SchedulePro Module for DirectRoute

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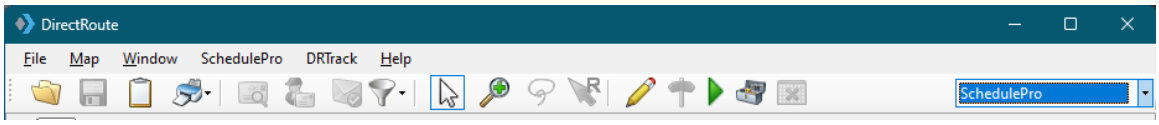
About SchedulePro

SchedulePro is a fleet scheduling tool for use with the DirectRoute that optimizes customer appointment days and balances volume over a planning period of 1–12 weeks at a time.

The SchedulePro (SP) module is fully incorporated within DirectRoute. All the basic DirectRoute menu and toolbar options remain available for use while working in SchedulePro. If a menu or toolbar icon is gray and faded rather than colored and clear, it means the item is not accessible at that time. You may need to have specific files open, be in the routing mode, or it may be accessible only when using another module.

To begin using SchedulePro, open DirectRoute and select **SchedulePro** from the ***Module Menu*** in the top right corner of the screen.



Create a New SchedulePro Project

Create a new SchedulePro project for each new planned routing scenario. Completed project results in a planned route schedule that considers a customer's volume and delivery pattern (frequency, requested delivery days) to plan scheduled stops over the planning period (1–12 weeks).

Each project involves four primary steps:

1. Review Preferences: Review routing preferences and choose the appropriate algorithm for your project, depending on how much consideration should be given to delivery pattern and volume, when building route schedules.
2. Create/Update SchedulePro Files: The primary files used are the Stop File, Truck File, and Pattern File; these files contain all the information needed by the software to build an optimal delivery schedule for each customer.
3. Build a Schedule: The software utilizes the Route Files to create routes for the first week of the planning period.
4. Review Schedule and Build Routes: Review the results of schedule building before building routes for the entire planning period.

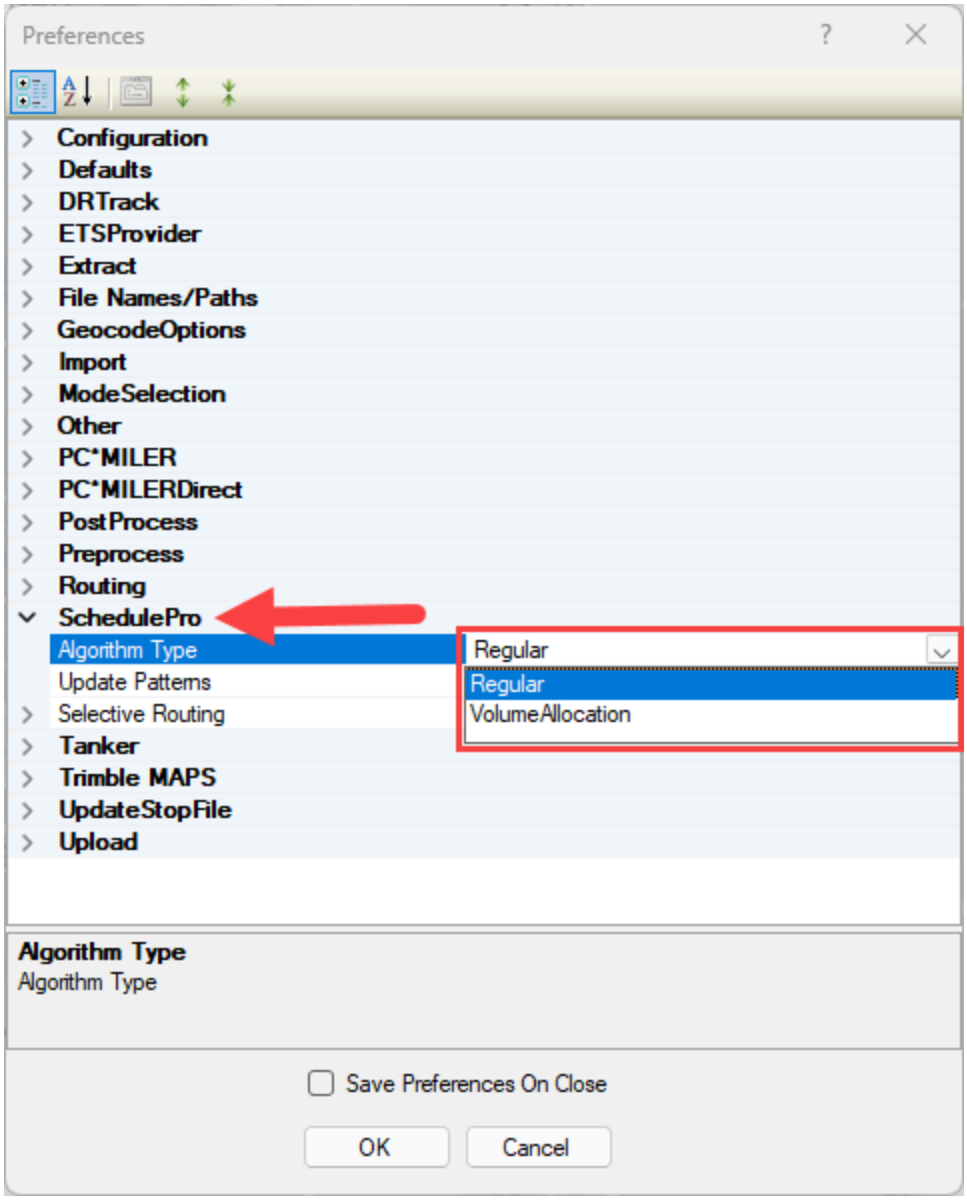
1. Review Preferences

Preferences are used to supply the necessary information about your routing environment and the type of results expected in the solution. These settings help identify specific data fields, volume types, and delivery windows used in the Truck File, the Stop File, and direct specific actions, behaviors, or special considerations that the software should perform or consider when building a solution.

