Garbage	RESI	Garbage	1000	Pounds	TRUE	TRUE	2	RESI	RESI^CSRV^Cart	TRUE
5	ALGB240	ALLEY Garbage	RESI	Garbage	1000	Pounds	TRUE	FALSE	3	RESI	RESI^CSRV^Cart	TRUE
6	ALGB360	ALLEY Garbage	RESI	Garbage	1000	Pounds	TRUE	TRUE	4	RESI	RESI^CSRV^Cart	TRUE
7	AREC240	ALLEY Recycling	RESI	Recycling	1000	Pounds	TRUE	TRUE	5	RESI	RESI^CSRV^Cart	TRUE
8	AREC360	ALLEY Recycling	RESI	Recycling	1000	Pounds	TRUE	TRUE	6	RESI	RESI^CSRV^Cart	TRUE

M	N	O	P	Q	R	S	T
serviceRateFrequency	container type name	unit type name	container size	rate	work flow[dispatchType^code^description]	billing code	minWeight
1	Garbage	Liters	240	R1	RESI^CSRV^Cart to be serviced	RESI-CSRV-R1	AGWU240
	Garbage	Liters	360				
1	Recycling	Liters	240	R1	RESI^CSRV^Cart to be serviced	RESI-CSRV-R1	ALGB240
1	Garbage	Liters	240	R1	RESI^CSRV^Cart to be serviced	RESI-CSRV-R1	ALGB360
1	Recycling	Liters	240				AREC240
	Recycling	Liters	360				

Work Flows

Edit Work flow 1

Work Flow

Work Flow	1
Dispatch Type	Roll-Off

Operating department

Roll-Off workflows ▾

Description:

Deliver

Customer Description:

Deliver

Save Work Flow

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Work flow (code)	alphanumeric	20	Yes	An identifier for the work flow.
Dispatch type	alphanumeric	20	Yes	Must correspond to a Lines of Business reference data element.
Operating Department (group)	alphanumeric	15	Yes	Must correspond to an Operating Department reference data element.
Customer Description	alphanumeric	256		Description of the work flow used by customer.

Excel/CSV File format

	A	B	C	D	E
1	Work Flow				
2	dispatchType	code	description	group	custDescription
3	RESI	CSRV	Cart to be serviced	REG-SRV	Empty
4	RESI	NC	No Cart	ssw	fwerfffff
5	RESI	1	Cart to be delivered	MNT	Cart to be delivered 1
6	RESI	31	Cart to be removed	MNT	Cart to be removed
7	RESI	41	Cart to be replaced	MNT	Cart to be replaced
8	RESI	10	Cart to be repaired	MNT	Replace body
9	COMM	CSRV	Cart to be serviced	REG-SRV	Cart to be serviced
10	COMM	NC	No Cart	REG-SRV	No Cart service

Operating Departments

Edit Operating department *BARREL*

Operating Department

Name:

BARREL

Description:

Barrel
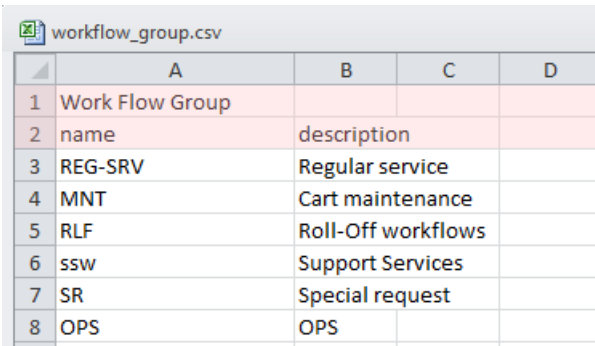
Save Operating Department

Data Fields

Data Item	Data Type	Max. Field size	Mandatory	Notes
Operating Department	alphanumeric	15		An identifier indicating the operating department. Must match a corresponding data element in Operating Department Reference Data
Description	alphanumeric	256		A meaningful description for the Operating Department.

Excel/CSV File format

workflow_group.csv			
	A	B	C	D
1	Work Flow Group			
2	name	description		
3	REG-SRV	Regular service		
4	MNT	Cart maintenance		
5	RLF	Roll-Off workflows		
6	ssw	Support Services		
7	SR	Special request		
8	OPS	OPS		

Importing and Exporting Reference Data

FleetLink Route Management System's import capabilities make it possible for you to import large amounts of Reference Data in a single operation, saving time and minimizing the potential errors of manual entry.
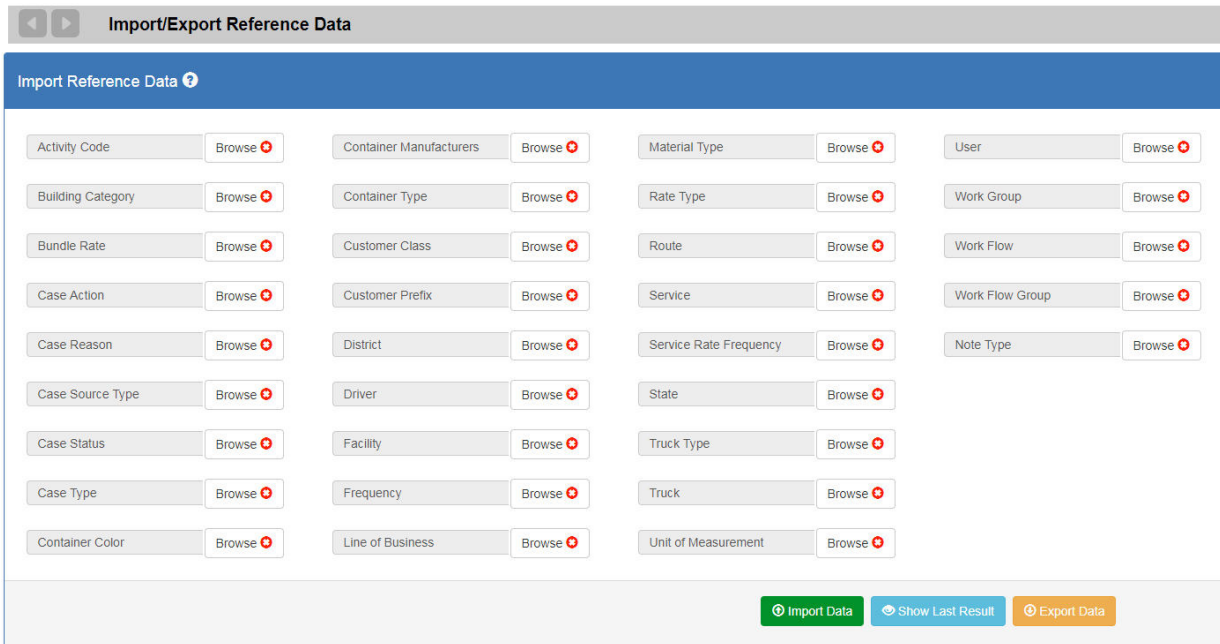
⚠️ It is assumed that you have already prepared your data according to the formats required by the FleetLink Route Management System. If you have not done so, please refer to Preparing Reference Data Off-line before proceeding.

From the Import Result screen, you can import individual reference data elements by browsing to a disk location, and then selecting Import.

When you export reference data, ALL reference data files are packed into a zip file, where you can extract and save any or all files to disk.

Importing Reference Data

1. From the static portion of the UI, select Reference Data > Import Reference Data.
   The Import Reference Data screen displays.

From this screen, you can import previously prepared CSV files for every category of Reference Data.

2. Select a reference data category, and then press its **Browse** button.
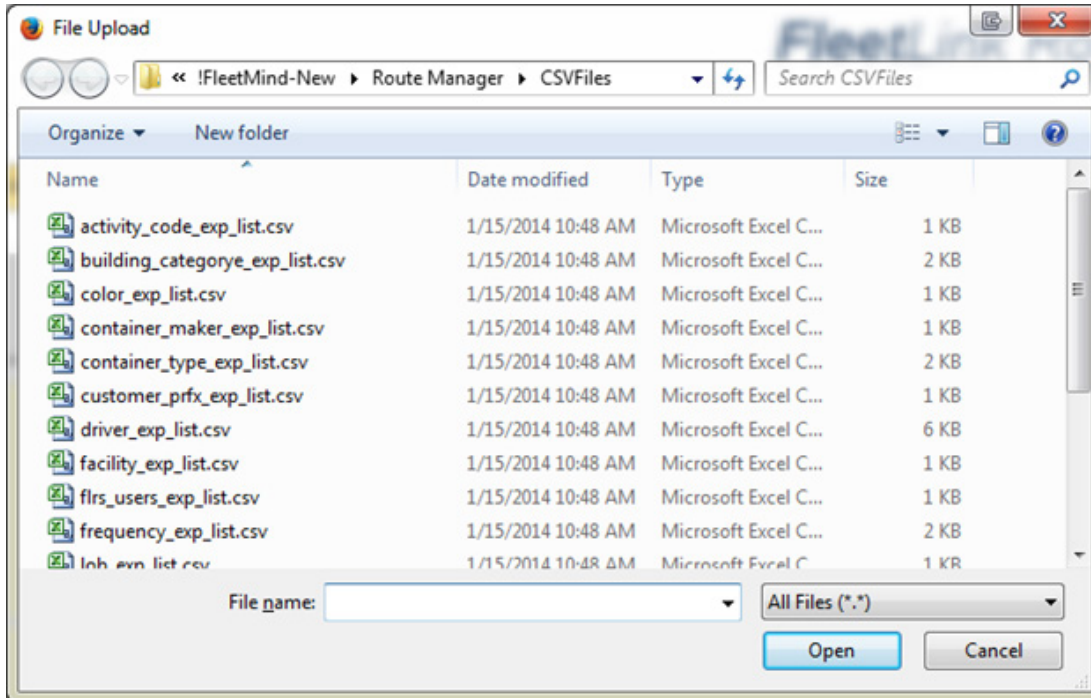
3. Navigate to the location on disk where your file is stored, select the file, and then press Open.
   Your file is added to the Import Reference Data list.
   The Browse button's status indicator changes to a check mark to indicate that a file has been selected.

   NOTE: If you realize that you have selected the wrong file, simply click the Browse button again to replace the currently selected file. To clear (delete) the selection altogether, you must press your browser's Refresh button. Doing so clears all selections.

4. To select additional categories, repeat steps 2 and 3.

5. When done, press **Import Data**.
   An animated progress indicator displays while file import is attempted.
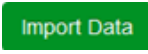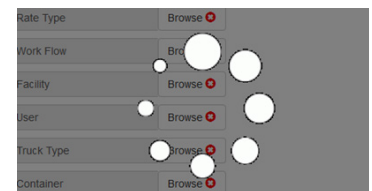
   Duration will depend on the amount of data being processed.
   Upon completion, a results dialog indicates success or failure of the operation.

Referential Data	Insertion	Rejection	Details	Total
Activity Code	1	0	●	1

Close

{"Message":"Input string was not in a correct format."}

Close
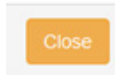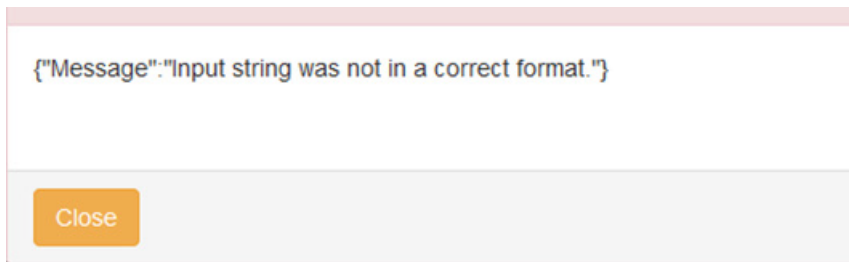
If errors result, review your import files to ensure that they comply with the formats specified in Preparing Reference Data Off-line.

Pressing the **Show Last Result** button [Show Last Result] will display the Import Result screen and show the results of the most recently performed import operation.

Exporting Reference Data

The export operation exports <u>all</u> available reference data; selection of individual categories is not supported.

1. Select **Export Data**.
An animated progress indicator displays while export is in progress.

Duration will depend on the amount of data being processed. When the process completes, a zipped archive opens automatically.

Name	Size	Packed	Type	Modified	CRC32
			File folder		
activity_code.csv	296	195	Microsoft Excel Co...	11/4/2015 12:1...	283AD150
building_category.csv	2,211	733	Microsoft Excel Co...	11/4/2015 12:1...	F1192F84
case_action.csv	1,132	478	Microsoft Excel Co...	11/4/2015 12:1...	3F37025E
case_reason.csv	360	210	Microsoft Excel Co...	11/4/2015 12:1...	101B7DD1
case_source_type.csv	133	109	Microsoft Excel Co...	11/4/2015 12:1...	36B0E1D3
case_status.csv	96	76	Microsoft Excel Co...	11/4/2015 12:1...	FFAA9FA4
case_type.csv	137	96	Microsoft Excel Co...	11/4/2015 12:1...	0A12768E

2. Extract your files to the desired disk location.

Combined Data

What is Combined Data?

The FleetLink Route Management System provides tools for importing and exporting Combined Data.

Combined Data is defined as a database record (or collection of records) each of which combines all data for one container: the container itself, the customer location to which the container is assigned, and details about that assignment.

File Formats

There are two different sets of Combined Data that can be imported into the FleetLink Route Management System:

- Combined Data (Inventory menu)

- Route Stops (Routes menu)

File content and format for these two sets of data are nearly identical--what differentiates them is that for Route Stops, each record has additional fields appended to the end to accommodate route data for up to 14 routes.

Inventory Combined Data

Select **Inventory > Import Combined Data**.

```
┌─────────────────────────────────────┐
│  Inventory                           │
└─────────────────────────────────────┘
          │
┌─────────────────────────────────────────┐
│  📰  Import Combined data               │
└─────────────────────────────────────────┘
```
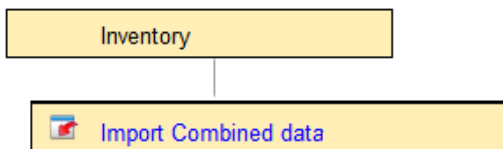
The following tables show the file format required when importing Combined Data.
You can download an empty CSV file and complete the fields with your own data by selecting Download Sample.

1- Highlighted rows indicate fields used to identify customer's location		2- * Mandatory			
Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
1	A	Customer Id*		Customer	60
2	B	Line of Business*	i	Customer	20
3	C	Business Name		Customer	60
4	D	Customer Last Name		Customer	60
5	E	Customer First Name		Customer	40
6	F	Office Phone		Customer	20
7	G	Home Phone		Customer	20
8	H	Fax		Customer	20
9	I	Email		Customer	60
10	J	Active/Inactive	i	Customer	8
11	K	Customer Comments		Customer	256
12	L	Customer Billing Id		Customer	60
13	M	Customer Class*	i	Customer	4

Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
14	N	Billable	ℹ	Customer	8
15	O	Street/Civic Number		Customer	12
16	P	Street		Customer	50
17	Q	Apt/Suite		Customer	13
18	R	District		Customer	40
19	S	City		Customer	40
20	T	State		Customer	2
21	U	Postal Code		Customer	10
22	V	Street/Civic Number		Location	12
23	W	Street		Location	50
24	X	Apt/Suite		Location	13
25	Y	District		Location	40
26	Z	City		Location	40

Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
27	AA	State		Location	2
28	AB	Postal Code		Location	10
29	AC	Building Categories*	ℹ	Location	40
30	AD	Contact Name		Location	40
31	AE	Contact Phone		Location	25
32	AF	Latitude		Location	40
33	AG	Longitude		Location	40
34	AH	Location Name		Location	60
35	AI	Billing Location Id*		Location	60
36	AJ	GeoId		Location	36
37	AK	Location Active*	ℹ	Location	8
38	AL	Serial Number*		Cart/Container	20
39	AM	RFID		Cart/Container	64

Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
40	AN	Capacity		Cart/Container	50
41	AO	Capacity Units	ℹ	Cart/Container	10
42	AP	Color	ℹ	Cart/Container	40
43	AQ	Container Type	ℹ	Cart/Container	20
44	AR	Active/Inactive	ℹ	Cart/Container	8
45	AS	Container Comments		Cart/Container	256
46	AT	Manufacturer	ℹ	Cart/Container	30
47	AU	Warranty Start Date	ℹ	Cart/Container	30
48	AV	Warranty End Date	ℹ	Cart/Container	30
49	AW	Label		Cart/Container	30
50	AX	Material	ℹ	Cart/Container	40
51	AY	Dimension Unit	ℹ	Cart/Container	10
52	AZ	Is Compactor		Cart/Container	8

Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
53	BA	Width		Cart/Container	11
54	BB	Height		Cart/Container	11
55	BC	Length		Cart/Container	11
56	BD	Latitude		Cart/Container Location Association	40
57	BE	Longitude		Cart/Container Location Association	40
58	BF	Material*	ℹ	Cart/Container Location Association	40
59	BG	Start Date	ℹ	Cart/Container Location Association	30
60	BH	End Date	ℹ	Cart/Container Location Association	30
61	BI	Active/Inactive	ℹ	Cart/Container Location Association	8
62	BJ	Assign Comments		Cart/Container Location Association	256
63	BK	Service Code*	ℹ	Cart/Container Location Association	10
64	BL	Facility Code	ℹ	Cart/Container Location Association	40
65	BM	Rate discount		Cart/Container Location Association	7

Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
66	BN	Service Subscription Id		Cart/Container Location Association	60
67	BO	Bundle Rate Code		Cart/Container Location Association	20
68	BP	Assignment Status Code*	ℹ	Cart/Container Location Association	4
69	BQ	Shared association		Cart/Container Location Association	10
70	BR	Is Primary	ℹ	Cart/Container Location Association	8
71	BS	Work Flow	ℹ	On Demand Stop	280
72	BT	Target Date	ℹ	On Demand Stop	10
73	BU	Driver Note		On Demand Stop	1024
74	BV	Dispatcher Note		On Demand Stop	120

Routes Combined Data

Select **Routes > Import Route Stops**.

In addition to the Inventory Combined Data (columns 1 through 68) previously described, Route Management Combined Data contains additional route data for up to 14 routes, as shown in the following table.

Column #	Excel Column #	Column Name	Valid Values	Database alias	Field Size
67	BO	Bundle Rate Code		Cart/Container Location Association	20
68	BP	Assignment Status Code*	i	Cart/Container Location Association	4
69	BQ	Shared association		Cart/Container Location Association	10
70	BR	Is Primary	i	Cart/Container Location Association	8
71	BS	Work Flow	i	On Demand Stop	280
72	BT	Target Date	i	On Demand Stop	10
73	BU	Driver Note		On Demand Stop	1024
74	BV	Dispatcher Note		On Demand Stop	120
75	BW	Route name 1	i	Route	10
76	BX	Sequence for Stop in Route name 1	i	Stop	
...	...	...		...	
101	CW	Route name 14 (maximum 14 routes allowed)	i	Route	10
102	CX	Sequence for Stop in Route name 14	i	Stop	
103	CY	Work Order Id		On Demand Stop	24

Advanced Options

The Clear Routes Before Import option removes all stops in routes before importing the new data. Use this feature when reorganization of routes means that the reorganized route(s) will have fewer stops.

Rules for Importing Combined Data

When importing combined data, you must ensure that the format of your CSV file adheres to specific criteria.

To minimize the potential for error when importing Combined Data, consult the following table to determine the maximum length and acceptable content for the individual fields of your imported file.

⚠ **IMPORTANT**
When importing Combined Data:

Any data item in the Combined Data that corresponds to a Reference Data element must first be defined in the Route Management System's Reference Data prior to import or errors will be generated stating what is missing and needs to be added.

Any missing Reference Data will result in entries being rejected and gaps in routes.

IMPORTANT RULES

- The spelling must be an exact match.

- Capitalization must be an exact match—the relationship between Combined Data and Reference Data is case-sensitive.

- The maximum field size must not be exceeded.

- No entry may include commas.

This icon denotes that the data element is Reference Data

No.	Data Item	Data Type	Max. Field Size	Mandatory	Notes
1	Customer ID	numeric	25	Yes	0 through 9. No special characters, e.g., /, *, #, etc.
2	Line of Businesses	alphanumeric	20	Yes	Case-sensitive; must match a corresponding Reference Data element.
3	Business Name	alphanumeric	60		Name of business, where applicable.
4	Customer Last Name	alphanumeric	40		Last name of customer
5	Customer First name	alphanumeric	40		First name of customer.
6	Office Phone	alphanumeric	20		Customer's office telephone number.
7	Home Phone	alphanumeric	20		Customer's home telephone number.
8	Fax	alphanumeric	12		Customer's fax number.
9	Email	alphanumeric	60		• a - z • A - Z • 0 - 9 • @ ("at" sign) • . (period)
10	Customer Active/Inactive	Flag/ alphanumeric	8		Possible values are "Active", "Inactive". If omitted, value defaults to "Active".
11	Driver comments	alphanumeric	256		Comments for customer data.
12	Customer Billing ID	alphanumeric	60		Unique identifier used for integration with billing system.
13	Customer Class	alphanumeric	4		Must match a corresponding Reference Data element.

No.	Data Item	Data Type	Max. Field Size	Mandatory	Notes
14	Billable	alphanumeric Y or N)	1		Determines whether customer address is billing address.
15	Civic Number	alphanumeric	12		Civic number part of address.
16	Street	alphanumeric	40		Street name part of address.
17	Apt/Suite	alphanumeric	12		Apartment/suite part of address.
18	District	alphanumeric	40		District part of address.
19	City	alphanumeric	40		City part of address.
20	State	alphanumeric	2		Case-sensitive; must match a corresponding Reference Data element.
21	Postal Code	alphanumeric	10		Postal/ZIP code part of address.
22	Civic number (location)	alphanumeric	12		Civic number part of location address.
23	Street (location)	alphanumeric	50		Street name part of location address.
24	Apt/Suite (location)	alphanumeric	13		Apartment/suite part of location address.
25	District (location	alphanumeric	40		District part of location address.
26	City (location)	alphanumeric	40		City part of location address.
27	State (location)	alphanumeric	2		State part of location address. Case-sensitive; must match a corresponding State Reference Data element.
28	Postal code (location)	alphanumeric	10		Postal/ZIP code part of location address.
29	Building Categories	alphanumeric	20	Yes	Case-sensitive; must match a corresponding Reference Data element.
30	Contact name	alphanumeric	40		Customer contact name.
31	Contact phone	alphanumeric	25		Customer contact phone number.
32	Latitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
33	Longitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
34	Location Name	alphanumeric	60		Optional description for the location.
35	Billing Location ID	alphanumeric	60	Yes	For integration with company's billing system. Not modifiable on RMS UI.
36	GeoID	alphanumeric	36		Location GeoId

No.	Data Item	Data Type	Max. Field Size	Mandatory	Notes
37	Location Active	alphanumeric	8 • Active/Inactive • Y/N • 1/0 • true/false	Yes	Location activation status
38	Serial number	alphanumeric	20	Yes	Container serial number.
39	RFID	alphanumeric	24		Container RFID.
40	Volume (capacity)	numeric	5		Used in conjunction with Volume/Weight units.
41	Volume/Weight units	alphanumeric	10		Case-sensitive; must match a corresponding Reference Data element.
42	Cart/container colors	alphanumeric	40		Case-sensitive; must match a corresponding Reference Data element.
43	Cart/container types	alphanumeric	20		Case-sensitive; must match a corresponding container type Reference Data element.
44	Container active/inactive	Flag/ alphanumeric	8		Possible values are "Active", "Inactive". If omitted, value defaults to "Active".
45	Office Comments (container)	alphanumeric	256		Notes added by Dispatch or back-office.
46	Manufacturer	alphanumeric	30		Case-sensitive; must match a corresponding container manufacturer Reference Data element.
47	Warranty Start Date	date	10		YYYY-MM-DD
48	Warranty End Date	date	10		YYYY-MM-DD
49	Label	alphanumeric	30		Container label
50	Material	alphanumeric	40		Material handled by container. Must match a Material Reference Data element.
51	Dimension unit	alphanumeric	10		Container dimension units. Must match a Units Reference Data element.
52	Is compactor	alphanumeric	8		Specifies whether the container to be serviced is a compactor

No.	Data Item	Data Type	Max. Field Size	Mandatory	Notes
53	Width	numeric	11		Container width
54	Height	numeric	11		Container height
55	Length	numeric	11		Container length
56	Latitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
57	Longitude	numeric	40		• 0 - 9 • Minus sign (-) • Period (.)
58	Material Types	alphanumeric	5	Yes	Case-sensitive; must match a corresponding Reference Data element.
59	Start date	date	18	Yes	YYYY-MM-DD HH:MM:SS Mandatory field.
60	End date	date	18		YYYY-MM-DD HH:MM:SS Not mandatory field.
61	Active/Inactive	Flag/ alphanumeric	8		Possible values are "Active", "Inactive". If omitted, value defaults to "Active".
62	Assignment comments	alphanumeric	256		Notes for driver.
63	Service code	alphanumeric	10	Yes	Case-sensitive; must match a corresponding Service Reference Data element.
64	Facility code	alphanumeric	10		Waste disposal facilities; must match a corresponding Facility Reference Data element.
65	Rate Discount	Decimal (multiplier)	N/A		Discount field of the Edit Container Association screen.
66	Service Subscription ID	alphanumeric	60		For integration with company's billing system. Not modifiable on RMS UI.
67	Bundle Rate Code	alphanumeric	20		Rate code for use with bundled services.

No.	Data Item	Data Type	Max. Field Size	Mandatory	Notes
68	Assignment Status	alphanumeric	• 4 • RM • TBRM • C • OHLD • PN • RD	Yes	Assignment status code. Default value is RD.
69	Shared association	alphanumeric	10		Specifies whether the container is associated with multiple subscriptions (i.e., shared container).
70	Is primary	alphanumeric	10		In a shared association, this field is mandatory. One subscription must be the primary one. The first subscriber to the service is the primary in the association. Should that subscription be cancelled for anyreason, the next subscriber in the succession becomes primary.
71	Workflow	alphanumeric	256		Workflow for the service provided at location.
72	Target Date	alphanumeric	10 • mm-dd-yyyy (05-26-2000) • yyyy/mm/dd (2000/05/26) • mm/dd/yy (05/26/00) • mm-dd-yy (05-26-00) • mm/dd/yyyy (05/26/2000		Target date for on-demand stop
73	Driver Note	alphanumeric	1024		Note to driver.
74	Dispatcher Note	alphanumeric	120		Note to dispatcher; not seen by Driver.

For Routes and Stops Combined Data

Routes and Stops combined data will contain the following additional fields.

No.	Data Item	Data Type	Max. Field Size	Mandatory	Notes
75	Route name 1 *Route will be created if it does not exist	alphanumeric	10	Yes	• a - z • A - Z • 0 - 9 To minimize the potential for conflicts in interaction between FleetLink Mobile and back-office systems, special characters such as @, *, #, $, %, &, /, \, ? are not permitted.
76	Sequence for stop in route	numeric	5 (max. value 32767)	Yes	0 - 9.
101	Route name 14 *Route will be created if it does not exist	alphanumeric	10	Yes	• a - z • A - Z • 0 - 9 To minimize the potential for conflicts in interaction between FleetLink Mobile and back-office systems, special characters such as @, *, #, $, %, &, /, \, ? are not permitted.
102	Sequence for stop in route	numeric	5 (max. value 32767)	Yes	0 - 9.
103	Work Order ID	alphanumeric	24		• a - z • A - Z • 0 - 9 To minimize the potential for conflicts in interaction between FleetLink Mobile and back-office systems, special characters such as @, *, #, $, %, &, /, \, ? are not permitted.

You can download an empty sample CSV file which you can populate with your own data by selecting **Download Sample**.

Route Management System (RMS) User Guide   *Managing Routes*

Managing Routes

The Routes menu provides the tools you need for managing your routes.

The Routes menu options are explained in the following sections.

Edit Last Previewed Route
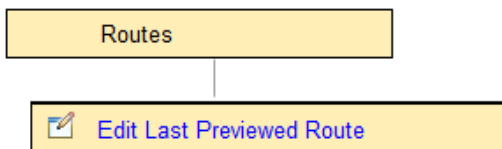
This menu option returns you to the Edit screen for the last route that you viewed or edited.

Due to the close inter-dependency of the various types of data involved in route management, you may find yourself navigating back and forth among various menus, e.g., Routes, Reference Data, etc. This menu option is provided as a quick navigation tool. Similar shortcuts are provided on the other menus of the user interface.

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Routes and Stops

This menu option displays a list of all your routes in the FleetLink Route Management System.

Item	Description
Set Stop Count	Displays the number of stops for each route.
Name, Mod Date, Frequency	Clicking any of these highlighted links brings you to the Edit Route screen.
Has GeoZone	Clicking a highlighted link brings you to the Edit GeoZone screen.
Truck	Clicking a highlighted link brings you to the Edit Truck reference data screen. A red truck icon in this column denotes that no truck is assigned to the route.
✖	Deletes the selected route.

Item	Description
➕	Lets you add a new route manually.
⊞	Lets you create a new temporary route.
Update GeoLocation, Serial Nbr	When these options are selected, the respective values in the FleetLink Route Management System database will be updated with any new values detected during a lift. For example, if the RFID of a cart read during a lift differs from that already associated with the customer location defined in the database, the new RFID will be associated with the location.

Showing Route Conflicts

Cases may occur where routes have stops that are in conflict with other routes.

To view conflicts:

1. Select the **Show Conflicts** button. Show Conflicts
   The page refreshes, showing the number of conflicts (to the left of the Has GeoZone column.

2. Click on a highlighted number to view details.
   A panel displays the routes with which the current one conflicts.

3. Click on a highlighted route to view the conflicting stops.

4. To remove a stop from either route, uncheck its check box.

5. Confirm your action using the confirmation dialog.

For convenience in clearing up numerous conflicts, Select/Unselect All check boxes are provided, enabling you to remove all stops in a single operation.
When you choose this option, you are prompted with the following dialog.

Routes List for Current Day

This menu option displays a list of all your routes for the current day.

Item	Description
⇨	Sends the route to the FleetLink Mobile unit of the vehicle specified in the Truck column
Route	Clicking a highlighted link brings you to the Edit screen for the selected route.
Truck	The truck assigned to the route. Pull-down menu allows selection.
Work Group	The work group the truck is assigned to. Pull-down menu allows selection.
Send text message icon ✉	Enables you to send a text message to the truck or work group.
Complete	Clicking a highlighted link displays all the completed stops in the selected route.
Incomplete	Clicking a highlighted link displays all the incomplete stops in the selected route and brings you to the Transfer Stops screen, where you can copy individual stops to another route.

Item	Description
	Let's you transfer all incomplete calls to another route. **NOTE**: You must create a temporary route first if none are available in the pull-down menu. Once you have done so, your entry will be displayed there.
Update GeoLocation, Serial Nbr	When these options are selected, the respective values in the FleetLink Route Management System database will be updated with any new values detected during a lift. For example, if the RFID of a cart read during a lift differs from that already associated with the customer location defined in the database, the new RFID will be associated with the location.
Check routes for	Let's you view the list of routes for another day.

Print Routes

This menu option displays a list of all routes and enables you to print selected ones to a HTML file.

1. Select a date from the calendar menu.

2. Make your route selections using the check boxes.

3. Select **Download**.
    The results are printed to a HTML file that you can view in your browser.

For each route selected, route info, disposals, and notes display first.

Route Info

Route:	363		
Route Date:	2018-01-31	Route Day:	Wednesday
Truck:	714	Driver:	
Material:		Total Breaks:	
Odometer Start:		Start Time:	
Odometer End:		End Time:	

Disposals

Site:		Time:	
Ticket #:		Liters/Weight:	
Site:		Time:	
Ticket #:		Liters/Weight:	
Site:		Time:	
Ticket #:		Liters/Weight:	
Site:		Time:	
Ticket #:		Liters/Weight:	

Notes

...followed by assignment details.

10	Customer: 731-40-63-7302-52201 - 721-40-65-7203-52201	Customer Id: 027-07505-000
	Address: 1125 RIVER ST SANTA CRUZ 95060-1710	Billing Loc Id: 26261
	Service: Front Load Special for Acct 027 07505 000	Workflow: Empty FL Bin
	Qty: 1	

20	Customer: DENNY'S - DENNY'S	Customer Id: 037-01020-013
	Address: 1515 OCEAN ST SANTA CRUZ 95060-2826	Billing Loc Id: 9462
	Service: 6 Yard 3x week	Workflow: Empty FL Bin
	Qty: 1	

50	Customer: PARK VIEW COURT	Customer Id: 039-00415-011
	Address: 120 GRANT ST SANTA CRUZ 95060-2917	Billing Loc Id: 9994
	Service: 2 Yard 1x week Front Load	Workflow: Empty FL Bin
	Qty: 1	

60	Customer: FIRESTONE STORE	Customer Id: 048-01625-014
	Address: 510 WATER ST SANTA CRUZ 95060-4113	Billing Loc Id: 12489
	Service: 2 Yard 1x week Front Load	Workflow: Empty FL Bin
	Qty: 1	

70	Customer: WASHINGTON MUTUAL #B2633	Customer Id: 048-01110-011
	Address: 730 OCEAN ST SANTA CRUZ 95060-4008	Billing Loc Id: 12417
	Service: 4 Yard 1x week	Workflow: Empty FL Bin
	Qty: 1	

80	Customer: JAY SIYARAM HOTELS LLC	Customer Id: 048-01635-016
	Address: 516 WATER ST SANTA CRUZ 95060-4113	Billing Loc Id: 12491
	Service: 4 Yard 1x week	Workflow: Empty FL Bin
	Qty: 1	

90	Customer: T J SCOTT	Customer Id: 048-01590-014
	Address: 316 MAY AVE SANTA CRUZ 95060-4109	Billing Loc Id: 12486
	Service: 2 Yard 1x week Front Load	Workflow: Empty FL Bin
	Qty: 1	

Completed Stops

Routes

Completed Stops SEP/11

This menu option displays a list of stops that have been completed for the current day.

Clicking on a route name in the upper panel displays details for the completed stops in the lower panel.

Unscheduled Stops

This menu option displays a list of stops that are not scheduled on any route.

The list is a tabbed interface providing views of all extras, regular (permanent) stops, and Cart Delivery stops.

From this screen, you can select a stop, find the route closest to that location and assign it to the route.

Item	Description
Check box ☑	Selects the unscheduled stop.

Item	Description
Route buttons Mo19R	Selects the route to which stop is to be added.
🌐	Indicates that route has an associated GeoZone.

The list is a tabbed interface providing views of all extras, regular (permanent) stops, and Cart Delivery stops.

From this screen, you can select a stop, find the route closest to that location and assign it to the route.

Assigning Unscheduled Stops to a Route

1. In the upper panel (list of stops), locate the stop and select its check box .
   The lower panel refreshes, displaying a map in the left-hand area and a list of routes in the right.

The route list sorts the routes with GeoZones closest to the stop and displays the distance in KM to the GeoZone.

2. Select a route from the route list by pressing its button .
   A dialog prompts you to confirm your action.
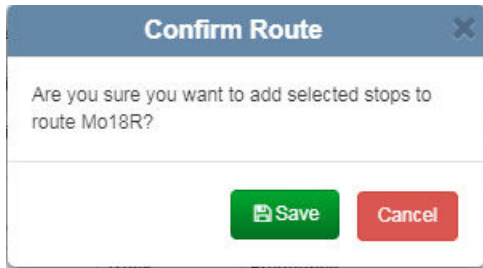
3. Click Yes.
    Your stop is added to the selected route.

⚠️ **WARNING**: Where the stop to be transferred and the destination route involve different materials (e.g., recycling vs. garbage), you will be prompted to confirm your action with the following warning dialog:
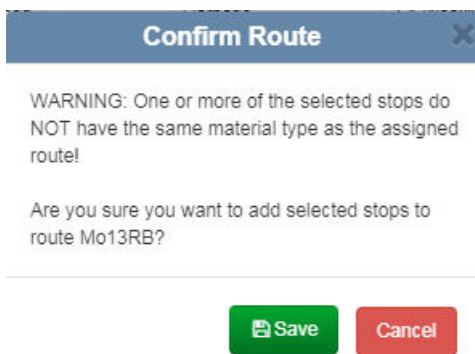
⚠️ **WARNING**: Where the stop to be transferred and the destination route have incompatible service frequencies, you will be prompted to confirm your action with the following warning dialog:

The comparison of selected stops service frequency to the route frequency enables supervisors to ensure that the service level agreement (SLA) is met.

Close Routes

The Route Management System provides Dispatch personnel the facility to ensure that stops that have not been serviced will be re-routed.

Whether a stop is "reroutable" is determined by a configurable parameter in the Activity Codes Master List of the FleetLink Mobile WasteApp.

Activity Codes represent the actions a driver can take when servicing a call. The completion codes (completed = yes,

ment System (RMS) User Guide

completed = no) associated with these activities are customer-specific and fully customizable. They must be configured using your back-office system.

Some activities represent intermediate steps (completion code = No) and are not removed from the calls list, such as Blocked Retry, where the driver indicates that he intends to return to complete the call.

FleetMind Standard Activity Codes are shown in the following table.

RCOM	101	Y	Completed
RNOT	102	Y	Not Out
RMIS	103	Y	Misplaced
RCTM	104	Y	Contaminated
RDMG	105	Y	Damaged
RUSS	106	Y	Unsafe Site
RNOA	107	Y	No Access
RNSV	108	Y	No Service
CCOM	201	Y	Completed
CBRT	202	N	Blocked Retry
CBRR	203	Y	Blocked Reroute
CCTM	204	Y	Contaminated
CORT	205	N	Overloaded Retry
CORR	206	Y	Overloaded Reroute
CCOV	207	Y	Carried Over
CUSS	208	Y	Unsafe Site
CNAS	209	Y	No Access to Site
CNSV	210	Y	No Service
CTIM	211	N	Waiting at Site
ICOM	301	Y	Completed
IBRR	302	Y	Blocked Reroute
IEMP	303	Y	Empty
ISND	304	N	Suspended No Disp
ISWD	305	Y	Suspended with Disp
ISWP	306	Y	Swapped
IDRC	307	Y	Dump Return Cont
INAS	308	Y	No Access to Site
INSV	309	Y	No Service
ITIM	310	N	Waiting at Site

When this flag is set to TRUE, the following behavior occurs in the Route Management System:

When a route is closed:

- ALL on-demand stops of type Residential, Front-Load, and Roll-off that are still of status Pending or of Activity Code with attribute Reroutable become available on the Unscheduled Stops screen, and can be scheduled to another route

- ALL recurring stops of type Front-Load and Roll-off (not Residential) that are still pending or of Activity Code with attribute Reroutable are converted to On-Demand stops and become available on the Unscheduled Stops screen, again to be scheduled to another route .

When viewing the Unscheduled Stops Screen, you can distinguish easily between stops that are there because of ReRoute, Missed, or First Time, and reschedule them accordingly.
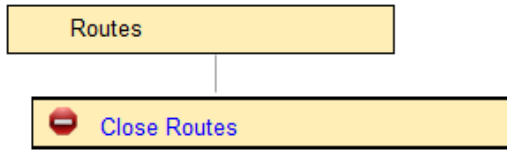
The Close Routes option enables you to close routes that have been left open at the end of the day.

In addition, this option enables dispatchers to close individual stops manually. A scenario where this feature can be useful is when a driver using Manual Confirm mode realizes—after checkout—that he has forgotten to confirm stops that he knows have been serviced. Giving Dispatch the capability to close the stops manually ensures that the stops are not flagged as "missed" and that their completion status is reflected properly in FRM Reports and FleetWeb.

The manual close feature is provided on the Close Routes screen, and is applicable to Recurring and On-demand stops
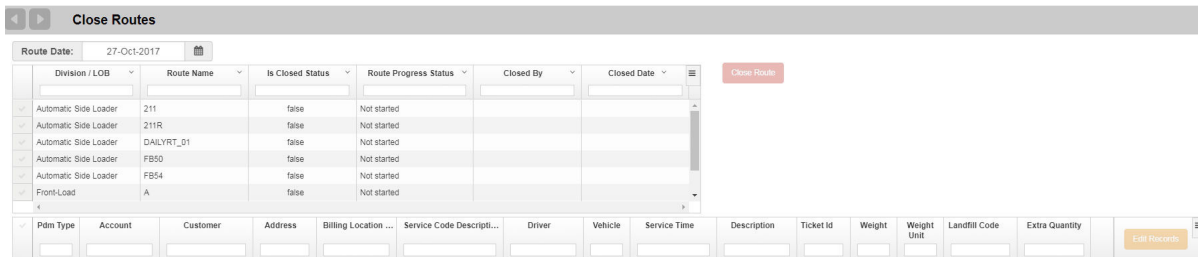
To close an entire route:

1. Locate your route in the Close Routes list, and then select its check box in the leftmost column.

A dialog displays immediately, where you can view and edit truck, driver, and logon information.
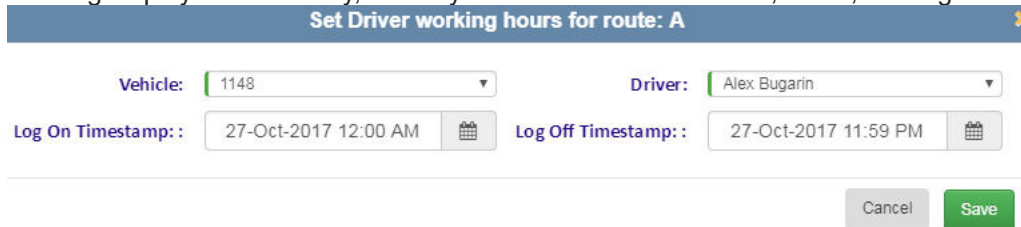
You can make changes and save here or you can dismiss the dialog. Once you have done so, the Close Routes screen refreshes, displaying the route's stops in the lower panel.
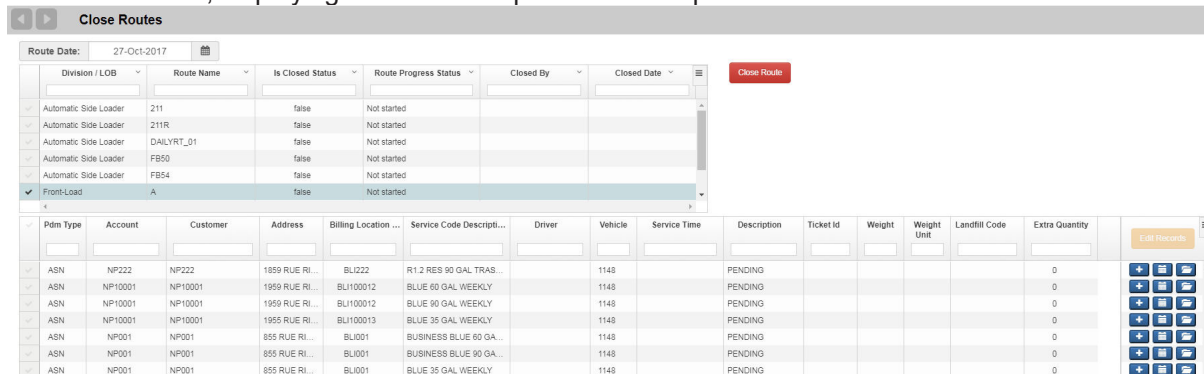
2. To close the entire route, click the Close Route button.
   The screen refreshes, showing the route's status as closed.

The route is closed, removed from the list, and is re-sent to the Mobile.

Search Stops

This menu option displays a form where you can enter search criteria and search for a specific customer location.

In the search criteria, you can specify the starting characters for street, city, district names, or ZIP codes/postal codes. You can also search for a range of civic numbers or specify a street side (odd or even numbers, both by default).
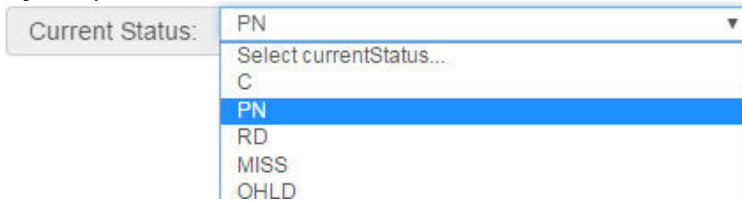
Additional search options include:

*   By Customer ID

*   By Service
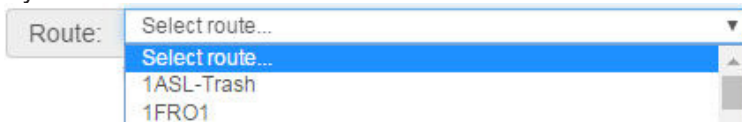
- By completion status
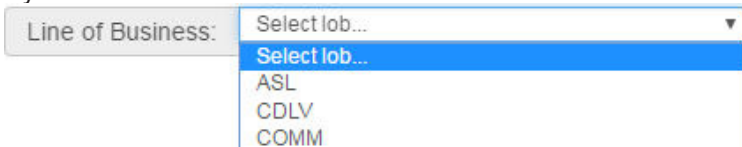
- By Route
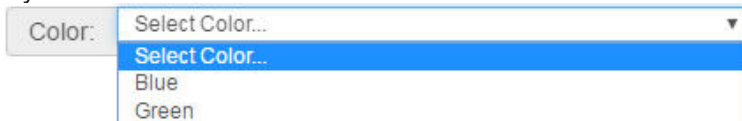
- By container volume

- By Line of Business
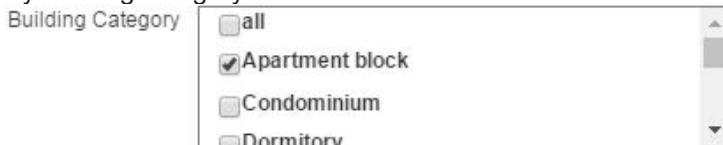
- By container color

- By building category

In the search results, you can select specific locations to be included in the route by using the filter fields in the column headers.

Add Route
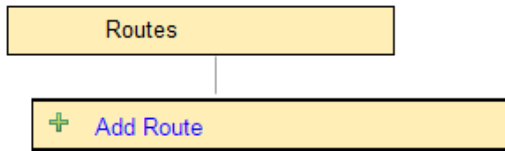
1. Select **Routes > Add Route**.

2. Enter your route information using the text field, menus, and check boxes.

 NOTES

- Name must be a unique identifier

- Single Day route: Used for regular waste collection routes. Multi Day Route for street sweeping services.

- Start Date is optional

- Route Frequency, Truck, Work Group, Material, Operating Department, and Container Type are all Reference Data elements. Make your selection from the pull-down menus.

- Temporary specifies whether the route is a regular (recurring) route or a temporary one created to handle special cases.
  Temporary routes in the FleetLink Route Management System are deleted automatically on the day following their creation.

- Update GeoLocation, Update RFID, and Update #Serial are options that will update the cart's coordinates and other associated data when the lift is performed.

3. Press **Save Route** when done.

Adding Stops to the Route

Once you have created and saved a route, the screen refreshes, displaying Edit Route in the header, and a lower panel where you can add stops and view route history.
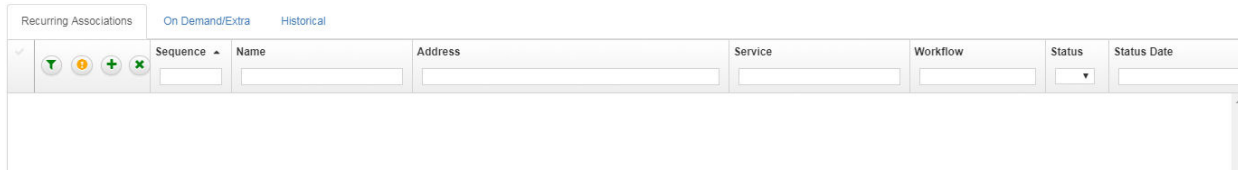
To add stops to the route:

1. Choose a tab; either **Recurring Associations** or On **Demand/Extra**.

2. Select the **Add new Stop** icon ,
    A new screen displays: Search Customer Locations to Select Route Stops.
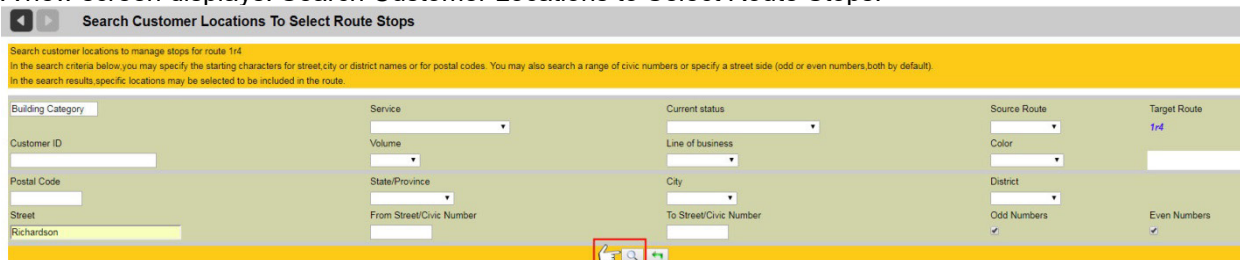
Searching instructions are provided at the top of the page. In this example, searching by **Street** is used.