In addition to the general routing preferences, SchedulePro provides a choice of algorithms to use when building a schedule of routes, to determine which factors are of most importance in the project.

The Routing Preferences and Options Table identifies and explains each setting and available options, more completely.

- To review/update general settings in Preferences, click **File > Preferences** from the menu.
- To review/update algorithm settings, click **File > Preferences > SchedulePro > Algorithm Type**.



Choose the appropriate algorithm to schedule stops based on how much consideration should be given to delivery patterns and volume.

- **Volume Allocation Algorithm**: Considers a customer's delivery pattern (frequency and delivery days) and volume to schedule stops over a specific time frame, from 1 week up to 12 weeks, in any one period. For new projects, this algorithm should be used.
- **Regular Algorithm**: Considers Frequency and the Min and Max Days Between columns to determine when delivery should take place.

EXAMPLE: Customer #1: Delivery pattern is WF (Wednesday, Friday), Volume Allocation = .5 (half on Wednesday, half on Friday); Customer #2: Delivery pattern is MWF (Monday, Wednesday, Friday), Volume Allocation = .333 (Monday, Wednesday) and .334 (Friday).

2. Create/Update SchedulePro Files

Flat Files are used to provide the software specifics concerning your customers and fleets. Creating and/or updating these files are key steps that must be done to initiate any scheduling project.

- SchedulePro Stop File: The Stop File is normally a tab-delimited text file (.xlsx, .xls, .stp) or a comma-delimited file (.csv), typically created from a Customer Master File, and contains order information for each customer, i.e. address, time windows, expected delivery days, volume, loading instructions, etc.
- SchedulePro Truck File: The Truck File contains information relating to the delivery fleet, including driver and truck assignments, availability, start and end times, vehicle capacities, work rules, etc.
- SchedulePro Pattern File: The Pattern File lists the days and frequency that may be assigned to the customer throughout the planning period.

2.1. SchedulePro Stop File

The Stop File is a spreadsheet that contains the customers' order and delivery information. Key fields represented in the Stop File include order **`ID1`**, **`Volume`**, **`Delivery Date`**, **`Address`**, and any special delivery rules. Optional data fields can also be used to manage customer schedules and territories, provide statistical data, generate reports, and/or generate additional Route Files.

If you already have one, or a spreadsheet with the required customer information, it can be used in the SchedulePro project if it contains the required data columns. If you do not already have a Stop File, a new one can be created that will automatically populate the necessary header columns and allow manual input of all customer data. Use the SchedulePro Stop File Fields Table to help complete the required columns. Additional optional data fields can also be included if needed (ref. Stop File Fields and Descriptions Table).

2.1.1. Create/Update the SchedulePro Stop File

1) From the menu, select **File > Open > Stop**, or **File > New > Stop**.
2) Update or enter each customer's data directly into columns on the spreadsheet or double-click on each row to launch the Stop Dialog box and update/enter all the data for each customer in one window.

3) Geocode the Stop File to locate and fill the correct Lat/Long for each record in the file (ref. Geocoding Records).

When completed, the file should be saved in the project folder (DirectRoute Data Folder).

2.1.2. SchedulePro Stop File Fields Table

FIELD	DESCRIPTION	REQUIRED, OPTIONAL, OR RECOMMENDED
Account Name	Name of the Customer (stop).	Required
ID1	Primary unique identifier for the stop (Account#, Customer#, etc.)	Required
ID2	Secondary unique identifier for stop (Order#, Store#, etc.)	Populated by the Volume Allocation Algorithm
Address	Street Address of the stop; used to geocode.	Required
City	City where address is located; used to geocode, and in the Distance File.	Required
State	Two-letter state abbreviation for the address; used to geocode.	Required
Zip	Zip Code of the address; used to geocode.	Required
FixedTime	Mandatory time that all vehicles must spend at the stop; typical range is 15 to 45 (minutes).	Recommended
EqCode	Alphanumeric code used to designate special equipment or requirements for the Stop (lift gate, refrig, etc.); used with Truck File field SpEq.	Optional
Volume1	The quantity of volume to be delivered; can be any quantity type (weight, cube, pallets, cases, etc.).	Required
UnldRate (UnldVol1)	Amount of time it takes to unload Volume1 (hours). Example: Volume1 = Cases (UnldCases), and 1 hr = unload 1000 cases, and Veh Capacity = 2000 cases then the unload rate would = 2 (2000 ÷ 1000/per hr.) Note: SchedulePro will add UnldRate to Fixed	Optional

FIELD	DESCRIPTION	REQUIRED, OPTIONAL, OR RECOMMENDED
	Time, to determine how long the truck will be at the stop.	
Open1	Earliest time of day delivery can be made to the stop (0000 - 2400).	Required
Close1	Latest time of day delivery can be made to the stop (0000 - 2400).	Required
Pattern1	Days of the week the stop can accept delivery (SMTWRFA); used with Open1 and Close1 to determine days/times that deliveries can be made.	Required
Rt ID	The route number to which the stop is assigned; discovered during the build.	Not used in SP
Seq	The sequence in which the stop is loaded on the route; discovered during the build.	Not used in SP
Longitude	Longitude of the stop, discovered during the geocode process.	Required
Latitude	Latitude of the stop, discovered during the geocode process.	Required
Symbol/Size/Color	The symbol (size and color) displayed on the map represents the stop. Symbols are chosen from the stop File; Double-click the customer record to open the dialog box; select the symbol, size, and color, then click **OK**.	Recommended
MinDaysBetween Deliveries	The minimum number of days required between deliveries to the stop. Example: Customer requires deliveries no more than once a week, then input 7 (number of days).	Required for the Regular Algorithm, not used with Volume Allocation
MaxDaysBetween Deliveries	The maximum number of days allowed between deliveries. Example: Customer requires deliveries at least every two weeks, then input 14 (number of days).	Required for the Regular Algorithm, not used with

<table>
<tr><th>FIELD</th><th>DESCRIPTION</th><th>REQUIRED, OPTIONAL, OR RECOMMENDED</th></tr>
<tr><td></td><td></td><td>Volume Allocation</td></tr>
<tr><td>Frequency</td><td>The number of times a stop is serviced during the planning period (enter the number conversion)

<table><tr><th>#Conversion</th><th>Frequency Pattern</th></tr><tr><td>1</td><td>1x a week</td></tr><tr><td>2</td><td>2x a week</td></tr><tr><td>3</td><td>3x a week</td></tr><tr><td>5</td><td>5x a week (daily, weekdays)</td></tr><tr><td>0.5</td><td>1x every 2 weeks (14 day cycle)</td></tr><tr><td>0.33</td><td>1x every 3 weeks (21 day cycle)</td></tr><tr><td>0.25</td><td>1x every 4 weeks (28 day cycle)</td></tr><tr><td>0.125</td><td>1x every 8 weeks (56 day cycle)</td></tr></table></td><td>Required</td></tr>
</table>

2.2. SchedulePro Truck File

The Truck File is a spreadsheet that contains all the information about the fleet that will be used to make deliveries. Each row in the file represents a truck on which the stops can be loaded.

The Volume Allocation version of SchedulePro requires one truck per driver per day, or one truck per day which references the total capacity for all trucks on that given day. These must be single-day trucks, each dispatching and returning on the same *Edate* and *Ldate*.

SchedulePro's Volume Allocation algorithm does not understand overnight vehicles or vehicles that could start before midnight on the previous day, such as a dispatch of 2300 on Sunday for a route that makes its deliveries on Monday. If these two types of trucks are required (vehicles that can perform overnight routes or vehicles that must dispatch before midnight of the previous day), a different truck file must be used for Route creation and Sequencing in DirectRoute once you complete the scheduling portion of the SchedulePro project.

If you already have a Truck File or a spreadsheet with vehicle and depot information (such as one that might have been used in TerritoryPro), it can be used in the SchedulePro project provided it contains the required data columns. If you do not already have a Truck File, a new one can be created that will automatically populate the necessary header columns and allow manual input of all customer data. Use the SchedulePro Truck File Fields Table to assist in completing the required columns. Additional optional data fields can also be included if needed (ref. Truck File Fields and Descriptions Table).

NOTE: SchedulePro's truck file is required for each day you are building. DirectRoute's truck file understands the overall operation. To properly build for SchedulePro, you will need to supply both of these files.

2.2.1. Create/Update the SchedulePro Truck File

1) From the menu, select **File > Open > Truck**, or **File > New > Truck**.
2) Enter each vehicle's data directly into each column of the spreadsheet, or double-click on each row to open the ***Truck Dialog*** box and update/enter all the data for each vehicle in one window.
3) Geocode the Truck File to locate the correct Lat/Long for each record listed in the file (Ref. Geocoding Records).

When completed, the file should be saved in the project folder (DirectRoute Data Folder).

2.2.2. SchedulePro Truck File Fields Table

FIELD	DESCRIPTION	REQUIRED, OPTIONAL, OR RECOMMENDED
TrkID	Truck ID may be a number, a name, or whatever is used to identify each vehicle	Required
Available	This must be set to **TRUE** to make the vehicle available for use in the route build	Required