3. Specify search information, and then click the search button .
    The **Add stops to route** screen displays results matching the search criteria, including locations that may already be in the route.
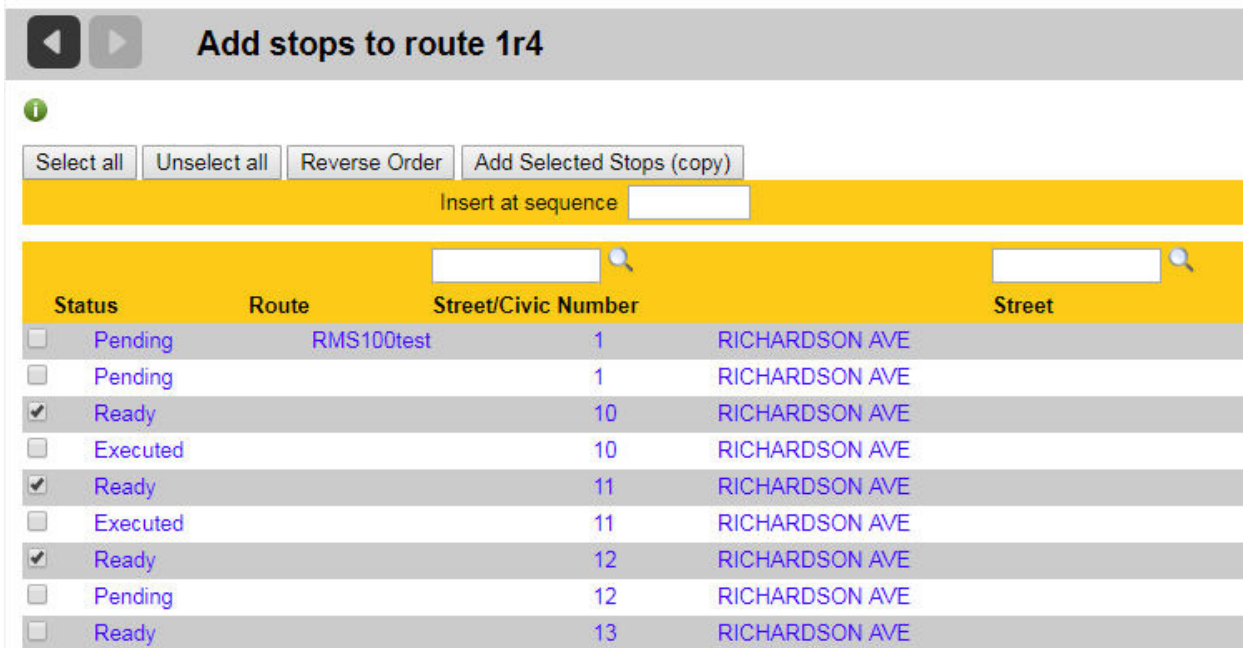
4. Using the check boxes, select the stops you wish to add.

5. Select **Add Selected Stops (copy).**
    You are returned to the Edit Route screen, where the newly added stops display in the list.

Editing a Route

Once you have created a route and populated it with stops, you can edit it, as required, using the Edit Route screen, which comprises additional controls.

a. **Satellite View** check box.
   Switches display from map view to satellite image view.
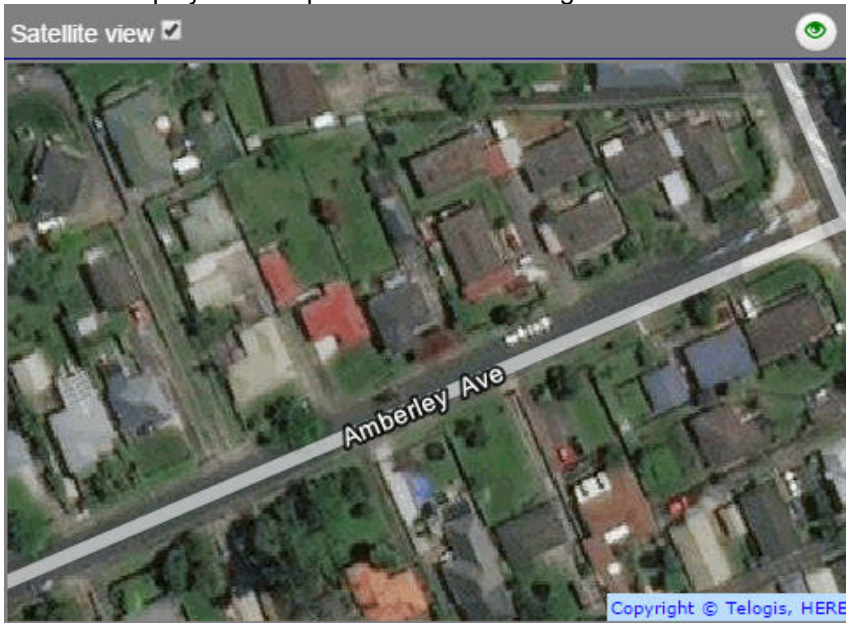
b. **Show All Bins** button.
   Displays bin icons for assignments on the map (or satellite image).
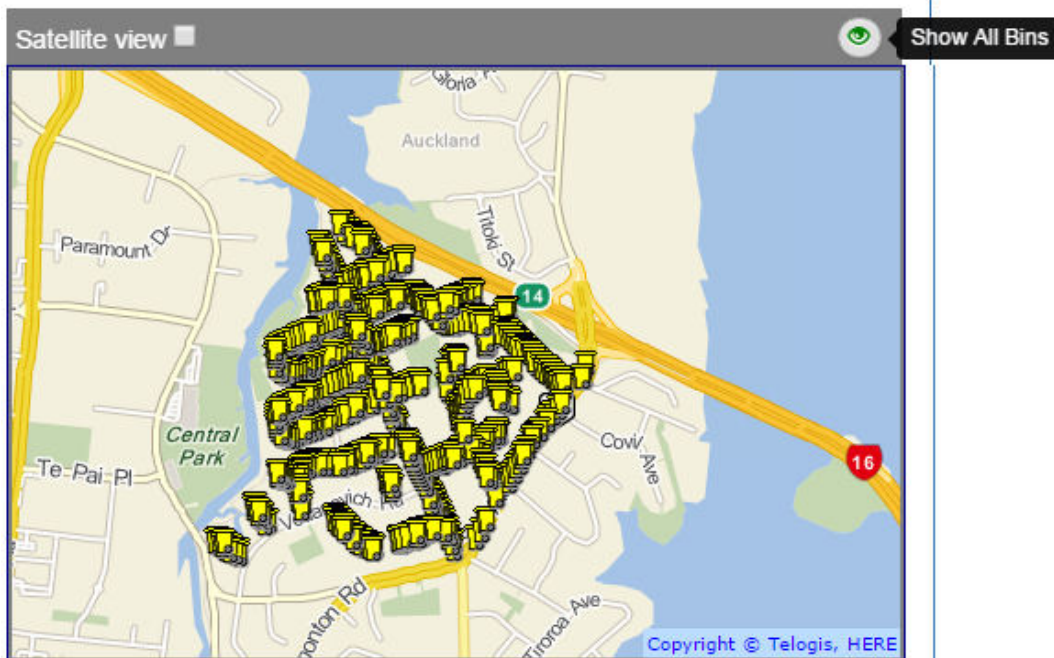
c. **Temporary Truck** button.
   Pops up a window where you can select a temporary truck and assign it to the route.
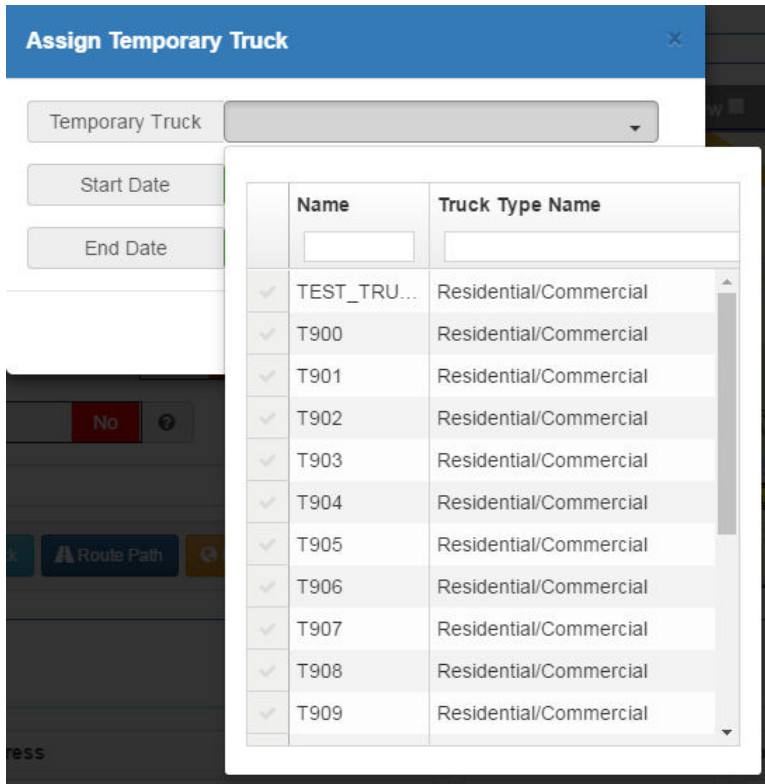
d. **Route Path** button.
    Route path is a path the driver should take while working on the route. Path is a set of WKT line strings which, if de-fined, will display arrows on the map.
    Selecting this button pops up a window where you can define the path by typing or pasting it into a text field, or by importing a `wkt` file from disk.
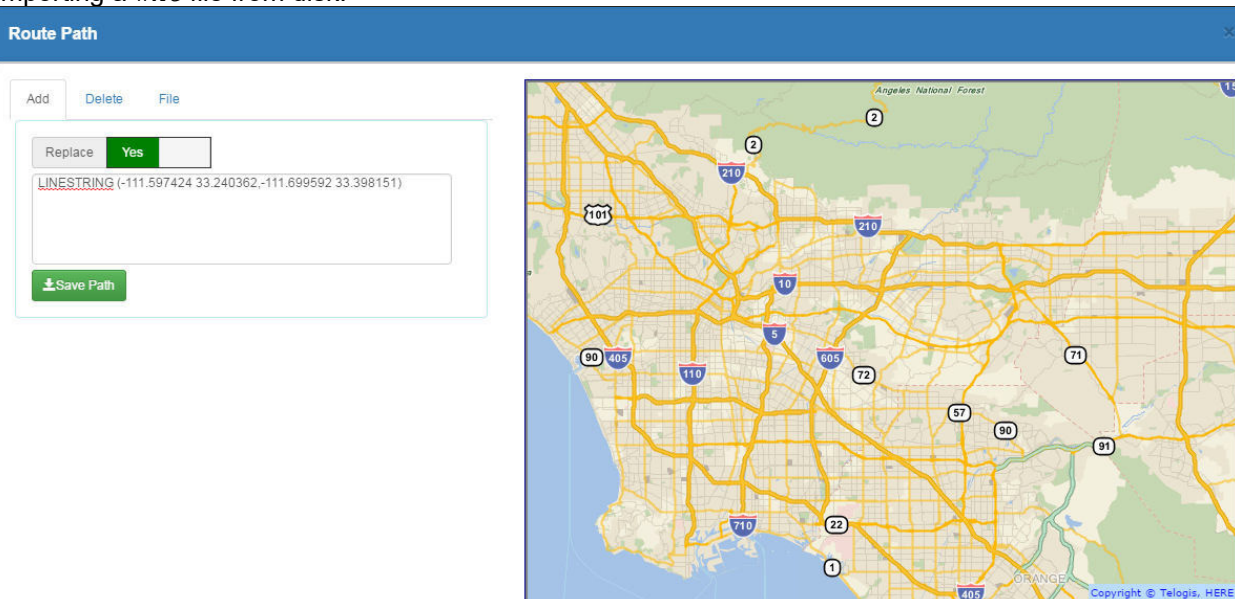
e. **Edit Positions** button.
    Pops up a window where you can update containers' positions by dragging them to a new location on the map (or satellite image).
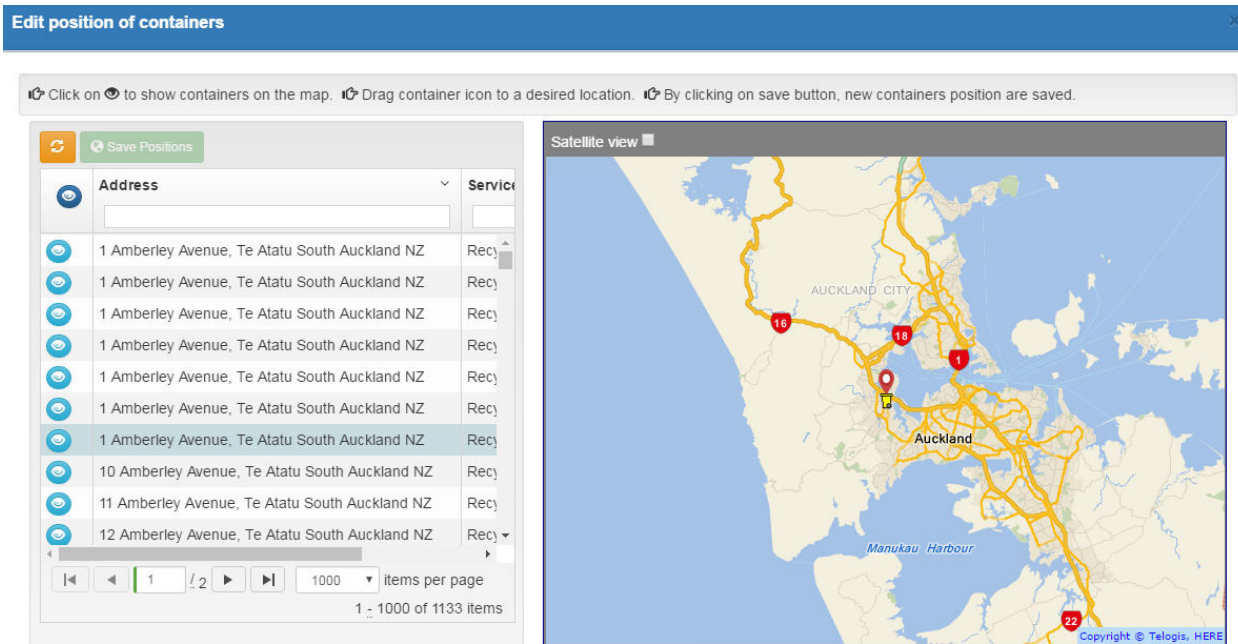
As of version 3.14

To assist you with further fine tuning, you can display a breadcrumb trails of how the route is actually run. Just pick any vehicle and any date (excluding future dates) and then select **Show Trail** to display a breadcrumb trail.

Up to 200 direction chevrons are shown with timestamp in a pop-up balloon.
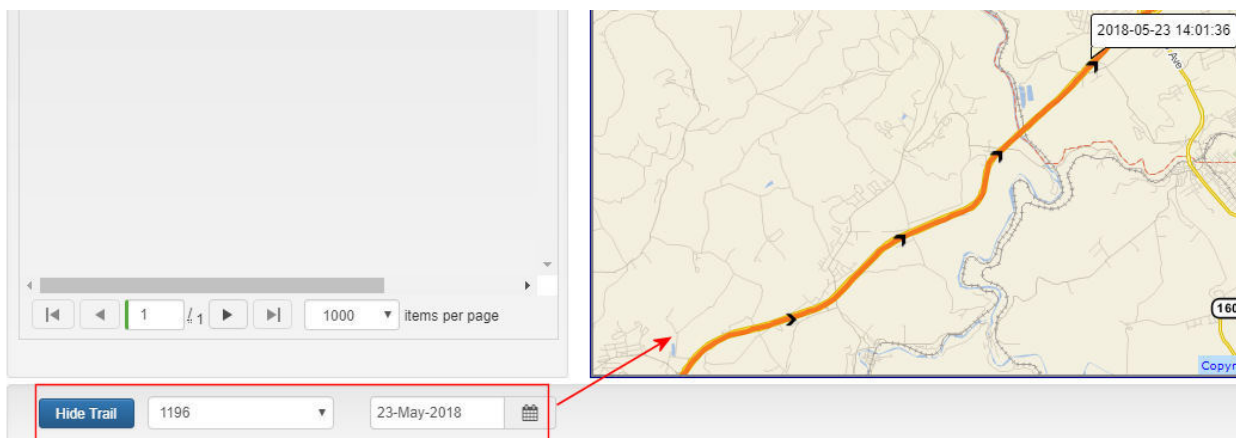
f. **Show All Filters** button.
   Displays the filters currently applied to route stops.

g. **Edit Sequence** button.
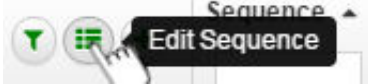
Displays the **Edit Route Sequence** screen. See [Resequencing a Route](#).

h. **Add New Stop** button.

Adds a new stop to the route. See [Adding Stops to the Route](#).

i. **Delete Selected Stops** button.
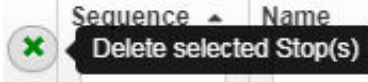
After selecting one or more stops from the list below, use this button to remove the stop(s) from the route.

j. **Show This Bin** button.
Displays the selected bin on the map (or satellite image).
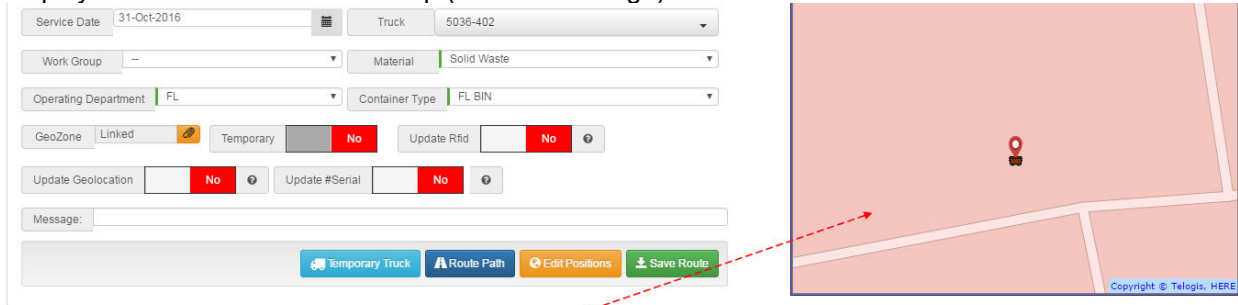
k. **Remove** button.
Removes the selected stop from the route.
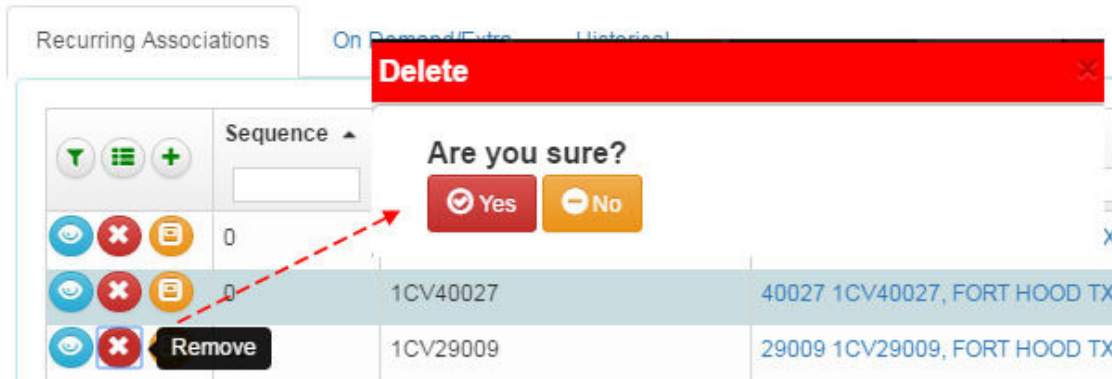
l. **Show Last Activities** button.
Shows the most recent activities for the selected stop.
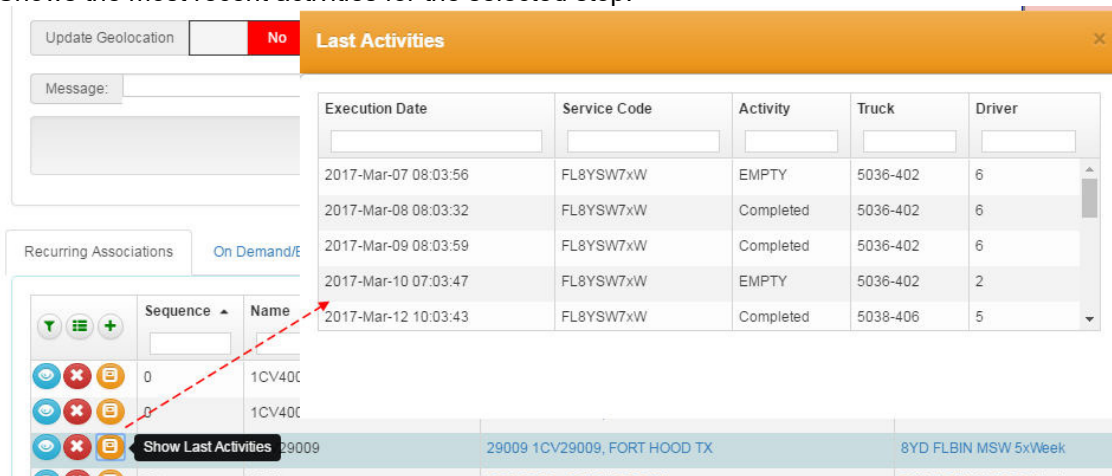
m. View tabs.
Choose among Recurring, On-demand/Extra, Historical.
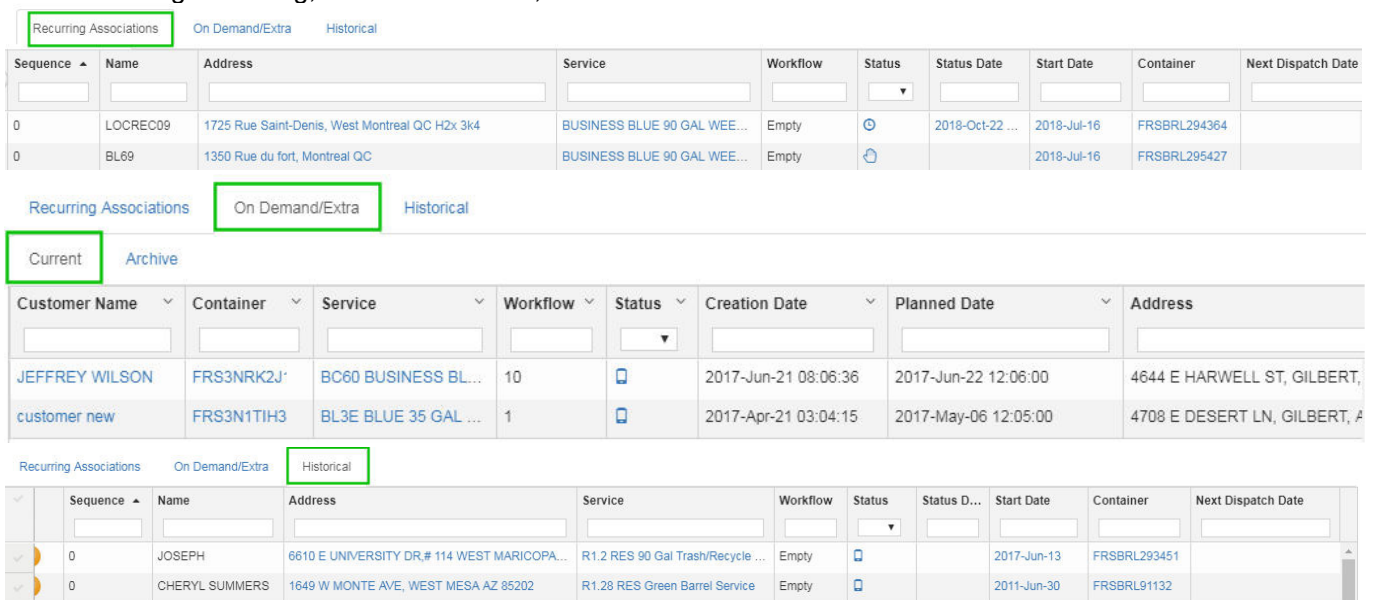
Assigning Non-completed Stops to a Temporary Route

You can transfer incomplete calls from a route to a temporary route.

PREREQUISITE : If you do not have any temporary routes, you must create one.

Locate the unfinished route in the route list for the current day.
The number in the **Incomplete** column indicates the number of calls remaining in the route. An associated pull-down menu comprises all temporary routes to which calls can be transferred.

Transferring ALL Stops

Select a temporary route from the pull-down menu, and then click the Transfer arrow .

All calls are transferred to the temporary route.

Transferring SELECTED Stops

Click on the highlighted number in the Incomplete column.

A page displays, listing the individual stops in the route.

Make your selection(s) using the check boxes, choose a target route from the list of compatible routes, and then select the **Copy selected stops into selected route** button in the header area of the page.

The selected calls are transferred to the route.

You can also select stops to be transferred by:

• Clicking on bins on the map.
• Using the selection tool to draw a rectangle around bins.

For either of the above transfer operations, you can send a text message by selecting the envelope button adjacent to the Work Group menu.

Assigning Non-completed Stops to Another Regular Route

If you prefer not to create a temporary route to execute a route's uncompleted calls, you can transfer the calls instead to an existing regular route.

1. Select **Route Management > Close Routes**.
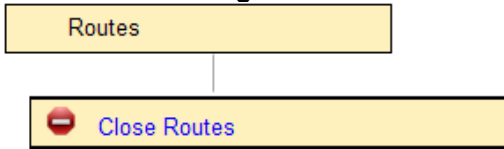
2. From the Close Routes, select the source route from the left-hand panel.
The list of remaining stops for the route display in the right-hand panel.
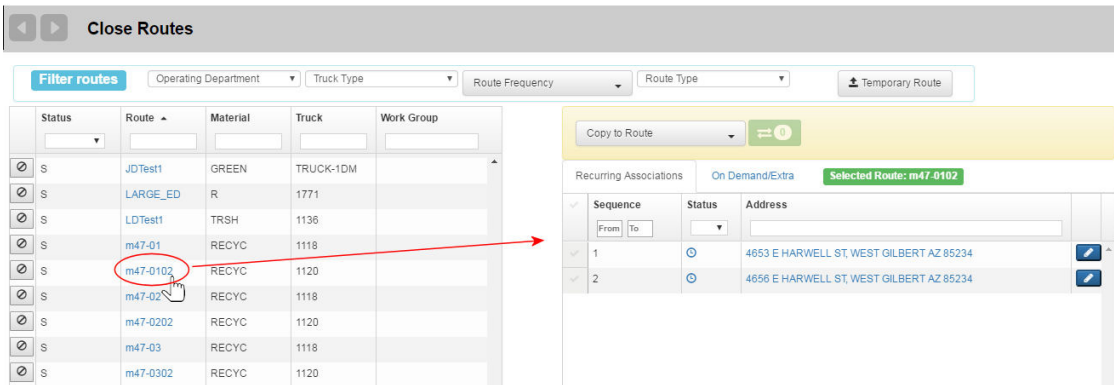
3. Select the stops you wish to transfer by checking their corresponding check boxes.

Tip: You can select all calls in the route by clicking the check box at the top of the list.
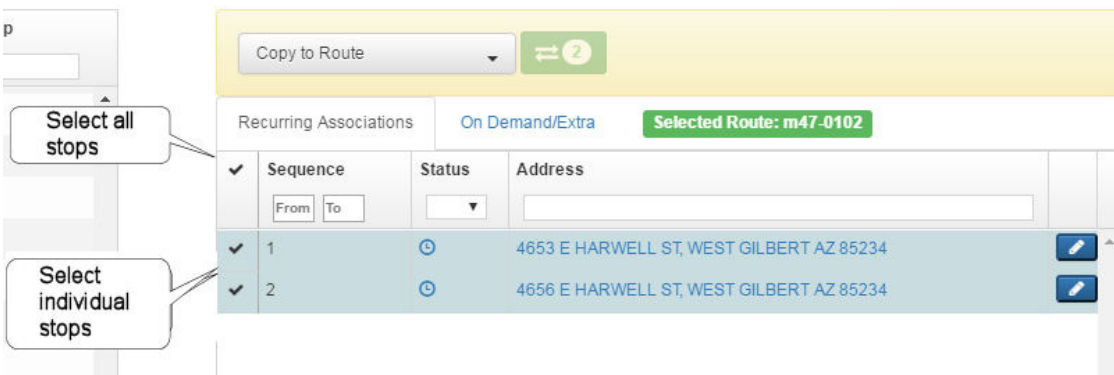
4. From the pull-down menu at the top of the list, select a target route, i.e., the route to which the calls will be transferred.

5. Transfer the selected calls by clicking the **Copy** button beside the pull-down menu.
   The list refreshes, showing the transferred calls.

Import Route Stops

This menu option lets you import data collected from (or exported by) your back-office (dispatch) system.
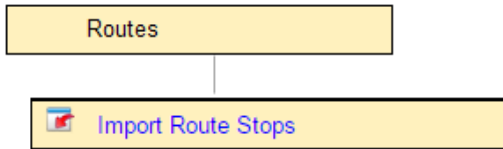
You can create new routes in the FleetLink Route Management System by importing data collected from (or exported by) your back-office (dispatch) system.

The imported data must be in a properly formatted comma-separated-value (CSV) file, which can be generated using Microsoft Excel or other spreadsheet management applications.

The formatting of the file must adhere strictly to a set of rules, which are defined on the FleetLink Route Management System user interface.

1. Prepare your data off-line, using the formatting scheme described in the figure below.

     You can download an empty .csv file using the **Download Sample** button, and populate it with your own route data.

2. Select **Routes> Import Route Stops**.
    The Import Route Stops screen displays.

3. Click the **Browse** button Browse ⊕ to navigate to the disk location where your file is saved.

4. Select your file, and then click **Open**.

✅ The application provides a feature to evaluate the file to be imported.
Evaluation will validate following:
• Column mismatch between CSV file and system grid.
• Reference data missing.
• Duplicated rows in CSV file.
• Duplicated Serial Number or RFIDs.

5. Select the **Validate and Import** button. [Validate and Import]
    A message displays the validation results for the data to be imported.

Evaluation Result - Mesa-New-stops.csv			
Number of Records	9	Number of Duplicate Records	0
Number of Locations to Update	9	Number of Locations to Insert	0
Number of Customer to Update	0	Number of Customer to Insert	9
New Serial #	0	Number of Duplicate Serial#	9
New RFIDs	0	Rows with wrong Column Count	0

[⊕ Import Data] [Cancel]

Advanced Options

The **Clear Routes** option removes all stops in routes before importing the new data. Use this feature when reorganization of routes means that the reorganized route(s) will have <u>fewer</u> stops.

Advanced Options ⚙

Clear Routes		No

Review the results, and select **Import Data** to proceed.

The **Containers/Streets** option is used when the routes to be imported are street sweeping routes (not applicable to all installations).
For street sweeping routes, select the **Sections** option.

Advanced Options ⚙

Clear Routes		No
Containers / Streets	Sections	

Export Routes and Stops

This menu option lets you export Combined Data for your routes and cart/container inventory for migration to another platform. The output is a text file (CSV) which can be opened and processed using Microsoft Excel.

Each record in the file contains all data for one container: the container itself, the customer location to which the container is assigned, and details about the assignment. The exported file is in the same format expected by the Import Combined Data feature.

From the **Export Customer, Cart/Container and Route Data** screen, you can specify filters to export only those items matching your specified criteria.

1. Specify your filter criteria using the menus and check boxes.

   You can select one, several, or all routes from the route selection menu.

2. Click the **Export** button.
   Your combined data file is exported.

Generating Routes from GeoZones

You can create new routes or re-generate existing ones based on the customer locations or bin locations within a GeoZone.

See Managing GeoZones for details.

Rescheduling a Route

To reschedule a route:

1. Select **Routes > Routes and Stops** to display the List of Routes screen.

2. Locate the desired route, and click on its entry in the **Name** column to display the Edit Route screen.

3. You must select either a Frequency **OR** a Service Date

    3.1 Select a new frequency from the **Frequency** pull-down menu.

    ⚠️ **ATTENTION**

    If you cannot locate the desired frequency in the menu, then it has not been defined in the Reference Data. You must define the frequency before rescheduling the route.

    3.2 Select the starting date from the **Service Date** calendar menu to select the specific to identify the specific day on which the route will be run.

⚠ By selecting a specific Service Date you override the frequency, and the route will no longer be generated automatically on other dates

4.   Press **Save** 💾 when done.

Resequencing a Route
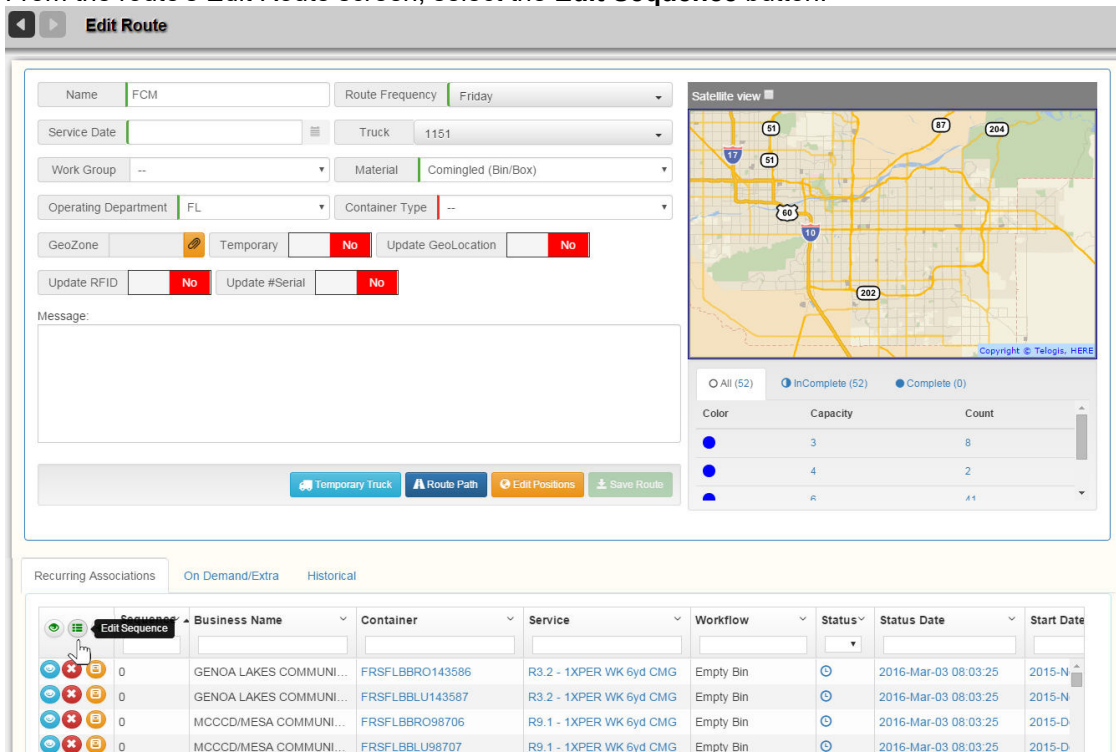
You can resequence any existing route to reflect the sequence actually followed by the driver.

Three different resequencing modes are supported:

- By breadcrumb trail

- By timestamp

- By using the sequence of another route.

To resequence a route:

1.   From the route's Edit Route screen, select the **Edit Sequence** button.

The next screen displays two panels depicting the route before and after resequencing.

You can reduce visual clutter on the map by selecting the Hide Map Markers button, which suppresses display of assignment markers.

2. Choose a Resequencing Mode from the pull-down menu.

Breadcrumb Trail Mode

Using this mode, you can resequence the route based on a breadcrumb trail for a specific date.

1. Select **Breadcrumb Trail** from the **Resequencing Mode** menu.

2. Choose a date from the **Date** pull-down menu.

3. Choose a truck from the Truck menu.

4. Click **Resequence**.

The page refreshes, showing the changes in the **Route After** map panel.

- To discard your resequencing changes, select the **Revert** icon.

- To save changes, select the **Save** icon.

 When you choose Resequencing by Breadcrumb Trail, RMS provides Advanced Options—additional controls that enable you to troubleshoot and fine tune your resequencing.

See <u>Understanding Advanced Options</u>.

Timestamp Mode

Using this mode, you can resequence the route based on the confirmation timestamps for the most recent execution of the route.

1. Select **a Truck and a Date from their respective menus.**

2. Click **Resequence.**

The page refreshes, showing the changes in the Route After map panel.

- To discard your resequencing changes, select the **Revert** icon.

- To save changes, select the **Save** icon.

Like Another Route Mode

Using this mode, you can resequence the route based on the sequence of another route.

1. Select **Like another Route** from the **Resequencing Mode** menu.

2. Choose a route from the **Similar to Route** pull-down menu.

3. Click **Resequence.**
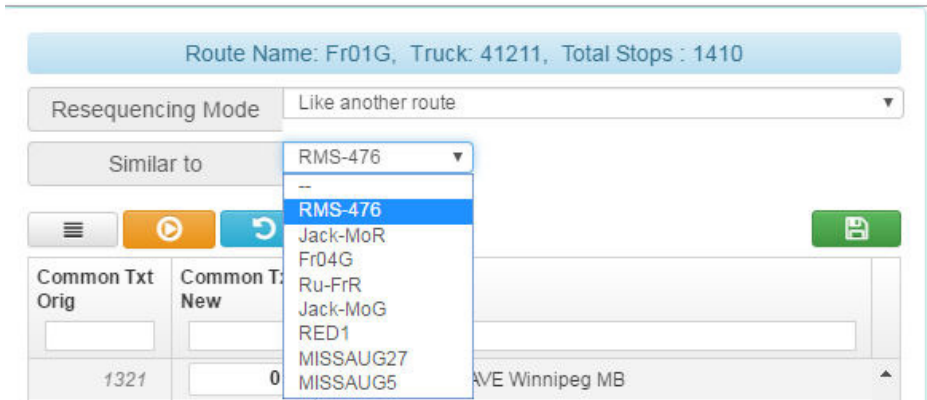
The page refreshes, showing the changes in the Route After map panel.

o   To discard your resequencing changes, select the **Revert** icon.

o   To save changes, select the **Save** icon.

Understanding Advanced Options

In Breadcrumb Trail Mode, Matching is done based on the property centroid located closest to the breadcrumb. The

breadcrumb sequence is used to assign a sequence number to every stop in the route.
Stops that cannot be matched are given a sequence number of 0 or 1, and thus flagged for review.

Advanced Options, available in *Resequencing by Breadcrumb Mode*, provides a set of parameters that you can adjust should you encounter difficulty resequencing a route.

Advanced Options Explained

Parameter	Description
Anchor point (container or customer)	The point of reference for measuring distance from the GPS trail: container assumes curbside anchor, customer assumes property centroid anchor.
Corridor width* See *Tips for Fine Tuning*	Centered on the GPS trail, this value is used for gauging the distance to collection anchor points on either side of the truck. A corridor value of 50 meters suggests a lane of 25 meters on either side of the truck. Default value is 50 meters.
Adjacent point filtering distance	Used to eliminate excessive redundant GPS points on the map to create a smoother GPS trail. Default is 6 meters.
Maximum valid speed* See *Tips for Fine Tuning*	Criteria used to determine when a vehicle is simply driving down a road, as opposed to performing collection services. Default is 25 km/h.
GPS position sampling (default 15 seconds)	Used to determine 'Maximum valid speed' between 2 GPS points if speed value is not available in Vehicular Data. Default 15 seconds.

Tips for Fine Tuning

When resequencing by Breadcrumb Trail, you may find that some stops remain unsequenced, i.e., sequence=0. In this section we suggest some troubleshooting tips using RMS and FleetWeb.

Using FleetWeb—Fleet Status/Route View
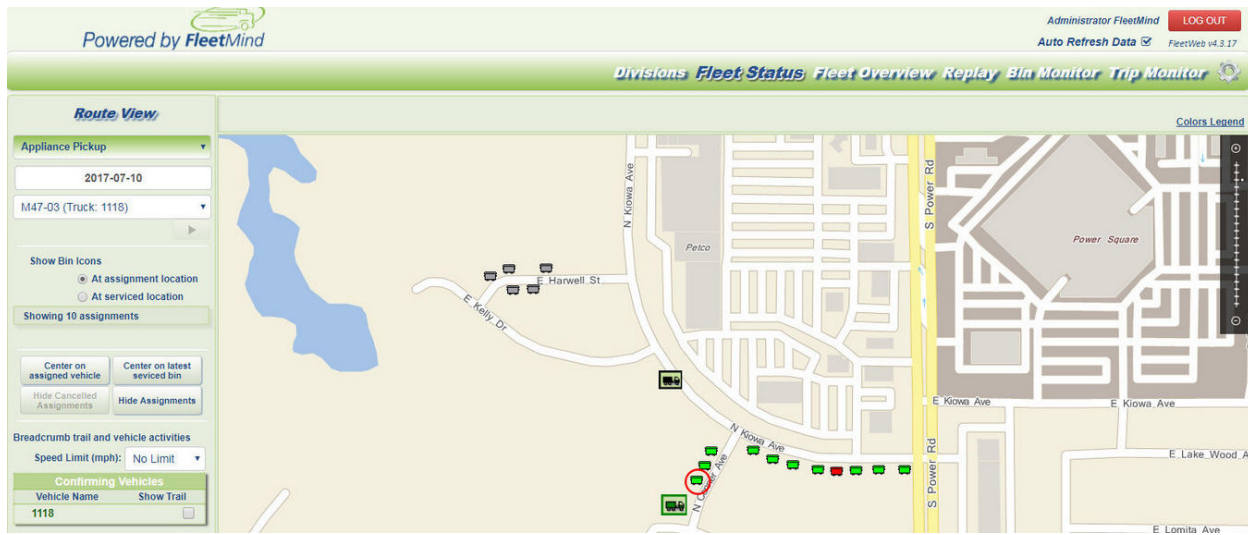
Use this view is to validate that the breadcrumb trail used by the driver has actually covered all the stops assigned to the route (i.e., ran a complete route) for a given date. If you see multiple trucks in the list of confirming vehicles, then it is likely that another truck helped and you do not have a complete breadcrumb trail for sequencing. In this case, you can switch to a different prior week until you find one where the route was run completely by one vehicle..

ⓘ Sometimes customers use the breadcrumb trail of a garbage route to sequence a recycling route—when choosing another date, it does not necessarily have to be the exact truck that ran the route. Customers that have tablets or handhelds sometimes will have a dedicated supervisor run the "perfect" route in their pickup trucks, naming the route with a prefix to facilitate subsequent identification.

Once you have located a suitable run date, make a note of the name and date, and proceed to RMS.

Using RMS—Edit Route/Edit Sequence

1. Select and edit the route identifed in FleetWeb.

2. Choose the **Edit Sequence** button.

3. Selected **Resequencing Mode > Breadcumb Trail.**
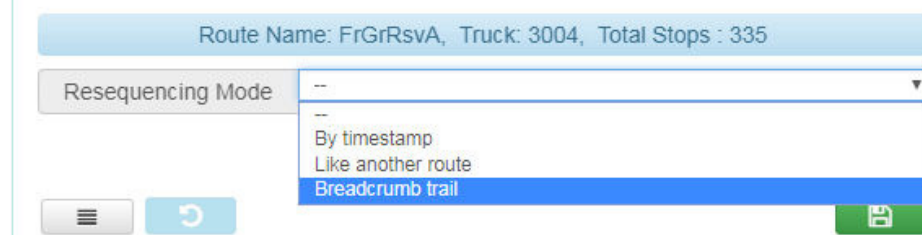
4. Select the date identified as the truck having run the entire route on its own.

5. Conduct a first pass without modifying advanced parameters by pressing the orange **Resequence** button.

6. Review the results.

If the results are unsatisfactory, i.e., there are are a significant number of stops with 0 for a sequence number, do not save—proceed to Advanced Options.
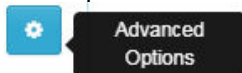
7. There are typically two reasons why stops remain unsequenced (0), both involving settings for the default parameter values:

a. **Corridor Width (in yards)** : Specifies the maximum distance from breadcrumb trail tolerated for inclusion in sequence.

b. **Maximum Valid Speed** : Specifies the truck max speed to be considered as valid breadcrumb for sequencing.
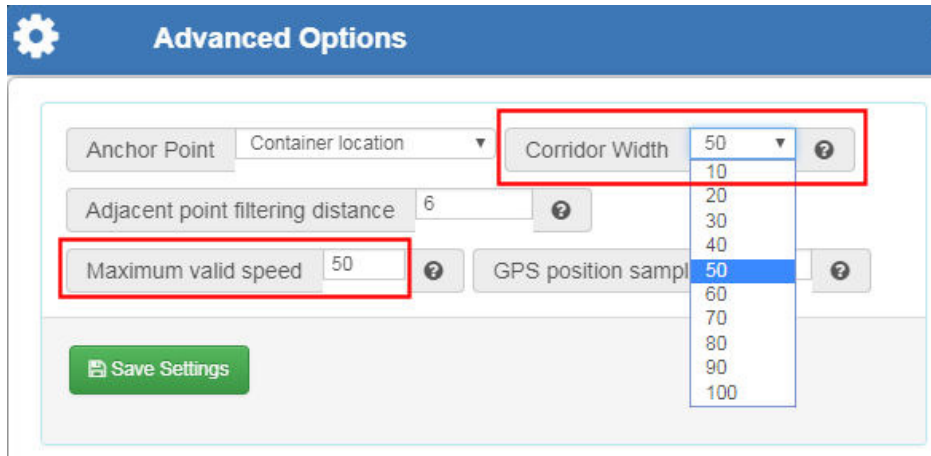
The corridor width is relevant depending on whether sequencing in high-density urban, urban/suburb, semi-rural or rural.

The maximum speed is useful if a truck drives multiple times in front of the container and really only want to service those in the second pass or if thecontainer in proximity of a highway.

8. Try increasing **Corridor Width** gradually from default 50 all the way to 80.

9. Try increasing **Max Valid Speed** from 25 to 50.

Once you have achieved an improved resequencing, you can save your work.

⚠️ Any stops that remains unsequenced are likely stops where the containers needs to be relocated, as they are too far away from the Breadcrumb Trail.

Exit resequencing mode and return to the Edit Route screen, where you can reposition selected containers as described in the following section.

RMS—Edit Route/Edit Position

1. From the Edit Route screen, select **Edit Positions.**
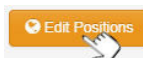
2. Locate the stop of interest in the table, and select **Show a Bin**.
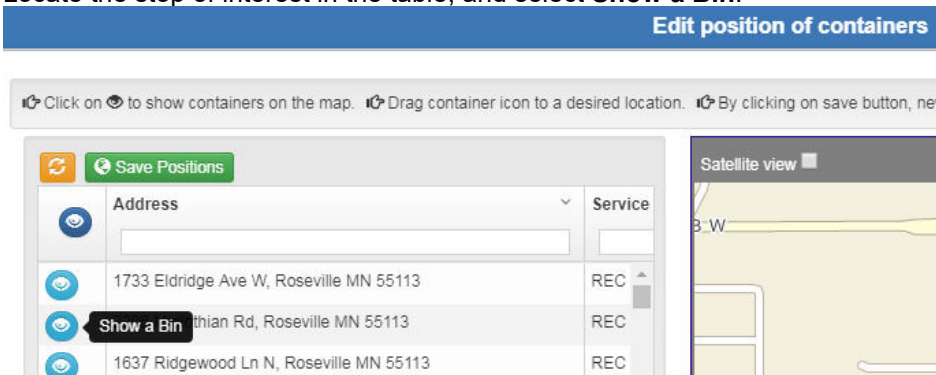
The property centroid and container display on the map.
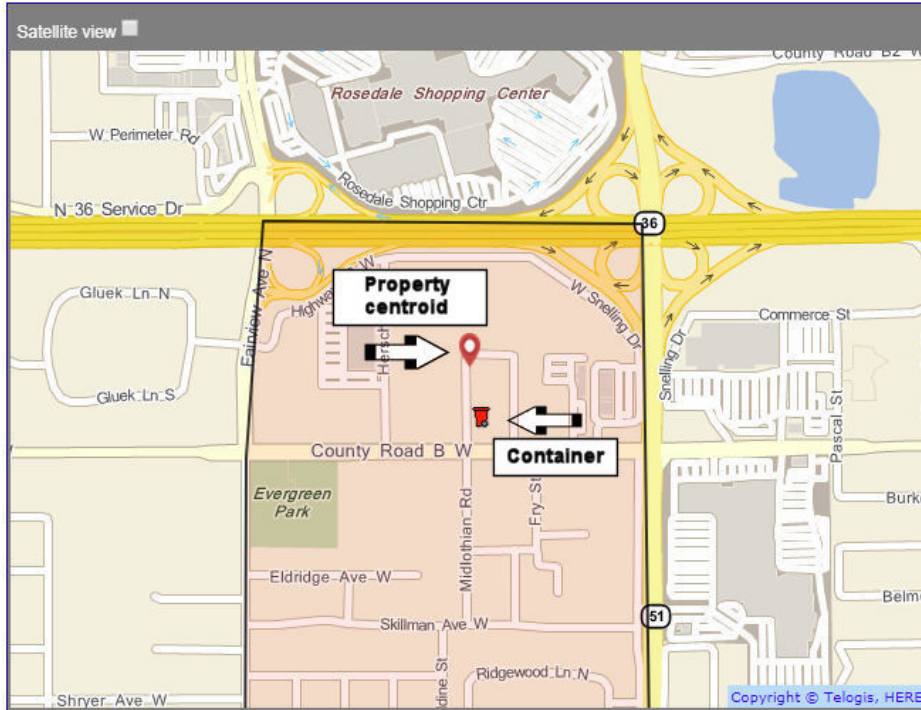
3. Drag the container toward the property centroid.
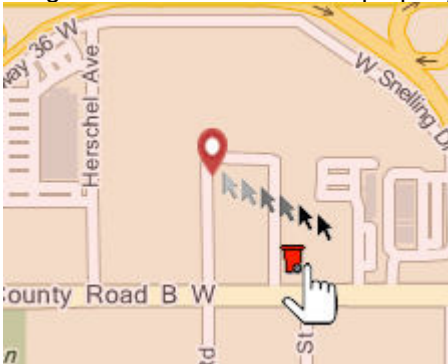
4. Select **Save Positions** when done.