FIELD	DESCRIPTION	REQUIRED, OPTIONAL, OR RECOMMENDED
OneWay	Set to **TRUE** for vehicles that will be routed out, but not returned to the depot. Set to **FALSE** if the vehicle will return to the depot upon completion of the route	Required
SpEq	Special Equipment Codes, along with Equipment Codes in the Stop File, are used to identify special designations for the vehicle; i.e. Lift Gate, Refrig compartment, etc.	Optional
Volume1	The max quantity of Volume1 (Stop File) that the vehicle can carry (Capacity); the same Volume1 type used in the Stop File	Required
MiCost	Cost per mile to operate this vehicle	Required
HrCost	Hourly Cost is the hourly cost of the driver for this vehicle.	Required
OTCost1	The cost per hour is added if the time to complete the route exceeds the time set for WorkDay. Example: If the cost for the first two hours of overtime is $5, then OTCost1 = 5.	Optional
OTHrs1	The level at which overtime hours are calculated; used with OTCost1. Example: If OT costs are paid in 2hr increments, then OTHrs1 = 2	Optional
FixedCost	Costs that do not change; tractor rental, maintenance, etc.	Optional
Address	Address where the vehicle (Depot) is located	Required
City	City where address is located; used to geocode	Required
State	Two-letter state abbreviation for the address; used to Geocode.	Required
Zip	Zip Code of the address; used to geocode.	Required
Longitude	The Depot's longitude coordinate discovered during the Geocode process	Required

FIELD	DESCRIPTION	REQUIRED, OPTIONAL, OR RECOMMENDED
Latitude	The Depot's latitude coordinate, discovered during the Geocode process	Required
Symbol/Size/Color	The symbol (size and color) that is displayed on the map, to represent the truck; Double-click on the truck record to open the dialog box; select the symbol, size, and color	Optional
EarStart	The earliest time a vehicle may leave the terminal to begin a route (military time format), ex. 2230	Optional
NormalStart	The normal daily start time of the vehicle	Required
LatStart	The latest time a vehicle can leave out of the terminal	Optional
LatFinish	The latest time a vehicle should return to the depot	Optional
WorkDay	The number of hours in a normal workday; OTCosts are incurred if the Workday hours are exceeded to complete the route (required if OTCost1 is used)	Optional
Brk1Start	How far into the shift/route a mandatory break should start; if the driver should take a break four hours into the route, then Brk1Start = 4. Note: Up to five break fields can be used.	Optional
Brk1Duration	The duration of the break; entered in decimal or whole number format (30 min = .5, 15 minutes = .25, etc.).	Optional
MaxWorkTm	The max time a vehicle can be out before returning to the depot.	Required
TargetWrkTm	The target work time for each vehicle.	Optional
MaxDriveTm	The max drive time per shift on a route before a layover is implemented; entered in hours.	Optional
MinLayover	The minimum number of hours a vehicle can layover.	Optional

FIELD	DESCRIPTION	REQUIRED, OPTIONAL, OR RECOMMENDED
MaxLayover	The maximum number of hours a vehicle can layover.	Optional
MaxDrvTmB4Layover	Determines how long a vehicle must drive before a layover can be implemented.	Optional
MaxLayovers	The maximum number of layovers allowed per route.	Optional
PreTrip	Per DOT rules, time is added to the start of each Rt.	Optional
PostTrip	Per DOT rules, time is added to the end of each Rt.	Optional

2.3. SchedulePro Pattern File

The **Pattern File** (or **Pattern Library**) is used only with the Volume Allocation version of SchedulePro. This text file details the number of times that a stop may be serviced (Frequency) and when (Day) that stop may be serviced. This is done by assigning a pattern to the various frequencies used.

2.3.1. Create/Update The Pattern Data File

The Pattern Data File is created as a spreadsheet (.xls) with a maximum of eight (8) columns. Once the file has been completed, it should be saved and stored in the DirectRoute Data Folder, where it can be used for multiple SchedulePro projects. An example Pattern Data File is shown in the table below.

- **First Column:** Pattern Identifier. This identifies the frequency and day of the week For example, one time a week on a Monday would be 1M, while four times a week Monday through Thursday would be 4MTWR.
- **Second and subsequent columns**: Each column represents a day of the week, beginning with Sunday and ending with Saturday. Enter the Volume Allocation (weekly volume divided by Frequency) for each Pattern Identifier. For example, a delivery which takes place three days a week would be 0.333, and deliveries which take place four days a week would be 0.25.

Remember to save the file and store it in the DirectRoute Data Folder, where it can be used again for multiple SchedulePro projects.

2.3.1.1. Pattern Data File Sample Table

1 M		1					
1 T			1				
1 W				1			
1 R					1		
1 F						1	
2 MR		0.5			0.5		
2 TF			0.5			0.5	
2 MW		0.5		0.5			
2 MF		0.5				0.5	
2 TR			0.5		0.5		
2 WF				0.5		0.5	
3 MWF		0.333				0.334	
3 MTR		0.333	0.333		0.334		
3 MWR		0.333		0.333	0.334		
3 MTF		0.333	0.333			.0334	
4 MTRF		0.25	0.25		0.25	0.25	
4 MTWR		0.25	0.25	0.25	0.25		
4 MTWF		0.25	0.25	0.25		0.25	
4 MWRF		0.25		0.25	0.25	0.25	
5 MTWRF		0.25	0.25	0.25	0.25	0.25	

2.3.1.2 Custom Volume Allocation by Account

You may have accounts where volume is not allocated equally among the delivery days in a week. For example, let's say you have two accounts with deliveries on Tuesdays and Thursdays (TR). However, Account 101 needs to be allocated at a 40/60 (0.4/0.6) split, while Account 102 needs to be allocated at a 70/30 (0.7/0.3) split. To do this, you need to:

1. In the Pattern Library, create and name separate patterns for each of the accounts. Best practice is to give each account a Pattern Identifier based on the account name. The above example with Accounts 101 and 102 would look like this:

Pattern Name	S	M	T	W	R	F	A
101			0.7		0.3		
102			0.4		0.6		

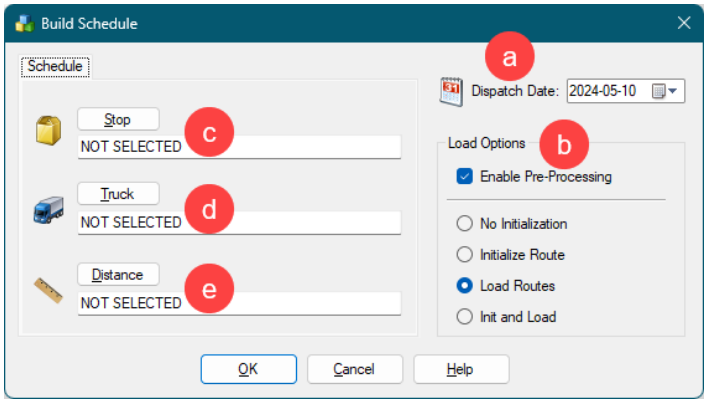
2. For the allocation to work properly, you must manually update the **Patterns** column in the Stop File with the appropriate pattern availability for each individual account. In the example above, you would use the Account Number as the **Patterns** value. (Note: The Patterns column will only be available if you have either run SchedulePro at least once in the past or if you manually add it under **File** > **Preferences** > **Stop User Fields**.)
3. Under **Preferences** > **SchedulePro,** change **Update Patterns** to **False**. This prevents SchedulePro from overwriting the values that were manually populated in the **Patterns** column. Accounts with a blank value under **Patterns** will receive all appropriate pattern options based on that Account's **Frequency** and **Pattern1** values.

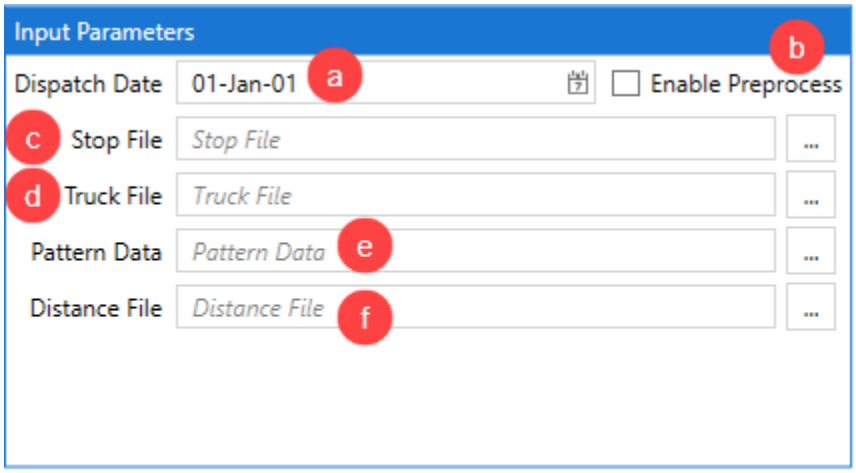
3. Build a Schedule

Once all the files have been updated and completed, ***Schedule Build*** will use those files to create routes for the first week of the planning period. The first week's routes will be the base from which routes for the remaining weeks in the planning period will be built.

To begin the Schedule Build and select all input parameters, select **File > New > Schedule** from the menu.

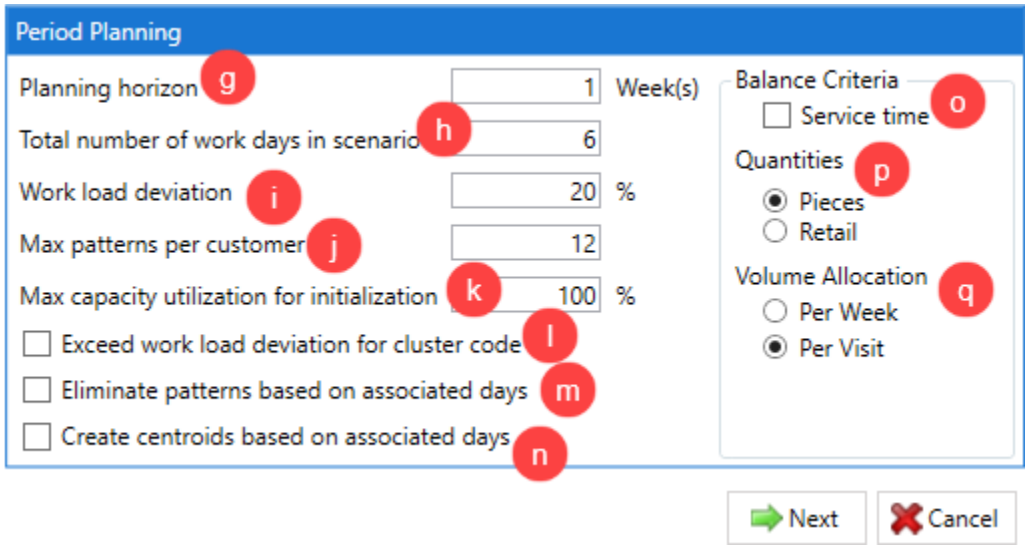
3.1. Input Parameters





a) **Dispatch Date:** Select the earliest date to dispatch/schedule vehicles; the default is Sunday.
b) **Enable Preprocessing:** Uses Preprocess settings from Routing Preferences.
c) **Stop File**: Select the Stop File (.stp, .xls, .xlsx, etc.).
d) **Truck File:** Select the Truck File (.truck, .trk, .xls, .xlsx).
e) **Pattern Data File**: Select the Pattern Data File (.txt).
f) **Distance File:** Select the Distance File (.dist).

3.2. Period Planning Parameters



g) **Planning Horizon:** Number of weeks the scheduling solution will cover.
h) **Total Days of Operation:** The total number of days the solution will cover for all weeks (ex: 14 = for a 2-week scenario with routes running 7 days each week).
i) **Workload Deviation:** the goal (%) to which the algorithm will attempt to schedule each week and or day within the next day and or week.

EXAMPLE: 20% is the goal to which the algorithm will try to balance and make equal between days. Tuesday's total volume would be within 20% of Monday's volume which should be within 20% of Wednesday's volume, etc.

j) **Max Patterns Per Customer:** The maximum number of Delivery Patterns in use by any given frequency per customer (set to the maximum number of choices for the least serviced customer or set to 84 as a default).
k) **Max Capacity Utilization for Initialization:** this is the percentage of the daily max volume capacity that SchedulePro will initially assign to any day before scheduling optimization occurs.

EXAMPLE: 80% is default and relays to the algorithm to fill up each day and or week to 80% of the total capacity to leave room for optimization to then move stops from one day and or week to another before ultimately filling up each day and week to the potential maximum volume allowed.

l) **Exceed workload deviation for cluster code**: Selection allows SchedulePro to ignore the Workload Deviation if required, to honor Cluster Codes.

m) **Eliminate patterns based on associated days**: Review the Pattern1 of each stop and anchors that day eliminating all other patterns in the Pattern Library for a customer that doesn't include that specific Pattern1 day. The algorithm does this regardless of whether this option is selected True or False.
n) **Create centroids based on associated days**: If the Day column has been imported, SchedulePro will create route centroids based on the provided days.

3.3. Balance Criteria Parameters

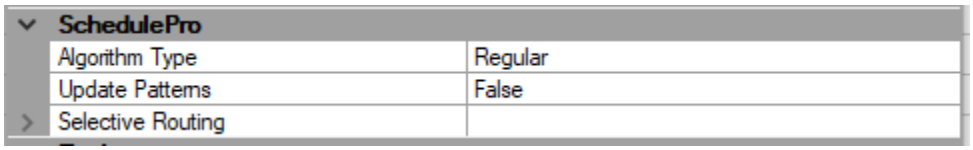
o) **Service Time:** Considers FixedTime, in addition to Capacity, when assigning customers.
p) **Quantities:** Select the Capacity field that will be used for balancing purposes; default is the first quantity field listed in **Preferences > Configuration > Volume**.
q) **Volume Allocation:** Choose what type of average volume has been provided in the stop file.

Click **Next** after all selections have been made. When the build is complete, the results will appear on the next screen.

3.4. Days Between Optimization

Days Between Optimization does not use the volume allocation algorithm for scheduling. Instead, it relies on the standard DirectRoute algorithm to load accounts and pick delivery days based on the routed answer. Pattern integrity is maintained by filling in two additional columns in the stop file called ***MinDaysBetweenDeliveries*** and ***MaxDaysBetweenDeliveries***. These columns tell DirectRoute how many days must be allowed between deliveries when SchedulePro explodes the account master.

To use SchedulePro this way, update your SchedulePro preferences (**File > Preferences > SchedulePro**) and change the ***Algorithm Type*** to **Regular**:



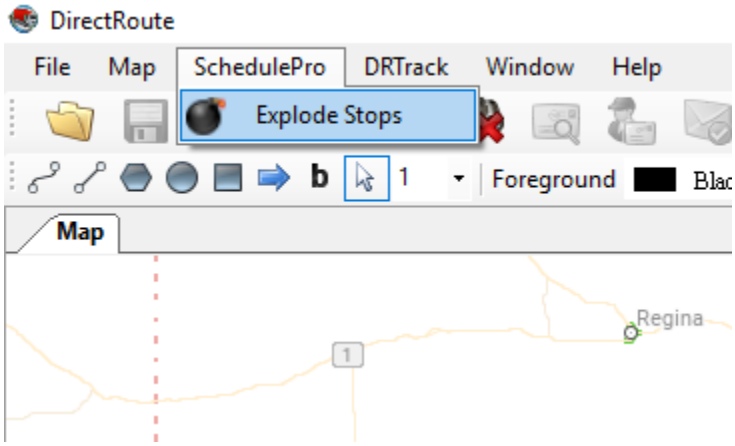
Build your account master stop file normally, one record per store. Include frequency and fill out the columns called ***MinDaysBetweenDeliveries*** and ***MaxDaysBetweenDeliveries***. These columns indicate how many days at minimum and maximum should be allowed between deliveries.