5. Try resequencing the route again using Breadcrumb Trail mode.

Holiday Route Scheduling

Note to FleetLink RMS Users

The procedures described in this section are provided as a workaround solution due to constraints of the current version of RMS software.
FleetMind is currently developing a feature, for future release, to simplify and automate the task of holiday scheduling.

FleetLink RMS can accommodate rescheduling or suspension of all services for statutory holidays.
You do not have to edit each route and/or customer information individually to accomplish this. Instead, you edit Route Frequency reference data to make a global change to all routes affected for the day of the week in question.

⚠ You must make these reference data edits in two operations:

- once before the holiday to manage the rescheduling or suspension, and

- once after to revert to "business as usual" service.

In the example provided here, we will use Monday as the holiday and reschedule all affected routes for the following day (Tuesday).

Part 1: View Regularly Scheduled Routes for the Holiday

1. Select **Routes > Routes and Stops**.

2. In the lower-left corner of the List of Routes screen, select *Monday* from the **Check routes for** menu.
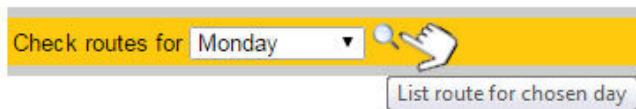
The List of Routes for Monday displays.

✅ In the interest of simplicity, we are using only a small number of routes. In a "real-world" scenario, there could be a significantly greater number.

The routes have different route frequencies, however they are all scheduled to run on the coming Monday.

Part 2: Back up (Export) Route Frequencies Reference Data

Before making any modifications to your Reference Data, back it up so that you can use it as a reference in case you require it when reverting to normal operations after the holiday.

⚠ You cannot restore the data by re-importing it, but at least you will have recorded the pre-holiday state of the frequencies so that you can verify them when re-editing the data.

1. Select **Reference Data > Import Reference Data**.
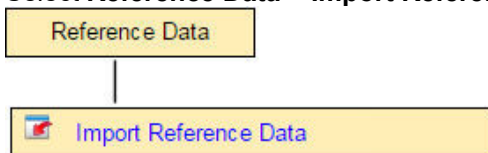
2. From the Import Result screen, select the **Export Data** button.

✅ This will export all categories of reference data to a zipped file—you cannot export a single category at a time.

3. Extract the `frequency.csv` file from the zipped file and save it to disk.
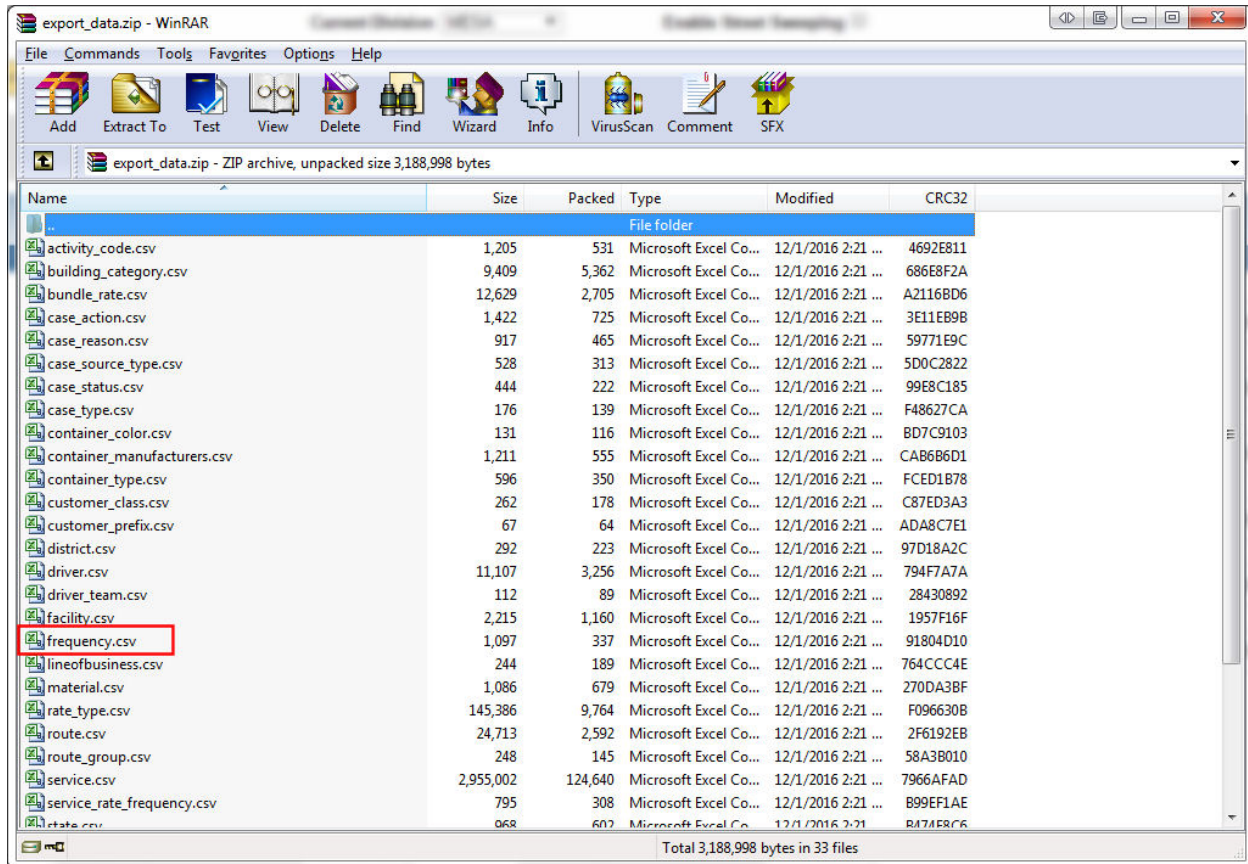
✅ Save the file with a meaningful and descriptive name, for example, `pre-holiday-backup-dec-01-2016.csv`.

You can now proceed with Reference Data modification.

Part 3: Edit Route Frequency Reference Data

1. Select **Reference Data > Routes > Route Frequencies**.
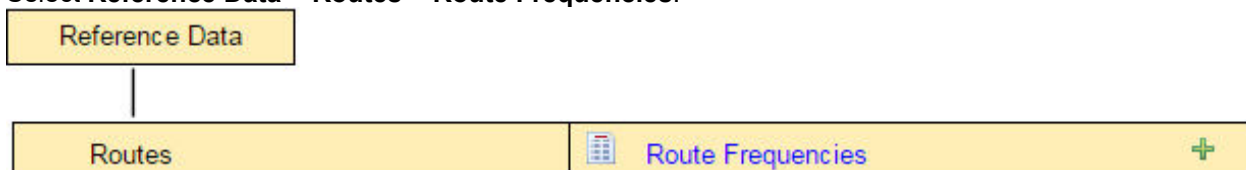
The List of Route Frequencies displays.

✅ By clicking on the **Monday** column header (to sort), you can view an at-a-glance grouping of all route frequencies that include Monday.

In this example, six route frequencies will require editing.

⚠️ **IMPORTANT**: MAKE A NOTE OF ALL ROUTE FREQUENCIES THAT ARE TO BE MODIFIED IN ORDER TO MINIMIZE THE RISK OF OMITTING SOMETHING WHEN RESTORING THEM TO THEIR ORIGINAL STATE. OPTIONALLY, DO A SCREEN CAPTURE OF EACH **EDIT ROUTE FREQUENCY** SCREEN BEFORE YOU MAKE ANY MODIFICATIONS.

The most meaningful data used by the RMS in this table are the days of the week that are checked off. The string in the **Frequency** column is simply a name—a useful description that is comprehensible to humans.
(A route with a frequency properly configured for Monday will be scheduled for Monday, even if the name in the **Frequency** column is Bob or Lucy.)
The data we will be modifying are the days of the week, not the Frequency names.

2. Select the **Edit** button for the first frequency item (*Monday* in the **Frequency** column).
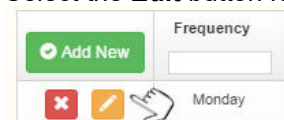
The Edit Frequency screen for Monday displays.

3. In the **Day Of Week** group of buttons, Monday is currently selected.

1. Click on the **Monday** button to deselect it.

2. Click on the **Tuesday** button to select it.

4. Select **Save Route Frequency**.
    A success message displays.
    Route Frequency modified successfully!

5. Return to the List of Routes for Monday.

1. Select **Routes > Routes and Stops**.

2. Select *Monday* from the **Check routes for** menu.
    Note that the two routes with a Monday frequency (*Mon-West* and *yuryRMS120*) are no longer on the list.

6. Now check the List of Routes for Tuesday.
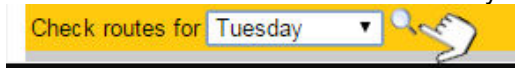
The routes affected by the Monday frequency are scheduled for Tuesday.

7. Return to the List of Route Frequencies reference data and modify (as required) the remaining frequencies that include Monday.

Constraints and Special Considerations

The Edit Route Frequency screen does not permit you to save the item if you have not selected *__any__* day of the week.

So, if service for the holiday is to be suspended altogether—not rescheduled—you must use a different approach.

Notice that different options are provided when you select:

a. A **Weekly** frequency (*Weekly*, *Even Weeks Only*, *Odd Weeks Only*, *Every Other Week*)

and

b. A **Monthly** frequency..

More specifically, the **Monthly** selection provides the additional option of Week Number. You can take advantage of these options when no make-up day is to be scheduled for cancelled holiday services.

For example:

1. If you are certain that the holiday occurs on an Even week, you could select **Odd Weeks Only** (and vice-versa).

2. Alternatively, you could select **Monthly**, and then choose a **Week Number** and **Day of Week** combination that will get you past the holiday and buy you sufficient time to restore the Route Frequencies to their normal (backed up) state.

Reverting to the Pre-Holiday Route Frequencies

As soon as possible after the holiday, you must revert to the pre-holiday schedule.
To do so, you must manually edit every Route Frequency reference data element that you modified prior to the holiday.

Consult the exported csv file and any notes and screen captures that you recorded in Part 2 of this section.

Excel File

Screen Captures

Deleting a Route

To delete a route:

1. Select **Routes > Routes and Stops** to display the List of Routes screen.

2. Click on the **Delete** icon ✖ for the desired route.

3. Press **Yes** on the confirmation dialog.

✅ All stops from the deleted route are moved to the Unscheduled Stops screen.

Sending Routes to Mobiles

Once you have defined and validated all data, you can send routes to your mobiles.

1. Select **Routes > Route List** *Month/Day*, where MONTH and Day represent the current date.
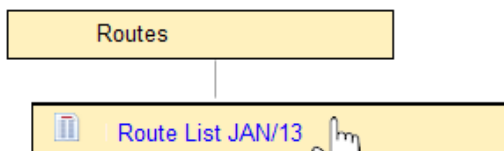
The List of routes for the current date displays.

2. Locate your route in the list.

3. In the Temporary column, click the right-arrow (Dispatch to mobile) to send the route to the mobile.

Managing Container Inventory

The Inventory menu provides the tools you need for managing your cart and container inventory.
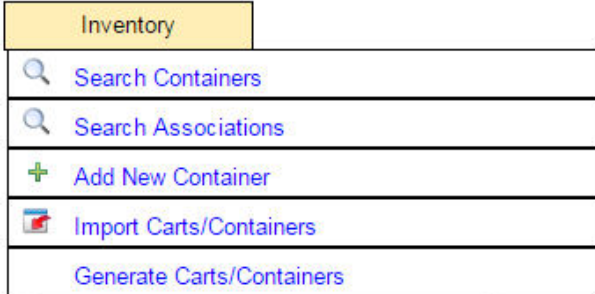
The Inventory menu options are explained in the following sections.

Search Containers

This menu option lets you locate an item in your inventory of carts and containers.

By specifying your search criteria using the text fields and menus, you can locate the cart or container and display the Edit Cart/Container screen, where you can edit its properties, and determine whether it is associated with a customer location.
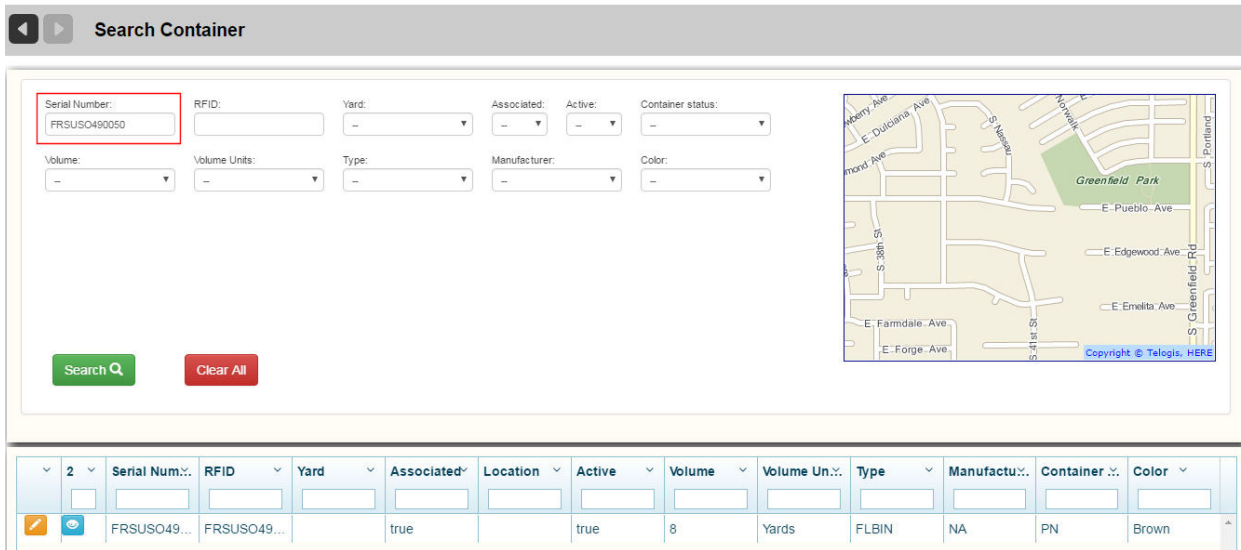
Search Associations
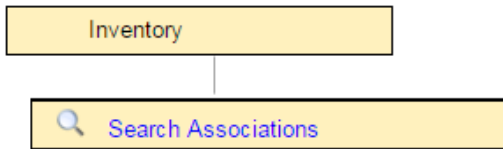
This menu option lets you locate associations between carts in your inventory and the customer locations to which they are assigned.

The FleetLink Route Management System finds existing carts' associations using their customer locations. Specify your search criteria to list matching customer locations with their currently associated carts.

For a quick search, specify the starting characters for Street, City, District, or Postal Code. You can also search a range of civic numbers, or a specific number by omitting the **To Civic Number** field.
Your search results are returned in the List Cart/Container by Association screen.

Clicking the **Container links** will display the Edit Cart/Container Location Association screen, from which you can end and suspend the association and specify required repairs for the container. Clicking the Location links displays the Edit Location screen.

Add New Container

This menu option lets you add a new cart or container to the system manually.

1. Enter all data using the text fields, menus, and check boxes.

   ⚠️ Entering an **RFID** or **Serial Number** is mandatory. If one value is omitted, the system will automatically generate the other.

   If you do not specify either value, you will get the following error message:

2. Choose a cart icon from the lower portion of the screen by selecting its radio button.

   ⓘ This is the icon you will see when you view your cart's location in a GeoZone.

3. Click **Save** 💾 when done.

The lower area of the screen now displays 2 new areas which, initially, will be empty:

1. Link to customer locations.
    Once the container has been associated with a location, the link displays here.

2. Yards history.
    This area displays a history of yards with which the container has been associated.

Import Carts and Containers

This menu option lets you import cart/container data from a file, as well as export your container inventory.
The most efficient way to define cart/container data is to import a comma-separated-values (CSV) file that you have pre-pared off-line (or have generated using your back-office system or other software) and formatted according to the criteria defined.

Column number	Excel number	Column name	Size	Description
1	A	Serial number	20	Optional
2	B	RFID	24	Optional
3	C	Capacity	8	Number
4	D	Unit	10	
5	E	Color	40	
6	F	Container Type	20	
7	G	Active	8	

1. Select the **Browse** button Browse ⊙ to navigate to the disk location where your file is located.
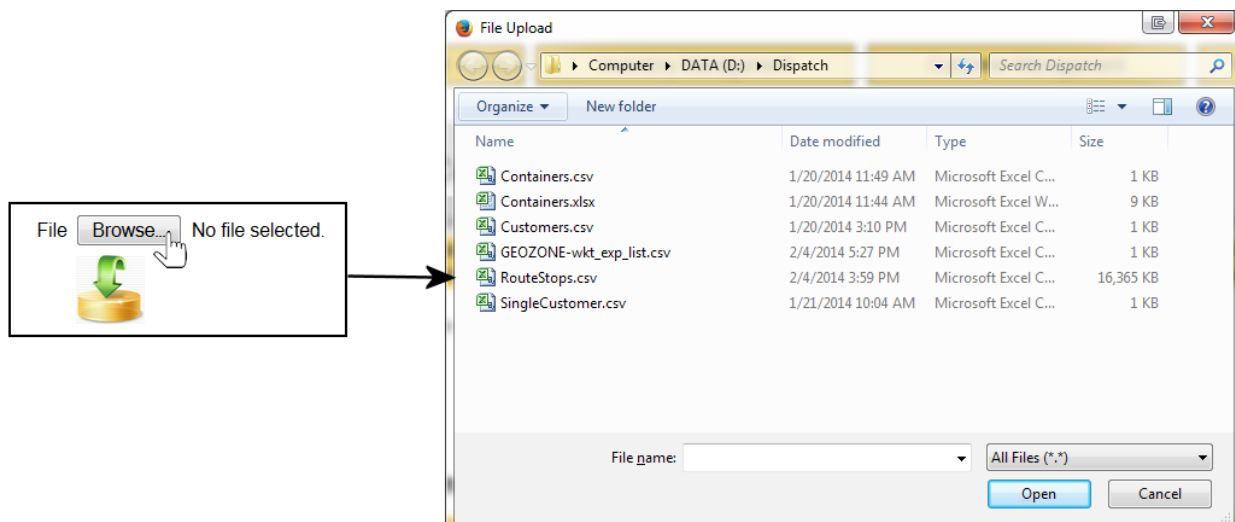
2. Select your file, and then click **Open**.

3. Click the **Validate and Import** button.
Your data is imported and a status message displays.

ⓘ See [Importing Container Inventory Data](#) for data rules and field descriptions.

To export your container inventory to a CSV file, select the Export Containers button ⊕ Export Containers .

Generate Carts and Containers

This menu option allows you to generate a series of consecutive serial numbers and RFID codes for carts and containers.

Carts/Containers are generally imported from an external data file. (See [Import Carts/Containers](#).) However, this function can be used to generate up to 5000 carts at a time, with sequential serial numbers.

⚠ **CAUTION**! There is no easy way to delete carts once they are generated, so this function should be used with care, by first generating a small number of containers (2 to 5) that can be updated easily in case of an error (serial numbers cannot be changed, however).

ⓘ **Example**: To generate 1000 containers numbered 96G008001 to 96G009000,with RFIDs 00A1B2C-3D4E5F6000000**8001** through 00A1B2C3D4E5F6000000**9000:**

- Number prefix may be set to:
    o 96G, or
    o 96G0,or
    o 96G00
        ...**but NOT**
    o 96G008.
- Accordingly, start and end numbers must be set to:
    o 008001-009000, **or**
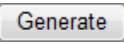
o   08001 -09000 **or**,

o   8001-9000,
    ....but NOT

o   1 - 1000.

The RFID prefix must be set to match the start and end numbers (RFIDs are optional). RFIDs can be generated only if their sequence is identical lo the sequence of serial numbers.

⚠ Beware—an easy mistake is to select 8000-8999 instead of 8001 -9000, or to select 8000-9000 and generate 1001 containers.

Also, double-check the number of zeros to prevent ending up with missing or extra zeros in serial numbers or RFIDs.

Finally, set the remaining fields to be used for all generated containers.

1. Specify your container properties using the menus and text fields.

2. Click **Generate** [Generate].
    A status message displays.

Generate Cart/Container

```
[██████████████████                    ]  9 containers created
```
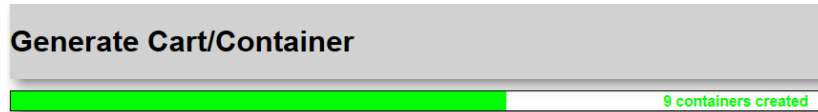
You can view the containers you have generated by selecting <u>Inventory > Search Containers</u> to locate your containers in the List of Containers.

Associating a Container with a Customer Location

A container becomes associated with a customer location when you subscribe a customer to a service using the Edit Location screen.

ⓘ See Subscribing a Customer to a Service.

Associating Containers Without Serial Numbers or RFIDs

On occasion, your Dispatch system may have to deal with containers that have neither an RFID nor a serial number—for example, garbage bags—that you want to associate with a customer and location.

To associate these containers with a location, you must:

*   Create a new container type in Reference Data.

*   Create "dummy" container serial numbers using the Generate Cart/Containers menu option.

*   Ensure that you have a Service Type associated with the containers.

*   Associate the containers with Customer Locations.

For purposes of this example, you will create a container type called *Garbagebags*.

1. Select **Reference Data > Carts/Containers > Cart/Container Types**, ensuring that you click the menu option's **Add** ✛ icon.
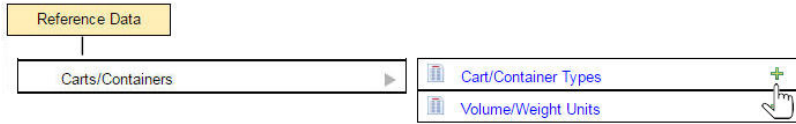
2. Create a new container type called *GBAGS*.

3. Press **Save Container Type** when done.

4. Select **Inventory > Generate Carts/Containers**.

5. Generate containers using the following data.
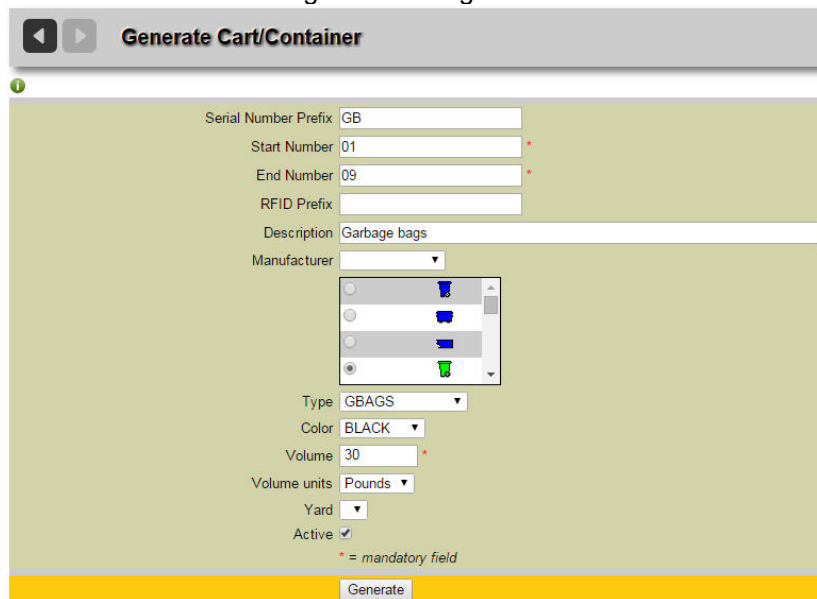
Once the containers are generated, a success message displays.
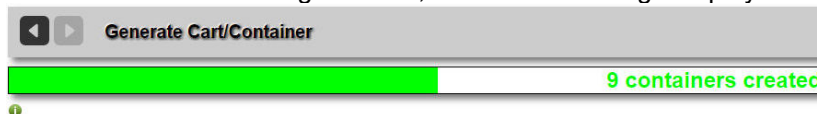
You can view the newly generated carts in the List of Containers.
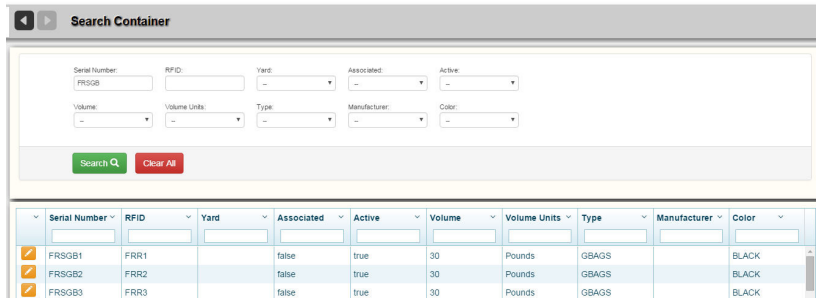
You must now ensure that you have a Service Type associated with the containers.

6. Select **Reference Data > Rates, Services and Work Flows > Services**, ensuring that you click the menu option's **Add** icon.
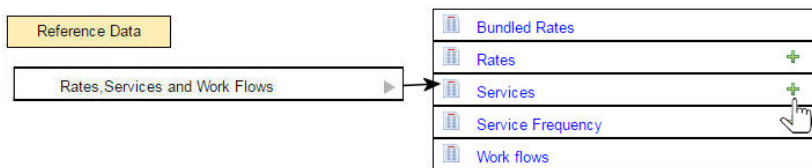
7. Create a new Service Type, as shown in the following figure.
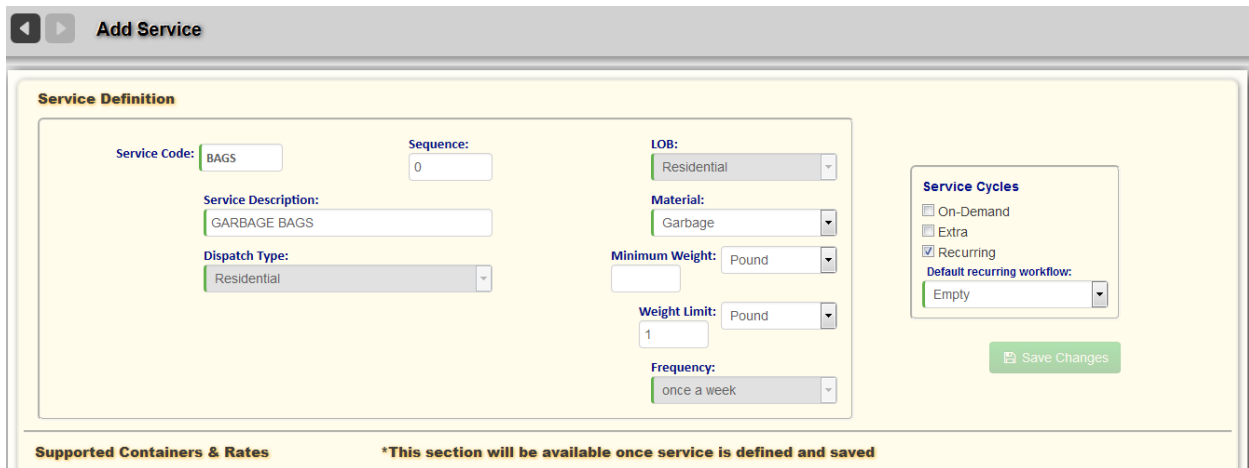
8. Press **Save** Changes when done.
   The lower part of the screen now displays Supported Containers and Rates.

9. Select **Add Container**.

10. Select a container type and size, and then choose **Save**.

11. Select **Add Work Flow & Rate**.

    ⚠️ In order for a rate and workflow to be available for selection here, they must be defined in Rate Type reference data.

12. Select a rate code and workflow, and then choose **Save**.

    ⓘ Alternatively, you can create a new rate by selecting the **Create New Rate** button. ➕ Create New Rate

    You have completed defining your service.

13. Edit the Customer Location to which the service is to be assigned.
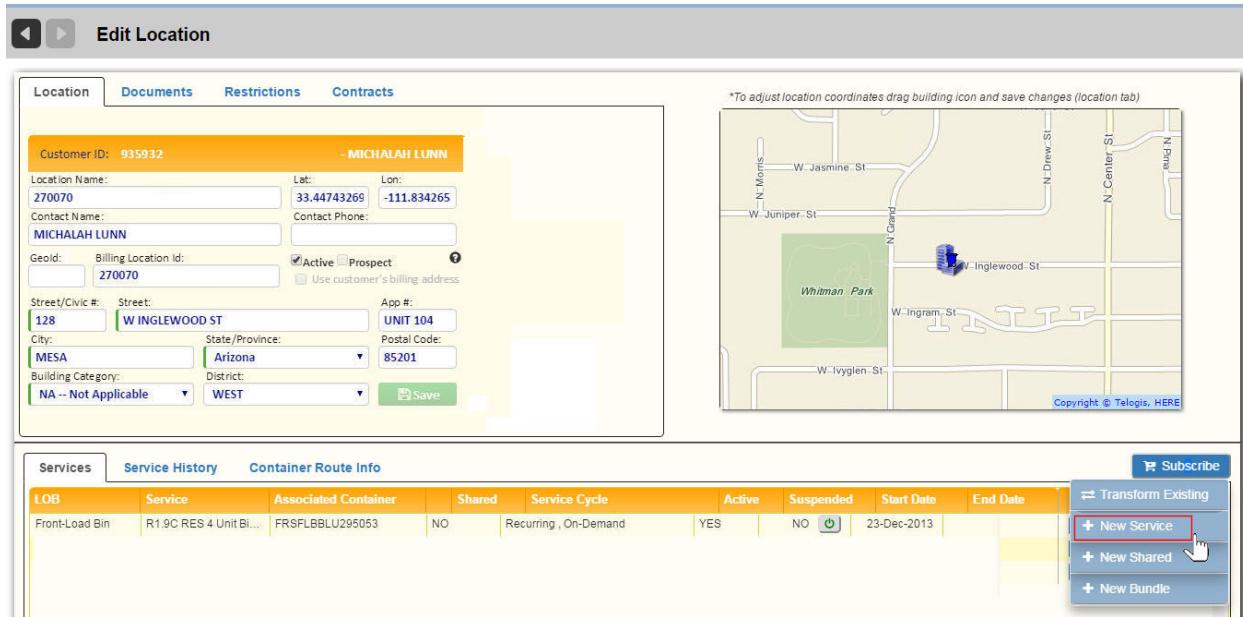
14. Click **Subscribe to Service**.
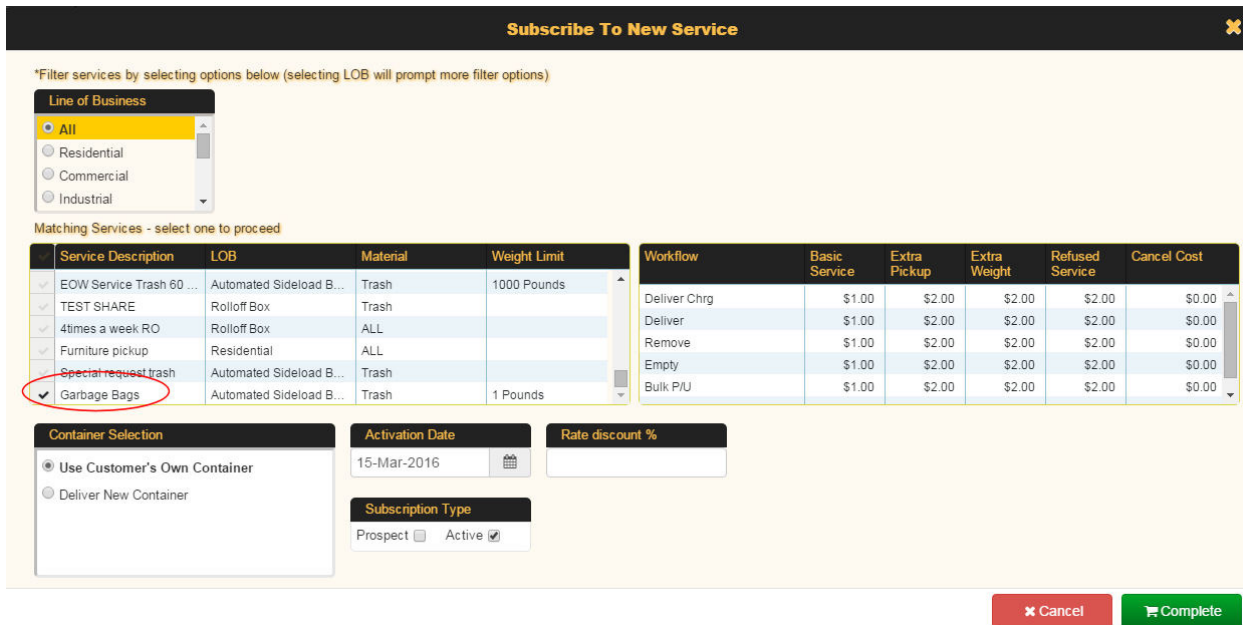
   a.   Filter your search results.

   b.   Select the service from the Service Description list.

   c.   Select Activation Date.

   d.   Optional: enter a Rate Discount (if applicable).

15. Press **Complete** when done.
    The subscription is added.

Managing Customers

The Customers menu provides the tools you need for managing your customer information.

The Customers menu options are explained in the following sections.

Search Customers

The **Search Customers** menu option lets you locate a customer in your list of customers.

Search Tips

For a quick search, specify the starting characters for street, city or district names, or postal code. You can also specify a range of civic numbers, or a specific number by omitting the **To Civic Number** value.

A search by **Customer ID** accesses that customer profile directly, so only a complete ID may be specified.

1. Select your search criteria.

2. Click the **Search** [ ] icon.
    If your search is unsuccessful, an error message displays.

Search Customers

No location found

Otherwise a results page displays, showing all matches.

- Selecting a customer's **View** 👁 button displays the View Customer screen.

- Selecting a customer's **Edit** ✏ button displays the Edit Customer screen.

- Clicking a hyperlink in the Customer Locations column displays the Edit Location screen.

Add New Customer

This menu option lets you add a new customer to the FleetLink Route Management System.

You add new customers in two steps: once you have filled out and saved the Customer Profile, the Add Location screen displays, enabling you to enter service locations (addresses) for the customer.

- Enter all customer profile data using the text fields, check boxes, and pull-down menu.

- **Customer prefix** menu: Selecting a prefix from this menu will result in the Customer ID—automatically generated by the system—contains the Customer Prefix as its first characters.
  See Customer Prefixes.

- **Billable** check box: Check this option if this address is the billing address for the customer account.

- **WOID Required**: Selecting this option forces you to enter a work order ID when scheduling an on-demand stop via the Edit Location screen.

Once you have entered all information press **Save Customer** .

The Edit Customer screen refreshes, enabling you to add customer location information.

Customer Locations

The lower portion of the Edit Customer screen provides an area where you can view and add additional customer location information.

To add a location:

1. Select the Location button [⊕ Location] .
   The Add Location screen displays.
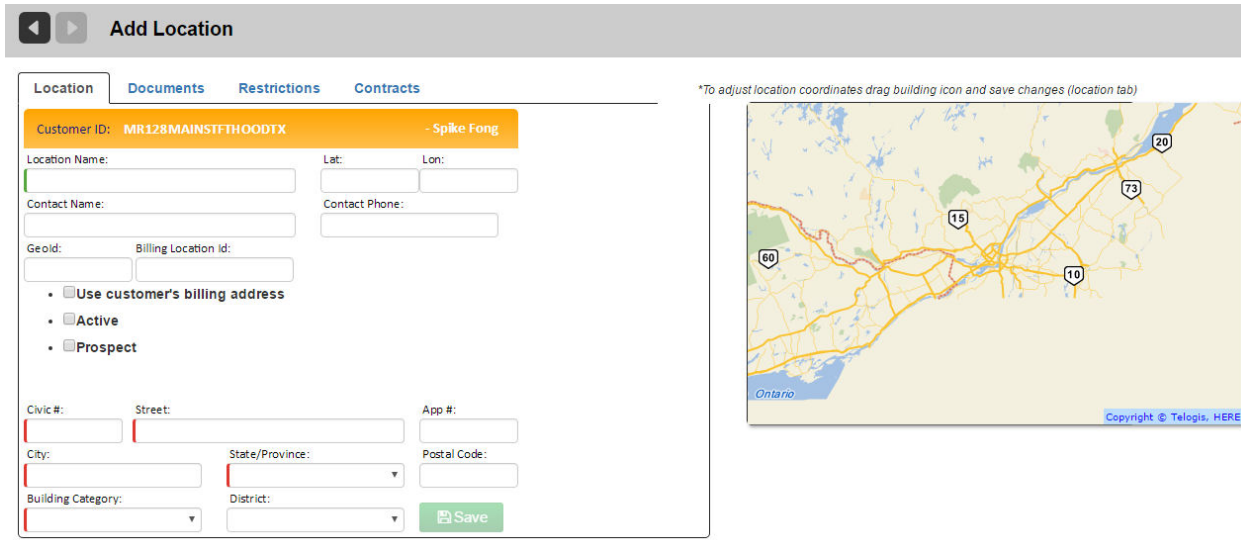
2. Enter all location information, and then press **Save** [💾 Save] .
   You are returned to the Edit Customer screen, where you can add additional addresses in the same manner.

Edit Location Screen

The lower portion of the Edit Location screen is where you subscribe the location to services and manage those subscriptions, schedule on-demand stops, and open customer cases, if required.
See Subscribing a Customer to a Service.

A tabbed interface also provides access to the location's service history and container/route associations.
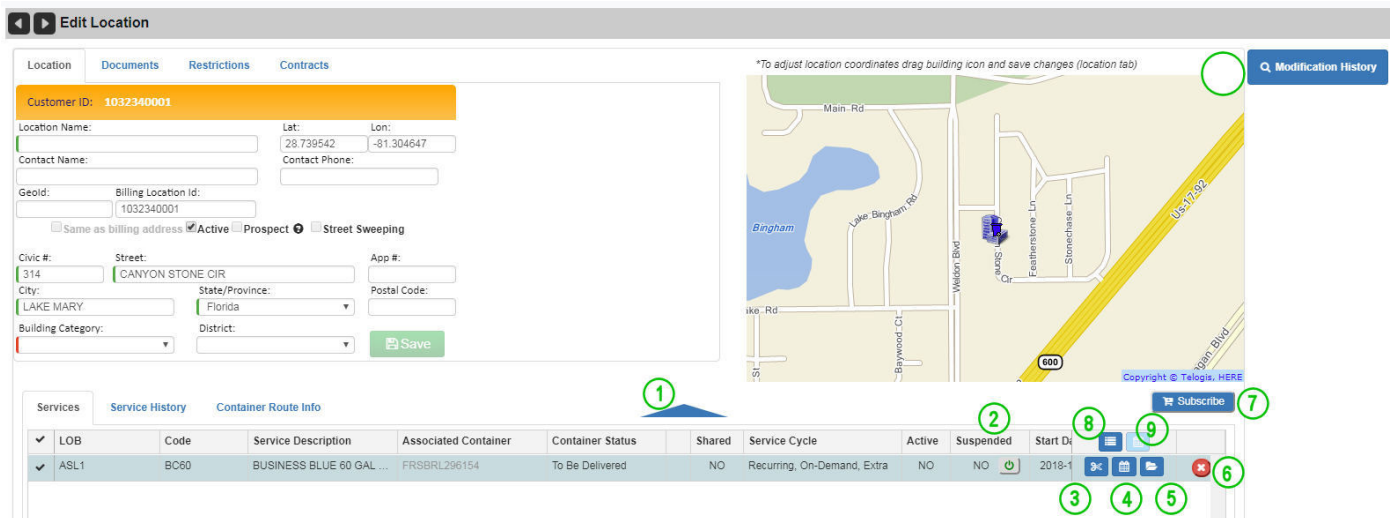
CONTROLS	
1	Enlarge/expand bottom panel for easier viewing when multiple services are listed.
2	Toggle suspension status of the service (YES/NO).
3	Terminate the service
4	Schedule on-demand stop for the service.
5	Open a customer case.
6	Delete the association between the service and the container.
7	Add subscription.
8	Schedule on-demand stop
9	Schedule multiple on-demand stops
10	Displays Audit Trail Log

Deactivating a Customer

In the event that a customer subscription must be cancelled (for example, resident has moved out of the premises), you can deactivate the Customer via the Edit Customer screen.

1. Deselect the **Active** check box.

2. Select **Save Customer**.
   RMS deactivates all associated locations and transfers subscriptions to default location, i.e., the municipality.

Suspending a Customer Subscription

In the event that a customer subscription must be suspended (for example, prolonged absence from the premises), you can deactivate the Customer via the Edit Customer screen.

1. Select a start date and end date from the **From** and **To** calendar menus.

2. Select **Save** when done

3. The suspension of all services for the customer is reflected in the **Suspended** column in the lower area of the screen.

     You can cancel the suspension at any time by toggling the button in this column from **Yes** to **No**.

List of Not GeoCoded Customers

This feature is provided as part of the GeoCode Management functionality.

See GeoCoding Non-GeoCoded Customer Addresses for details.

List Customer Cases

This features is provided as part of the CSR Dashboard option.

See APPENDIX A - CUSTOMER SERVICE REPRESENTATIVE (CSR) DASHBOARD for details.

Import Customer

The Import Customer menu option lets you import customer data in a text (CSV) file.

To download a sample CSV file that you can populate with your own data, click the **Download Sample** button in the upper-right area of the page.

Import - Export Customer Documents

The Import/Export Customer Documents menu option lets you import customer documentation in a text (CSV) file for viewing within the RMS, and export that information from the RMS to a CSV file.

To download a sample CSV file that you can populate with your own data, click the CSV icon in the upper-right area of the page.

Importing Documents

1. Select the **Browse** button and choose the file to be imported.

2. Select **Import Documents** .

    a. If there are errors in the file, an error dialog displays.
        Click warning icon to display details.

    b. If there are no errors, a success dialog displays.

Exporting Documents

• Select the **Export Documents** button .
Your customer contracts are exported to a CSV file.

Unsubscribed Customers

This feature is provided as part of the CSR Dashboard option.

It enables Customer Service personnel to search, view and export data for customers who have unsubscribed from service within a selectable time frame.

Report data includes:

* Service (from list of existing active services)

* Reporting Period (Last 30 days, Last 60 days, Last 90 days)

Subscribing a Customer to a Service

You subscribe a customer to a service using the Edit Location screen.

1. Locate the customer in the List of Customers, and click the location link to open the **Edit Location** screen.

2. On the Edit Location screen, select **Subscribe**, and then select **Subscribe to Service** from the menu.
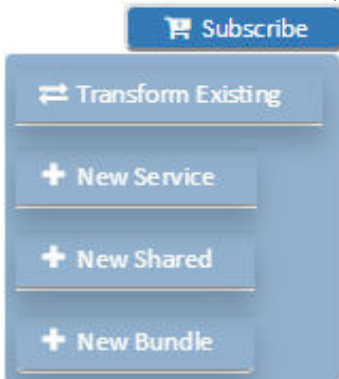
3. Select a Line of Business.
   Once you have done so, further filter options become available.
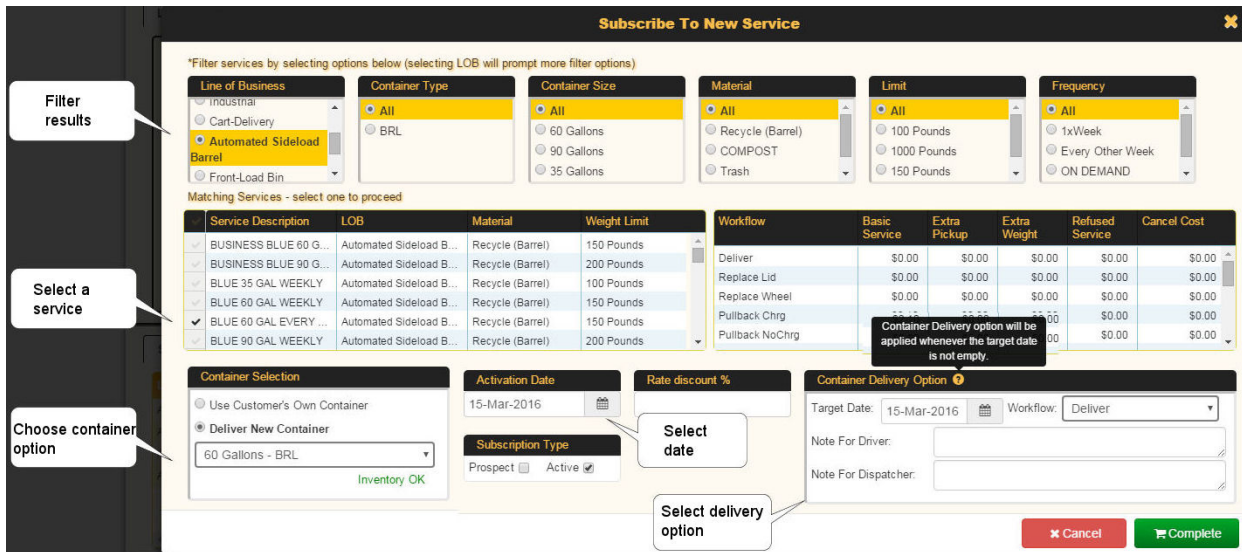
4. Select a service from the Service Description area.

5. Select an Activation Date from the calendar menu.

6. Enter a Rate Discount, if applicable.

7. Make a Container Selection using one of the radio buttons.
    In this example, we are selecting a container from among those available in the system.

    ⓘ The RMS checks container inventory to ensure container availability, and displays an inventory status message, e.g., **Inventory OK**.

8. Specify a delivery date from the Container Delivery Option menu.

9. Click **Complete** when done.
    The new service is added to the Services list.
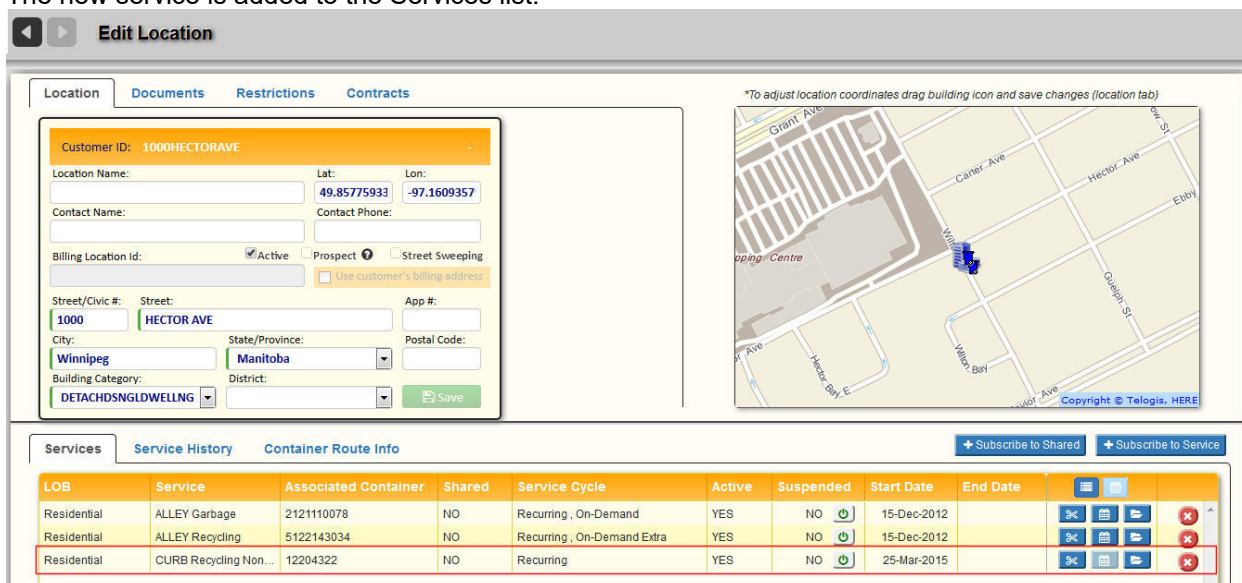
Subscribe to Shared Option

In a multi-family dwelling—such as an apartment building or townhouse complex—it is not uncommon for several sub-scribers to share a single container.

To subscribe a location to a service using a shared container:

1. On the Edit Location screen, select **Subscribe**, and then select **New Shared** from the menu.

    A dialog displays, enabling you to search for a shareable container within close proximity to the current location.

2. Choose a search method (**Search Location by Address** or **Search Location by proximity)**, and then click the

    Search button.
    In this example, an address search is used.
    The Matching Locations panel displays the search results.

3. Click on an address to select the closest container.
   The Existing Associations panel refreshes, showing available container(s) for that location.

4. Select the container appropriate for the service you wish to add.

5. Select a service from the Available Services panel.

6. (Optional) specify a Start Date, Rate Discount, and Active/Prospect option from the New Subscription Details panel.

7. Click **Complete**. ![Complete]
   The service is added to your selected location using the shared container.

Subscribing a Customer to a Bundled Rate

ⓘ Feature supported in installations where Bundled Rate functionality is enabled.

To subscribe a customer to a bundled rate:

1. From the Edit Location, select **Subscribe > New Bundle**.

2. Select a bundled rate code from the scrolling list.

3. Choose an Activation Date and Delivery Date from the calendar menus.
    If any of the services support multiple container types, you must also select a type from its **Container Type and Size** menu.

4. Select **Complete**.
    The system checks inventory for container availability, and a progress message displays.

You are then returned to the Edit Location screen, where the bundled rates display highlighted in blue to indicate pending status.

Transforming a Customer's Services to a Bundled Rate

Transform Service to Bundle

To transform a customer's existing services to a bundled rate:

1. From the Edit Location screen, select **Transform Existing > Service to Bundle**.
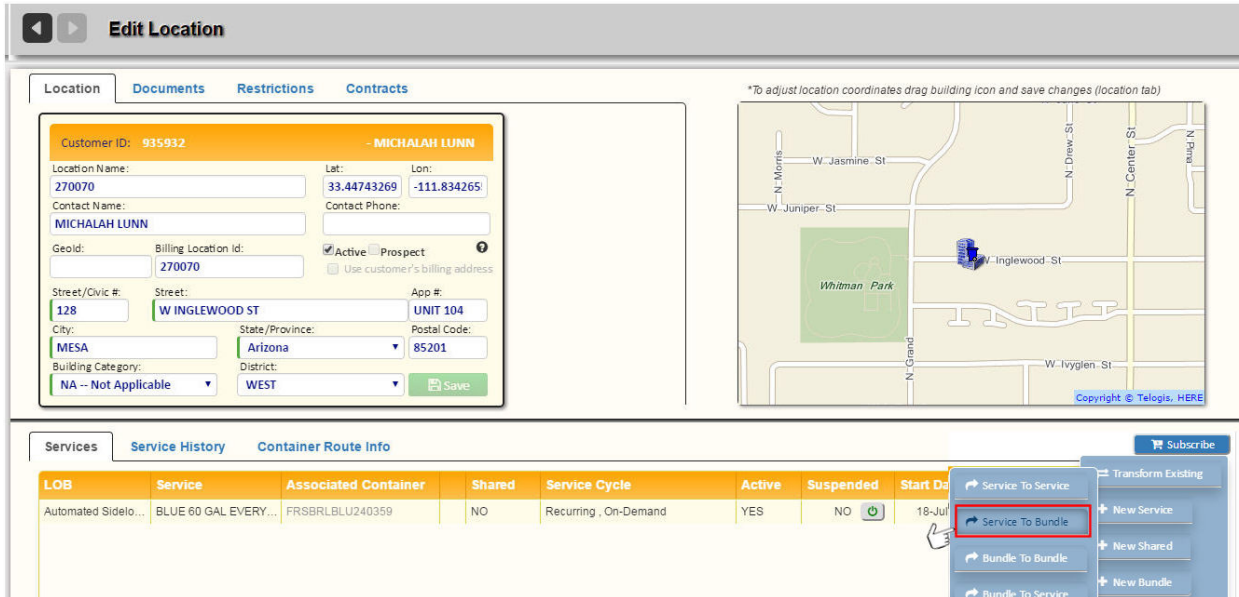
2. In the Transform Bundled Rate dialog, select a service from the left panel.
    Available bundled rates display in the right panel.
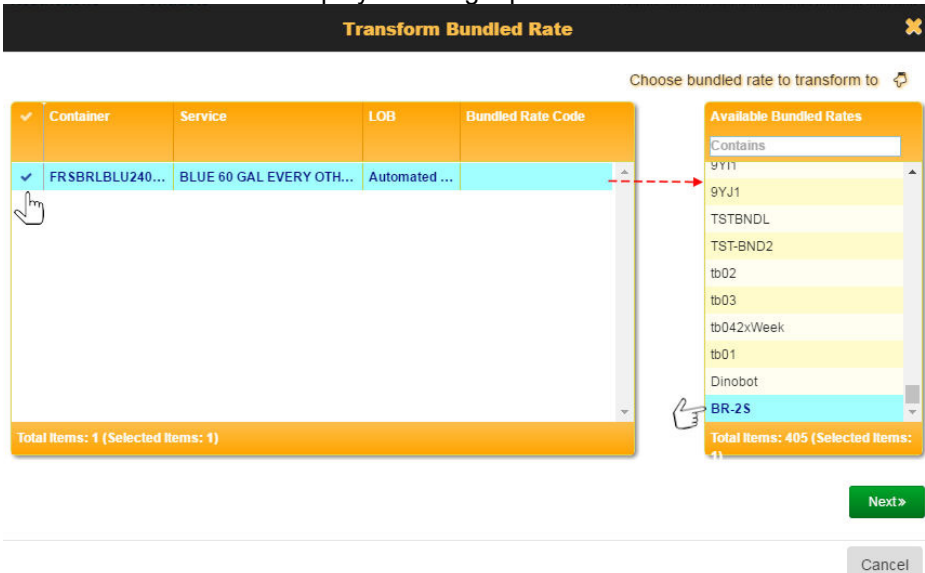
3. Select a bundled rate, and then click **Next>**.

4. Review the transformation details and modify them if necessary.

5. Select **Proceed with Transformation**.
The list of services on the Edit Location screen is updated accordingly.

In this example:

- The customer's existing service is cancelled and its associated container will be removed (pullback),

- Containers for the new bundled services are scheduled to be delivered.

- Once delivery is confirmed, the status on the **Suspended** column changes from **Yes** to **No**.

Transform Bundle to Bundle

To transform a customer's existing bundled rate to a different bundled rate:

- From the Edit Location screen, select **Transform Existing > Bundle to Bundle**.

Scheduling an On-Demand Service

What are "On-Demand" Services?

An On-Demand service is a billable pre-configured service purchased by a customer, usually by telephone request to the Sales Agent.

Preliminaries

1. Ensure that you have a **Service Frequency** defined in Reference Data for on-demand type services.

2. Go to Rates reference data; choose a rate to apply or create a new one.

Make sure LOB, District, Container type, size, and Service Rate Frequency are defined appropriately. They must correspond to those used for the new service.

Creating the New Service

1. Select **Reference Data > Rates, Services and Work Flows > Services**, ensuring that you click the green plus sign icon.
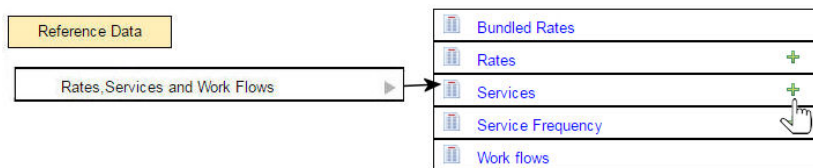
2. From the List of Services, create a new service by clicking the green plus sign icon in the header.

The Add Service screen displays.

3. Define your service in the Service Definition area.

   a. **LOB**, **Dispatch Type**, **Container Type**, and **Frequency** must match those specified for the Rate Type you have chosen to apply.

   b. Choose On-Demand for **Frequency** and **Service Cycle**. Click **Save Changes**.

   You must now define Containers and Rates for the service in the lower area of the screen.

Defining Containers and Rates

1. From the Supported Containers area, select **Add Container**.

2. Choose the Container Type And Size.
   This must match the information specified for the Rate Type to be applied.
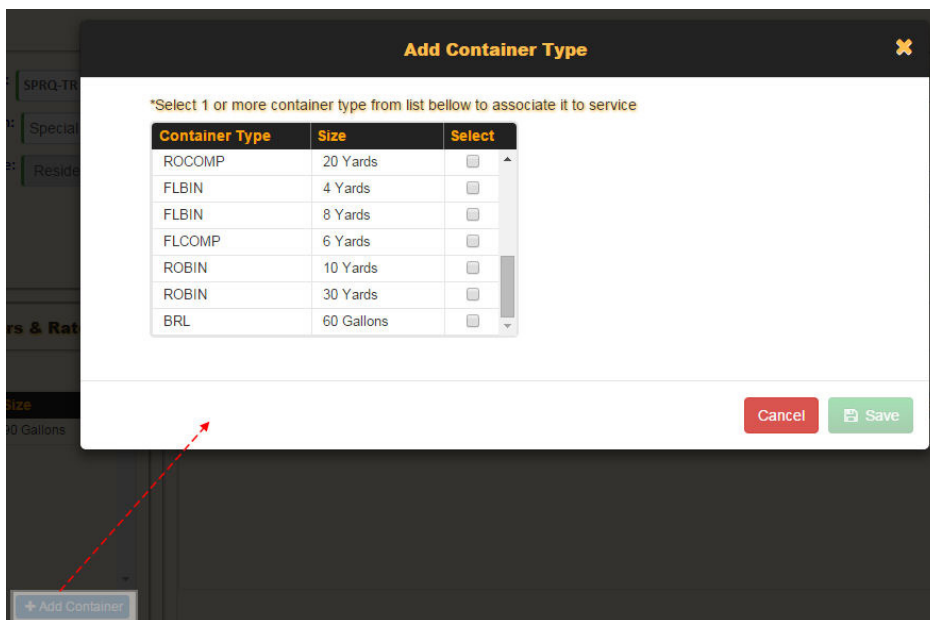
3. Click **Save** when done.

4. From the Workflows and Rates section, select **Add Work Flow and Rate**.

5. Select an available rate and a workflow, or create a new one by selecting **Create New Rate.**

6. Press **Save**.
   You have completed defining the on-demand service.

Scheduling the New Service at a Location

1. Navigate to the Edit Location screen for the customer.

2. Select **Subscribe to Service**.

3. Use the radio buttons to filter your selection.

4. Select a service from the Matching Services area.
   New input fields display at the bottom of the screen.

5. Choose an **Activation date**, **Rate discount** (if applicable), and **Container Selection**.
   For this example, we will **Use Customer's Own Container**.

6. Select **Complete**.
   The on-demand service now displays in the Services list at the bottom of the screen.

7. Select the Schedule on-demand stop button ![icon] for the service.

8. Select a **Target Date** and **Workflow**.

9. Enter a Work order ID (if required).

    ⚠ **NOTE**: In some cases, you may be required to enter a work order ID. When scheduling an on-demand stop, if the customer is flagged as "Requires WO", the user must provide WOID to be able to schedule an on-demand call. Without entering a character string here, the **Save** button is disabled.
    The WOID Required flag is set via a check box on the Edit Customer screen.

Route Assignment Options

At this point, you have a choice:

- If you select **Save** now, the service is scheduled but no route is assigned. You can assign a route later using the Unscheduled Stops screen. See Assigning the Unscheduled Stop to a Route.

- Alternatively, you can assign a route immediately by doing the following:

1. Select the ***Advanced option** check box to display the **Route** text field.

2. Click in the text field to display the **Select Route** pop-up window.

Assigning the Unscheduled Stop to a Route

1. Select **Routes > Unscheduled Stops**.

2. Locate your stop in the **Unscheduled Stops** list.

⚠ Ensure that the On-demand radio button is selected, as this is an on-demand service.

3. Select the stop from the list by checking its check box.

4. Select a route from the route list in the lower-right panel.

ⓘThe route list is sorted according to the routes' proximity to the stop.

5.   Confirm the selection when the confirmation dialog displays.
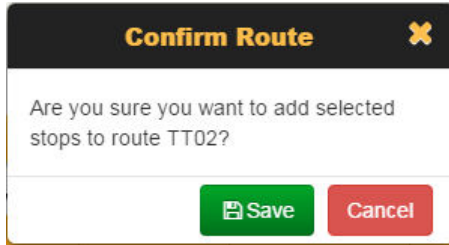
6.   Select **Yes** to proceed

Managing GeoZones

GeoZones are user-defined geographical areas that can be used for reference and classification purposes by various applications.
In RMS, GeoZones can be associated with routes, yards, and disposal facilities, and can be used to generate routes automatically. In addition, they can be used by FleetLink software for purposes of generating alarms.

You can create your own GeoZones by drawing their polygons on the map, or you can import them into the RMS in the form of .wkt (well-known text) files that contain the coordinates (latitude and longitude) of all the points defining a geographic region.

The GeoZones menu and the Edit Route screen provide the tools you need for managing your GeoZone information.

- The GeoZones menu for creating/modifying, importing, and exporting GeoZones.

- The Edit Route screen for managing Route-Geozone relationships.
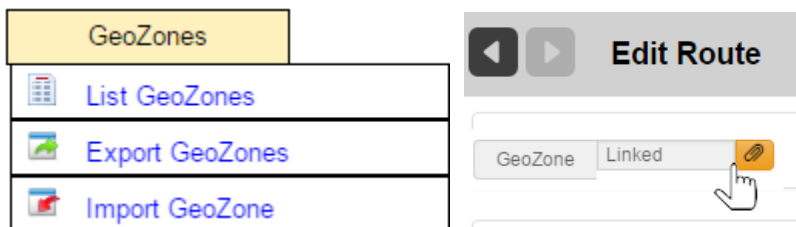
The menu options are explained in the following sections.

Viewing the List of GeoZones
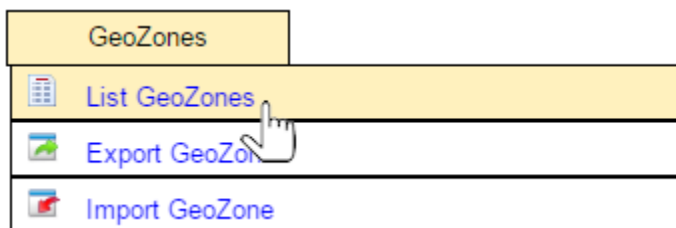
To view a list of all GeoZones in the FleetLink Route Management System:

- Select **GeoZones> List GeoZones**.
  The List of GeoZones displays.

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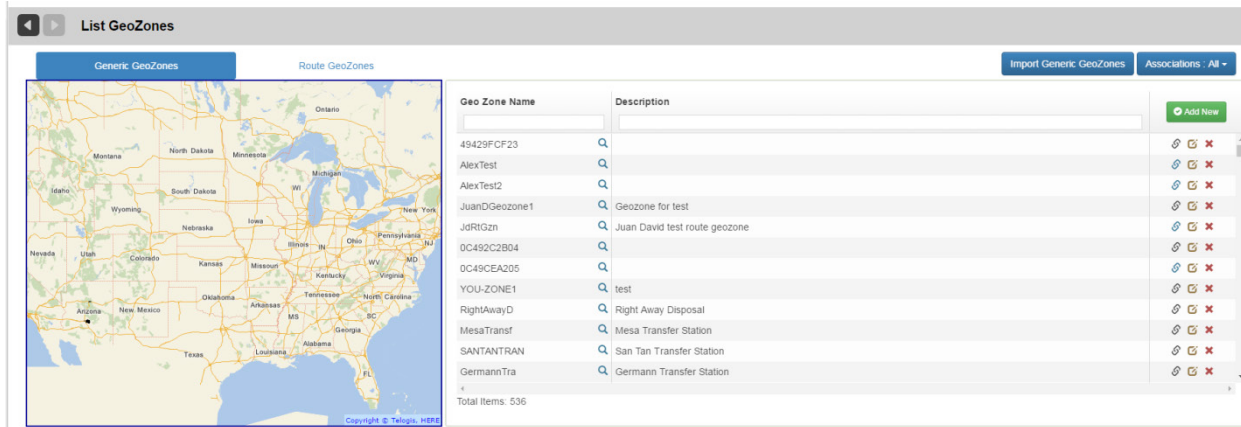
The List of GeoZones is a tabbed interface comprising:

• Generic GeoZones, those Geozones that are not necessarily associated with routes

• Route GeoZones, GeoZones that are linked to routes.

The initial (default) view displays with the Generic tab selected, as shown above.
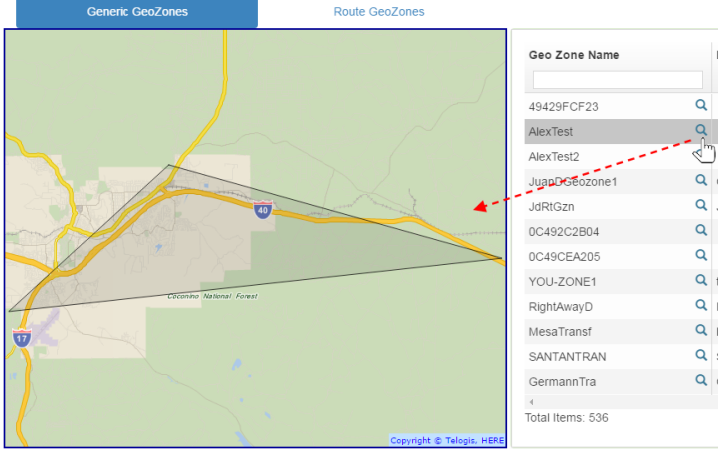
The following figure shows the list with the Route Geozones tab selected.
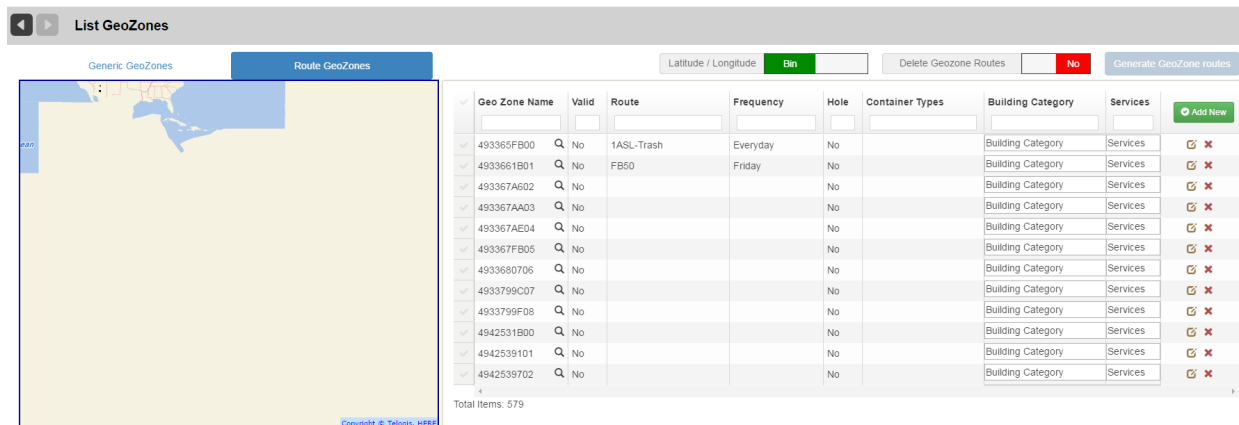
Generic GeoZones Controls and Features

The Generic GeoZone tab enables editing, importing, deleting GeoZones, and viewing GeoZone associations.

Control	Function
Filter text fields in header Geo Zone Name Description	Typing text into these fields displays items containing that text in the table below

GeoZones Association filter **Associations : All ▾** All Associated Not Associated	Filters the table display according association status.
View Geozone (magnifying glass) 🔍 in GeoZone Name column	Displays selected GeoZone on the map.
Import Generic GeoZones button **Import Generic GeoZones**	Enables you to import Geozone(s) from a data file (.csv).
View Associations button 🔗	Pops up a dialog showing route or facility association(s).
Edit GeoZone button	Opens the GeoZone for editing.
Delete GeoZone button ✖	Removes the GeoZone.

Route GeoZones Controls and Features

The Route GeoZones tab enables you to generate routes (individually or in bulk) from the GeoZones in the list.

Control	Function
GeoZone Select (check box) ✔ 493367A602	Selects a GeoZone for further action(s), e.g., editing, deleting, route generation.
View Geozone (magnifying glass) 🔍 in GeoZone Name column	Displays selected GeoZone on the map.
Lat/Lon Bin/Location switch Latitude / Longitude **Bin** Latitude / Longitude **Location**	For route generation, determines whether coordinates for bin or location are used.
Delete GeoZone Routes switch Delete Geozone Routes **Yes** Delete Geozone Routes **No**	For route generation, determines whether existing stops are deleted before generation.
Generate GeoZone Routes button **Generate GeoZone routes**	Generates all routes from the list of Geozones.
Edit GeoZone button 🖉	Opens the GeoZone for editing.
Delete GeoZone button ✖	Removes the GeoZone.
Add New button **⊕ Add New**	Adds a new GeoZone.
Building Category (check boxes) Building Category ☐ All ☐ Apartment block ☐ Asylum ☑ Condominium ☐ Dormitory ☐ Duplex	Selects Building Categories for routes to be generated,
Services check boxes Services ☐ All ☑ BC60 ☑ BC90	Selects Services for routes to be generated,

Viewing GeoZone Associations

To view Geozone Associations:

- From the Generic GeoZones tab, select the link icon for the GeoZone of interest.
  A tabbed dialog (Facilities and Routes) pops up, displaying associations, if any.
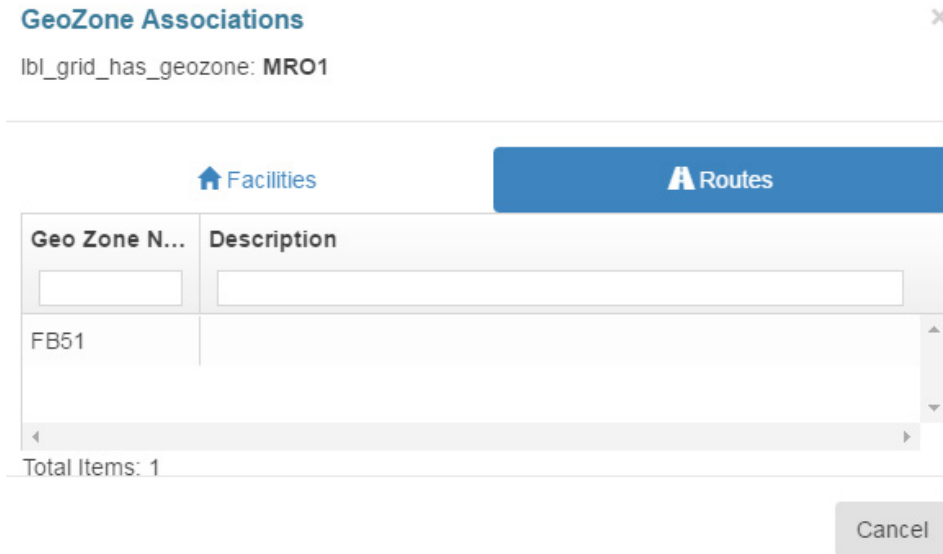
Editing a GeoZone

To edit a GeoZone:

- From either the Generic GeoZones or Route GeoZones tab, select the **Edit GeoZone** button .
  An Edit screen for the selected GeoZone displays.
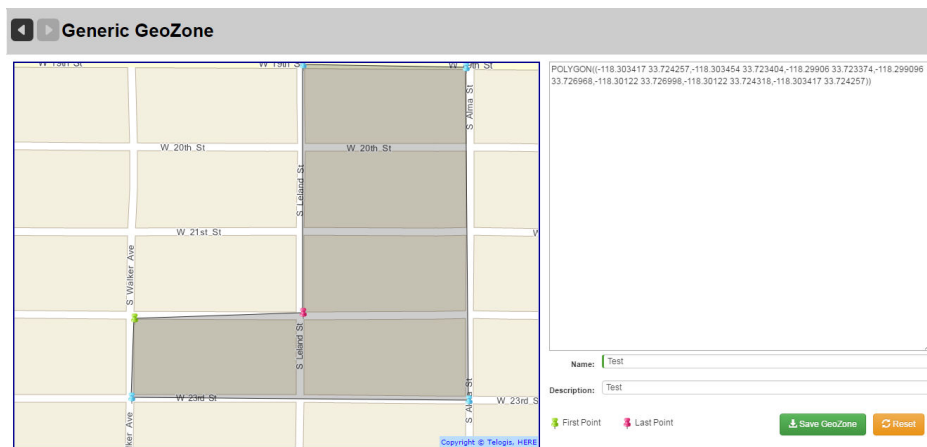
From the Edit GeoZone page, you can modify an existing GeoZone or create a new one by saving under a different name.

You can modify the GeoZone by "drawing" it on the map:

Polygon Tools
Green pushpin is the first point of the GeoZone.
Red pushpin is the last point of the GeoZone.
Blue pushpins are intermediary points of the GeoZone.
A right click on the map adds a new point to the last point of the GeoZone.
A right click on a pushpin deletes the point from the map.
Polygon's shape can be modified by clicking on a point and dragging it to a new position
The mouse wheel can be used to zoom the map in and out.
The entire map can be repositioned by dragging it.
Save GeoZone Saves your work.
Reset Clears the polygon on the map and the WKT text field.
You can import the polygon in WKT format into the text area.

Deleting a GeoZone

To delete a GeoZone:

1. Select its **Delete** icon.

2. Confirm the operation when the confirmation dialog displays.

Delete Geozone   ×

Are you sure you want to delete this GeoZone ?

Cancel   Delete

Adding a New GeoZone

To add a new GeoZone:

1. Select the **Add New** button. **Add New**
   A generic GeoZone page displays, providing a blank slate for drawing a new GeoZone.

2. Draw the GeoZone using the polygon tools, as described in Editing a GeoZone.

3. When done, enter a **Name** (mandatory) and a **Description**.

4. Select Save GeoZone.

Exporting GeoZones

To export GeoZones:

*   Select **GeoZones> Export GeoZones**.

The csv file is downloaded to your local disk in the download directory defined in your browser settings.

Importing GeoZones

To import GeoZones:

1. Select **GeoZones> Import GeoZones**.

The Import GeoZone Data screen displays.

Import GeoZone Data

File [Browse...] No file selected.

☐ Delete GeoZones before importing

GeoZone File Format

The GeoZone file must contain columns defined below.

The header line should begin with a '#' character to be ignored by the application.

Column number	Excel number	Column name
1	A	WKT Format String *"POLYGON((-114.00478 50.71159,-113.98556 50.71159,-113.98556 50.72142,-114.00478 50.72142, -114.00478 50.71159))"*
2	B	GeoZone name
3	C	Is hole
4	D	Description
5	E	Color
6	F	Container Type
7	G	Route
8	H	Truck
9	I	Work Group
10	J	Frequency

2. Click the **Browse** button to navigate and select your file.

3. Click the **Import GeoZone** icon
   The results of the operation display on the **Import Result** page.

Import result

Data type	Insertions	Updates	Total
Customer	0	0	0
Location	0	0	0
Cart/Container	0	0	0
Associations	0	0	0
Stop	0	0	0
GeoZone	2	0	2
Route	1	1	2

Total read	Total imported	Errors
4	2	0

Log 2014-02-25 11:05:55 - 2014-02-25 11:06:39

Data imported successfully

Generating Routes from GeoZones

You can create new routes or re-generate existing ones based on the customer locations or bin locations within a Geo-Zone.

1. Select a route from the pull-down menu.

   ℹ️FOR NEW ROUTES:
   To create a new route, click the Add icon ➕ adjacent to the pull-down menu. You will be redirected to the Add Route page, where you can specify the new route information.

   Once you have saved the new route, you will automatically be returned to the Edit GeoZone page, where you can select your newly created route from the menu.
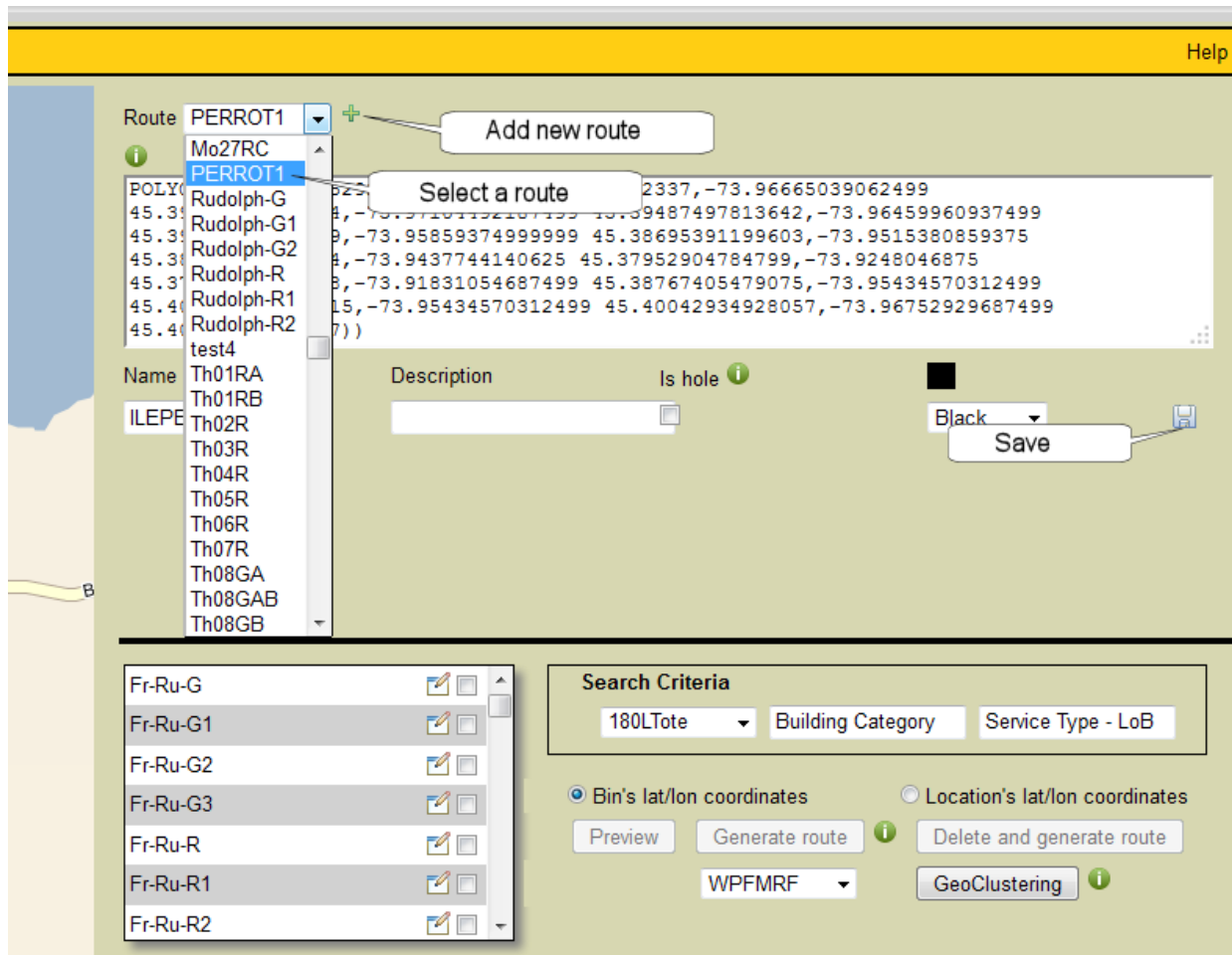
2. Click **Save** 🖫 .
   The controls in the lower-right area of the page are now active (i.e., no longer grayed out).

3. Select your search criteria using the **Container Type**, **Building Category**, and **Service Type - LoB** pull-down menus.

   ⚠️ **Container Type** is a mandatory field; select the correct type for the **Service Type** to be provided.
   The other two menus provide check boxes, enabling you to select multiple options.
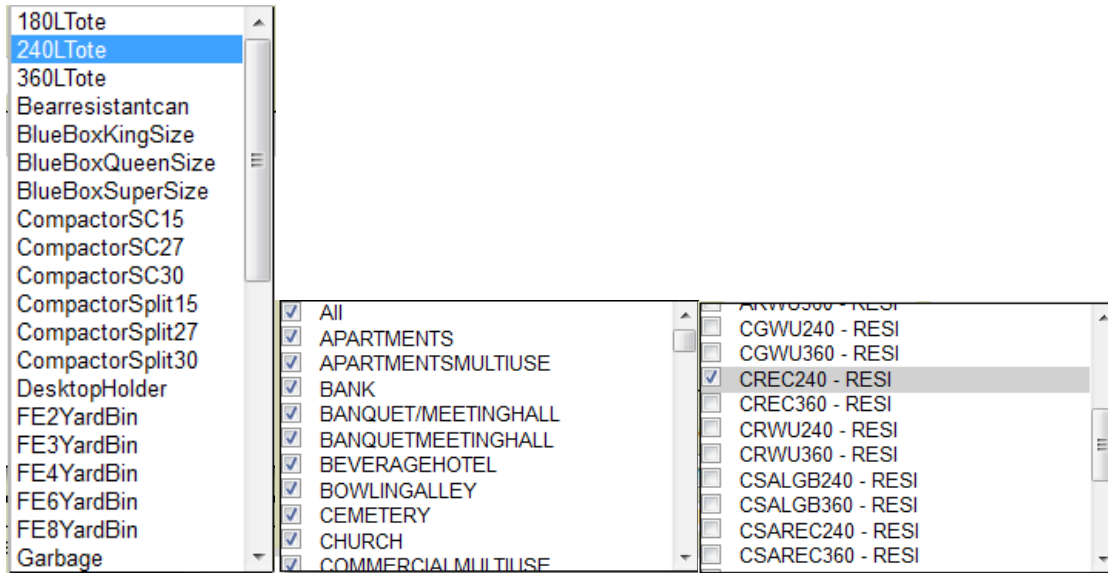
4. Select one of the following radio buttons

    a. **Bin's lat/lon coordinates**, to generate a route using the bins' latitude and longitude.

    b. **Location's lat/lon coordinates**, to generate a route using the locations' latitude and longitude.
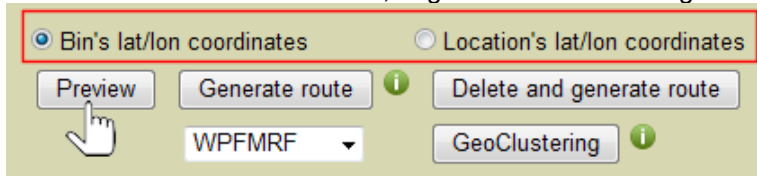
5. Select **Preview** [Preview].
    The display refreshes, showing bin locations in the map area and a results summary in the lower-right area of the page.
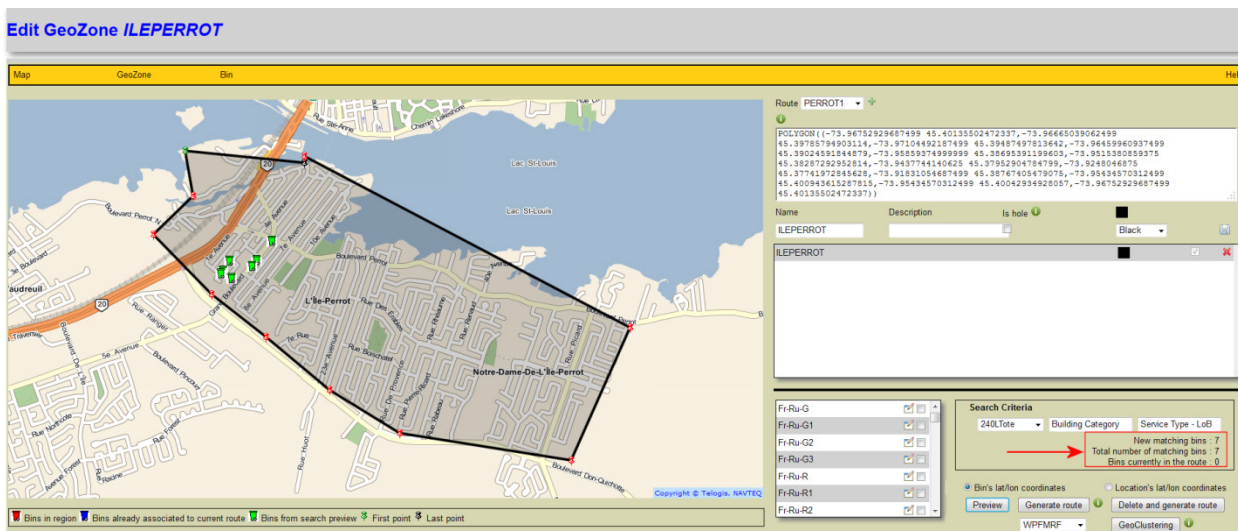
ⓘ In the preceding example, we chose to create a new (empty) route and query bins to populate it. Note that all bins on the map are the same color (**green**), indicating that they are "new".

Had we chosen to use an existing (populated) route and query any new bins in the GeoZone in order to add them to the route, the results summary would display something similar to that shown below.

Clicking on the highlighted link **Bins currently currently in the route** would update the map with existing bins displayed in blue and new ones in green.
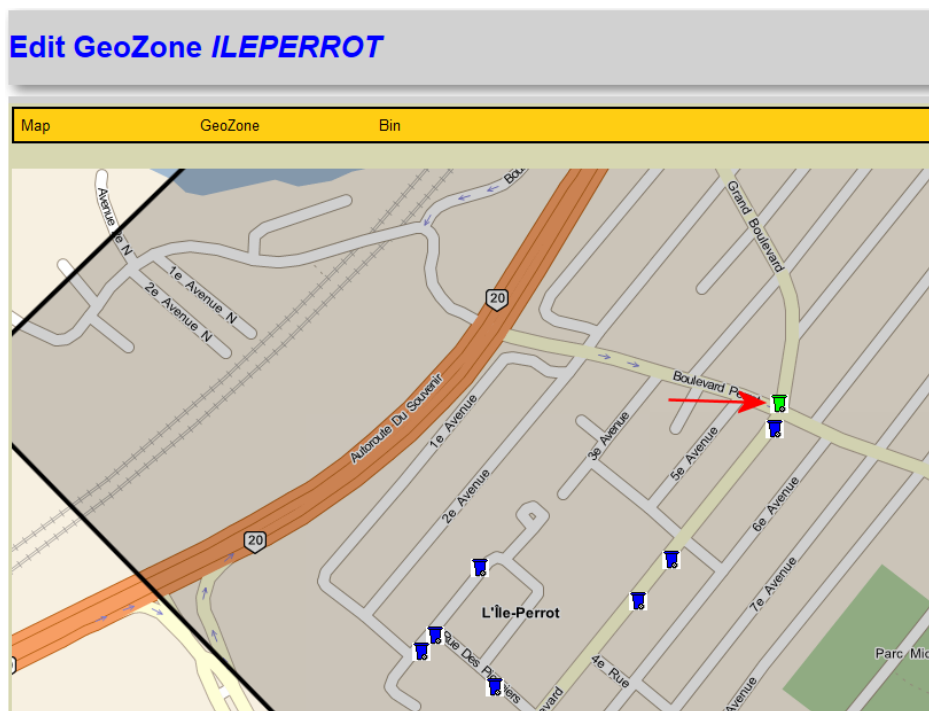
You can now generate the route. To do so:

6. Select either **Generate route** or **Delete and generate route** .
   The route is generated, and you are automatically redirected to the route's Edit GeoZone page, where you can view the results and make modifications as required.

Combining GeoZones

With the development and implementation of the concept of Work Groups and Route Groups, the FleetLink Route Management System supports combining GeoZones.
You can combine GeoZones easily using the **Copy To** feature on the Edit GeoZone page.

The figures below show GeoZones for two defined routes. For purposes of this example, we will copy the first, *Fr18RA*, to the second, *Fr19RA*.

Edit GeoZone *Fr19RA*
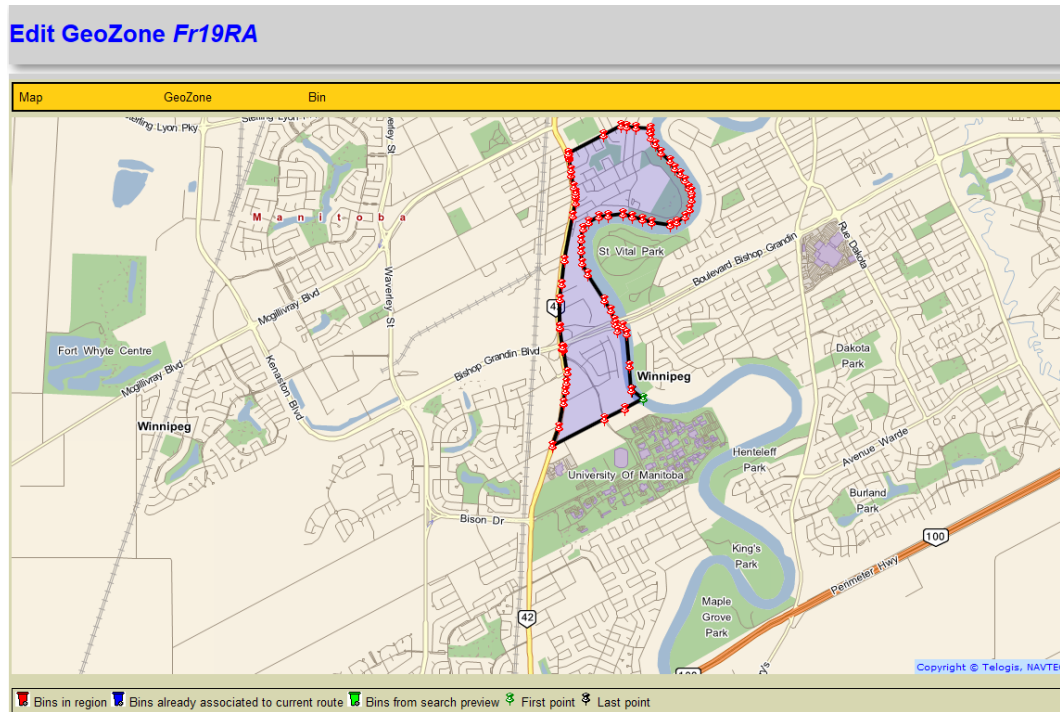
1. From the List of GeoZones, select the first GeoZone, i.e., the GeoZone you wish to copy, to open its edit page.

2. From the menu GeoZone menu in the header of the Edit screen:

    a. From the **Copy To** pull-down menu, select the target route, e.g., *Fr19RA*.

    b. Check the **Include stops** check box.

    c. Click **Copy To** [Copy to] .

Map Controls

The Map menu provides basic search and view controls for the GeoZone.
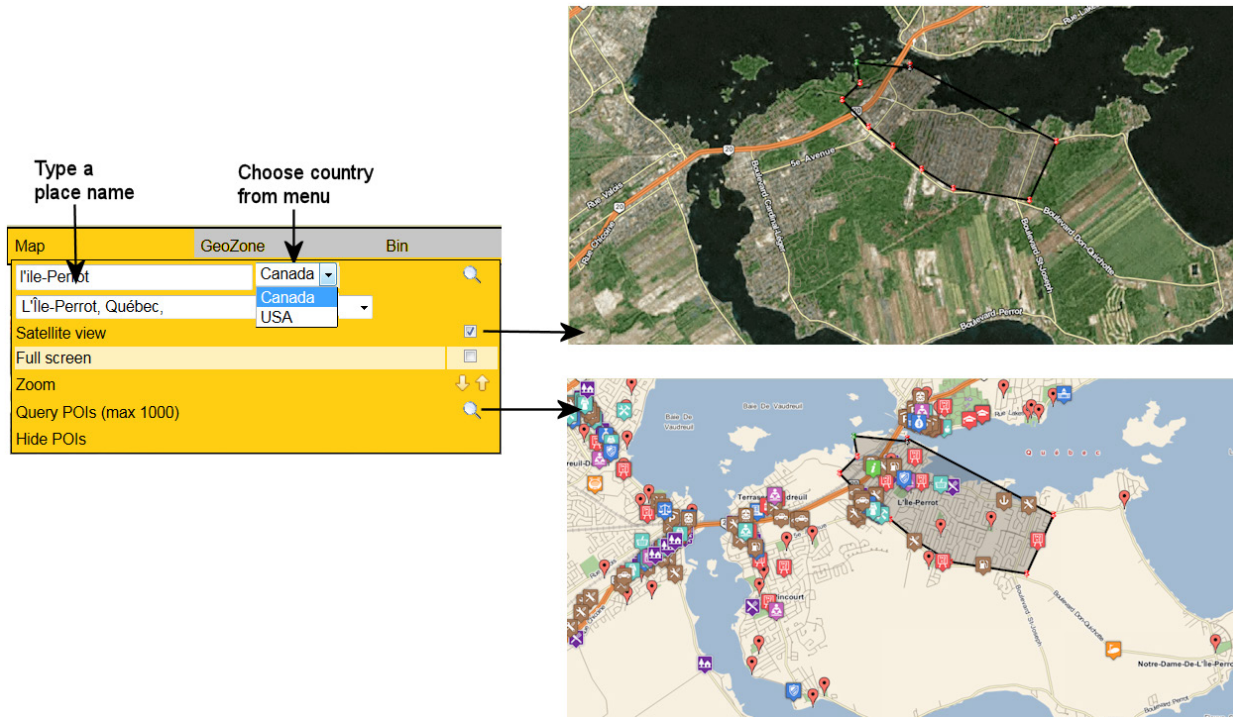
Item	Description
Location text field	Enter place name. Click to 🔍 search.
Country pull-down menu	Choose a country.
Location pull-down menu	Choose a saved or previously viewed location
Satellite view	Display satellite photo for GeoZone.
Full screen	Display GeoZone in full viewing area of your screen.
Zoom	Use the arrows to zoom in and out.
Query POIs	Display points of interest.
Hide POIs	Suppress display of POIs.

GeoZone Controls

The GeoZone menu provides controls for:

- Copying/moving/combining GeoZones.

- Map display show/hide options.

- GeoZone generation.

Item	Description
GeoZone text field and Add icon ✚	Enter a name in the text field and select the Add icon to create a new GeoZone.
Move to [Move to]	Moves the current GeoZone to another GeoZone.
Copy to [Copy to]	Copies the current GeoZone to another GeoZone.
Move all to [Move all to]	Moves all GeoZones to another GeoZone.
Copy all to [Copy all to]	Copies all GeoZones to another GeoZone.
Include stops check boxes	Select this check box to move/copy all assignments within a GeoZone. A GeoZone may contains stops for more than one type of service—for example, garbage and recycling—and you may not wish to include stops for both services. This option provides you the flexibility to choose the action appropriate to your move/copy operation.

Hide read-only GeoZones check box	This tool is provided to reduce visual clutter in the map area when editing a GeoZone. The Edit GeoZone page may have multiple polygons, for example Snapped GeoZone polygons, which are listed in the right-hand area of the Edit GeoZone page. Selecting this option lets you view only the polygon which you are currently editing.
Route pull-down menus	Enable selection of a target route for copy and move operations.
Hide Points check box	Shows/hides the pushpin icons that define the perimeter of the GeoZone
Snap to streets	This option creates a new polygon that is snapped to the city streets grid of the current GeoZone. The new snapped GeoZone displays in the right-hand area of the Edit GeoZone page.
Delete snapped GeoZones	Removes all snapped GeoZone polygons from the list in the right-hand area of the Edit GeoZone page. To remove a single snapped GeoZone, locate the polygon in the list and then select its Delete ✖icon.
Generate auto-matic GeoZones	Generates GeoZones comprising the maximum number of bins specified in the pull-down menu. ⚠ You must first perform a query of bins in the region by selecting Query route bins (maximum 10000) from the Bin Controls menu.
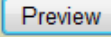
Bin Controls

The Bin Controls menu provides query controls and hide/show functionality for bins in the GeoZone.

Item	Description
Query route bins (max 10000)	Displays bins already in routes. To check for new bins (i.e., bins not yet scheduled on any routes), use the Preview [Preview] function, located in the lower-right area of the page. see Generating Routes from GeoZones
Hide route bins	When selected, suppresses display of bins already in routes—useful for de-cluttering the map display when previewing new bins
Query bins in displayed region (max 10000)	Displays all bins located within the entire map display region.
Hide region bins	Suppresses display of bins located in displayed region..

GeoCoding Non-GeoCoded Customer Addresses

The FleetLink Route Management System provides a facility for listing all non-geocoded customer locations and geocoding them individually or all at once.