For example, a frequency two account may have a ***MinDaysBetweenDeliveries*** of 2 and a ***MaxDaysBetweenDeliveries*** of 3. With those values, if the first record was scheduled for a

Tuesday, the second delivery could only be scheduled for Thursday or Friday. If you need to lock a group of stops to certain days, then before routing, Pattern1 should be set to the delivery days required. If you leave pattern 1 with MTWRF, then SchedulePro will pick the correct day during routing. SchedulePro will explode the account master and change pattern 1 to the selected day.

To start a solution, click **File > New Schedule** from the menu, and select your stop, truck, and distance files per usual. When selecting the stop and truck file, SchedulePro will automatically create a copy of the stop and/or truck file that will contain the exploded records. These are the names of your files amended with ***_Explode*** (e.g. stopfile_Explode.xls). Once you finish selecting your files, click **Load** to begin the routing and scheduling process.

If this is a multi-week problem with frequencies less than 1, after the initial pass, click **SchedulePro > Explode Stops** from the menu:

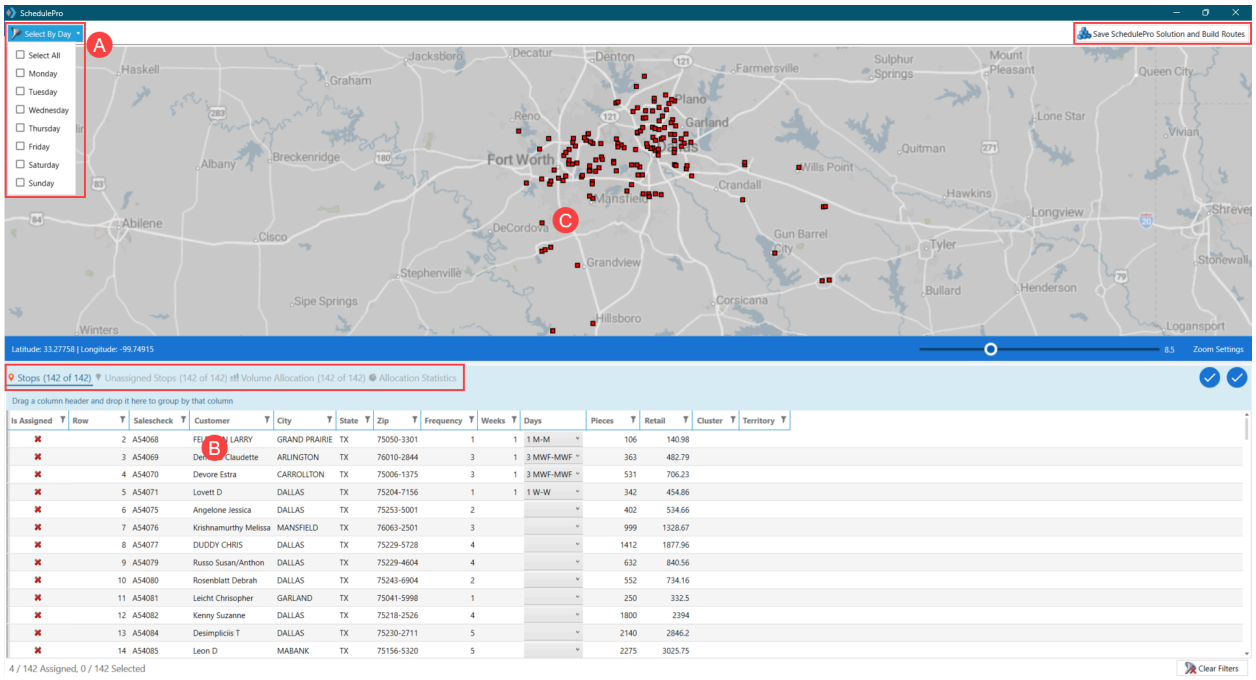


Using SchedulePro this way prioritizes efficient routing over balancing daily volume. As a result, you may notice a routed answer will appear to have the week front-loaded, particularly if there is a high proportion of low-frequency stops (occurring once or twice weekly). However, this approach may lead to an increase in stops with no assigned load, especially among higher-frequency stops.

To adjust for this, you can manually shift volume to later in the week. This can be done by modifying your truck file for routes earlier in the week. Limiting volume, hours, or even the number of routes available on EDates 1, 2, and 3 will encourage more stops to be scheduled later in the week. Additionally, you can change the pattern of frequency to one account so that they can only be scheduled later in the week (e.g. Pattern 1 changing from MTWRF to WRF), which can seed routes later and distribute volume more evenly.

4. Review and Build Routes

The ***Schedule Build*** results will appear on the next screen; the map with planned stops appears on the top half, and the results are listed on the bottom half, in four separate tabs. These can all be used to analyze the results of the chosen parameters before building routes.