1. Select **Customers > List of Not GeoCoded Customers**.
    The List of Not GeoCoded Customers displays.
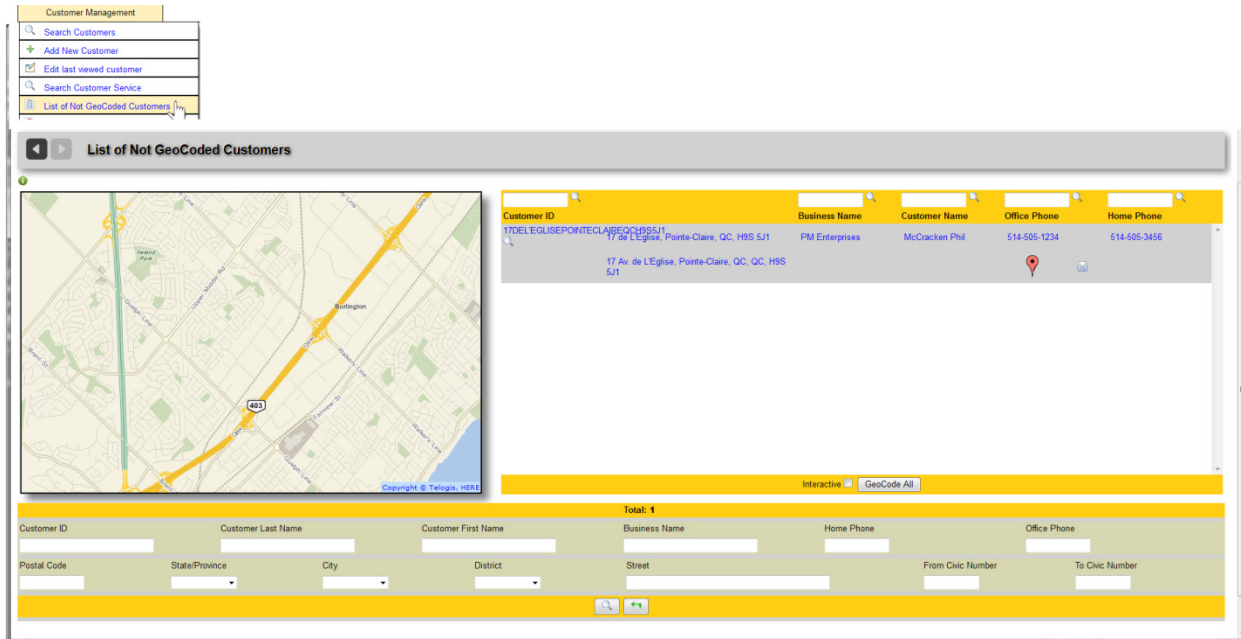
The right-hand side of the interface displays a list of all customer addresses that are not geocoded.

    a.   Clicking on a highlighted link in any column brings you to the Edit Customer page.
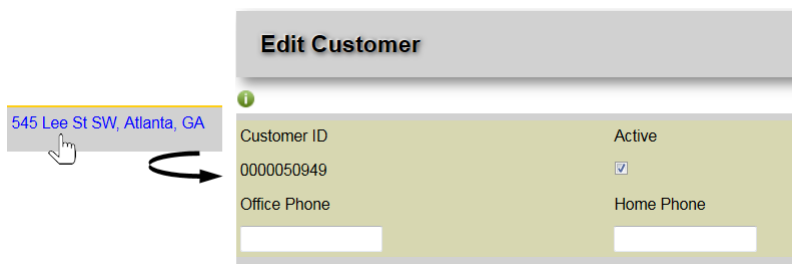
    b.   Clicking on the magnifying glass icon beside the **Customer ID** displays a pop-up window with customer location information.
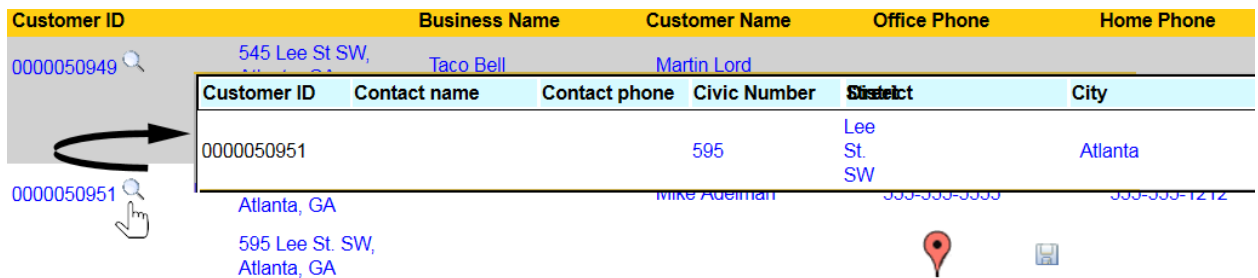
    c.   Typing a text string into the text field of any column and then clicking its magnifying glass icon returns all records with that string in the corresponding field.
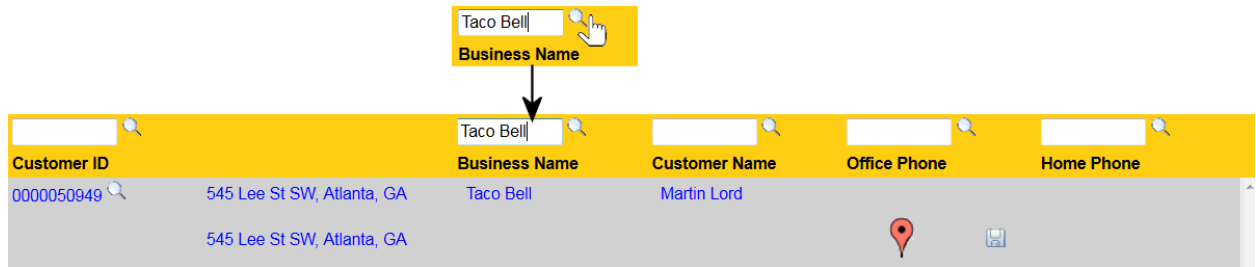
d. To geocode a single location, click the balloon icon .
The application will attempt to geocode the location, returning its corresponding latitude and longitude when successful.
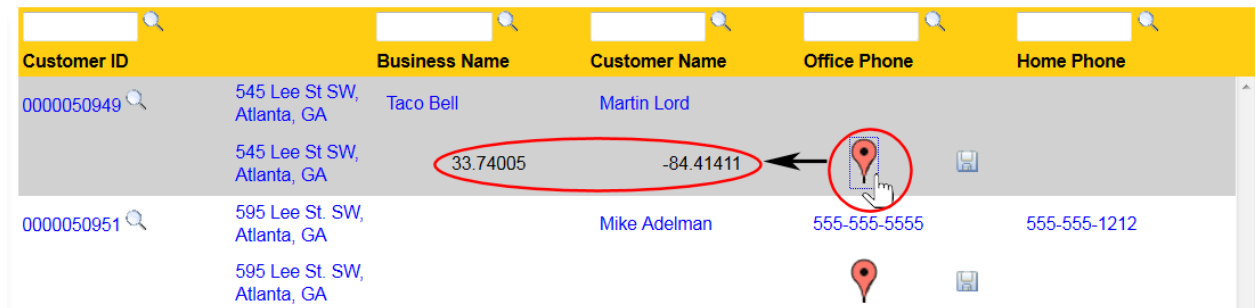
e. To geocode all entries in the list, select **GeoCode All**. [GeoCode All]

f. Select the **Interactive** check box when geocoding to plot the geocoded location on the map.

Interactive ☑ [GeoCode All]

The lower area of the interface provides additional search features.

g. The magnifying glass icon [🔍] initiates a search.

h. The reset icon [↩] clears all fields in the lower area of the interface.

⚠ After geocoding any or all addresses, you must click **Save** 💾 or your changes will not be applied.

Managing Reference Data

What is Reference Data?

Reference data is specific to your enterprise. It defines the properties for your business and represents information that is available for use by all routes in your system.

Defining reference data is the starting point for your project. The most efficient way to define reference data is to import a comma-separated-values (CSV) file that you have prepared off-line (or have generated using your back-office system or other software) and formatted according to the criteria defined for each type of data.

Defining (or Importing) Reference Data

You define reference data using the menu options provided by the Reference Data pull-down menu.
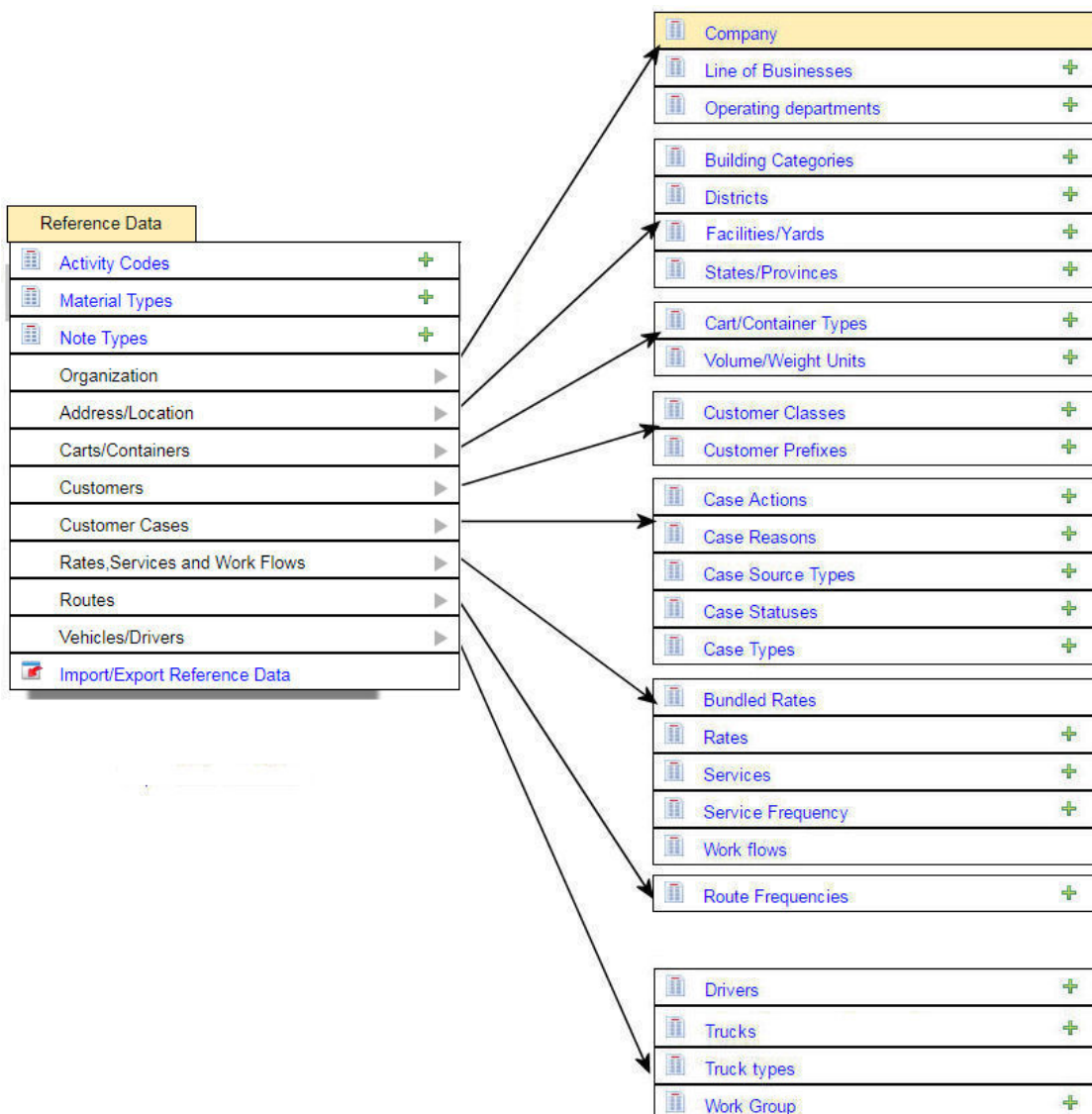
TIP: It is recommended that you define your **Services** reference data as one of the last items, as it has dependencies on many other Reference Data elements in the list.

Material Types

Material Types Reference Data specifies the types of disposal material for your business .
Examples include Recyclable Materials, Compostable Yard Waste, Organics, Garbage, and so on.

This data defines the menu options available on the FleetLink Mobile WasteApp user interface, their captions, and the order in which they are presented to the user.

Material types are used in defining the Service types as well as filling out the material Master List for disposals or call-ins.

It follows the FleetMind standard API message compliance.

```
MSGTYPE=MAT                      3      alpha-num
VEHNAME=33-106                  10      alpha-num
LSTVER=050418160000             12      alpha-num
LSTSIZE=00020                    5      num
00001CODE=L9                    10      alpha-num
00001DESC=# 9 NEWS, COATED BOO  20      alpha-num
00002CODE=L6
```

Viewing the List of Material Types

- Select **Material Types** from the Reference Data pull-down menu.

Reference Data
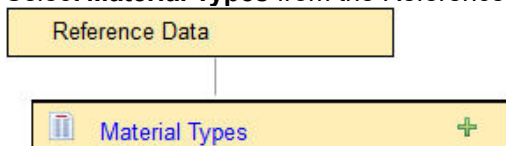
Material Types

The **List of Material Types** screen displays.

	Name	Sequence	Description	Disposal Rate	Unit of Measurement
Add New					
✖ ✏	C	10	CARDBOARD ONLY		
✖ ✏	A	20	ASBESTOS - NON-HAZAR		
✖ ✏	D	30	ASBESTOS - HAZARDOUS		
✖ ✏	W	40	WOOD		
✖ ✏	T	50	TIRES		
✖ ✏	CN	60	CONCRETE		
✖ ✏	G	70	GLASS		
✖ ✏	M	80	METAL / COPPER		
✖ ✏	AL	90	ALUMINUM	150	Yard

Sorting and Searching

- Type a search string into the text box of a column header. The table will show results as you type.
  Use the **Reset Search** icon to clear the contents of the search text field.
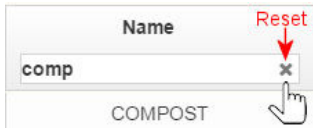
Editing Material Information

- Click on an **Edit** icon.
  The **Edit Materi-
  al** screen
  displays.

- To edit Material information, use the text fields.
  Press **Save Material Type** when done.

Adding a Material Manually

You can add a Material manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Material Types** and clicking the green plus sign icon.
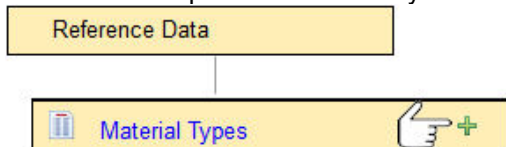
- From the **List of Material Types** screen by selecting the Add New button.
  The **Add Material** screen displays.

1. To add Material information, use the text fields.

2. Press **Save Material Type** when done.

Deleting a Material

To delete a Material:

- From the **List of Material Types** screen, select the delete icon for the item you wish to remove from the list.

Resequencing Material Types

An material type's value in the **Sequence** column defines the order in which that menu option appears on the FleetLink Mobile WasteApp user interface.
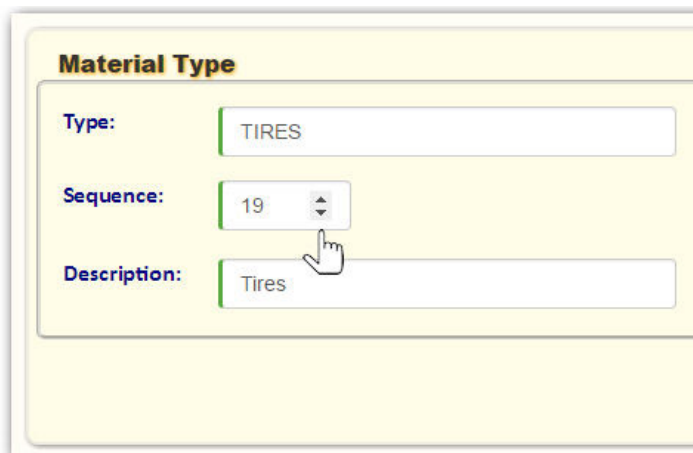
You can customize this order to suit your requirements or preferences by editing the value in the **Sequence** column.

You can resequence a Material Type in one of two ways:

- From the **List of Material Types**, double-click in the **Sequence** text field and type in a new value.

- From the **Edit Material** screen, enter the desired value into the Sequence text field, and then press **Save**.

Exporting Material Types

You can export Material Types for migration to another platform using the Import Reference Data screen.
See Importing and Exporting Reference Data.

Note Types
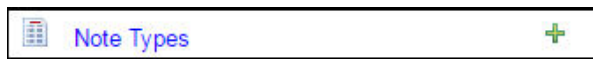
Note Types refer to the codes defined in the Note Type Codes (NTC) master list that is sent to the mobile units. These codes are used to define lists of recipients for messages sent between the mobiles and the server

Note Types Reference Data defines the codes defined in the Note Type Codes (NTC) master list that is sent to the mobile units. These codes are used to define lists of recipients for messages sent between the mobiles and the server

Viewing the List of Note Types

• Select **Note Types** from the Reference Data pull-down menu.

The **List of Note Types** screen displays.

	Name	Sequence ❷	Description	Dispatch Type
⊘ Add New				
✖ ✎	NT1	1	Note one for testing MIAN-177	Residential
✖ ✎	NT2	20	Note two for testing MIAN-177	Commercial
✖ ✎	test	5	test123	Commercial
✖ ✎	test2	52	test123	Commercial
✖ ✎	1	1	1	Graffiti (stop type 7)

Sorting and Searching

• Click on a column name to sort ascending or descending.

• Type a search string into the filter text box of a column header.

Editing Note Type Information

• Click on the **Edit** button in the left column.
The **Edit Note Type** screen displays.

- To edit activity code information, use the text fields and pull-down menu.
  Press **Save Activity Code** when done.

Adding a Note Type

You can add an Activity Code manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Activity Codes** and clicking the green plus sign icon
  .
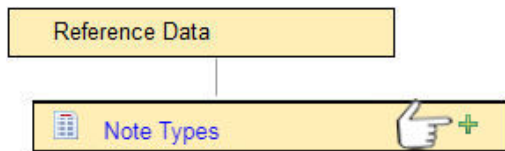
- From the **List of Note Types** screen by selecting the **Add New** button.

  The **Add Note Type** screen displays.

1. To add Note Type information, use the text field and pull-down menus.

2. Press **Save Note Type** when done.

Deleting a Note Type

To delete a Note Type:

- From the List of Note Types screen, select the **Delete** button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.
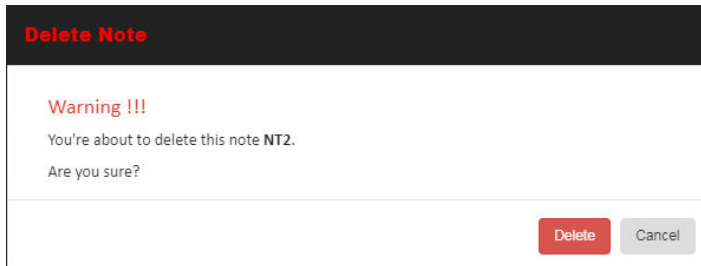
Exporting Note Types

You can export Note Types for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data .

Lines of Business

Line of Business Reference Data specifies the types of waste management services for your business, and hence, the functionalities offered on the FleetLink Mobile WasteApp user interface.
The standard FleetMind LOBs are Commercial, Industrial, Residential, and Cart Delivery.
The LOBs are associated to the ASN Stop type. You can technically add different LOBs to the system and have them associated all to the same stop type.

⚠Any new LOBs that you define must be added to the FleetLink Connector database using the PuTty tool.

Viewing the List of Lines of Business

- Select **Reference Data > Organization > Line of Businesses**..

The **List of Line of Businesses** screen displays.

Sorting and Searching

- Click on a column name in the header to choose a column's sort order.

- Type a search string into the filter text box of a column header.

Editing Line of Business Information

- Click on the **Edit** icon for the **Line of Business**.
  The **Edit Line of Business** screen
  displays.

- To edit Line of Business information, use the text fields.
  Press **Save Line of Business** when done.

Adding a Line of Business Manually

You can add a Line of Business manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Organization > Line of Businesses** and clicking the green plus sign icon.
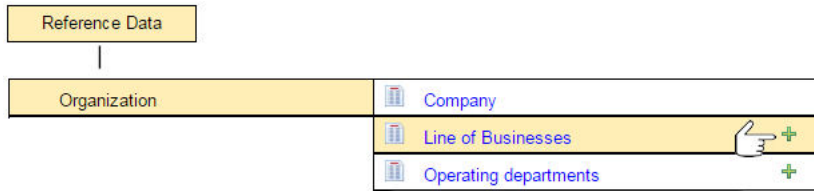
- From the **List of Line of Businesses** screen by selecting the **Add New** button in the header area of the dynamic portion of the screen.

  The **Add Line of Business** screen displays.

1. To add Line of Business information, use the text fields.

2. Press **Save Line of Business** when done.

Deleting a Line of Business

To delete a Line of Business:

- From the **List of Line of Businesses** screen, select the **Delete** button for the item you wish to remove from the list.

  You will be prompted to confirm deletion of the record.
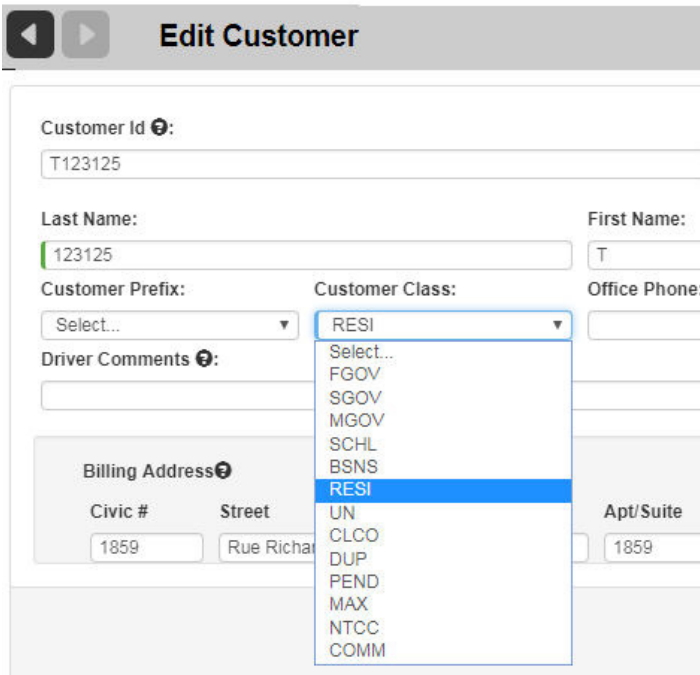
Exporting Lines of Business

You can export Lines of Business for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data.
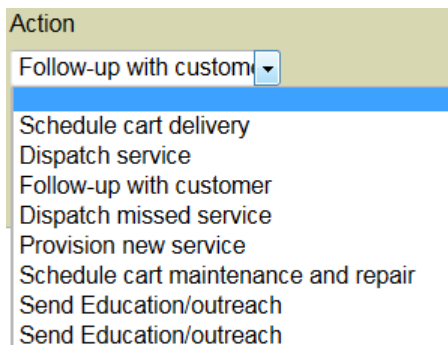
Customer Classes

Customer Classes Reference Data is provided as an optional data element for integration with a company's billing system
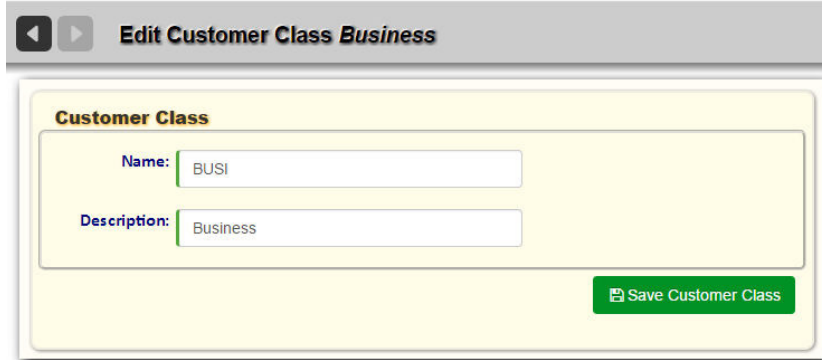
You associate a Customer Class with a customer via the Edit Customer screen.

Viewing the List of Customer Classes

- Select **Reference Data > Customers > Customer Classes**.

The **List of Customer Classes** screen displays.

Editing Customer Class Information

Click on the **Edit** button for the **Customer Class**.

The **Edit Customer Class** screen displays.

To edit the information, use the text fields.
Select **Save Customer Class** when done.

Adding a Customer Class Manually

You can add a Customer Class manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Customer Classes** and clicking the green plus sign icon .

- From the **List of Customer Classes** screen by selecting the **Add New** button.
  The **Add Customer Class** screen displays.
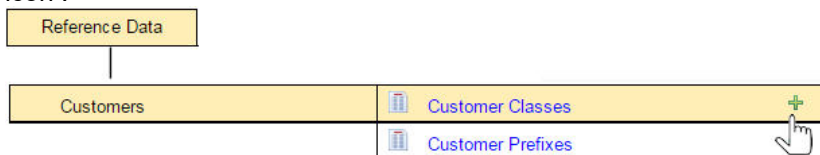
1. To add information, use the text field and check boxes.

2. Press **Save Customer Class** when done.

Deleting a Customer Class

To delete a Customer Class:

- From the List of Customer Classes screen, select the **Delete** button for the item you wish to remove from the list.
  You will be prompted to confirm deletion of the record.

Exporting Customer Classes

You can export Customer Classes for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data.

Customer Prefixes

When adding new customers to the FleetLink Route Management System, the application generates a unique ID for the new customer. A Customer Prefix is any alphanumeric string that is meaningful to your business for purposes of sorting or categorization of customers.
For example, if you wish to add a new customer to a Division of your business named "Beacon Hill", you may wish to add a customer prefix called "BH". This will enable you to generate a unique system ID resembling "BHnnnnnnnnn", where nnnnnnnnnn is the numeric part of the unique Customer ID.

Customer Prefixes are used to make customers linkable/groupable, and may be used in the future for billing purposes.

Viewing the List of Customer Prefixes

• Select **Reference Data > Customers > Customer Prefixes.**
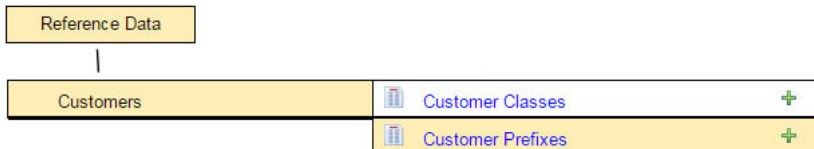
The List of Customer Prefixes page displays.
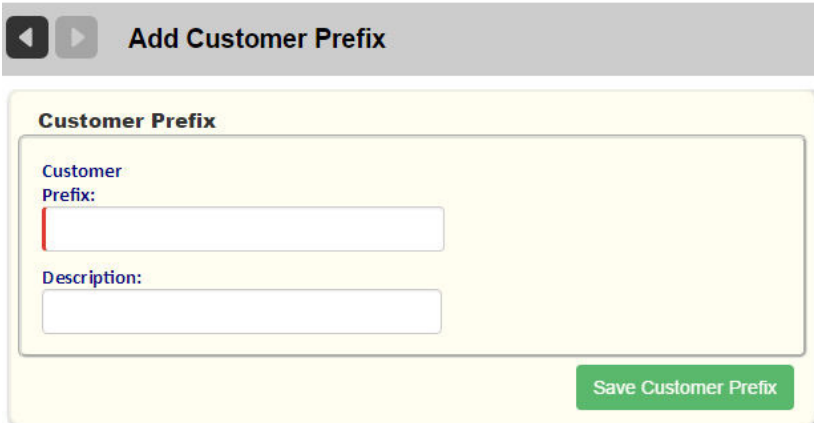
Adding a Customer Prefix

You can add a Customer Prefix in one of two ways:

• From the static portion of the UI by selecting **Reference Data > Customers > Customer Prefixes** and clicking the

green plus sign icon .
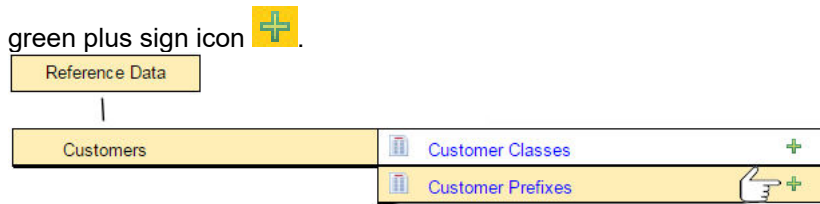
- From the **List of Customer Prefixes** screen by selecting the green plus sign icon in the header area of the dynamic portion of the screen.
  The **Add Customer Prefix** screen displays.

1. To add Customer Prefix information, use the text fields.

   o **Customer Prefix** is a mandatory field, and must be a unique identifier.

2. Press **Save** when done.

Exporting Customer Prefixes

You can export Customer Prefixes for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data.

Route Frequencies

Route Frequencies Reference Data defines the frequency with which your routes are run.

You associate a frequency with a route via the Edit Route screen.

Viewing the List of Route Frequencies

- Select **Reference Data > Routes > Route Frequencies**.

The **List of Route Frequencies** screen displays.

Editing Route Frequency Information

- Select the **Edit** button.
The **Edit Frequency** screen
displays.

To edit route frequency information, use the text field and check boxes.
Select **Save Route Frequency** when done.

Adding a Route Frequency Manually

You can add a route frequency manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Routes > Route Frequencies** and clicking the green plus sign icon .
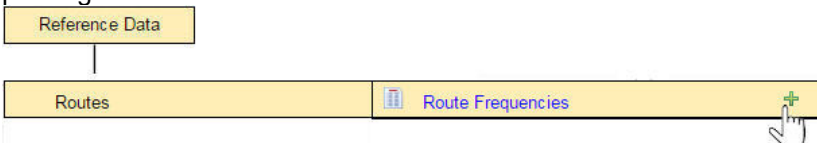
- From the **List of Route Frequencies** screen by selecting the **Add New** button.

The **Add Frequency** screen displays.

1. To add route frequency information, use the text field and check boxes.

2. Press **Save Route Frequency** when done.

Deleting a Route Frequency

To delete a route frequency:

•   From the List of Route Frequencies screen, select the **Delete** button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.

Exporting Route Frequencies

You can export Route Frequencies for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data .

Cart and Container Types

Cart and Container Reference Data specifies the types of waste receptacles used by your business, and hence, the cart/container types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface. Common examples include Blue Boxes, Totes, Yard Bins, and Compactors.

Viewing the List of Cart/Container Types

- Select **Reference Data > Carts/Containers > Cart/Container Types**.
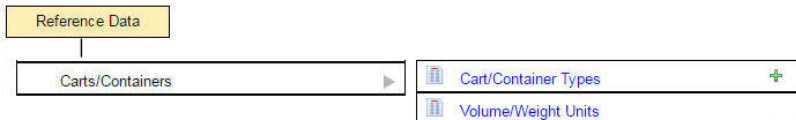
    The **List of Cart/Container Types** screen displays.

The list is a tabbed interface, providing lists of:

- **Cart/Container Types** (default view)
  Container types are descriptive categories that can be associated with containers. The programmed container types can be associated with Service Types .
  Container types are simply a code and description that are available via a drop down list when adding a container.
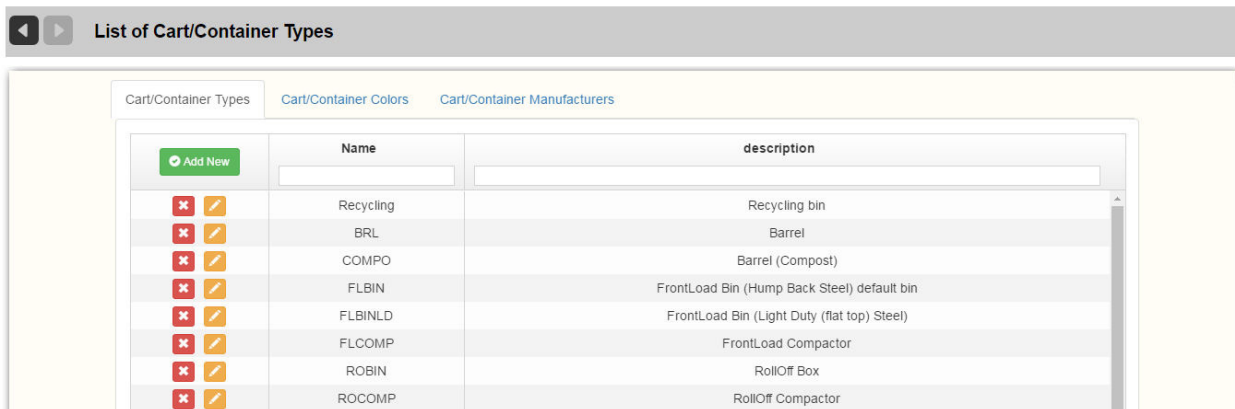
    The association of container type with container enables the system to group containers together, mostly for service type reasons and, ultimately, billing reasons.

- **Cart/Container Colors**
  Cart Container colors enable you to associate the color word to the container to be more descriptive. The actual visual color next to the word has no meaning.

The color is pushed through the assignment message to provide a more descriptive indication to the driver about the container he is servicing.

- **Cart/Container Manufacturers**
  The manufacturer label is simply an identification field. It's not pushed to other applications. There is no functionality tied to the manufacturer; it is simply a field that contains a code and description that is tied to defining a container.

Sorting and Searching

- Click on a column name in the header to choose a column's sort order.

- Type a search string into the filter text box of a column header

Editing Cart/Container Type Information

- Click on an item in the **Container Type** column.
  The **Edit Container Type** screen displays.

- To edit Container information, use the text fields.
  Press **Save Container Type** when done.

Adding a Cart/Container Type Manually

You can add a Cart or Container type manually in one of two ways:
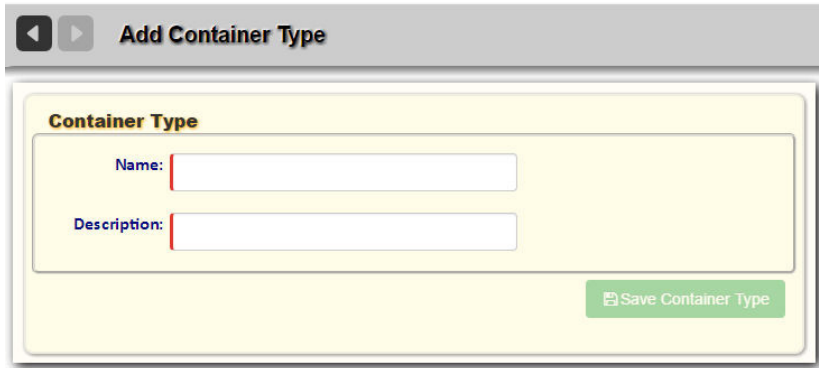
- From the static portion of the UI by selecting **Reference Data > Cart/Container Type** and clicking the green plus sign icon .
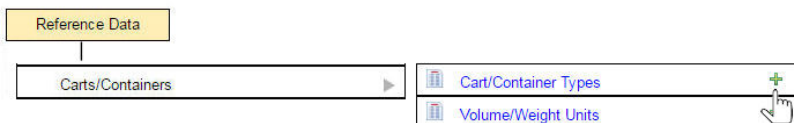
- From the **List of Cart/Container Types** screen by selecting the **Add New** button.

The **Add Container Type** screen displays.

1. To add Material information, use the text fields.

2. Press **Save Container Type** when done.

Deleting a Container Type

To delete a Container Type:

- From the **List of Cart/Container Types** screen, select the **Delete** button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.

Exporting Cart/Container Types

You can export Cart/Container Types for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data.

Truck Types

Trucks Reference Data defines the purposes of the vehicles used on your routes .

Viewing the List of Truck Types

- Select **Reference Data > Vehicles/Drivers > Truck Types**.
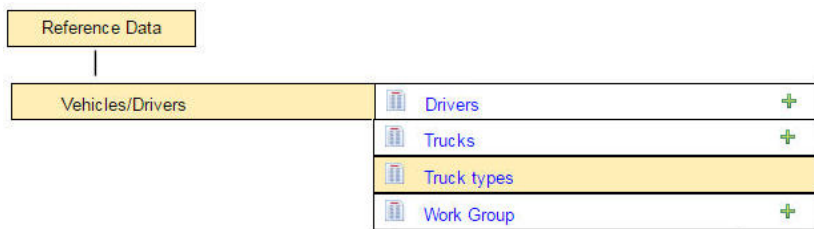
The List of Truck Types Displays

Name	description
RE	Residential/Commercia
RO	Roll-off
FB	Cart delivery
SD	Sewer/Drain cleaning
RS	Road sweeper
PP	Port-o-Potty
LQ	Liquid waste

Truck types are hard-coded in the RMS. They can be added, deleted, and edited only by authorized RMS users.

Exporting Truck Types

You can export Truck Types for migration to another platform using the Import Reference Data screen.
See Importing and Exporting Reference Data.

Building Categories

Building Categories Reference Data specifies the types of buildings serviced by your business .
Examples include Apartments, Office, Single-Family Dwelling, and Banquet Hall

This data has no impact on the FleetLink Mobile WasteApp user interface, but may be of use for route planning or statistical analysis by your Operations department.

A building category is a grouping available to the customer location that describes the building location. The Customer location will have a building category. Each customer can have multiple locations and each location can have multiple containers. The building category is associated with the Customer location level.

In the FleetLink Route Management System, the building category field gives the ability to the person in charge of creating the routes to omit a certain building type from the route generation process.
Building Categories are not transferred to any other level of FleetMind applications.

Viewing the List of Building Categories

• Select **Reference Data > Address/Location > Building Categories**.
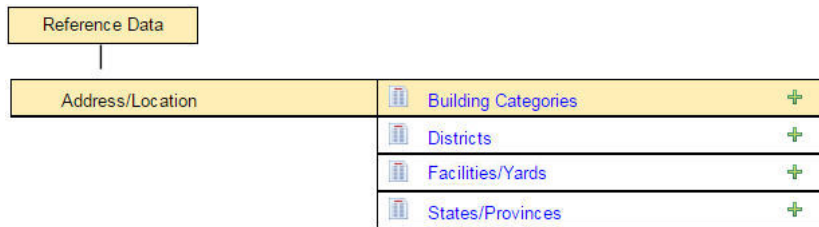
The **List of Building Categories** screen displays.

Sorting and Searching

- Click on a column name in the header to choose a column's sort order.

- Type a search string into the filter text box of a column header to search for an item.

Editing Building Category Information

- Click on an the **Edit** button for a Building Category.
  The **Edit Building Category** screen displays.

- To edit Building Category information, use the text fields.
  Press **Save** when done.
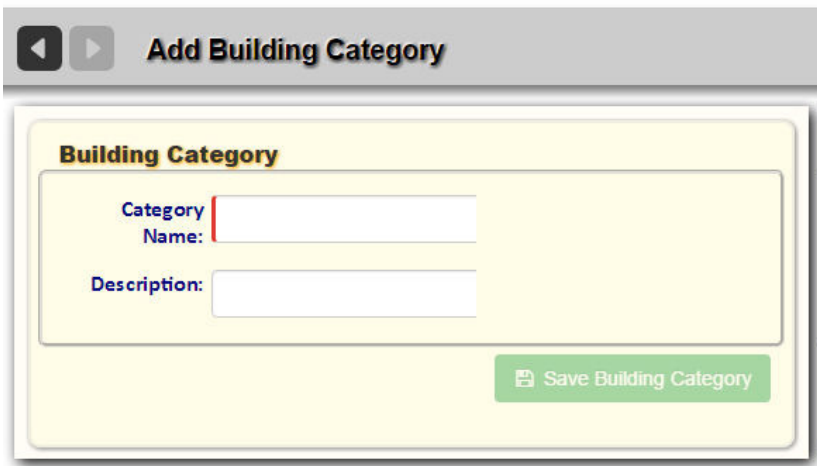
Adding a Building Category Manually

You can add a Building Category manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Building Categories** and clicking the green plus sign icon .

- From the **List of Building Categories** screen by selecting the **Add New** button. The **Add Building Category** screen displays.
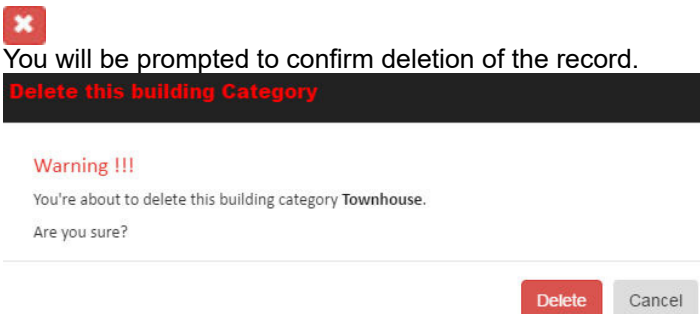
1. To add Building Category information, use the text fields.

2. Press **Save Building Category** when done.

Deleting a Building Category

To delete a Building Category:

- From the **List of Building Categories** screen, select the Delete button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.

Exporting Building Categories

You can export Building Categories for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data.

States and Provinces

States and Provinces Reference Data specifies the U.S. states and/or Canadian provinces serviced by your business.

Viewing the List of States

- Select **Reference Data > Address/Location > States/Provinces**.
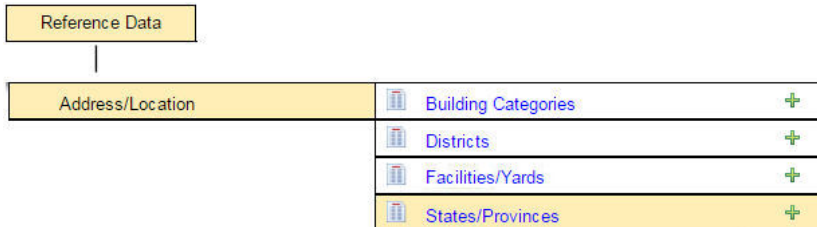
The **List of States/Provinces** screen displays.
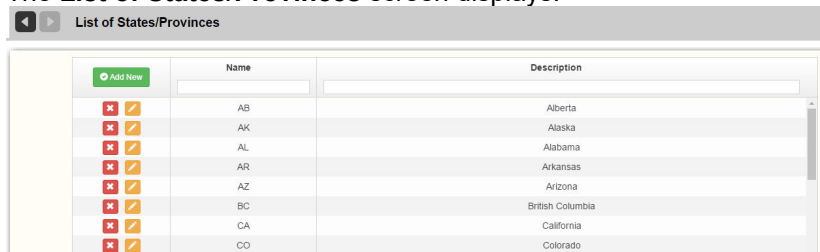
Sorting and Searching

- Click on a column name in the header to choose a column's sort order.

- Type a search string into the filter text box of a column header.

Editing States/Provinces Information

- Click on an item in the Code column.
  The **Edit State** screen displays.

1. To edit Facility information, use the text field.

    o **Name** is a mandatory field and must be a unique identifier.

2. Press **Save** ![save icon] when done.

Adding a State or Province

You can add a State or Province in one of two ways:

- From the static portion of the UI by selecting **Reference Data > States/Provinces** and clicking the green plus sign icon ![plus icon].
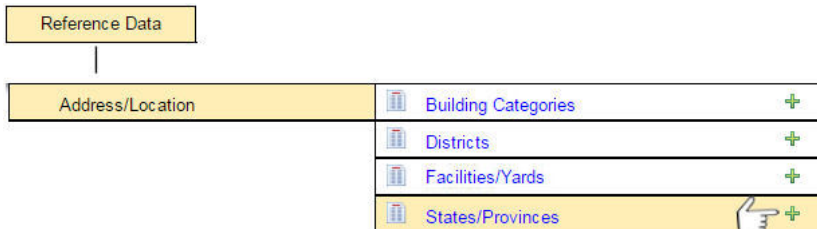
- From the **List of States and Provinces** screen by selecting the green plus sign icon in the header area of the dynamic portion of the screen.
  The **Add State** screen displays.

1. To add State/Province information, use the text fields.

    o **Name** is a mandatory field, and must be a unique identifier.

    o **Code** is the abbreviation for the province or state.

2. Press **Save State** when done.

Deleting a State or Province

To delete a State/Province:

- From the **List of States/Provinces** screen, select the **Delete** button for the item you wish to remove from the list. ![delete icon]
  You will be prompted to confirm deletion of the record.

Delete this state

Warning !!!

You're about to delete this state **DC.**

Are you sure?

Delete   Cancel

Exporting States/Provinces

You can export States/Provinces for migration to another platform via the Import Reference Data screen. See Importing and Exporting Reference Data.

Districts

Districts Reference Data specifies the geographic areas serviced by your business.

Viewing the List of Districts

1. Select **Reference Data > Address/Location > Districts.**

Reference Data

Address/Location

Building Categories   ✚
Districts   ✚
Facilities/Yards   ✚
States/Provinces   ✚
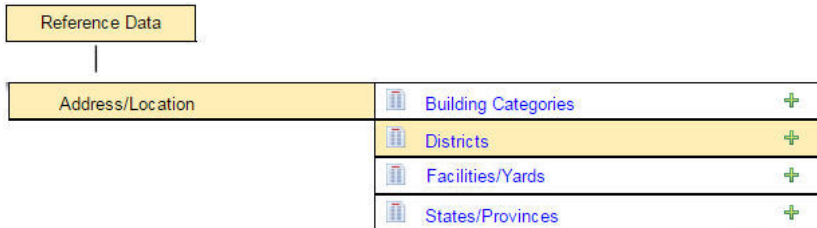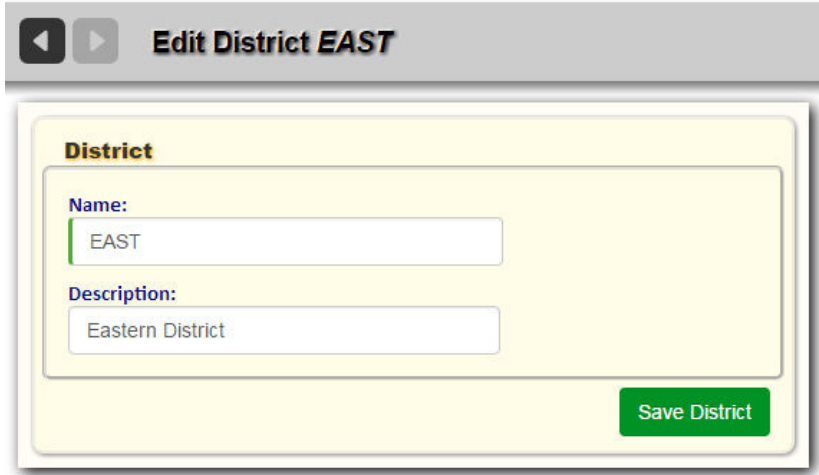
The List of Districts page displays.

◀ ▶ **List of Districts**

	District ▾	description
✚ Add New		
✖ ✎	XXXX	test import district
✖ ✎	West	West Side
✖ ✎	test	test
✖ ✎	South	South Side
✖ ✎	sdfsdfs	
✖ ✎	East	East Side
✖ ✎	sdfsd	
✖ ✎	North	North Side

• Clicking on an **Edit** button directs you to the Edit District page. ✎

• Selecting the **Delete** button deletes the selected District. ✖

• Selecting **Add New** enables you to add a new District. ✚ Add New

Editing Districts Information

1. Click on the **Edit** button on the List of Districts page.
   The Edit District page displays.

   District and **is a** mandatory field and must be a unique identifier.

2. Press **Save District** when done editing.

Adding a District

1. You can add a District in one of two ways:

   a. From the static portion off the UI by selecting **Reference Data > Address/Location > Districts** and clicking the green plus sign icon .
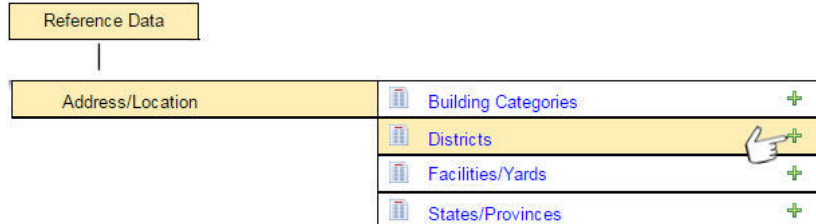
   b. From the **List of Districts** screen by selecting the **Add New** button.

      The **Add District** screen displays.
      The data elements on this screen are identical to those of the Edit District page.

2. Enter all required information and press **Save District** when done

Deleting a District

To delete a District:

- From the **List of Districts** screen, select the **Delete** button for the item you wish to remove from the list.
  You will be prompted to confirm deletion of the record.

Exporting Districts

You can export Districts for migration to another platform via the Import Reference Data screen. See Importing and Exporting Reference Data.

Volume and Weight Units

The FleetLink Route Management System has pre-programmed metric unit types:

• Cubic Meters

• Kilogram

• Kilometer

• Liter

• Meter

• Metric Ton

This page enables you to add a different unit of measurement corresponding to its equivalent metric unit type.

Viewing the List of Volume and Weight Units

1. Select **Reference Data > Carts/Containers > Volume/Weight Units.**
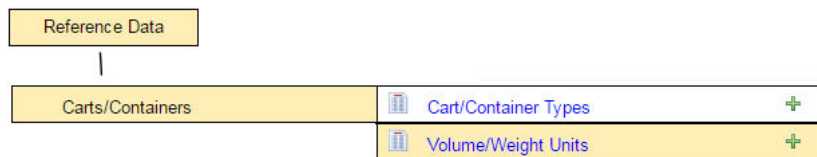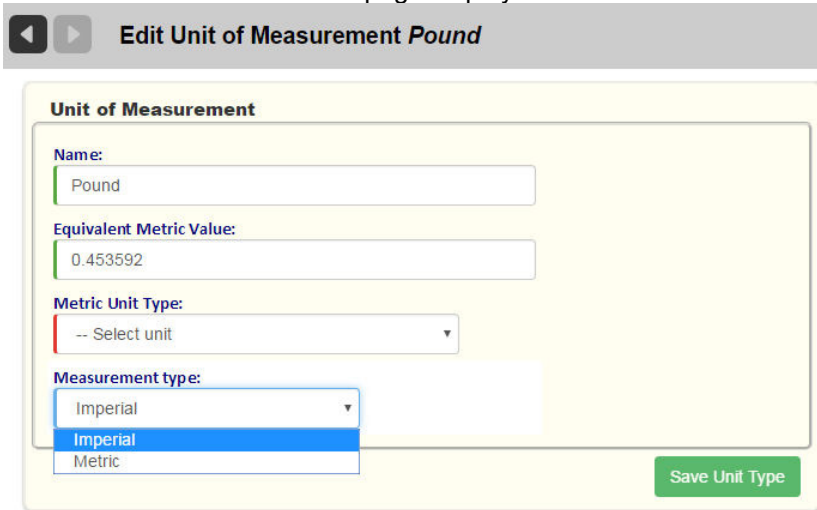
The List of Measurement Units page displays.

	Name	Equivalent Metric Value	Metric Unit Type	msrType	Description
Add New					
✕ ✎	1	2	L	I	Liter
✕ ✎	Cm	0.01	M	M	Meter
✕ ✎	Cubic-Yard	0.76455	CM	I	Cubic Meters
✕ ✎	Gallons	3.78541	L	M	Liter
✕ ✎	lb4lb	144.5	Kg	I	Kilogram
✕ ✎	Inch	0.0254	M	I	Meter

- Clicking on the **Edit** button directs you to the Edit Unit of Measurement page.

- Selecting the **Delete** button deletes the selected unit of measurement.

- Selecting **Add New** enables you to add a new unit of measurement.

Editing Volume and Weight Units Information

1. Click on an any highlighted link on the List of Measurement Units page.
   The Edit Unit of Measurement page displays.

Name and **Equivalent Metric Value are** mandatory fields; **Name** must be a unique identifier.

2. Press **Save Unit Type** when done editing.

Adding a Unit of Measurement

1. You can add a Unit of Measurement in one of two ways:

   a. From the static portion off the UI by selecting **Reference Data > Carts/Containers > Volume/Weight Units** and clicking the green plus sign icon .
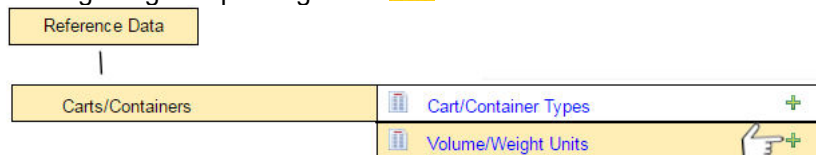
   b. From the **List of Measurement Units** screen by selecting the **Add New** button.

   The **Add Unit of Measurement** screen displays.
   The data elements on this screen are identical to those of the Edit Unit of Measurement page.

2. Enter all required information and press **Save Unit Type** when done

Deleting a Unit of Measurement

To delete a Unit of Measurement:

- From the **List of Measurement Units** screen, select the delete **Delete** button for the item you wish to remove from the list. ✖
You will be prompted to confirm deletion of the record.

Delete Material

Warning !!!

You're about to delete this material **lb4lb**.

Are you sure?

Delete   Cancel

Exporting Units of Measurement

You can export Units of Measurement for migration to another platform via the Import Reference Data screen. See Importing and Exporting Reference Data.

Case Actions

ⓘ This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Case Actions are the actions that can be taken to process or resolve a Customer Case.

These actions represent the available menu options you will see on the Action pull-down menu when editing or adding a customer case.
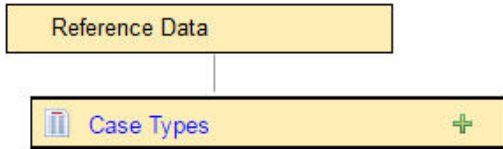
Action

Follow-up with custome ▼

Schedule cart delivery
Dispatch service
Follow-up with customer
Dispatch missed service
Provision new service
Schedule cart maintenance and repair
Send Education/outreach
Send Education/outreach

See Defining CSR Reference Data.

Case Types

This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Case Types indicate the nature of the customer case, as different types will determine the course(s) of action and may be accorded different priorities.

See Defining CSR Reference Data.

Rates

See also: Bundled Rates.

Viewing List of Rates

To view the List of Rates:

- Select **Reference Data > Rates, Services and Work Flows > Rates**.
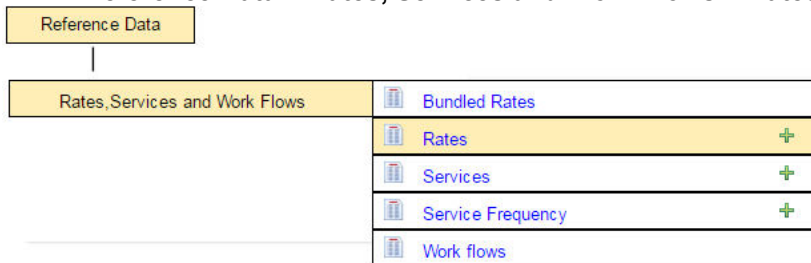
The List of Rates displays.

- Selecting the Active tab displays all Rates currently in effect.

- Selecting the Expired tab shows expired Rates.

Rates define the billing rates associated with different types of services, for example, regular service, extras, extra weight, and No Service.

After you have defined Rate Types, you can apply them when defining services.

Adding a New Rate

You can add a Rate manually in one of two ways:

- From the static portion of the UI by selecting **Reference Data > Rates, Services and Work Flows > Rates** and clicking the green plus sign icon .
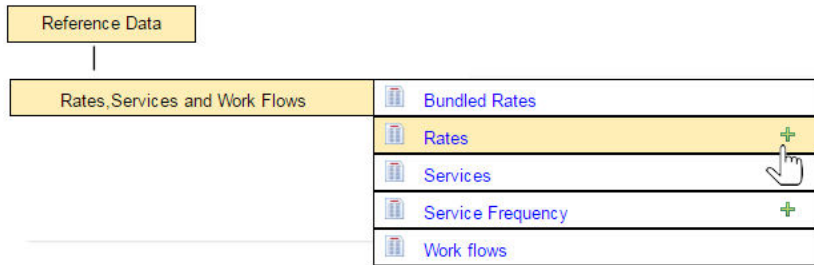
- From the **List of Rates** screen by selecting the **Add New** button.

The **Add Rate** screen displays.

Enter the new rate information using the text fields and pull-down menus.

When done, select **Save Rate**.

Exporting Rates

You can export Rates for migration to another platform using the Import Reference Data screen.
See Importing and Exporting Reference Data.

Bundled Rates

Bundled Rates are special discounted rates available to customers who subscribe to a package comprising multiple service subscriptions.

Viewing List of Bundled Rates

To view the List of Bundled Rates:

Select **Reference Data > Rates, Services and Work Flows > Bundled Rates**.

The List of Bundled Rates displays.

The first column in the table lists the rate code and (in parentheses) the number of services in the bundle.

Clicking an expand button ⊞ displays the list of services in the bundle.

Typing search criteria into the text fields in the table header filters the contents, displaying only those bundled rates containing the specified criteria.
Clicking the **X** in the text fields clears the filter.

Editing Bundled Rates

To edit a Bundled Rate:

- Click its **Edit** button.
  The **Modify Bundled Rate** screen displays.

⚠ Edit functionality will differ according to the bundle's "in-use" status:

- In-use bundles are displayed in grayed-out text. They cannot be deleted, and the only parameter that can be edited is **Amount**.

- Never-used bundles can be deleted, and their edit screen allows all fields to be edited.

In-Use Bundles

To edit an in-use bundled rate:

1. Enter a new value in the **Amount** text field.

2. Click **Save** when done.

Never-Used Bundles

For unused bundled rates, you can:

- Delete the Bundled Rate.

- Modify the Bundled Rate Name.

- Modify the Amount.

- Remove services from the bundle.

- Add services to the bundle.

To delete a Bundled Rate:

- Select its delete icon.

To modify Name or Amount:

1. Type a new value into the respective text field.

2. Select **Save**.

To remove a service from the bundle:

1. In the Bundled Services list (left panel), select the check box for the service.
   The service displays as red strike-through text.

2. Select **Save**.

To add a service to the bundle:

1. In the Add Service area (right panel), select a service from the **Service to Add** pull-down menu.

2. Select **Add to Bundle**.
    The service is added to the Bundled Services list.

3. Select **Save**.

Exporting Bundled Rates

You can export Bundled Rates for migration to another platform using the Import Reference Data screen.
See Importing and Exporting Reference Data.

Case Reasons

ⓘ This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Case Reasons represent predefined descriptions of the case that the Customer Service Representative will be able to select from a pull-down menu when entering or editing a case.

See Defining CSR Reference Data.

Case Source Types

ⓘ This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Customer Cases will usually be initiated by a communication from the customer—via various means, such as email, telephone, web interface, and so on—to register a complaint or request a service

Customer Cases may also, on occasion, originate with a driver. For example, a driver may notice that a customer's bin is missing a wheel or is damaged to the point that it cannot be lifted with a side-loader. The driver may then relay this information to the back office so that a Customer Case may be created.

See Defining CSR Reference Data.

Case Statuses

ℹ️ This reference data element is a component of the Customer Service Representative (CSR) Dashboard and may not be applicable to your installation.

Case status indicates the current state of a customer case within the CSR's work flow.

Three statuses are predefined in the CSR Dashboard:

- Open - Unassigned

- Open - Assigned

- Closed

See Defining CSR Reference Data.

Company

Company reference data defines the properties of your company.

Used primarily for Customer Service Report generation, Company reference data has the following hierarchy:

- Company

- Region

- Division

- Site

- Service Area

When generating either the Curbside CSR or the Multi-Family CSR reports, one of the mandatory criteria is *Service Area*. When creating a case, the user will select the service area as part of the report criteria.

The service area is the bottom of the hierarchical company chart.

Adding a Region to the Company

To add a Region:

1. Select **Reference Data > Organization > Company** to display the Edit Company page.

2. Select the green plus sign icon ➕ in the header area of the dynamic portion of the screen.
   The Add Region page displays.

3. Enter a region name in the **Name** field.
   This is a mandatory field and must be a unique identifier.

4. Enter a meaningful description for the region in the **Description** field.

5. Click **Save** 💾 when done.
   Your new Region is added to the Edit Company page.

Adding a Division to a Region

To add a Division to a Region:

1. From the Edit Company page, click the highlighted link for the desired Division to display the Edit Region page.

2. Select the green plus sign ✚ icon in the header area of the dynamic portion of the screen.

The Add Division page displays.

3. Enter all required information using the text fields and pull-down menu.

⚠️ Name is a mandatory field and must be a unique identifier.

4. Click **Save** 💾 when done.
    Your new Division is added to the Edit Region page.

Adding a Site to a Division

To add a Site to a Division:

1. From the Edit Division page, select the green plus sign icon ➕ in the header area of the dynamic portion of the screen.

The Add Site page displays.

2. Enter all required information using the text fields and pull-down menu.

   ⚠ Name is a mandatory field and must be a unique identifier.

3. Click **Save** 🖫 when done.
   Your new Site is added to the Edit Division page.

Adding a Service Area to a Site

To add a Service Area to a Site:

1. From the Edit Site page, select the green plus sign ✚ icon in the header area of the dynamic portion of the screen.

Managing Reference Data

The Add Service Area page displays.

2.   Enter all required information using the text fields and pull-down menu.

⚠ Name is a mandatory field and must be a unique identifier.

3.   Click **Save** 💾 when done.
     Your new Service Area is added to the Edit Site page.

The Service Area will now be an available menu option (and a mandatory field) when generating Customer Service Reports.

Trucks

Trucks Reference Data defines the vehicles used on your routes.

ⓘ Because truck creation in the FleetLink Route Management System and the Command Center are independent, they need to be created in both places.

⚠ Residential routes are server-resource intensive. If the system has been setup to send 20 residential routes every morning to trucks that don't exist, valuable route generation time will be wasted.
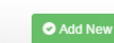
The only data that is functionally important to the system is the name of the truck. All other fields are just descriptive.

Viewing the List of Trucks

- Select **Reference Data > Vehicles/Drivers > Trucks**.
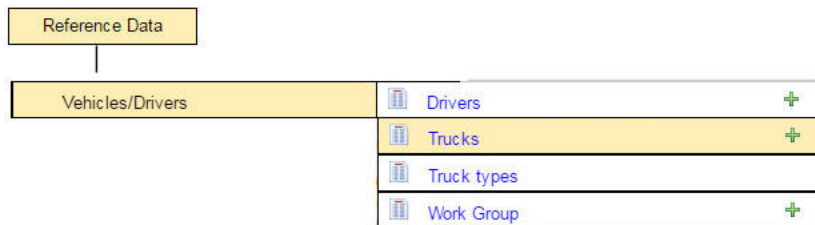
The List of Trucks screen displays.

Sorting and Searching

- Use the **Sort Ascending/Sort Descending** arrows ⬇ ⬆ to choose a column's sort order.

- Type a search string into the text box of a column header and press the **Search** icon 🔍 to search for a truck or a description.
Use the **Reset Search** icon ↩ to clear the contents of the search text field.

Editing Truck Information

- Click on an item in the Truck or Description column.
The Edit Truck screen displays.

- To edit truck information, use the text fields and pull-down menus. Select **Save Truck** when done.

Adding a Truck Manually

You can add a truck manually in one of two ways:

1. From the static portion off the UI by selecting **Reference Data > Vehicles/Drivers > Trucks** and clicking the green plus sign icon.
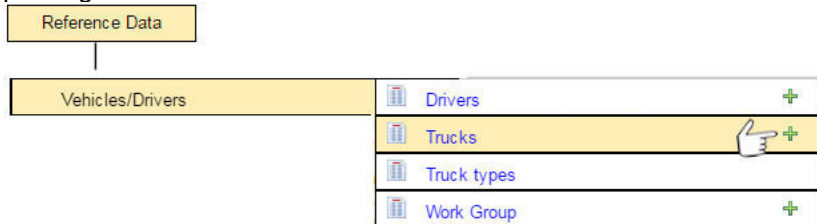
2. From the List of Trucks screen by selecting the green plus sign icon in the header area of the dynamic portion of the screen.

The Add Truck screen displays.

3. To add truck information, use the text fields and pull-down menus.

4. Press **Save Truck** when done.

Deleting a Truck

To delete a truck:

- From the List of Trucks screen, select the delete (red X) icon for the truck you wish to remove from the list.

Truck ⬇ ⬆		Truck Type	Description ⬇ ⬆		Work Group	✚
3028		Roll-off	SL (1 Tip)			✖
3031		Residential/Commercial	SLM		SOUTH-G	✖
3033		Residential/Commercial	SLM			✖
3036		Residential/Commercial	OTT			✖
3037		Residential/Commercial	SLM			✖
3041		Residential/Commercial	SLM			✖
3042		Residential/Commercial	SLM			✖
3045		Residential/Commercial	SLM			✖
3046		Residential/Commercial	SLM			✖
4006		Residential/Commercial	RL (1 Tip)			✖
4009		Residential/Commercial	RL (1 Tip)			✖
4010		Residential/Commercial	RL (1 Tip)			✖
4018		Residential/Commercial	RL			✖
4028		Residential/Commercial	RL			✖
4032		Residential/Commercial	RL (1 Tip)			✖
4036		Residential/Commercial	SLM (1 Tip)			✖
85			Total: 85			Export

- You will be prompted to confirm deletion of the record.

Confirm deletion

Are you sure you want to delete the record 3028!

[Yes] [No]

Drivers

Drivers Reference Data defines the personnel authorized to drive the vehicles in your fleet.

Changes to drivers in this page are reflected in the drivers master list, and must conform to the waste messaging API.

```
MSGTYPE=DRV            3    alpha-num    mandatory
VEHNAME=33-106         10   alpha-num    mandatory
LSTVER=050418160000    12   alpha-num    mandatory
LSTSIZE=00007          5    num          mandatory
00001CODE=AA           20   alpha-num    mandatory
00001DESC=ABDUL        20   alpha-num    mandatory
00002CODE=AM
```

Viewing the List of Drivers

- Select **Reference Data > Vehicles/Drivers > Drivers**.
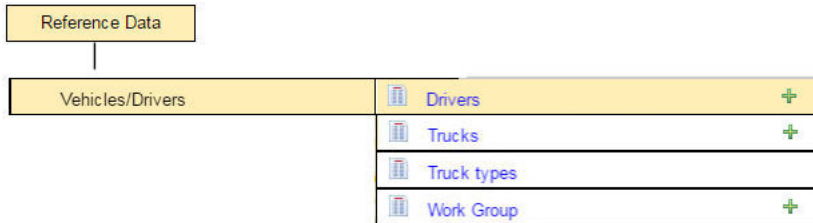
The **List of Drivers** screen displays.

Name	Code	Start date	Crew Member	
Adam Chouinard	83	2014-05-21 00-33-45	No	✖
Ajay Mann	105	2014-05-21 00-33-45	No	✖
Albert Prince	46	2014-05-21 00-33-45	No	✖
Alex Venegas BK	136	2014-05-21 00-33-45	No	✖
Allen Cook	16	2014-05-21 00-33-45	No	✖
Areil Capiendo	77	2014-05-21 00-33-45	No	✖
Brad Wiebe	89	2014-05-21 00-33-45	No	✖
Brian Kaplan	112	2014-05-21 00-33-45	No	✖
Brian Clyne	13	2014-05-21 00-33-45	No	✖
Calvin Dick	56	2014-05-21 00-33-45	No	✖
Charanpreet Sharma	3	2014-05-21 00-33-45	No	✖
Charles Rudolph	4	2014-05-21 00-33-45	No	✖
Charles Lenton	54	2014-05-21 00-33-45	No	✖
Charles Rudolph	67	2014-05-21 00-33-45	No	✖
Charles Boyd	7	2014-05-21 00-33-45	No	✖
Chris Desiarlais	109	2014-05-21 00-33-45	No	✖

90   Total: 90   Export

This screen is a tabbed interface that comprises lists of active and inactive drivers.

Sorting and Searching
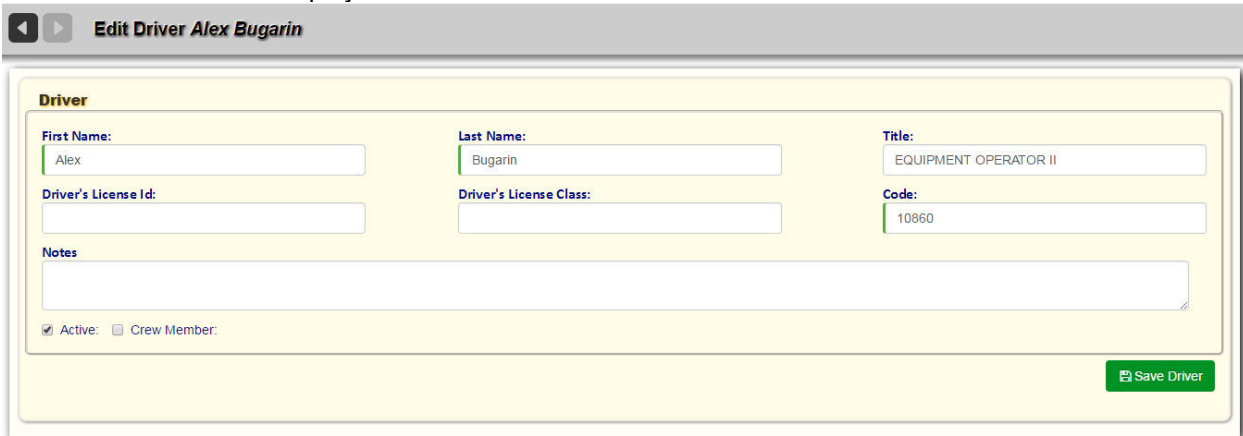
- Use the **Sort Ascending/Sort Descending** arrows to choose a column's sort order.

- Type a search string into the text box of a column header and press the **Search** icon 🔍 to search for a **Driver**, **Code**, or **Start Date**.

  Use the **Reset Search** icon ⬛ to clear the contents of the search text field.

Editing Driver Information

- Click on an item in the **Driver**, **Code**, or **Start Date** column.
  The Edit Driver screen displays.
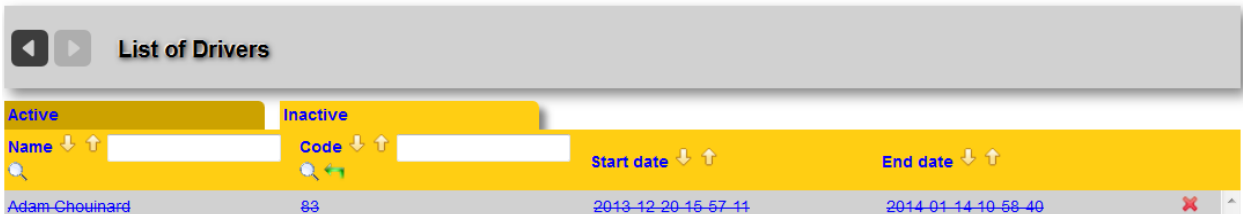
To edit driver information, use the text fields and check boxes.
Press **Save Driver** when done.

⚠️ CHANGING DRIVER STATUS

To change a driver's status from Active to Inactive:

- Uncheck the **Active** check box ☑, and then press **Save Driver** .
  The driver's name is moved from the Active to Inactive list.

To return a driver to Active status.

1. From the Inactive list, click on a driver's name to re-display the **Edit Driver** screen.

2. Check the **Active** check box, and then press **Save Driver** .

The driver is now returned to the Active list.

Adding a Driver Manually

You can add a driver manually in one of two ways:

- Select **Reference Data > Vehicles/Drivers > Drivers** and click the green plus sign icon.
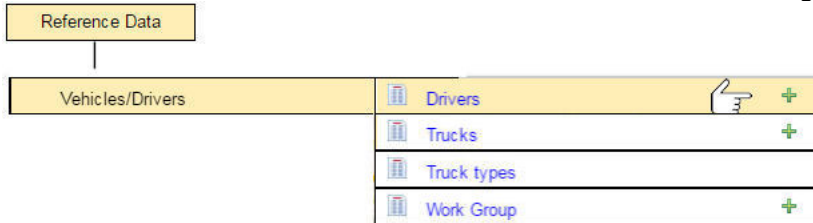
- From the **List of Drivers** screen by selecting the green plus sign icon in the header area of the dynamic portion of the screen.
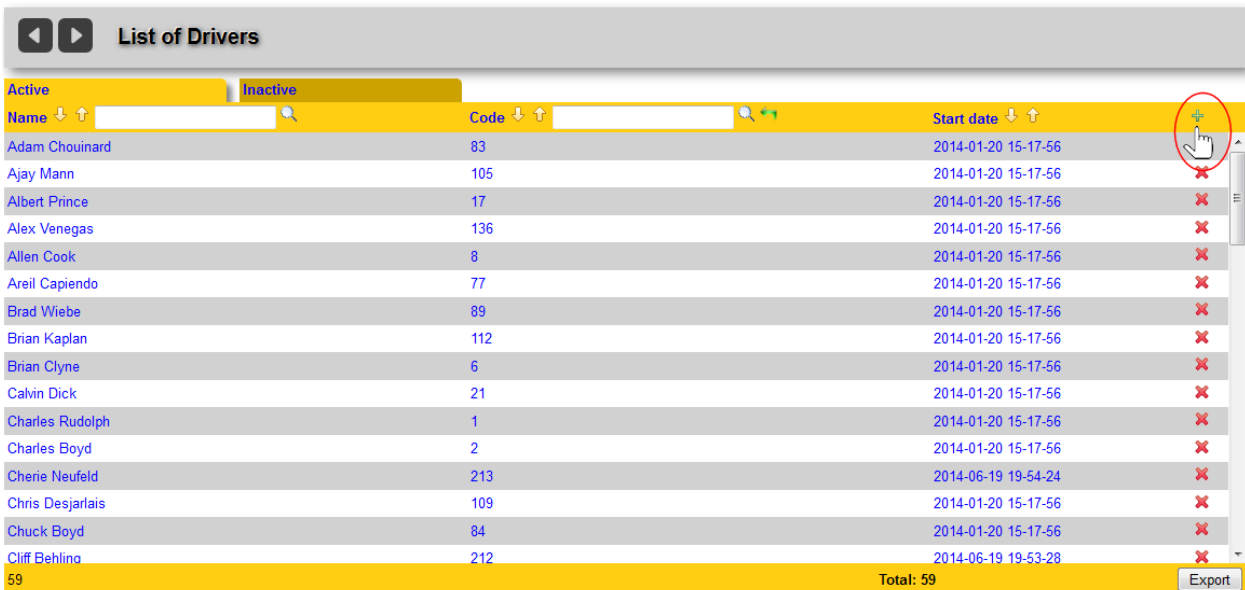
The **Add Driver** screen displays.

1. To add driver information, use the text fields and pull-down menus.

2. Press **Save Driver** when done.
   The newly added driver is placed automatically in the Active list.

Deleting a Driver

To delete a driver:

- From the List of Drivers screen, select the delete (red X) icon for the driver you wish to remove from the list. You will be prompted to confirm deletion of the record.

Confirm deletion

Are you sure you want to delete the record Dweezil Fong!

Yes   No

Activity Codes

Activity Codes Reference Data defines the codes that indicate the completion status for stops on your routes; they are completion codes that are included in the activity master list that's sent to the mobile.
Examples include Completed (normal completion), UTS (unable to service)—bin not out, access blocked, cart misplaced, and so on.

Activity Codes Reference Data defines the buttons or menu options available on the FleetLink Mobile WasteApp user interface, their captions, and the order in which they are presented to the user.

They are restricted to the Waste API fields.

```
MSGTYPE=ACT              3     alpha-num              mandatory
VEHNAME=33-106          10     alpha-num              mandatory
LSTVER=050419160000     12     alpha-num              mandatory
LSTSIZE=00004            5     num                    mandatory
00001CODE=C              4     alpha-num              mandatory
00001DESC=COMPLETE      20     alpha-num              mandatory
00001EXCEP=N             1     'Y' or 'N' (def=Y)     optional
00001COMP=Y              1     'Y' or 'N' (def= N)    optional
```

Viewing the List of Activity Codes

- Select **Activity Codes** from the Reference Data pull-down menu.

Reference Data

Activity Codes   +

The **List of Activity Codes** screen displays.

Sorting and Searching

- Click on a column name to sort ascending or descending.

- Type a search string into the filter text box of a column header.

Editing Activity Code Information

- Click on an item in the Activity Code column.
  The **Edit Activity Code** screen displays.

- To edit activity code information, use the text fields and pull-down menu.

Press **Save Activity Code** when done.

ⓘ About Reroutable Activity Codes

All Activity Codes have an associated **Reroutable** flag.
Used primarily for exceptions, when this check box is selected, the driver will have the option of making the unserviceable stop Reroutable, which means that it will be removed from his assignment list and made available for rescheduling by Dispatch on another route.

A typical example would be the **BLOCKED REROUTE** button when logging an exception status.

Adding an Activity Code Manually

You can add an Activity Code manually in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Activity Codes** and clicking the green plus sign icon .
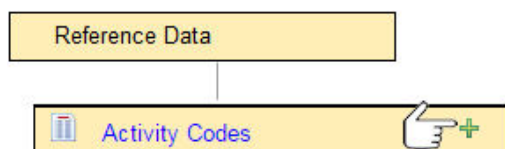
- From the **List of Activity Codes** screen by selecting the **Add New** button.

The **Add Activity Code** screen displays.

1.   To add activity code information, use the text field and pull-down menus.

2.   Press **Save Activity Code** when done.

Deleting an Activity Code

To delete an activity code:

- From the List of Activity Codes screen, select the **Delete** button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.

Resequencing Activity Codes

An activity code's value in the Sequence column defines the order in which that function (button or menu option) appears on the FleetLink Mobile WasteApp user interface.

For example:
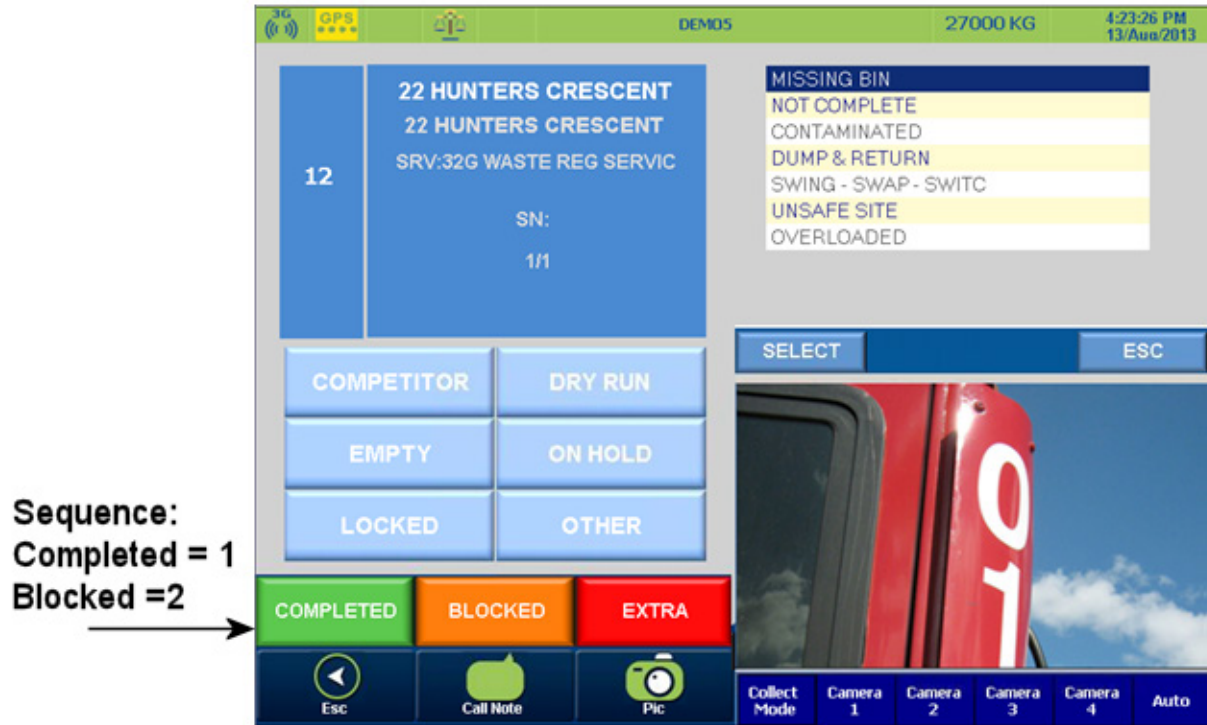
You can customize this order to suit your requirements or preferences by editing the value in the **Sequence** column.

To resequence an Activity Code:

- From the **Edit Activity Code** screen, type the desired value into the **Sequence** text field, or use the increment/ decrement controls to change the value..

Exporting Activity Codes

You can export Activity Codes for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data

Facilities

**Disposal Facilities Reference Data specifies the Disposal Facilities utilized by your business .
Information includes contact information and Facility location, which the application can translate into geographic coordinates for use by the FleetLink Mobile WasteApp .**

The Route Management System does not have the ability to add/remove facilities based on LOB or division. This means that all trucks will receive all entries in the in this list (unless modified through the FleetLink Connector)

ⓘDisposal messages coming from the mobile are not inserted to the route system database.

Only the code and description are passed to the FleetLink Connector; the column length is respected from the waste API.

```
MSGTYPE=FAC                     3     alpha-num                          mandatory
VEHNAME=33-106                  10    alpha-num                          mandatory
LSTVER=050630160000             12    alpha-num                          mandatory
LSTSIZE=00005                   5     num                                mandatory
00001CODE=TT                    10    alpha-num                          mandatory
00001DESC=TIDEMORE TRANSFER     20    alpha-num                          mandatory
00001GPSLAT1=                   10    alpha-num  +/-deg.decimal  Note1    Optional
00001GPSLON1=                   10    alpha-num  +/-deg.decimal  Note1    Optional
00001GPSLAT2=                   10    alpha-num  +/-deg.decimal  Note1    Optional
00001GPSLON2=                   10    alpha-num  +/-deg.decimal  Note1    Optional
00002CODE=ATTAR
00002DESC=ATTAR METALS
00003CODE=BFI VAUG
00003DESC=BFI – VAUGHAN
00004CODE=CANSORT
00004DESC=CAN-SORT RECYCLING
00005CODE=CAPITAL
00005DESC=CAPITAL – BRAMPTON
```

Viewing the List of Facilities

- Select **Reference Data > Address/Location > Facilities**.

The **List of Facilities** screen displays.

Sorting and Searching

- Click on a column name to sort ascending or descending.

- Type a search string into the filter text box of a column header.

Editing Facility Information

- Click on the **Edit** button for a Facility.
The **Edit Facility** screen displays.

1. To edit Facility information, use the text fields.

    o **Code** and **Description** are mandatory fields; **Code** must be a unique identifier.

    o **Sequence** is the order in which the Facility is displayed among the controls or menu options on the FleetLink Mobile WasteApp user interface. You may leave this value at **0** for the time being and edit later.

    o **Address**, although not a mandatory field, is one whose contents can be used by the system to calculate the geographic coordinates for the facility. Specify full address including ZIP code or Postal Code when ever possible.

    o **Phone** and **Fax** fields are for human reference only, and have no impact on the functionality of FleetLink Mobile WasteApp.

    o **Latitude** and **Longitude** are the geographic coordinates of the facility. You may enter these manually or omit them altogether. If you have specified a full and valid address in the **Address** field, the application may calculate the coordinates and copy them to these fields automatically.

    o **GeoZone**: A unique identifier for the GeoZone. Make selection using the pop-up window.

    o **Integrated**: Specifies whether the Facility is equipped with integrated weigh scales.

    o **Map controls**:

        ▪ Right-clicking on a location on the map pins the Facility at those coordinates and updates the Latitude and Longitudes fields accordingly.

        ▪ Dragging the pin icon repositions the Facility and updates the Latitude and Longitudes fields with the new coordinates.

        ▪ Clicking the "eye" button zooms the map into the Facility.

- o **Show Catalog**: If the Facility has provided a catalog with prices for disposal materials, clicking this button displays the catalog.
  You can update the catalog with new materials by clicking the catalog's **Add** button.

2. Press **Save Facility** when done.

Adding a Facility

You can add a Facility in one of two ways:

- From the static portion off the UI by selecting **Reference Data > Address/Location > Facilities** and clicking the green plus sign icon .
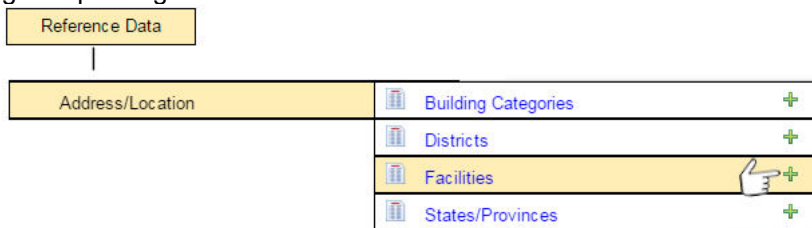
- From the **List of Facilities** screen by selecting the **Add New** button.
  The **Add Facility** screen displays.

- To add Facility information, use the text fields.
  See Editing Facility Information for field descriptions.

- Press **Save Facility** when done

Resequencing a Facility

Sequence refers to the order in which facilities are displayed on the driver's user interface.

You can resequence a facility in one of two ways:

- From the List of Facilities, by typing a value in the **Sequence** field, and then clicking **Save**.

- From the Edit Facility screen, by typing a new value in the text field, or using the increment/decrement controls.

Deleting a Facility

To delete a Facility:

- From the **List of Facilities** screen, select the **Delete** button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.

Assigning a GeoZone to a Facility

1. Open the List of Facilities (**Reference Data > Facilities/Yards**), choose the **Facilities** tab, and select a Facility from the list to open its edit screen.
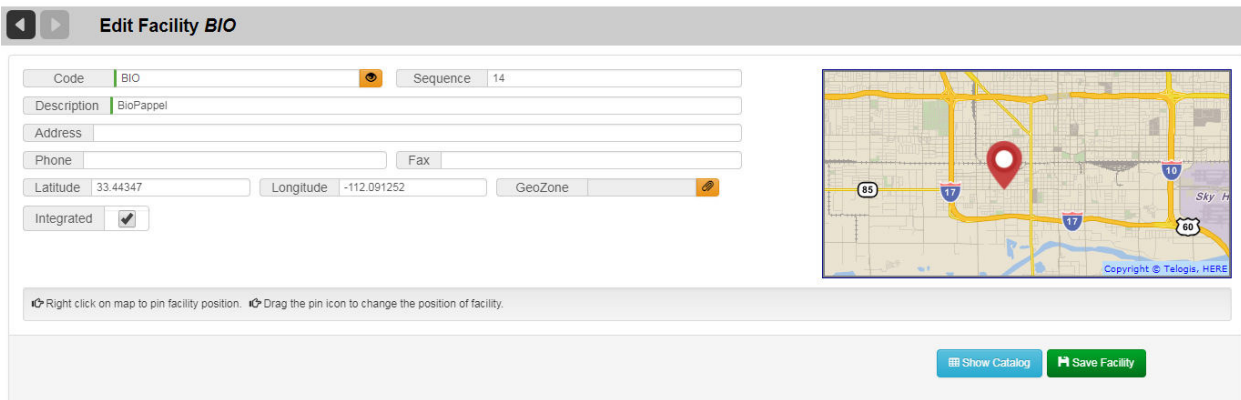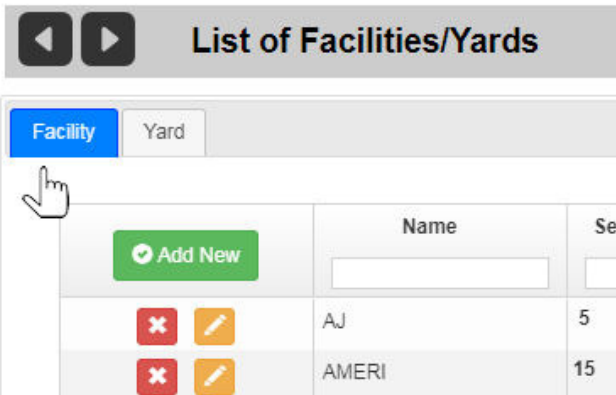
If the Facility is already linked to a GeoZone, its name is displayed in the GeoZone text field.
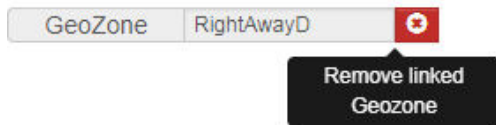
Otherwise, this field will be blank.

ⓘ You can break the current link by selecting the delete button.

To link an unlinked Facility:

2. Select the paper clip icon **(Link Facility to a GeoZone) to** show GeoZones.

Controls are provided to show all GeoZones in the RMS and to filter the list according to the Facility's coordinates. Hovering your mouse on a GeoZone name displays its polygon on the map.

3. Set a GeoZone by clicking on the Add icon adjacent to the GeoZone name.

    The GeoZone is assigned to the Facility and you are returned to the Edit Facility screen, where you must.select **Save Facility**.
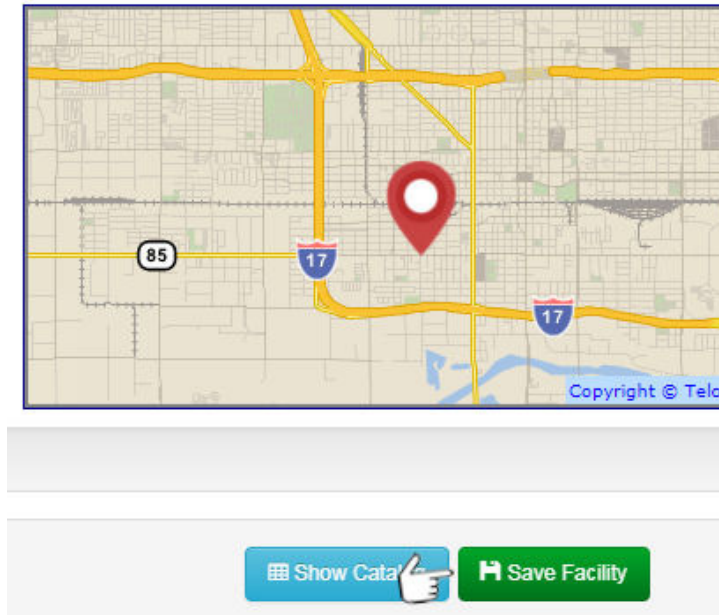
⚠ If none of the GeoZones displayed when you select Show GeoZones is suitable for the Facility, you can create your own Generic GeoZone, return to this edit page, and assign the new GeoZone to the Facility. See

Managing Costs for a Facility

RMS provides the capability to manage a catalog of costs per material at disposal facilities.

1. Select **Show Catalog.**
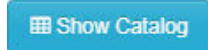
   The Facility Price Catalog displays showing the Name, Description, and a date range for which the catalog is valid.

CONTROLS	
	Add a material to the catalog.
	Show material cost.

❌	Delete material.
✏️	Edit material.
🗐	Clone price catalog.

Adding a Catalog Item

1. Click the **Add** button ⊕ in the table header.

2. Enter a name, description, and start date. End Date is optional.

3. Select **Save**.
   The material is added to the catalog.

Editing a Catalog Item

To edit a material item:

1. Click the **Edit Material** button ✏️ and make modifications as required on the Facility Price Catalog.

2. Select **Save** when done.

Deleting a Catalog Item

To delete a catalog item:

1. Select the **Delete Material** button .
   The item is removed from the catalog

Managing Material Costs

1. Select **Show Material Cost**.
   If no costs have been assigned, a message displays in the Cost area.

2. To assign a cost, click **Add Material Cost**.

3. Select **Material** and **Units** from their respective menus, and enter a cost in the **Cost** text field.

4. Click **Save** when done.
   The item is added to the list.

Cloning a Catalog

1. Select the **Clone Catalog** button.

The catalog and all its associated costs are added to the list, where you can rename, edit it, and change date range as required.

Exporting Facilities

You can export Facilities for migration to another platform using the Import Reference Data screen.See Importing and Exporting Reference Data .

Work Groups

See Managing Work Groups.

Services

Services Reference Data specifies the types of waste management services provided by your company and, hence,
the service types displayed on the calls list and menus of the FleetLink Mobile WasteApp user interface.
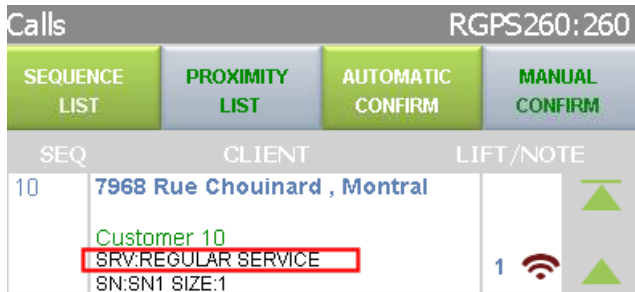
Viewing the List of Services

- Select **Reference Data > Rates, Services and Work Flows > Services**.
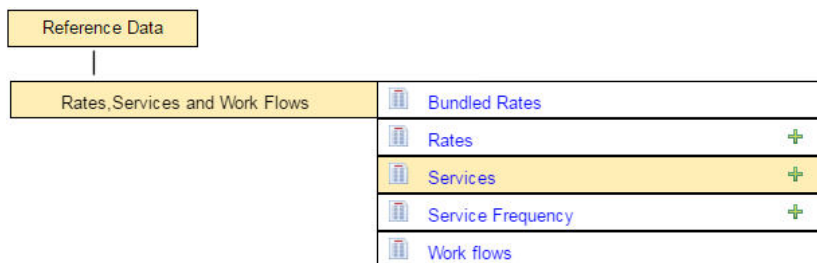
The **List of of Services** screen displays.
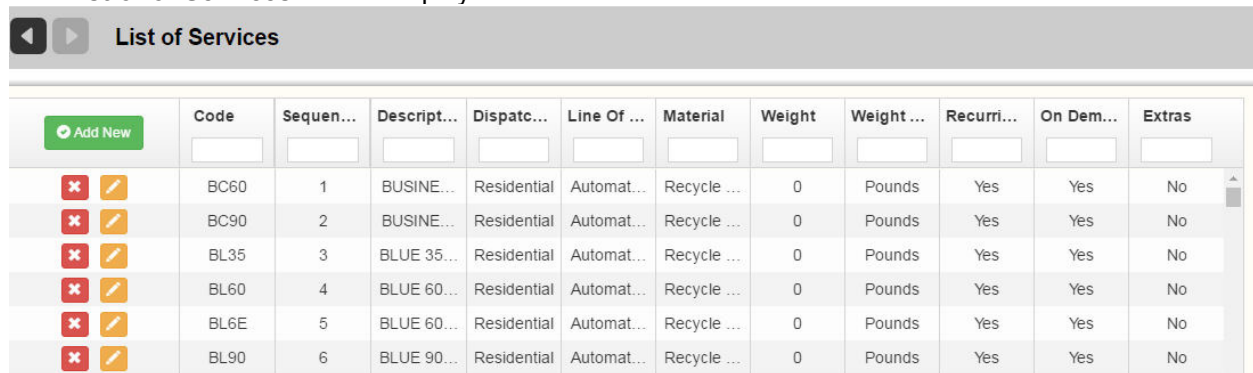
Sorting and Searching

- Click on a column name to sort ascending or descending.

- Type a search string into the filter text box of a column header.

Editing Services Information

1. Click on the **Edit** button for a Service.
   The **Edit Service** screen displays.

2. To edit Service information, use the text fields, check boxes, and pull-down menus.

    o   **Service Code** is a mandatory field and must be a unique identifier.

    o   **Service Description** is a mandatory field. Enter a meaningful description of the service.

    o   **Sequence** defines the order in which the Service appears in the FleetLink Mobile WasteApp user inter-face. This can be left at 0 for the time being; you can edit the value later.

    o   **(LOB) Line of business** specifies the market being served, e.g., *Commercial*, *Residential*; must match values defined in Lines of Business. If you have not already defined Line of Business reference data, this will menu will be empty.

    o   **Dispatch type**: selects a type of dispatch, and hence, type of vehicle for the service.

    o   **Material** specifies the waste material to be collected; must match values defined in Material Types. If you have not already defined Material Types reference data, this will menu will be empty.

    o   **Minimum weight**: Used to formulate correction factor for recording lift weights. (Can be left at 0.)

    o   **Weight** limit specifies the Weight capacity of the bin or cart.

    o   **Weight unit** is the unit of measurement; must match values defined in Volume and Weight Units. If you have not already defined Units reference data, this will menu will be empty.

    o   **Frequency** specifies the regularity with which the service is provided, e.g., weekly.

    o   **Recurring** denotes a regularly scheduled service, for example, weekly or bi-weekly.

    o   **Extra** specifies whether the service is considered an *Extra* service.

    o   **On demand** specifies whether the service is an *On Demand* service.

o **Default Recurring Work flow** specifies the description of the task, for example, *Cart to be replaced*; must match values defined in *Work Flows* . If you have not already defined Work Flow reference data, this will menu will be empty.

o **Supported Containers**: Use this area to manage (add, delete) containers supported by the service.

o **Workflows and Rates**: Use this area to manage (add, delete) to manage the work flows and associated billing rates supported by the service.

3. Press **Save Changes** when done.

Adding a Service
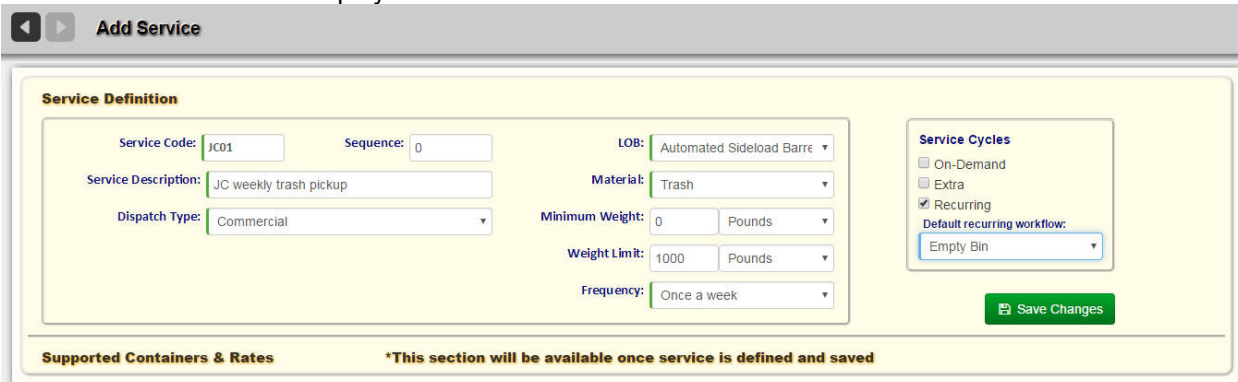
Adding Services is a step that is best left until you have defined all other Reference Data, as Services have dependencies on several other Reference Data categories.

You can add a Service in one of two ways:

- From the static portion of the UI by selecting **Reference Data > Rates, Services and Work Flows > Services** and clicking the green plus sign icon .
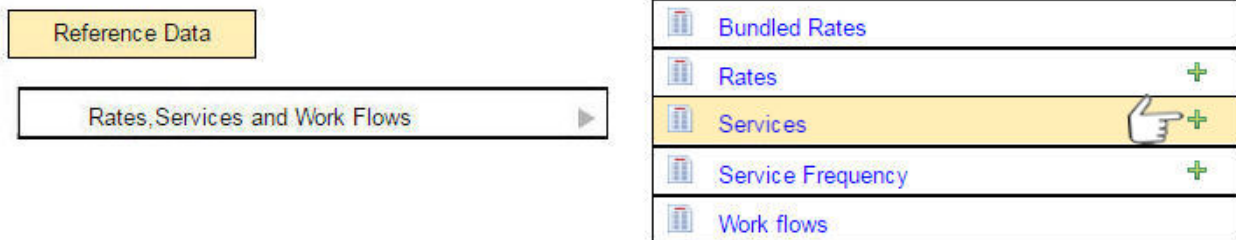
- From the **List of Services** screen by selecting the **Add New** button.
  The **Add Service** screen displays.

1. To add Service Definition information, use the text fields, pull-down menus, and check boxes.
   See Editing Services Information for field descriptions.

2. Once you have specified the Service Definition data and saved your changes, the page refreshes and you can add Container and Rates information.

Supported Containers, Workflows and Rates

To specify supported container(s):

1. Select **Add Container**.

2. From the Add Container window, select container type(s), and then click **Save**.

The containers are added to the list of those supported.

3. Select **Add Work Flow and Rate**.

4. Select a Workflow from the list.

5. Choose a Rate Code or, optionally, create a new one by selecting **Create New Rate**.
The selected rate code is applied to the workflow.

6. Select **Save**.

Deleting a Service

To delete a Service:

- From the **List Services** screen, select the **Delete** button for the item you wish to remove from the list. You will be prompted to confirm deletion of the record.

Exporting Services

You can export Services for migration to another platform using the Import Reference Data screen.
See Importing and Exporting Reference Data.

Service Frequencies

Service Frequency Reference Data specifies the frequency with which services are rendered at a Customer Location, for example, Daily, Twice a Week, On-Demand.

Viewing the List of Service Frequencies

- Select **Reference Data > Rates, Services and Work Flows > Service Frequency**
  The List of Service Frequencies screen displays.

Adding a New Service Frequency

To add a new service frequency:

1. Select the **Add New** button.
   The Add Service Frequency screen displays.

2. Enter a unique **Name** and a **Description** in their respective text fields.

3. Choose the **On-Demand** check box, as appropriate.

4. Select a Frequency: **Daily**, **Weekly**, or **Monthly**.

5. For Weekly and monthly frequencies, select an **interval.**

6. Click **Save** to commit your changes.

Editing a Service Frequency

To edit a service frequency:

1. Select its **Edit** button.
   The Edit Service Frequency screen displays.

2. Make the required modifications as described for *Adding a New Service Frequency*.

Deleting a Service Frequency

To delete a service frequency:

1. Select its **Delete** button.

2. Confirm the operation in the confirmation dialog.

Operating Departments

Operating Departments Reference Data specifies the cost centers responsible for the various types of waste management services provided by your business.

Each Operating Department may be associated with different Work Flows, Lines of Business, and Dispatch Types.

Viewing the List of Operating Departments

- Select **Reference Data > Organization > Operating Departments**.
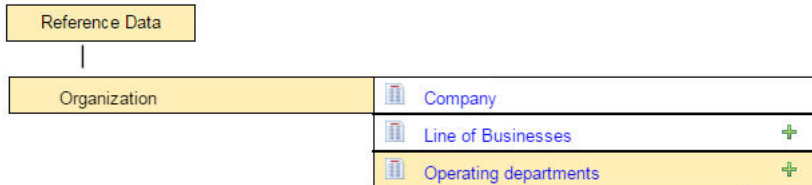
The List of Operating Departments displays.

Editing Operating Departments

1. Click the **Edit** button for the Operating Department.

2. Enter/modify the information in the text fields, and then select **Save Operating Department**.

Adding Operating Departments

1. You can add an Operating Department manually in one of two ways:

   o From the static portion off the UI by selecting **Reference Data > Organization > Operating Depart-**

ments and clicking the green plus sign icon .
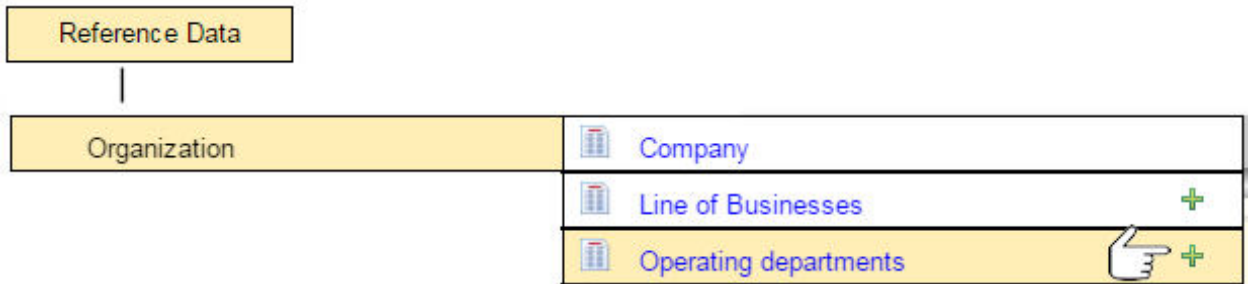
o   From the **List of Operating Departments** screen by selecting the **Add New** button.

2.   Enter a unique identifier in the **Name** field, and a description in the **Description** field.

3.   Select **Save Operating Department.**

Deleting an Operating Department

To delete an Operating Department:

*   From the List of Operating Departments screen, select the **Delete** button for the item you wish to remove from the list.
    You will be prompted to confirm deletion of the record.

Exporting Operating Departments

You can export Operating Departments for migration to another platform using the Import Reference Data screen. See Importing and Exporting Reference Data.

Managing Work Groups

What are Work Groups?

A work group is a collection of vehicles working as a team to complete work assigned to them. From the perspective of the FleetLink Route Management System, a work group can be thought of as an identifier that can be set as a destination of a route.

Work Group Concepts
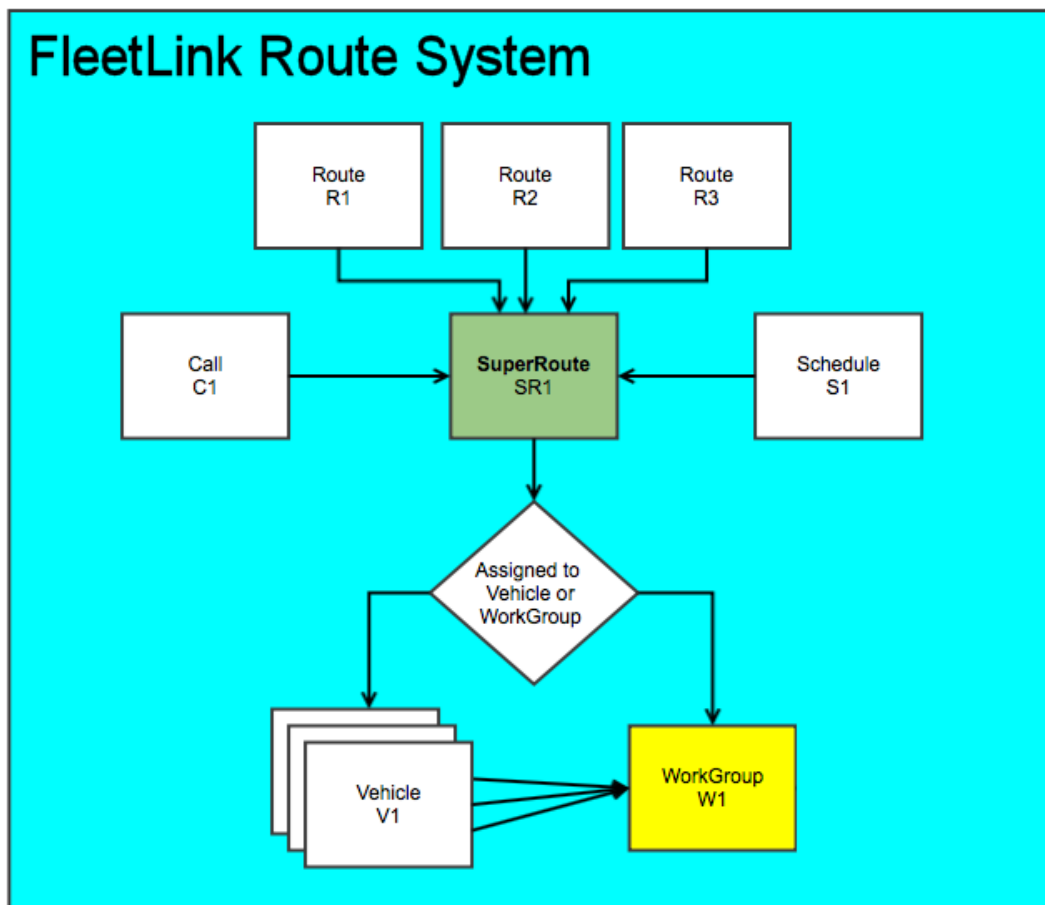
- Operations or Dispatch personnel create a Work Group as a Reference Data entity (see Defining Work Groups). They can then populate that Work Group by selecting trucks already defined in the Route Management System and assigning them to the Work Group.

- A Work Group mimics the behavior of a Truck with respect to confirmations, alarms and disposals. It is a "Virtual Truck".

- As stops get confirmed (or driven-by, or stopped-by), the messages are communicated and the status of the routes are updated, specifying which truck communicated the information. The status of the Super Route is a "view" of the status of each route comprising it.

- The dispatcher may need to reconfigure the WorkGroup if a truck fails to start in the morning or breaks down during the day. At that point, the dispatcher must add one or more trucks to the Work Group. This addition will prompt the FleetLink Route Management System to immediately dispatch the Super Route associated with the Work Group to the newly added truck(s).

- At the end of the day, the dispatcher may need to reassign work that has not been completed.
In this case, the dispatcher may create a temporary route.

- A temporary route can be dispatched to a Work Group. In this case, confirmations from all trucks in the Work Group will update the same route. If more than one confirmation, driven-by or stopped-by is received, the first one will count, and all others will be ignored.

- A regular route can also be dispatched to a Work Group. The behavior will be the same as that described for a temporary route.

- When Work Groups are viewed in the FleetLink Report Manager, each truck will appear within the Work Group route.

- In FleetWeb, both the individual trucks and the Work Groups can be viewed and tracked. Clicking on the stops will display the usual information, including the truck that performed the work.

Rules

- The work Group name must be unique.

- A vehicle can be a member of no more than one Work Group at a time..

- If a vehicle has been added to a Work Group, this vehicle cannot be the single destination of a route. All existing routes associated with this vehicle will be removed once it is added to a Work Group.

- Cancels or RTCs will not be sent to vehicles for routes that have a Work Group as a destination

- If a vehicle has been added to a Work Group after the route has been dispatched, when you manually re-dispatch the route, it will be sent only to the newly added vehicle, in order to minimize unnecessary traffic on the system.

Defining Work Groups

To define a new Work Group:

1. Select **Reference Data > Vehicles/Drivers > Work Group**, ensuring that you click on the green **Add** icon.

The Add Work Group page displays.

2. Enter a **Work Group** identifier and **Description** in their respective text fields.

    ⚠ **Work Group** is a mandatory field, and must be a unique identifier.

3. Select **Work Group** [Work Group] when done.
    The page refreshes, displaying a vehicle list and assigned routes list panels.

4. To add trucks to the work group, select the **Assign Vehicle** button.
A pop-up menu displays where you can select the trucks to be added to the group.

5. Select vehicles by clicking on their **Add** icons ⊕, and close the pop-up window when done.
The vehicles are added to the List of Vehicles.

6. Select **Work Group** [Work Group] again when done.
    The new work group is added to the List of Work Groups.

The next step is to associate a Work Group with the route.

Associating a Work Group with a Route

You can either add a new route for your Work Group, or associate the Work Group with an existing route. In the following example, a new route is added.

1. Select **Routes > Add Route**.

2. Create a new route on the **Add Route** page, as shown in the following figure.

⚠️ Notice that the **Truck** and **Work Group** pull-down menus are mutually exclusive, i.e., you can do only one of the following two operations, not both:

- Associate a Work Group with a Route.

- Associate a Truck with a Route.

In the above example, we are assigning this new route to a work group.

3. **Select Save Route** when done.
   You can add stops to the route now or do it later. See Creating a Single Route.

ⓘ When you view your route in the List of Routes, you will notice a Work Group icon in the **Truck** column instead of a truck number, and the Work Group identifier in the **Work Group** column.

Managing Yards - Automatic Gate-Crossing

Yards are part of a company hierarchy, defined in RMS Reference Data , whose topmost level is **Company**.

Yards are a subset of **Site** reference data; they can be added, deleted, modified, and also associated with GeoZones, just as Routes and Facilities can.

Adding a Yard to a Site

1. Locate the Site to which the new yard is to be edited, and open its Edit Site screen.

    In order to do so, you will have to drill down through the Company hierarchy described in Company Reference Data as follows:
    Reference Data > Company > **Region** > **Division** > **Site**.

2. In the **Yards** area of the screen, select the **Add** icon to add a new yard.

3. Fill in all details in the **Yard Information** area of the Add Yard screen, and press **Save** when done.

Your new Yard is now saved and added to the list in the Yards area of the Edit Site screen.

You can now associate the new yard with an existing GeoZone, or create a new generic one to associate with it.

Associating a Yard with a GeoZone

Once you have saved your new Yard, RMS will try to locate a GeoZone containing the Yard's coordinates.

ⓘ If no GeoZone can be located, you can create a new one. See Creating a New GeoZone.

All located GeoZones are listed in the GeoZone Details area, and their polygons are shown on the map.

Hovering your mouse over a GeoZone name in the table highlights that polygon on the map.

To make a GeoZone association:

1. Click on a name in the table.

2. Choose **Associate Selected GeoZone**.

The selected GeoZone is now associated with the Yard.

⚠ Should you wish to associate the Yard with a different GeoZone, simply select **Disassociate GeoZone,** and make a new association by selecting a different GeoZone or creating a new one.

Creating a New GeoZone

If RMS cannot locate a GeoZone containing the yard's coordinates, you can create a new one which you can later associate with the Yard.

To do so:

1. Select the **Create GeoZone** button.
    You will be redirected to the Add Generic GeoZone screen.

2. Create your new GeoZone, as described in Managing GeoZones.

3. Once you have done so, return to the Edit Yard screen, where your new GeoZone will be available for selection in the GeoZone Details list.

Managing Street Sections for Sweeper Routes

In addition to providing routing capabilities for regular sanitation and waste-hauling services, as of version 3.5 FleetLink RMS accommodates debris removal (e.g., street sweeping and snow clearing) routes.

Since these types of services do not involve container inventory (nor customer locations and associations in the conventional sense), a new menu, *Street Sections*, is provided, replacing the *Inventory* menu when the **Street Sweeping** option is selected. The header area of the RMS user interface includes an **Enable Street Sweeping** check box to toggle this option.

Regular Menu Bar (Street Sweeping not enabled)
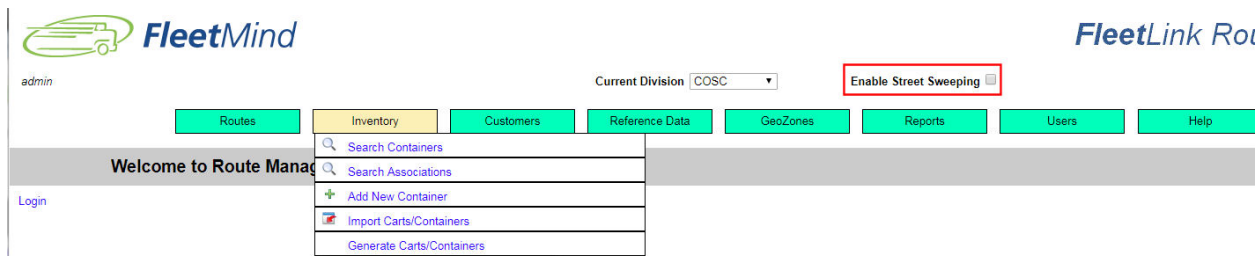
Alternate Menu Bar (Street Sweeping enabled)
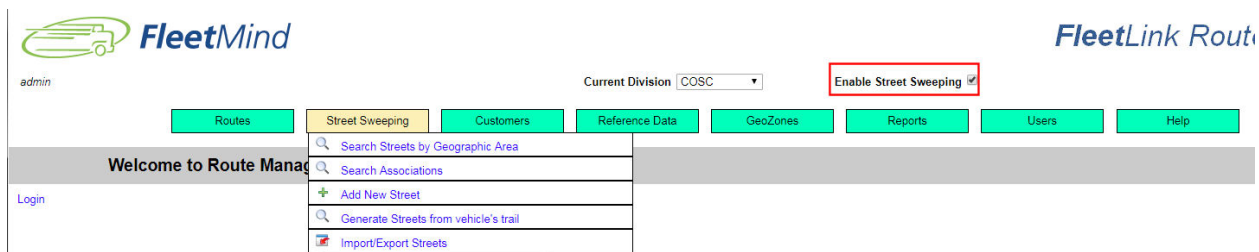
Unlike regular waste removal and recycling routes, which are generally completed in one day, street-sweeping routes may span several days, with the driver resuming a route where he/she left off on a previous day.
With regular waste collection service, the unfinished part of a route is represented by uncompleted assignments (e.g., lifts). With street-sweeping routes, the RMS employs the concept of Street Segments rather than lift assignments to measure the route's completion status.

Street Sections Menu

The Street Sections menu provides the necessary tools for managing street-sweeping routes:

- [Locating street segments.](#)

- [Finding associated addresses.](#)

- [Adding new segments by drawing them on a map.](#)

- [Generating segments based on paths previously taken by drivers.](#)

- [Importing segments from a comma-separated value (csv) file prepared off line.](#)

Search Streets by Geographic Area

This option enables you to locate and edit street sections defined in the RMS.

1. Select **Street Sections > Search Streets by Geographic Area**.
   The Search Street Sections screen displays.

   The entire visible map area is searchable.

    You can pan and zoom the map to change the searchable area.

2. Type a street name into the **Name** text field, and then select **Search**.

   The map refreshes, displaying located sections.

1. Hovering your mouse on a section displays details in the left hand pane.

2. Clicking on a section directs you to the Edit Street Section screen.

Editing Street Sections

The Edit Street Section screen enables you to make modifications to previously defined street sections.

A green checkered flag ⚑ indicates the starting point of a section, a black checkered flag ⚑marks the end point.

- To define a new end point, right-click on a point on the map or drag (left mouse button) the black checkered flag to that location.

- To change the starting point, drag the green checkered flag to a new location.

Once you select **Save**, the latitude/longitude values in the **From** and **To** fields update accordingly.

ⓘ Alternatively, if you know the exact coordinates for points to be modified, you could type these values directly into the text fields.

Selecting the **Clean** [Clean] button clears all data for the current section, including all text fields in the upper area of the screen.

⚠ You cannot save a street section in this state. If you attempt to do so, a warning message displays.
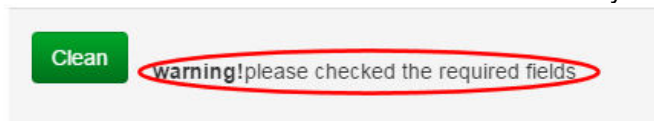
After making any edits on this screen, select **Save** to commit your changes.

Add New Street

This option enables you to create new street sections easily by drawing them on the map.

1. Select **Street Sections > Add New Street.**
   The Add Street screen displays.

2. Locate the street of interest on the map (pan and zoom, if necessary), and right-click where you want to define the section's starting point.
   A green checkered flag displays at the first point, and its coordinates display in the **From** and **To** text fields.
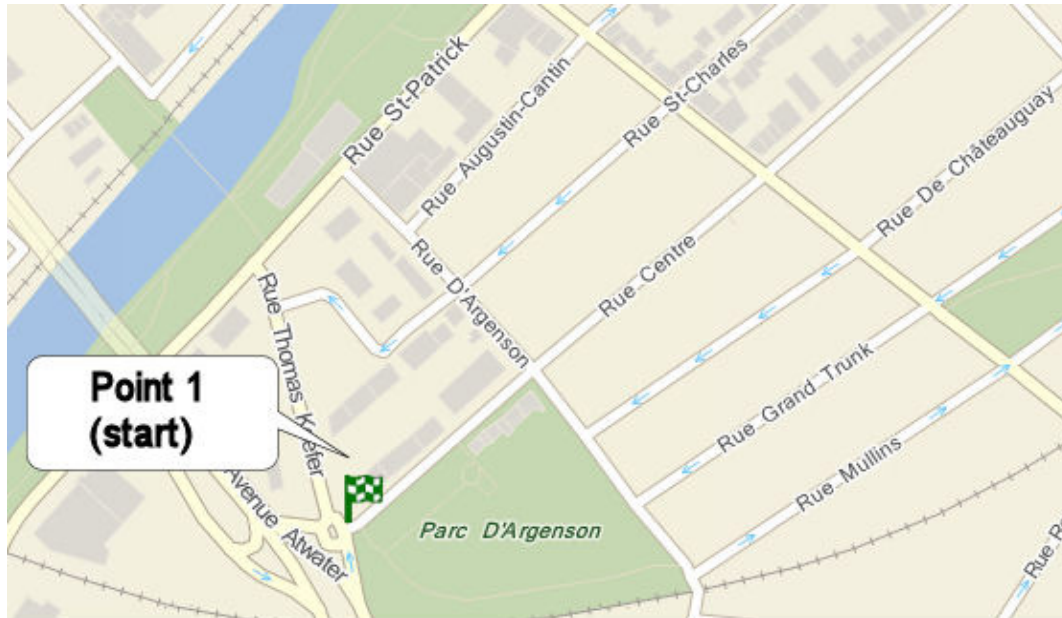
To define a street section, a minimum of two points are required (defining a line). You may, optionally, add additional points to extend the line or even draw a polygon.

3. Right-click on a second point.
    A black checkered flag displays to mark the end point.

✅ The most recently added point always becomes the end point of the segment.
For example, if you were to add a third point, Point 2 would no longer be marked as the end point. Instead, the point is marked with a dot rather than a flag, and point 3 becomes the end.

4. Give your new street section an identity by entering a information in the **Name** and **Description** fields in the upper area of the screen.

5. Check the **Active** check box.
    Doing so enables the section to be added to a route and dispatched to the mobile.

6. Select **Save** when done.
    Your new street section is added.
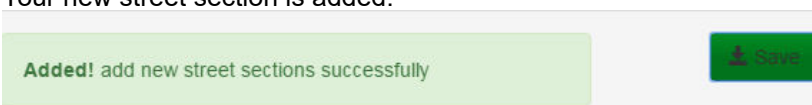
Search Associations

This feature currently under development.

Generate Streets from Vehicle's Trail

This option enables you to generate street sections from the path traveled by your vehicles, save them, and assign them to a route.

1. Select **Street Sections > Generate Streets from vehicle's trail**.

The Generate Streets screen displays.
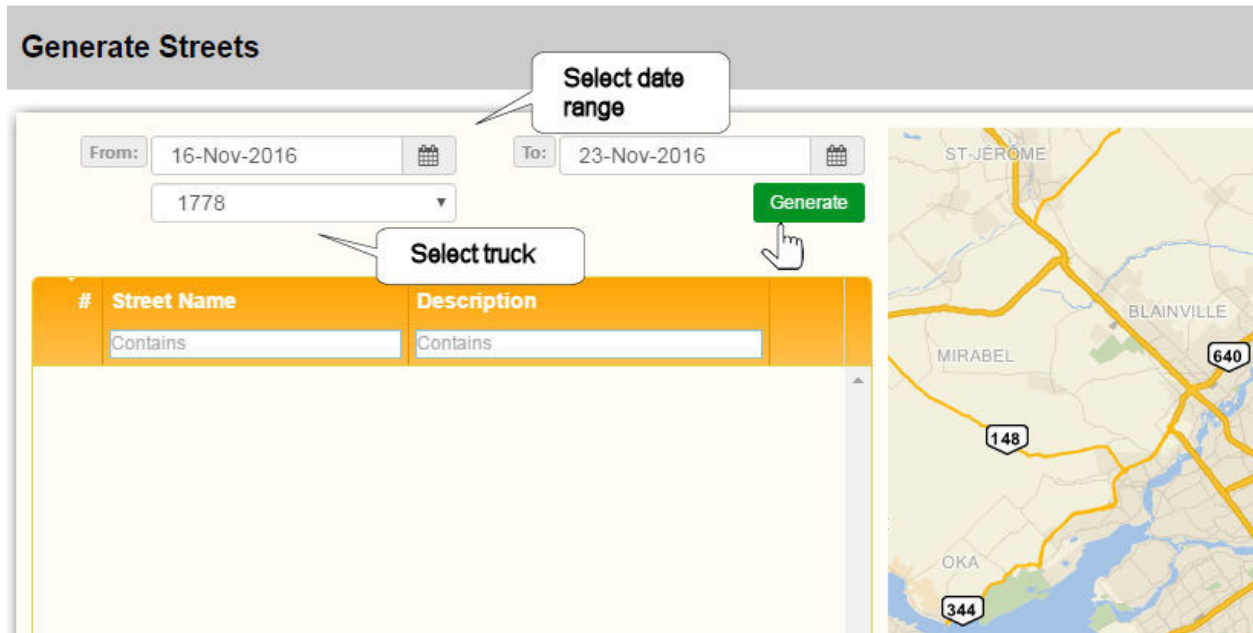
2. Select a date range from the **From** and **To** calendar menus.

3. Choose a truck from the **Vehicle** menu.

4. Click **Generate**.
    Generated street sections are listed in the table and displayed on the map.
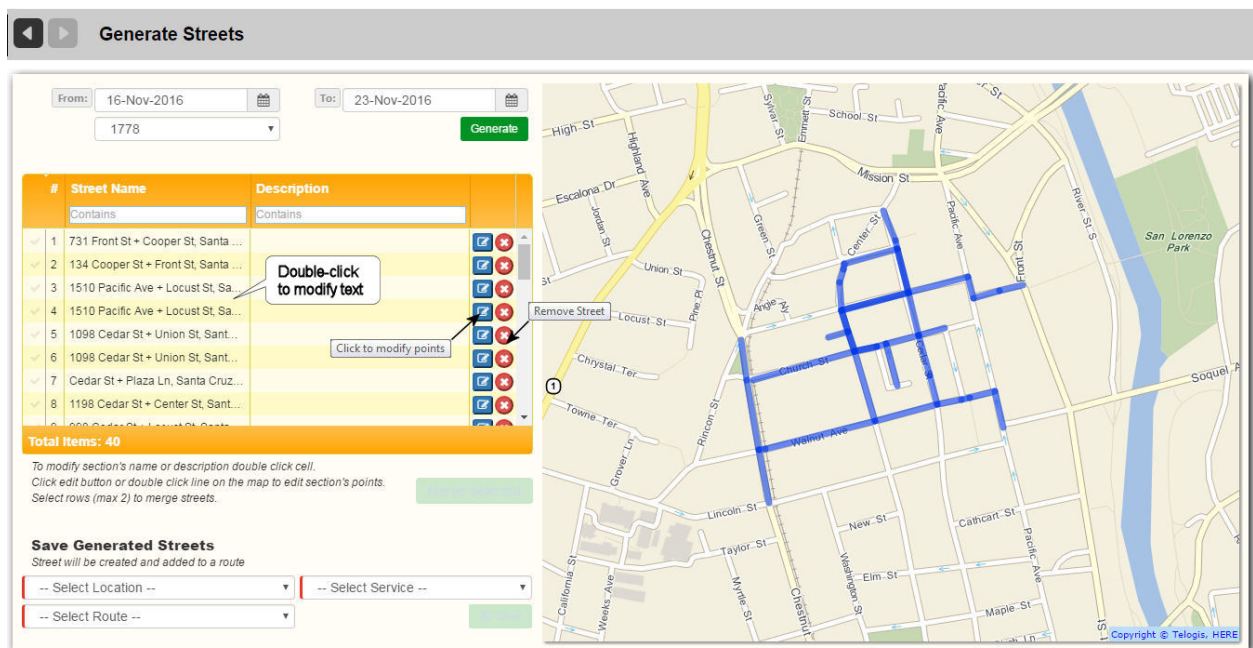
5. Before assigning the street sections to a route, you can do the following:

    a. To edit an entry in the Street Name or Description column, double-click in the text field and enter a new

string.

> 5   St + Union St, Santa Cruz, California
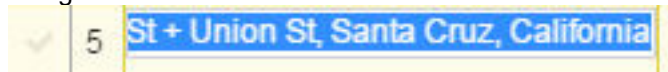
b. To remove a street section, select its **Delete** button. ❌

c. To modify the points of a street section, select its **Edit** button. 🔲
    The map area goes into Edit mode
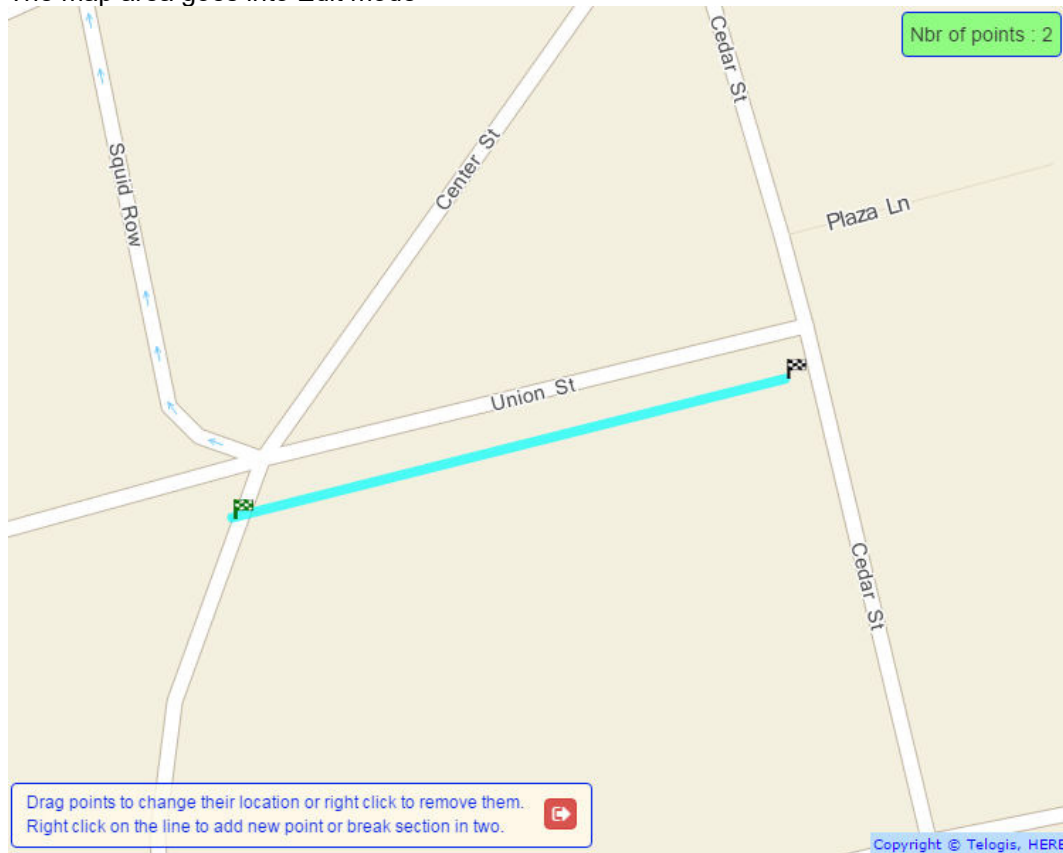
6. To assign the street sections to a route:

a. Select a location from the Location menu.

> -- Select Location --
> 145043
> HolyGrailLocation
> LavalSaint-ElzearOuest

b. Select a service from the Service menu.
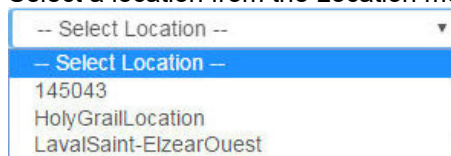
> -- Select Service --
> 1
> Debris removal
> Sweeper Service
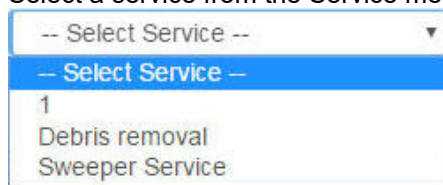
c. Select a route from the Route menu.
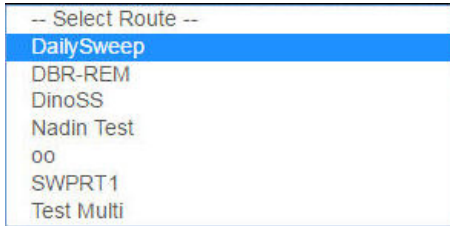
7. Click **Save** to commit your changes.

Import/Export Street Sections

This option enables you to import street sections from a CSV file prepared off line, and to export your street sections from the RMS to a CSV file that you can save to disk.

•   Select **Street Sections > Import/Export Street Sections**.
    The Import/Export Streets screen displays.

Importing

As is the case for importing all other data into RMS, your street sections CSV file must adhere strictly to formatting rules, which are shown in the lower area of the screen.

Clicking an Info icon [i] (where provided) displays an example of valid field values in the right-hand pane.

Column #	Excel Column #	Column Name	Field Size	Valid Values
		* Mandatory		
1	A	*Street Name	60	
2	B	*Description	256	
3	C	*Active	8	ℹ
4	D	*Wkt		ℹ

Valid values for:**Wkt** column

POLYGON((27.7734375 27.761329874505233,21.708984375 20.3034175184893,30.76171875 16.46769474828897,38.49609375 24.206889622398023,27.7734375 27.761329874505233))

You can also download and save a blank sample file, which you can populate with your own data, by clicking the **Download Sample** button. ⬇ Download Sample

Sample CSV File

	A	B	C	D	E	F
	street_section_sample.csv					
1	Street Name	Descrription	Active	WKT		
2						
3						
4						
5						

To import a CSV file containing street sections:

1. Click the **Browse** button to open an Explorer window, browse and select a file. Browse ⊝

   The button's caption changes to indicate that a file has been selected. Browse ✔

2. Select **Validate and Import**. Validate and Import
   RMS validates the data and, on success, imports the file.

Advanced Options

Advanced Options ⚙

Clear existing Streets before import.	Yes	

Select this option if the intention is for the RMS database is to comprise **fewer** street sections after the data is imported.

Exporting

1. Select the **Export Data** button. ⊕ Export Data

2. Browse to a disk location and save your file.

	A	B	C	D	E	F	G	H	I	J	K	L	M
	street_sections (1).csv												
697	198 Almar Ave + Sunset Ave	Santa Cruz	California		TRUE	LINESTRING(-122.04205 36.952389,-122.04205 36.952389,-122.04218 36.95299)							
698	298 Almar Ave + Oxford Way	Santa Cruz	California		TRUE	LINESTRING(-122.04218 36.95299,-122.04218 36.95299,-122.04236 36.95382)							
699	398 Almar Ave + Alta Ave	Santa Cruz	California (1)		TRUE	LINESTRING(-122.04236 36.95382,-122.04236 36.95382,-122.042551 36.954651)							
700	301 Alta Ave + Bethany Curv	Santa Cruz	California		TRUE	LINESTRING(-122.042551 36.954651,-122.042551 36.954651,-122.03975 36.95506)							
701	1701 Delaware Ave + Almar A	Santa Cruz	California (2)		TRUE	LINESTRING(-122.04271 36.955499,-122.04271 36.955499,-122.04287 36.95635)							
702	101 Handley St + Almar Ave	Santa Cruz	California (1)		TRUE	LINESTRING(-122.04287 36.95635,-122.04287 36.95635,-122.04297 36.95712)							
703	632 Almar Ave + Handley St	Santa Cruz	California (1)		TRUE	LINESTRING(-122.04297 36.95712,-122.04297 36.95712,-122.043011 36.95735)							
704	#NAME?	Santa Cruz	California (1)		TRUE	LINESTRING(-122.043011 36.95735,-122.043011 36.95735,-122.04307 36.95771)							
705	644 Almar Ave + Hebard St	Santa Cruz	California		TRUE	LINESTRING(-122.04307 36.95771,-122.0431 36.957891)							
706	828 Almar Ave + Ingalls St	Santa Cruz	California		TRUE	LINESTRING(-122.04331 36.95946,-122.04331 36.95946,-122.04346 36.96029)							
707	850 Almar Ave + Rankin St	Santa Cruz	California		TRUE	LINESTRING(-122.04346 36.96029,-122.04346 36.96029,-122.04365 36.961441)							
708	2107 Mission St [Ca-1] + Alma	Santa Cruz	Califor		TRUE	LINESTRING(-122.04365 36.961441,-122.04365 36.961441,-122.04383 36.96261)							

Adding Street Sections to a Route via Add Stops to Route Screen

This feature currently under development.

Adding a New Street Sweeper Route

You add a Street Sweeper route as you would any other type of route: via the **Routes** menu. (See Creating a Single Route.)
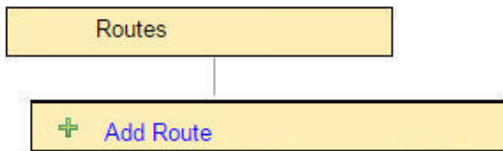
⚠ For Street Sweeper Routes, you must select **Multi Day Route** from the pull-down menu at the top of the screen.

Generating Reports

Although the FleetLink Report Manager (FRM Reports) is the most comprehensive application in the FleetMind Solution for report generation, the RMS Reports menu enables you to generate route-relevant revenue and billing-reports and Customer Service reports.
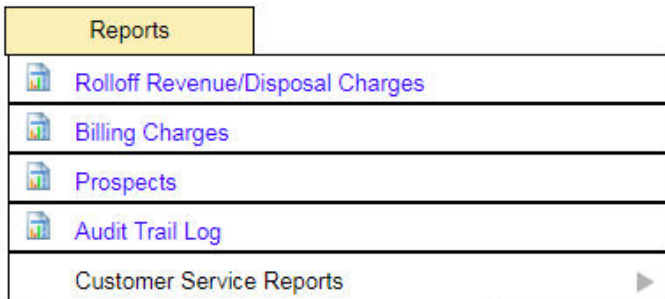
The following options are provided:

- Rolloff Revenue/Disposal Charges

- Billing Charges

- Prospects

- Audit Trail Log

- Customer Service Reports

Rolloff Revenue/Disposal Charges

The Rolloff Revenue/Disposal Charges report tracks the history of roll-off revenue and disposal costs per material for each disposal facility, .

To generate a Rolloff Revenue/Disposal Charges report:

1. Select **Reports > Rolloff Revenue/Disposal Charges**.

The report form displays.
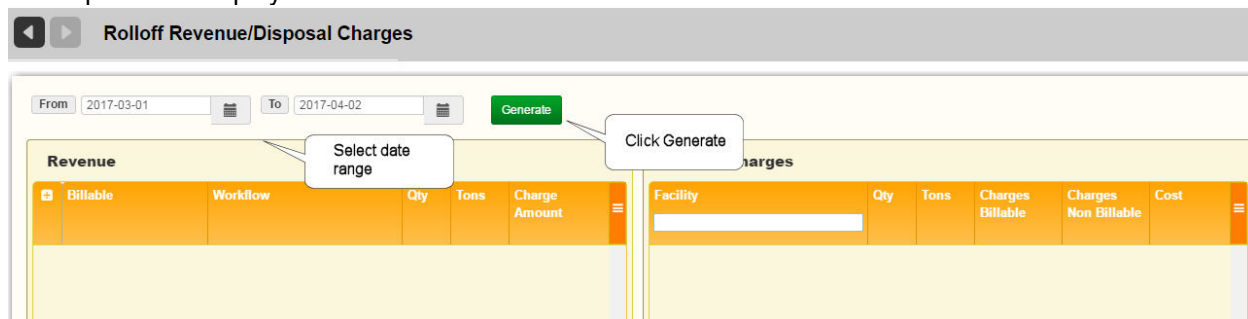
2. Enter a date range using the **From** and **To** calendar menus.

3. Select **Generate**.
The screen refreshes, displaying revenue in the left panel and charges in the right

4. To filter results in the Landfill Charges panel by Facility, enter the name of the facility—in whole or in part—in the **Facility** text field.

5. To reset the filter, select **Clear all filters** from the drop-down menu.

6. To export either Revenue or Landfill charges for review and analysis off-line, choose **Export all data as CSV** from their respective menus.
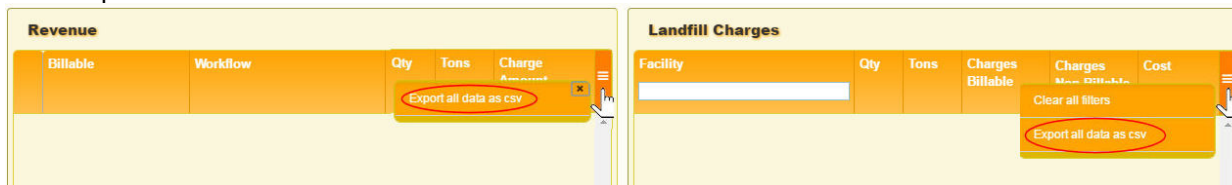
Billing Charges

The Billing Charges report tracks the history of billing charges for services provided.

To generate a Billing Charges report:

1. Select **Reports > Billing Charges**.
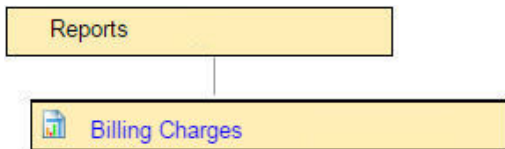
2. Select a date range, Dispatch Type(s), and Operating Department(s) using the calendar menus and pull-down menus, and then click **Generate**.
    The report displays results matching your search criteria.

3. You can filter the results further by using the text fields in the column headers and the **All/Billable/Non-billable** radio buttons.

4. To export your report results for off-line review and analysis, select **Export to CSV**.

Prospects

The Prospects report displays a list of all prospective (non-active) customers and services in the Route Management System

To generate a Prospects report:

1. Select **Reports > Prospects**.

The Prospects report displays.

The Prospect Customers tab, shown above, displays a list of customer profiles.
The Prospect Services tab, shown following, displays a list of services for the prospect customers.

2. To filter results in any column, enter a string—in whole or in part—in the text fields in the table header.
    To reset the filter, clear the text field, or select **Clear all filters** from the drop-down menu.
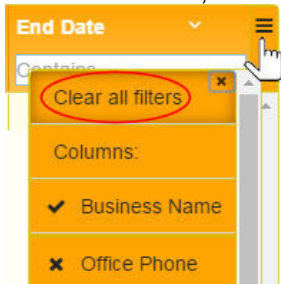
3. To show/hide columns in the report, make your selections from the same drop-down menu.

Clear all filters

Columns:

✔ Business Name

✔ Office Phone

✖ Home Phone

✔ Fax

✔ E-mail

✖ Civic Number

✔ Street

✔ Suite

✖ District

✖ City

✔ State/Province

✖ Postal Code

Audit Trail Log

The Audit Trail Log enables you to query and view operations performed on the RMS database(s) over a range of dates, and by whom (RMS user name) the operations were done.

To generate an Audit Trail Log report:

Select **Reports > Audit Trail Log**.

You can query changes made to:

- Customers

- Locations

- Subscriptions

- Reference Data

Modifying Settings

RMS settings are accessible via the Help menu.
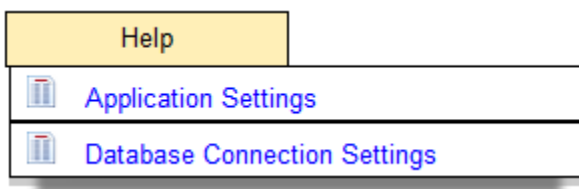
Application Settings
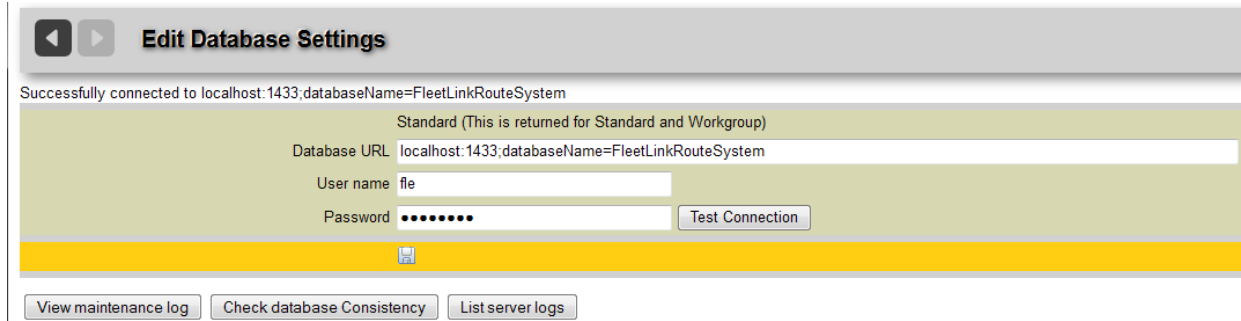
The Edit Application Settings screen enables you to specify URLs used by the application, default map coordinates, and colors for the various elements of the application's user interface.

- **pictureUrlBase**: specifies the URL for images used in the application. Must be the same as the images.url setting in the VDI.
  The images folder where the image files are archived should be accessible via URL.

- **telogisGeobaseUrl**: specifies the URL for the geostream server. This IP address should be used as opposed to 127.0.0.1 or local host in the url. Telogis 3.9.1 is the minimum required version to run Service Centric routesystem (2013-09-23). This minimum requirement may change as Telogis releases fixes.

- **defaultMapLatLon**: specifies the coordinates for the default location the map will open whenever a map that has no geo-located content is opened.

- **Color palette:** specifies user interface colors. Enter your settings as six-digit hexadecimal values.

- **Reset** button: resets all colors changed during the current editing session to their previous values.

- **Reset to Default** button: resets all colors to their default values.

- **Save** button: saves changes made during the current editing session.

Database Connection Settings

The Edit Database Connection Settings screen specifies the database location and user authentication parameters, and provides diagnostic and troubleshooting tools.
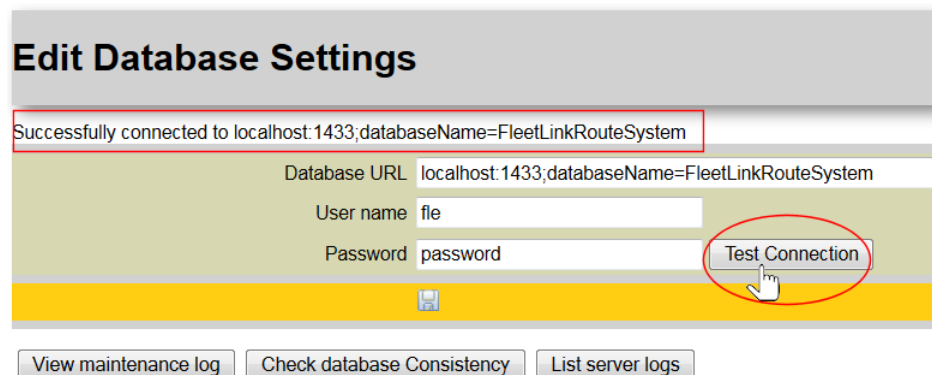
Test Connection

This feature tests whether there is a communication link with the FleetLink Route Management System database. It gives you the ability to verify the connection string and credentials.

Only users in the admin role can modify information on this page.

⚠ After changing any information on this page, the Apache server needs to be restarted.

The **Test Connection** button enables you to verify the connection string and credentials.

- Click the Test Connection button.
  Connection test results display in the header area of the screen.

View Maintenance Log

This feature displays the database maintenance log, listing for each operation the timestamp, procedure name, and description.

Use the maintenance log for debugging and troubleshooting.

Check Database Consistency

This feature enables you to validate the data in the database according to all defined rules.

List Server Logs

This feature lets you view the server logs, both current and historical.

The logs are presented in reverse chronological order, i.e., the first log in the list is the most current.

1. To view the current log, click on the highlighted link.

2. Choose **Open with** or **Save File**, and then select **OK**.
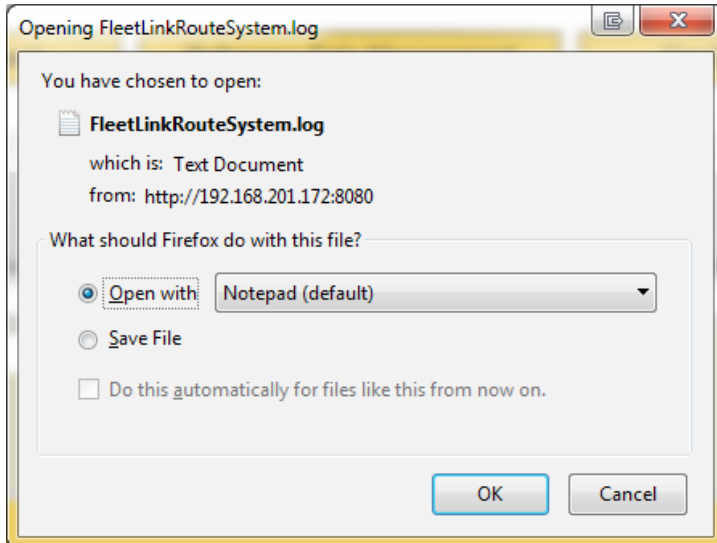
A sample server log is shown below.
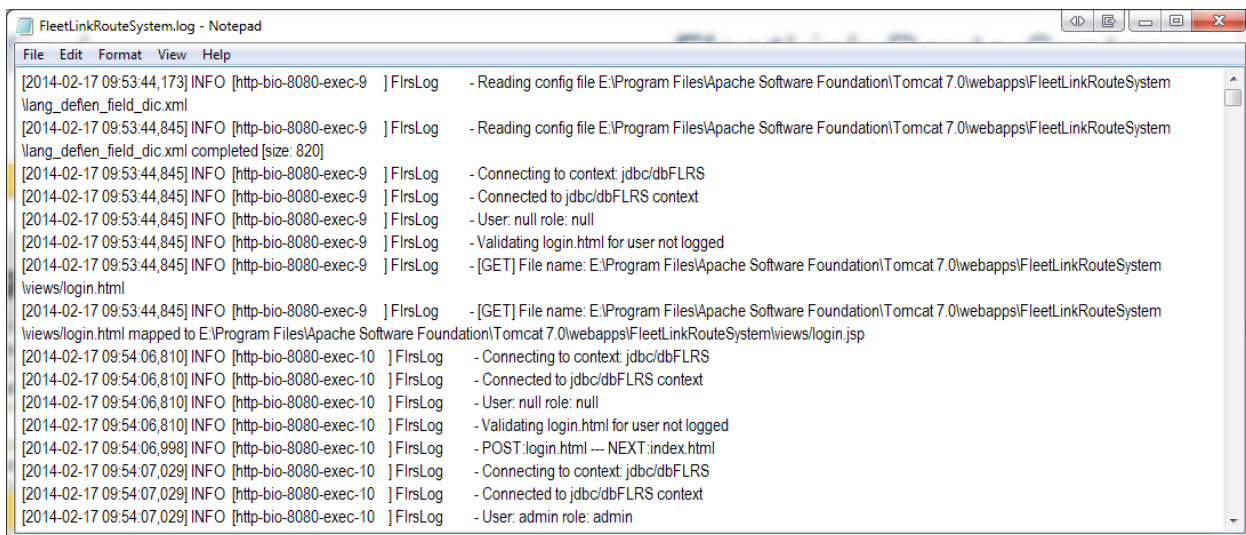
3. To view previous logs, click the **Unzip** icon.
   The list refreshes, displaying a highlighted zip file that you can open with file compression utilities such as WinZip or WinRAR.

File name	File size in bytes
FleetLinkRouteSystem.log	241,151
FleetLinkRouteSystem.log.2014-02-10.log.zip	130,521
FleetLinkRouteSystem.log.2014-02-11.log	1,722,126

4. To delete a log, click its **Delete** ✖ icon.
   When the confirmation dialog displays, click **Yes** to confirm the operation.

Confirm deletion
Are you sure you want to delete the record FleetLinkRouteSystem.log.2014-02-10.log.zip!
Yes   No

User Management

ⓘ As of software release 3.5, User Management is done exclusively through the *Platform Web Services (PWS) User Portal* or *Active Directory.* RMS no longer provides *List User* and *Add User* menu options.

For information purposes, this section describes the user properties and privileges that can be defined using those applications.

Languages

Preferred language is the language used on the user interface. The FleetLink Route Management System currently supports English, French and Spanish.

Roles

Every user must be assigned a role, which defines their access privileges.

Five roles are defined for FleetLink Route Management System users:

- **Admin** has full privileges.

  ⓘ Only an Admin can view and edit the list of users.

- **Billing** defines billing plans, processes billing data.

- **Dispatcher** manages daily assignment dispatch, handles assignment exceptions/problems.

- **Provision** provisions customer service subscription to specific routes.

- **Reader** has very limited read-only privileges**.**

A user assigned the role of Reader can perform only the following operations:

READER PERMIS- SIONS
Search Associations
Search Stops
Search Containers
Search Customers
List GeoZones

If the Reader attempts to perform any unauthorized operations, he/she will be logged out automatically and the following message will display.

Access denied [listFlrsUsers.html] to user: reader [read]

Login	
Password	

Login

The other roles and their associated privileges are listed in the following table.

⚠ The privileges assigned to each are role are hard-coded in the application and are not user-configurable in the current software release.

	Dispatch-er	Provi-sion	Bill-ing	Ad-min
Add Activity Code		Yes	Yes	Yes
Add Assignment		Yes	Yes	Yes
Add Building Category		Yes	Yes	Yes
Add Color		Yes	Yes	Yes
Add Container		Yes	Yes	Yes
Add Container Maker		Yes	Yes	Yes
Add Container ype		Yes	Yes	Yes
Add Customer			Yes	Yes
Add Customer Prfx		Yes	Yes	Yes
Add Customer Type		Yes	Yes	Yes
Add Facility		Yes	Yes	Yes
Add Flrs Users				Yes
Add Frequency		Yes	Yes	Yes
Add Location		Yes	Yes	Yes
Add Material		Yes	Yes	Yes
Add Operator		Yes	Yes	Yes
Add Route		Yes	Yes	Yes
Add Service Add On			Yes	Yes
Add Service Type			Yes	Yes
Add State		Yes	Yes	Yes
Add Truck		Yes	Yes	Yes
Add Unit		Yes	Yes	Yes
Add Wkt		Yes	Yes	Yes
Add WorkGroup		Yes	Yes	Yes
Dispatch Route	Yes	Yes	Yes	Yes
Edit Activity Code		Yes	Yes	Yes
Edit App Settings				Yes
Edit Assignment		Yes	Yes	Yes

Edit Assignment Status		Yes	Yes	Yes
Edit Building Category		Yes	Yes	Yes
Edit Color		Yes	Yes	Yes
Edit Container		Yes	Yes	Yes
Edit Container Maker		Yes	Yes	Yes
Edit Container Type		Yes	Yes	Yes
Edit Customer			Yes	Yes
Edit Customer Prfx		Yes	Yes	Yes
Edit Customer Type		Yes	Yes	Yes
Edit DB Settings				Yes
Edit Facility		Yes	Yes	Yes
Edit Frequency		Yes	Yes	Yes
Edit List Wkt		Yes	Yes	Yes
Edit Location		Yes	Yes	Yes
Edit Material		Yes	Yes	Yes
Edit Operator		Yes	Yes	Yes
Edit Route		Yes	Yes	Yes
Edit Service AddOn			Yes	Yes
Edit Service Type			Yes	Yes
Edit State		Yes	Yes	Yes
Edit Truck		Yes	Yes	Yes
Edit Unit		Yes	Yes	Yes
Edit Wkt		Yes	Yes	Yes
Edit WorkGroup		Yes	Yes	Yes
exportAllData				Yes
exportAssignment				Yes
exportReferenceData				Yes
Import AllData				Yes
Import Assignment				Yes
Import Containers				Yes
Import Customers				Yes
Import Reference Data				Yes
Import Routes				Yes
Import Wkt				Yes
List Flrs Users				Yes
List Prepared Routes	Yes	Yes	Yes	Yes
List Prepared Stops	Yes	Yes	Yes	Yes
List Route		Yes	Yes	Yes
List Routes To Close	Yes	Yes	Yes	Yes
Remove Activity Code		Yes	Yes	Yes
Remove Assign		Yes	Yes	Yes

Remove Building Category		Yes	Yes	Yes
Remove Color		Yes	Yes	Yes
Remove Container Maker		Yes	Yes	Yes
Remove Container Type		Yes	Yes	Yes
Remove Customer Prfx		Yes	Yes	Yes
Remove Customer Type		Yes	Yes	Yes
Remove Facility		Yes	Yes	Yes
Remove Flrs Users				Yes
Remove Material		Yes	Yes	Yes
Remove Operator		Yes	Yes	Yes
Remove Route		Yes	Yes	Yes
Remove Service AddOn		Yes	Yes	Yes
Remove Service Type		Yes	Yes	Yes
Remove State		Yes	Yes	Yes
Remove Stop		Yes	Yes	Yes
Remove Tmp Route	Yes	Yes	Yes	Yes
Remove Truck		Yes	Yes	Yes
Remove UnitT ype		Yes	Yes	Yes
Remove WorkGroup		Yes	Yes	Yes
View Server Log Files				Yes

APPENDIX A - CUSTOMER SERVICE REPRESENTATIVE (CSR) DASHBOARD

Welcome to the FleetLink CSR Dashboard User Guide.

This guide is intended for Customer Service Representatives—who may be Operations or Dispatch personnel—using the FleetLink Route Management System. It provides the information you need to use the CSR Dashboard solution to manage your customer service issues.

What is the CSR Dashboard?

The CSR Dashboard is a Customer Case Management solution that is a value-added, fully integrated component of the FleetLink Route Management System.

Using the CSR Dashboard, a Customer Service Representative can:

- Manage issues such as customer complaints.

- Create new Customer Cases.

- Modify existing Customer Cases.

- Act on complaints.

- Dispatch missed services.

- Provision new services.

- Schedule on-demand customer services.

- Schedule cart delivery, maintenance, and repair.

- Search and filter customer service instances (by name, address, or date).

- Assign a Case ID (or job ticket) that can be shared outside of the system.

- Generate reports:

    o Private Curbside Collection

    o Multi-Family Collection

Because it is integrated into the FleetLink Route Management System, the CSR Dashboard takes advantage of FleetLink Mobile's real-time fleet tracking, data collection, and service verification capabilities to provide your Dispatch or Operations personnel with a tool to streamline your customer service management.

Customer and Location information is already integrated into the Route Management System, making it immediately accessible for customer case management, and alleviating the need to use multiple applications to do so.

How it Works
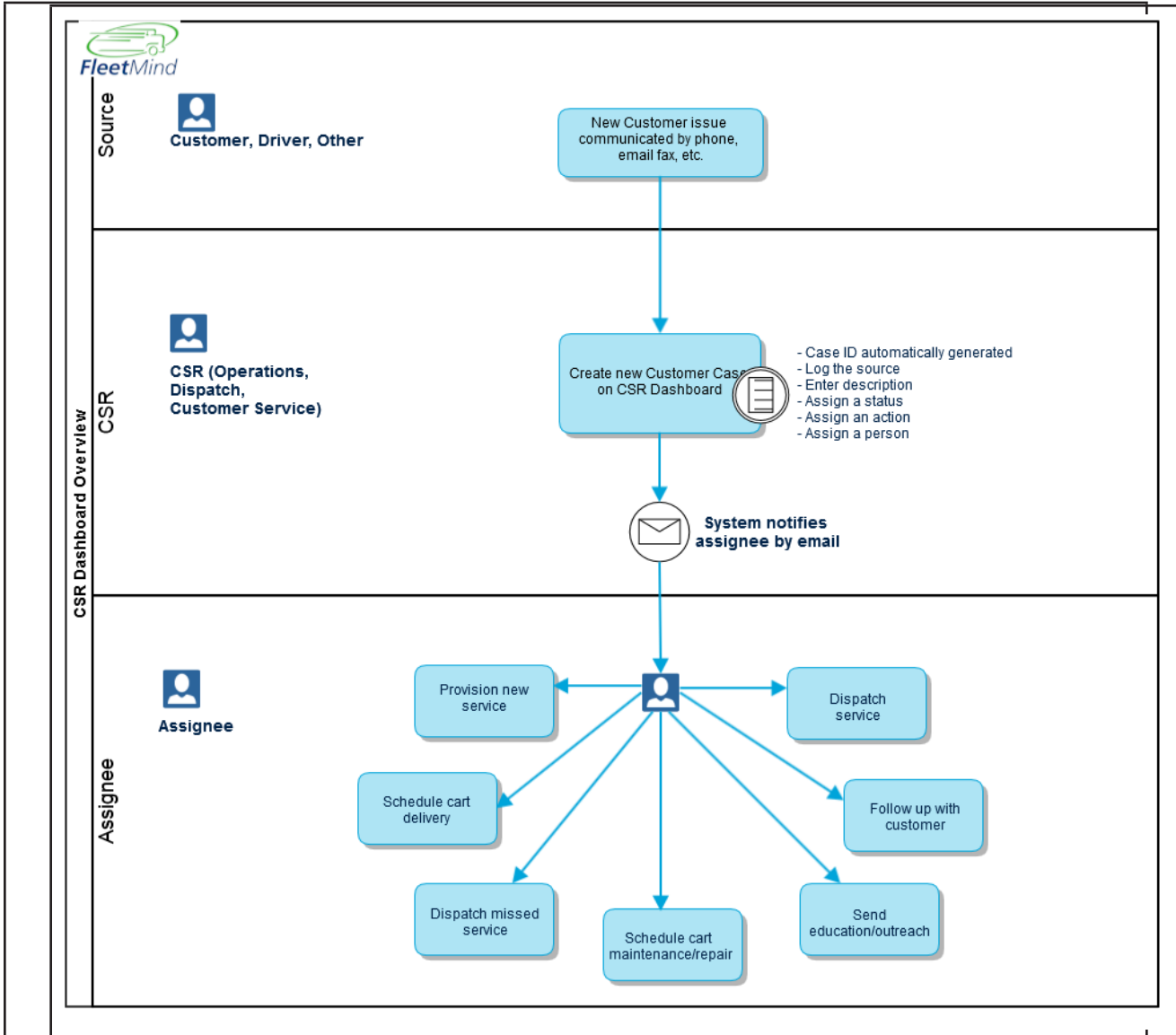
Getting Started with the CSR Dashboard

Your initial setup and subsequent use of the CSR Dashboard will involve, for the most part, the use of the following FleetLink Route Management System menus:

- Customer Menu
- Reference Data
- Reports

Customer Menu

The features of the CSR Dashboard are accessible via the FleetLink Route Management System's Customers menu.

Using the Customer menu options, CSRs can list all current cases, search for specific cases, edit/update cases, and add new ones.

ⓘ CSR functions are accessible via several locations on the Route Management System's user interface.

For further details, refer to Working with Customer Cases.

Reference Data Menu

As with other features of the FleetLink Route Management System, CSR Dashboard requires its own supporting Managing Reference Data, which is accessible via the Reference Data menu.

Reference Data must be defined before you begin using the Customer Management menu's CSR options.

For details, refer to Defining CSR Reference Data.

Reports Menu

The Reports menu is where you generate Customer Service Reports.

From the Reports menu, you can generate Curbside or Multi-Family reports of cases.
See Generating Customer Service Reports.

Configuring eMail Notification Settings

eMail Settings

Not all authorized users of the FleetLink Route Management System will require email communication with the system. However, in order to ensure that assignees of Customer Cases in the CSR Dashboard receive the necessary email notifications, you must ensure that the following settings are configured:

- The SMTP server identification (the sending party).

- A user email address for the assignee (the receiving party).

To configure these settings, you will use the **Help** and **Users** menus.

Configuring SMTP

To configure SMTP settings:

1. Select **Help > Application Settings**.
   The Edit Application Settings page displays.

   Edit Application Settings

pictureUrlBase	http://192.168.201.156/images
telogisGeobaseUrl	http://192.168.201.156/GeoStream
fleDatabaseUrl	localhost;databaseName=fleetlinkenterprise;username=fle;password=password
mailServer	imail.fleetmind.com
defaultMapLatLon	45.483898,-73.562263

2. Ensure that the setting **mailServer** is correctly identified.

   ✅ This information can be provided by your computer system administrator.

3. Click **Save** 💾 when done.

Specifying Assignee eMail Address

1. Select **Users > List Users**.

Users	
📄 List Users 🖑	✚
Login	
Logout *admin*	
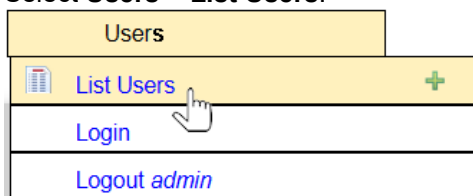
   The List of Users page displays.

List of Users

Login	Role name	Last access	Session duration	Expiration date	Preferred language	Email	
admin	admin	2014-05-12 15:21:31	0		English	222@222.com	
DannyGendron	dispatcher		60		English	123@fleetmind.com	✖
DELIVERY	dispatcher	2014-04-23 16:54:19	15		English	mdemers@fleetmind.com	✖
DISPATCH	dispatcher	2014-05-05 11:30:36	15		English	mdemers@fleetmind.com	✖
FIXER	admin		0		English	jackmontreal1@gmail.com	✖
fleetmind	admin	2014-01-20 13:33:44	0		English		✖
JackCarley	dispatcher		0		English	jackmontreal1@gmail.com	✖
jatintandon	admin		60		English		✖
MAINTENANCE	dispatcher	2014-04-25 12:28:28	15		English	mdemers@fleetmind.com	✖
nevildavies	admin		60		English		✖
PROVISION	provision	2014-05-05 11:31:13	15		English	mdemers@fleetmind.com	✖
SALES	billing	2014-05-05 11:31:13	15		English	mdemers@fleetmind.com	✖
15			**Total: 15**				Export

Screen name	read [40] ⓘ	dispatcher [30]	provision [20]	billing [10]	admin [0]
Add Activity Code			☑	☑	☑

2. For all intended users of the CSR Dashboard who require notification of Customer Cases, ensure that there is a valid email address in the Email column.

✅ The email address may be that of a group, or *distribution lis*t.

Defining CSR Reference Data

Defining Reference Data is the starting point when setting up your CSR Dashboard.
Using the CSR options of the Reference Data menu, you define the list of sources for customer cases, their status, and the list of possible actions to be taken.

ⓘ All Reference Data elements defined here represent the menu options that will be available when you add or edit Customer Cases.

You can define 5 types of CSR Reference Data:

- Case Actions

- Case Types

- Case Reasons

- Case Source Types

- Case Statuses

Case Actions

Case Actions are the actions that can be taken to process or resolve a Customer Case.

Adding a Case Action

To add a Case Action:

1. From the List of Case Actions screen, select the **Add New** button.
   OR

2. From the Customer Management menu, select the Case Actions menu option, ensuring that you click the **Add** icon ( ).
   The Add Case Action screen displays.

3. Enter a Name and Description, and then select **Save Case Action**.

Editing a Case Action:

1. From the List of Case Actions screen, select the **Edit** button.
    The Edit Case Action screen displays.

2. Modify the information as required, and then select **Save Case Action**.

Case Reasons

Case Reasons represent predefined descriptions of the case that the Customer Service Representative will be able to select from a pull-down menu when entering or editing a case.

Adding a Case Reason

To add a Case Reason:

1. From the List of Case Reasons screen, select the **Add New** button.
    OR

2. From the Customer Management menu, select the Case Reasons menu option, ensuring that you click the **Add** icon ( ).
   The Add Case Reason screen displays.

3. Enter a Name and Description, and then select **Save Case Reason**.

Editing a Case Reason:

1. From the List of Case Reasons screen, select the **Edit** button.
    The Edit Case Reason screen displays.

2. Modify the information as required, and then select **Save Case Reason**.

Case Source Types

Customer Cases will usually be initiated by a communication from the customer—via various means, such as email, telephone, web interface, and so on—to register a complaint or request a service.

Customer Cases may also, on occasion, originate with a driver. For example, a driver may notice that a customer's bin is missing a wheel or is damaged to the point that it cannot be lifted with a side-loader. The driver may then relay this information to the back office so that a Customer Case may be created.

The Case Source Types menu option enables you to define sources of Customer Cases.

List of Case Source Types

	Case Source	Description
✖ ✏	S1Driver	Driver
✖ ✏	S2Mail	Mail
✖ ✏	S3Email	Email
✖ ✏	S4Meeting	Meeting
✖ ✏	S5Other	Other
✖ ✏	S6Telephone	Telephone
✖ ✏	S7Vmail	Voicemail
✖ ✏	S8WebFrm	Web Form
✖ ✏	S9InPerson	In Person
✖ ✏	S10Director	Dept Director
✖ ✏	S11Council	City Council Member
✖ ✏	S12Mayor	Mayor Office
✖ ✏	S13CityMgr	City Manager Office
✖ ✏	S14OtherCityEmp	Other City Employee
✖ ✏	T1FmToBilling	FleetMind RMS
✖ ✏	T2BillingToFM	Billing System
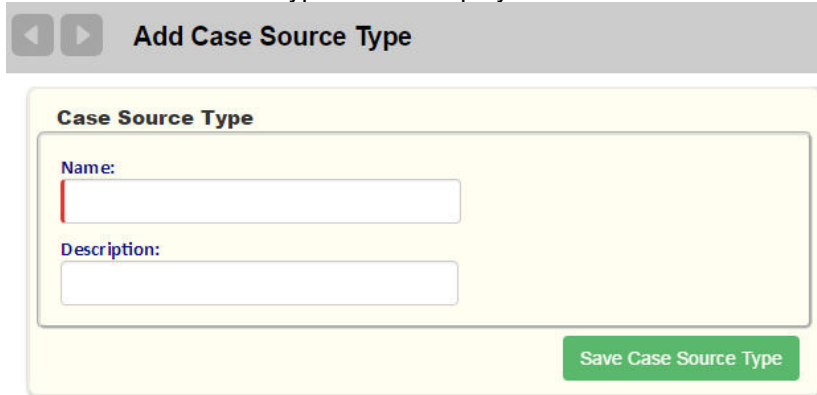
Total Item: 19

Adding a Case Source Type

To add a Case Source Type:

1. From the List of Case Source Types screen, select the **Add New** button. ⊘ Add New
   OR
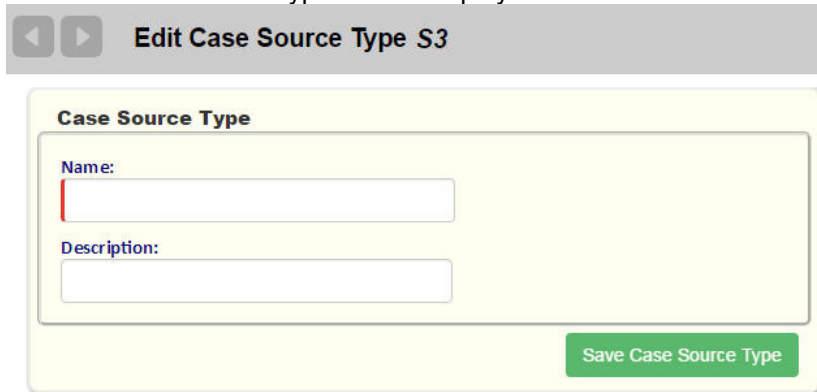
2. From the Customer Management menu, select the Case Source Types menu option, ensuring that you click the **Add** icon (➕).
The Add Case Source Type screen displays.

3. Enter a Name and Description, and then select **Save Case Source Type**.

Editing a Case Source Type:

1. From the List of Case Source Types screen, select the **Edit** button. 🖉
The Edit Case Source Type screen displays.

2. Modify the information as required, and then select **Save Case Source Type**.

Case Statuses

Case status indicates the current state of a customer case within the CSR's work flow.
Three statuses are predefined in the CSR Dashboard:

- Open - Unassigned

- Open - Assigned

- Closed

Adding a Case Status

To add a Case Status:

1. From the List of Case Statuses screen, select the **Add New** button.
   OR

2. From the Customer Management menu, select the Case Statuses menu option, ensuring that you click the **Add** icon ( ).
   The Add Case Status screen displays.

3. Enter a Name and Description, and then select **Save Case Status**.

Editing a Case Status:

1. From the List of Case Statuses screen, select the **Edit** button.
   The Edit Case Status screen displays.

2. Modify the information as required, and then select **Save Case Status**.

Case Types

Case Types indicate the nature of the customer case, as different types will determine the course(s) of action and may be accorded different priorities.

Adding a Case Type

To add a Case Type:

1. From the List of Case Types screen, select the **Add New** button.
OR

2. From the Customer Management menu, select the Case Types menu option, ensuring that you click the **Add** icon ( ).
The Add Case Type screen displays.

3. Enter a Name and Description, and then select **Save Case Type**.

Editing a Case Type:

1. From the List of Case Types screen, select the **Edit** button.
The Edit Case Type screen displays.

2. Modify the information as required, and then select **Save Case Type**.

Working with Customer Cases

Viewing Customer Cases

To view Customer Cases:

1. Select **Customers> List Customer Cases**.
    A blank form displays, where you can search for specific cases using any of the fields as search criteria.
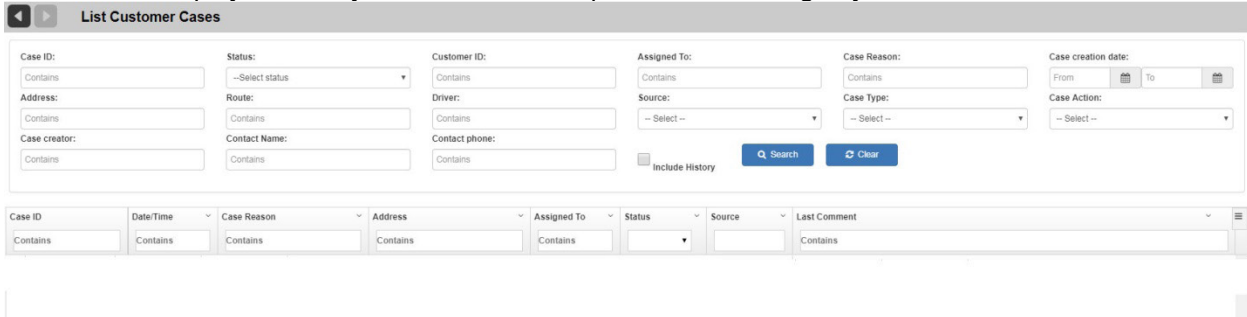
If you select **Search** without specifying any search criteria, all customer cases are returned.
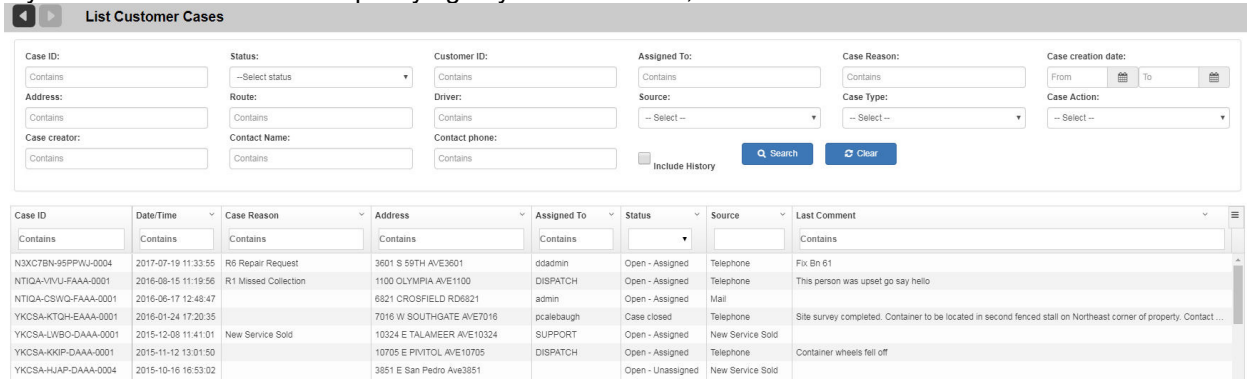
Clicking on the chevron icon in any column header displays a drop-down menu with sort and show/hide options.
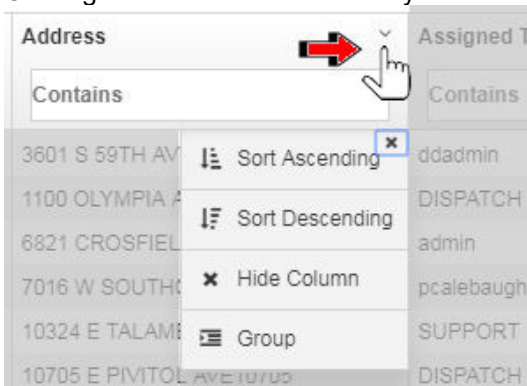
From the List of Customer Cases, you can access any case by clicking the highlighted links, which will bring you to the Edit Customer Case page. Editing a Customer Case
See Editing a Customer Case.

Adding a Customer Case

You add a Customer Case using the Add Customer Case page.
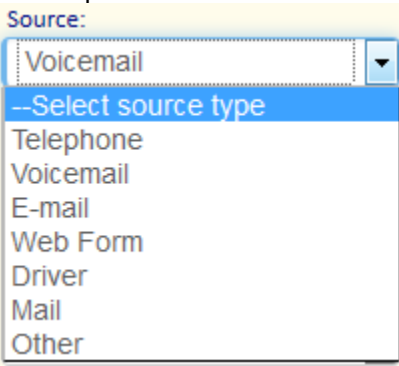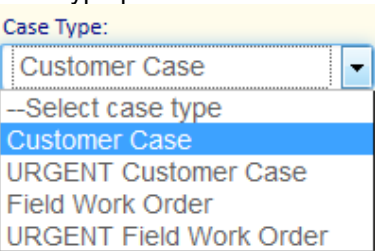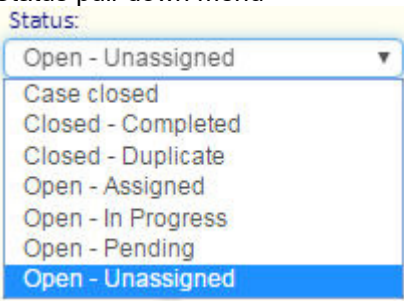
The Add Customer Case page is accessible via the following screens:
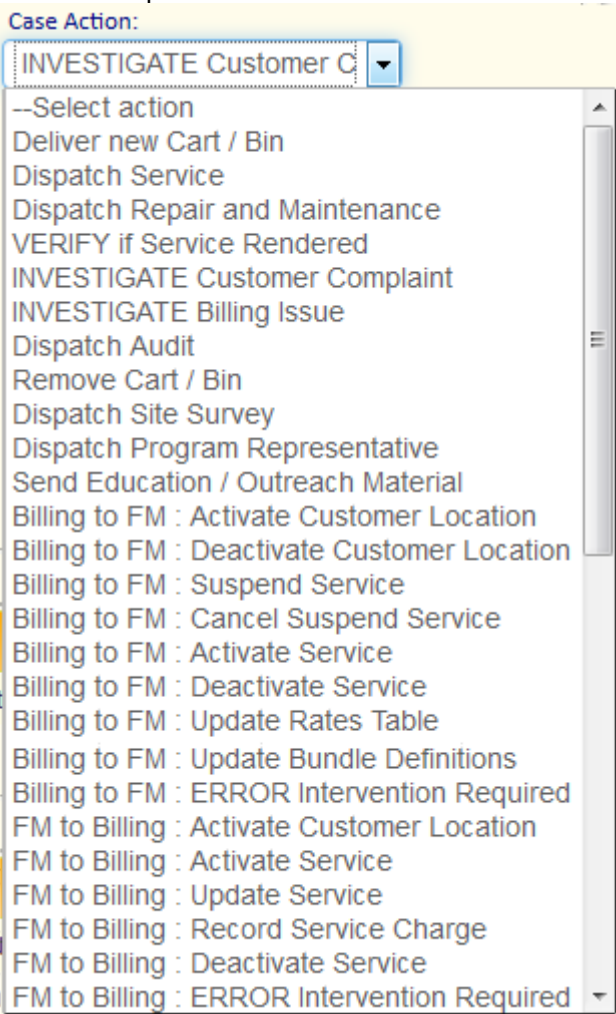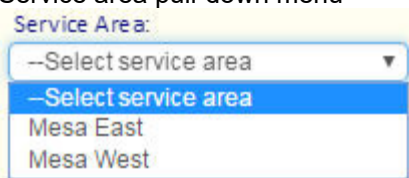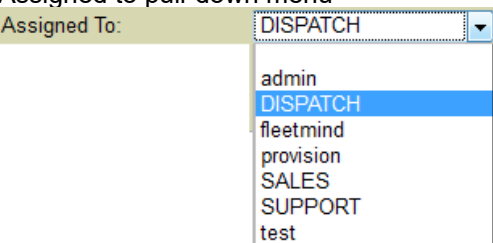
- Edit Location page

- Edit Customer page

Field Descriptions

Select the source of the complaint from the menu.These options represent entries defined in Case Reasons Reference Data.

Field	Description
Is Multi-family check box. Is Multi-family: ☐	If the case refers to a container that is shared by multiple parties (e.g., residents of an apartment or townhouse complex, select this check box. Otherwise, leave it unselected.
Case Reason pull-down menu 	Select a reason for the complaint from the menu. These options represent entries defined in Case Reasons reference data.
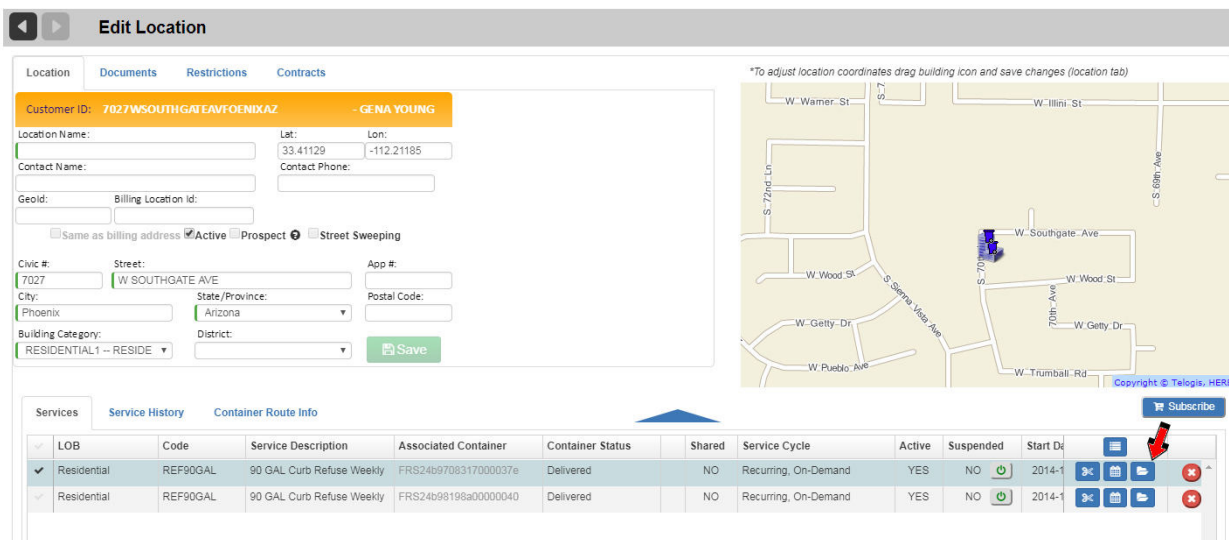
Source pull-down menu 	Select a complaint source from the menu. These options represent entries defined in Case Source Types reference data.
Case type pull-down menu 	Select a case type from the menu These options represent entries defined in Case Types reference data.
Status pull-down menu 	Select a status from the menu These options represent entries defined in Case Statuses reference data.

Case action pull-down menu Case Action: INVESTIGATE Customer C ▼ --Select action Deliver new Cart / Bin Dispatch Service Dispatch Repair and Maintenance VERIFY if Service Rendered INVESTIGATE Customer Complaint INVESTIGATE Billing Issue Dispatch Audit Remove Cart / Bin Dispatch Site Survey Dispatch Program Representative Send Education / Outreach Material Billing to FM : Activate Customer Location Billing to FM : Deactivate Customer Location Billing to FM : Suspend Service Billing to FM : Cancel Suspend Service Billing to FM : Activate Service Billing to FM : Deactivate Service Billing to FM : Update Rates Table Billing to FM : Update Bundle Definitions Billing to FM : ERROR Intervention Required FM to Billing : Activate Customer Location FM to Billing : Activate Service FM to Billing : Update Service FM to Billing : Record Service Charge FM to Billing : Deactivate Service FM to Billing : ERROR Intervention Required	Select an action from the menu These options represent entries defined in Case Actions reference data.
Service area pull-down menu Service Area: --Select service area ▼ --Select service area Mesa East Mesa West	Select a service area from the menu. This represents service area of the route, which is configured by the Company Reference Data.
Assigned to pull-down menu Assigned To: DISPATCH ▼ admin DISPATCH fleetmind provision SALES SUPPORT test	Select an assignee from the menu. These assignees represent entries/roles defined in the List of Users. See Defining CSR User Permissions.
Send email check box Send email: ☑	Select this check box to send email notifications to assignee(s).

As html/text radio buttons As html ◉ As text ○	Select a format for the email notifications according to users' preference. ⚠️ These buttons display only once the Send email check box has been selected.
Add Attachment: Choose File No file chosen Clear Attachment	Use the Choose file button to browse for a file to attach to the customer case. Use Clear Attachment to remove the attachment from the case.
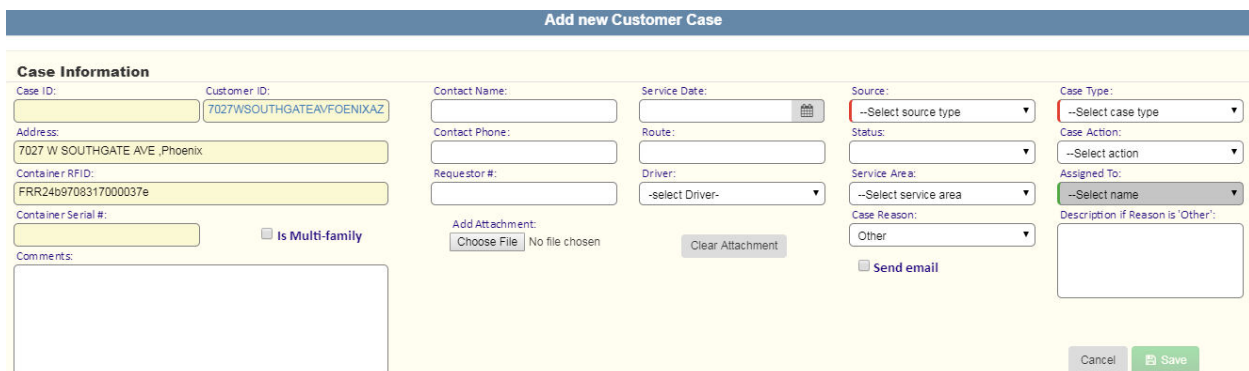
Adding a Customer Case from the Edit Location Page

The lower area of the Edit Location page lists the services associated with the location. Opening a Customer Case from this page will open the Add Customer Case page, with the case automatically associated with the container for that service.

- Locate the desired container and click its **Open new case** button.
  The Add Customer Case page opens.

ℹ️ Note that the container association is made automatically (**Container** field).

Adding a Customer Case from the Edit/View Customer Page

The lower area of the Edit Customer and View Customer pages lists the customer's location(s).

- Locate the desired location and click its **Open new case** button.
  The Add Customer Case page displays.

   Note that, unlike opening a Customer Case from the Edit Location, there is no container association when you use this method

Editing a Customer Case

To edit a Customer Case, for example, to reassign a case, change its status, or enter additional comments:

1. Select **Customer Management > List Customer Cases**.

2. Locate the desired case in the list, and then click a highlighted link in any column.
   The Edit Customer Case page displays.

- The lower area of the page displays a complete history of the Customer Case. These items are not editable.

- The information in the upper area of the page is editable. After making any changes here, click **Save** 💾.
  Once you have saved your edits, your update is added to the list of historical items in the lower area of the page.

- Clicking the highlighted **Customer** link in the header brings you to Edit Customer screen for that customer.

Deleting a Customer Case

⚠️ You cannot delete a Customer Case.
However, once you change a case status to **Closed**, the case is removed from the List of Customer Cases.

You can view a customer's case history by navigating to the Edit Customer page and selecting the **List Customer Cases** tab in the lower area of the page.

Generating Customer Service Reports

From the Reports, menu the Route Management System user can generate Curbside or Multi-Family reports of cases. The data extracted in either of these reports is determined by whether the *is Multi-Family* option is selected when the customer case is created or edited. See Adding a Customer Case.

Private Curbside Collection Report

To generate a Private Curbside Collection Report:
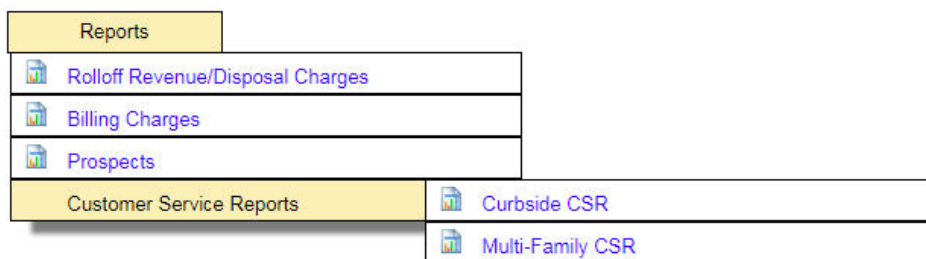
1. Select **Customer Management > Customer Service Reports > Curbside CSR**.

    The Customer Service Report - Private Curbside Collection page displays.

2. Select a date range using the **Date from** and **Date to** calendar menus.

3. Select a Service Area from the **Service Area** menu.

4. Click **Generate Report**.
   The report for the selected period and Service Area displays.

The following controls are provided in the report:

- You can search for a text string contained in any column by clicking the search arrow in the far right of the report and entering a string in the text field.


- You can sort report results by any column by clicking on the column header.

- You can group report results by any column by dragging the column header to the area above the report data.

You can drag multiple column headers to this area for further grouping.

- You can export the report to a CSV file for use in Excel or other spreadsheet applications by pressing **Export to csv**.
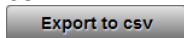
Multi-Family Collection Report

To generate a Multi-Family Collection Report:

1. Select **Customer Management > Customer Service Reports > Multi-FamilyCSR**.
   The Customer Service Report - Multi-Family Collection page displays.

2. Specify your report criteria as described for Private Curbside Collection Report, and then click **Generate Report**.
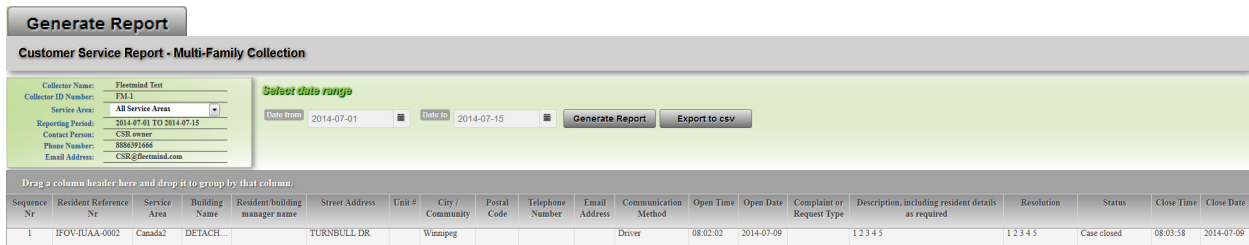
All the same controls as described for Private Curbside Collection Report are provided here. Refer to that section for details.

APPENDIX B - WORKFLOWS

Industrial Work Flows

The INDUSTRIAL (or ROLL-OFF) line of business uses a truck chassis to transport large containers that "roll-on" and "roll-off" the truck. These containers will vary in size and function, and may include compactors.

In some cases, the truck not only carries a container, but also pulls a trailer with a second container. This approach is especially useful when servicing two customers that are close to each other but far from the yard or disposal site, allowing the driver to make a single trip to the disposal site.

Usually, less than 10 customers will be serviced in a day since in most cases, each "load" involves a trip to the disposal site.
Each load is a high-value service. Both the distance traveled and the time spent on a load can influence the price being charged for the service and/or productivity of the operation. Because so few customers are processed in a day, measuring durations and distances precisely is key to maximizing profitability.

There are 10 common types of services associated with this line of business and supported by the FleetLink Route System.

1. **DELIVERY**: The driver leaves the yard or a customer's site with an empty bin. He arrives at the customer site and delivers the empty bin. He then either returns to the yard or goes to service the next customer.

2. **RELOCATION**: The driver either leaves the yard or a customer's site. He arrives at the customer site, picks-up the bin and repositions it at the customer site. He then either returns to the yard or goes to service the next customer.

3. **Dig Out**: The driver either leaves the yard or a customer's site. He arrives at the customer site, and digs out the bin. He then either returns to the yard or goes to service the next customer.

4. **Wash**: The driver either leaves the yard or a customer's site. He arrives at the customer site, and washes the bin. He then either returns to the yard or goes to service the next customer.

5. **REMOVAL**: The driver either leaves the yard or a customer's site. He arrives at the customer site, picks-up the bin, goes to the disposal site to empty it and either returns to the yard or goes to service the next customer.

6. **SWAP**: The driver leaves the yard or a customer's site with an empty bin. He arrives at the customer site, delivers

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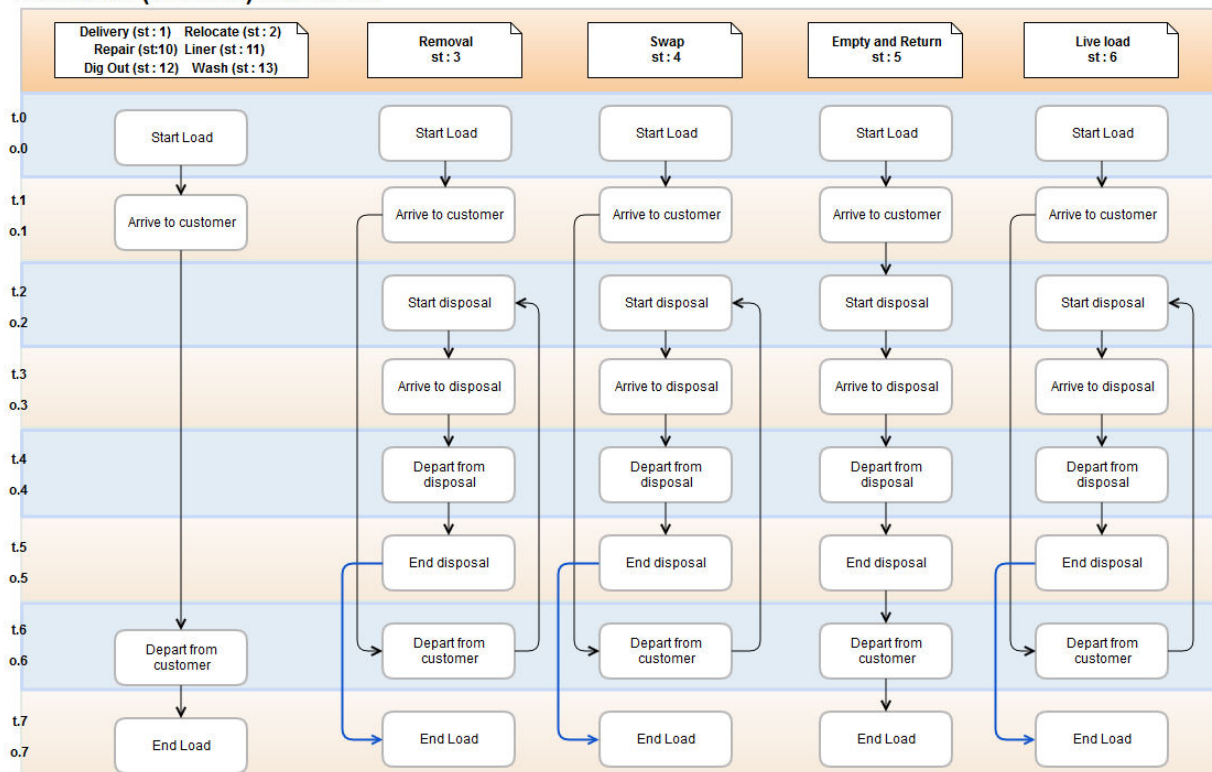
Commercial/Residential Workflows

For the Commercial and Residential lines of business, the following workflows can be selected via the user interface:

- **Cart to be serviced**, a regular, recurring pickup service for garbage or recycling.

- **No cart**, special service where no cart is involved, for example, a pickup of waste cooking oil from a restaurant, or a septic tank cleaning.

- **Cart Maintenance**, involving the following operations:

    o   Removal

    o   Delivery

    o   Exchange

    o   Repair

Appendix C - Setting up Shared Container Service

In multi-family dwellings—such as an apartment building or townhouse complex—it is not uncommon for several sub-scribers to share a single container. The same arrangement may apply to some commercial subscribers, such as small businesses in a strip mall.

In order to set up shared container service in the FleetLink Route Management System (RMS), you must create a *Default Customer Account*. ALL shared Containers are owned by the Default Customer (i.e., the Municipality). In addition, all non-shared containers revert to Default Customer ownership when a subscriber moves out and cancels his/her subscription ("container pullback").

ⓘ You need to set up only <u>one</u> Default Customer Account in RMS in order to accommodate shared container service. You may, optionally, create other accounts for your Municipality, as required, for different purposes.

This document explains how to:

- Set up shared container service under the Default Customer Account

- Subscribe customers to shared container service at their locations.

⚠ The procedures described here assume that you are familiar with creating customer accounts in RMS and subscribing customers to services.

The Default Customer Account

In the Edit Customer screen shown below, a Default Customer Account has been created.

- The customer is **Active**,

- Not a **Prospect**,

- Business Name is **DEFAULT MUNICIPAL ACCOUNT**.

The next task is to add a location to which the container will be delivered.

1. Select the **Add Location** button .

2. Specify the location details on the Add Location screen.
    For purposes of this demonstration, we are using *SHARED CONTAINER A* as the Location Name, and *Asset Address* as the Building Category.

3. Select **Save** when done.

4. Next, add a service.
    Use the **New Service** option (<u>not</u> *New Shared*), as the container is not yet shared.

5. Specify the service subscription details, as shown in the following figure:

    a. **Service**: 4 YD front-load trash bin, 7X/week

    b. **Container Selection:** Deliver new container

    c. **Container delivery workflow:** Deliver Bin

6. Select **Complete**.
Your Edit Location screen now looks like this.

Note that, initially, the **Suspended** value is **YES**, as the container has not yet been delivered. Once delivery is confirmed, this value will be set to **NO**.

Subscribing a Location to Shared Container Service

In the following procedure, we will subscribe an actual customer at or near the location where the container has been delivered (9902 E Grandview).
In this case, the customer is at 9903 E Grandview, as shown below.

1. Select **New Shared** from the Subscribe menu.

2. From the **Subscribe to Service for Shared Container** menu, search for a nearby container by selecting the **Search** button.

3. When the search results display, do the following:

    a. Locate and select the shared container in the **Matching locations** panel.

    b. Select an association from the **Existing Associations** panel.

    c. Choose a service from the **Available Services** panel

    d. Select a **Start Date** and set the subscription to **Active**.

    e. Select **Complete**.

The shared container service is added to the location.

You can add additional subscribers to the shared container service by repeating the above steps.

ⓘ In the above example, we subscribed the customer to a new service (i.e., a service type that he/she did not already have). To replace a customer's existing (non-shared) service with a shared service of the same type, use the above procedure to add the shared service, and then delete the customer's existing service. Doing so will generate a workflow to have the existing container removed.