4.1. Map Results

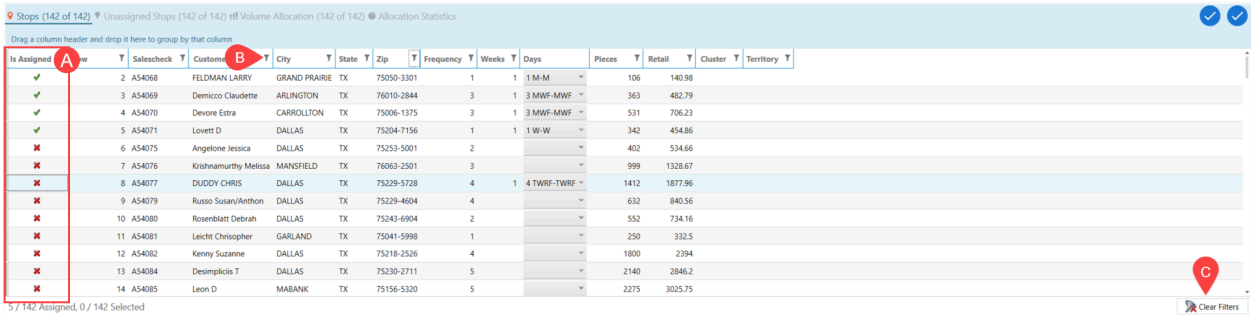
The map screen displays all the selected stops for the chosen tab:

- Use the **Filter by Day** button (A) in the top-right corner of the screen to filter the stops shown.
- Click any stop in the ***Assigned Stops*** results tab (B) to select/locate the stop on the map.
- Hover over the stop symbol on the map (C) to view the ***Stop Details*** info box.
- The map can be zoomed in/out by rotating the wheel button, or by dragging the Zoom slider.

4.2. All Stops Results

All Stops lists all stops contained within the records.

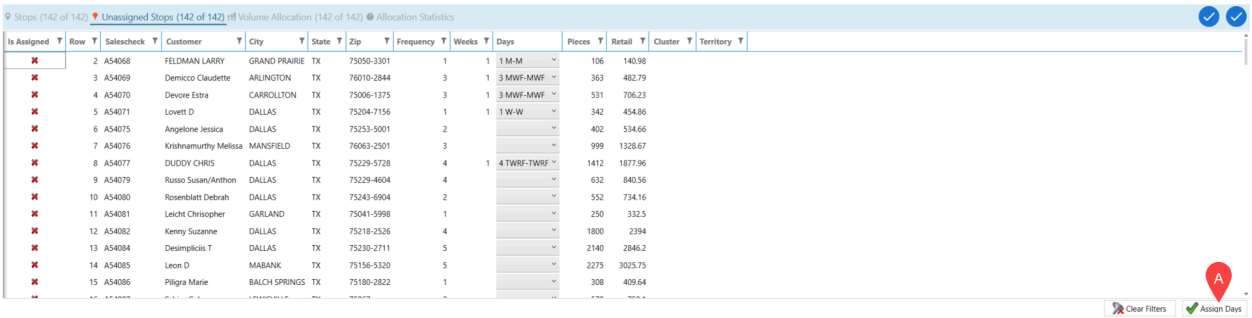
- Stops in the ***Is Assigned*** column (A) marked by a checkmark indicate a selected stop, while an X indicates an unassigned stop.
- The Days column presents a dropdown box by which the user can select to assign a new pattern from assigned days/weeks; on change, the stop will be assigned to the selected days and the quantities will be allocated based on the pattern chosen.
- Use the Filter button (B) for any column to filter records; filters can be cleared in the Filter info box or by clicking **Clear Filters** (C).
- The counter in the bottom left corner shows the number of assigned stops, the number of all stops, and the number of selected stops.



4.3. Unassigned Stops Results

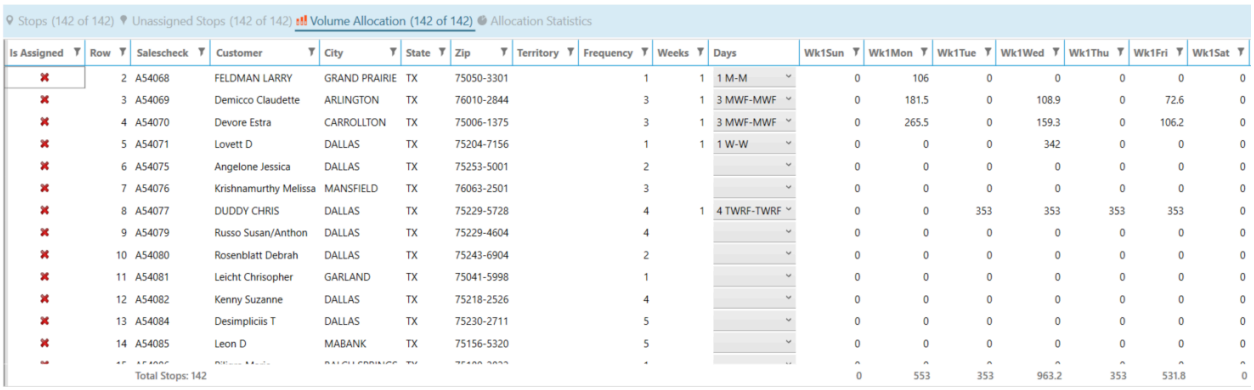
Unassigned Stops lists all stops that were not assigned (loaded).

- Can be sorted by column and/or filtered by column data.
- To assign a stop, use the Days column drop-down arrow to select a day pattern.
- View immediate results from changes/selections for any number of stops.
- To commit the changes made, click **Assign Days** (A). Newly assigned stops will move out of the ***Unassigned Stops*** tab.



4.4. Volume Allocation Results

Volume Allocation provides a snapshot of scheduled volume; and includes volume totals for each stop, and the total volume for each day of the week.



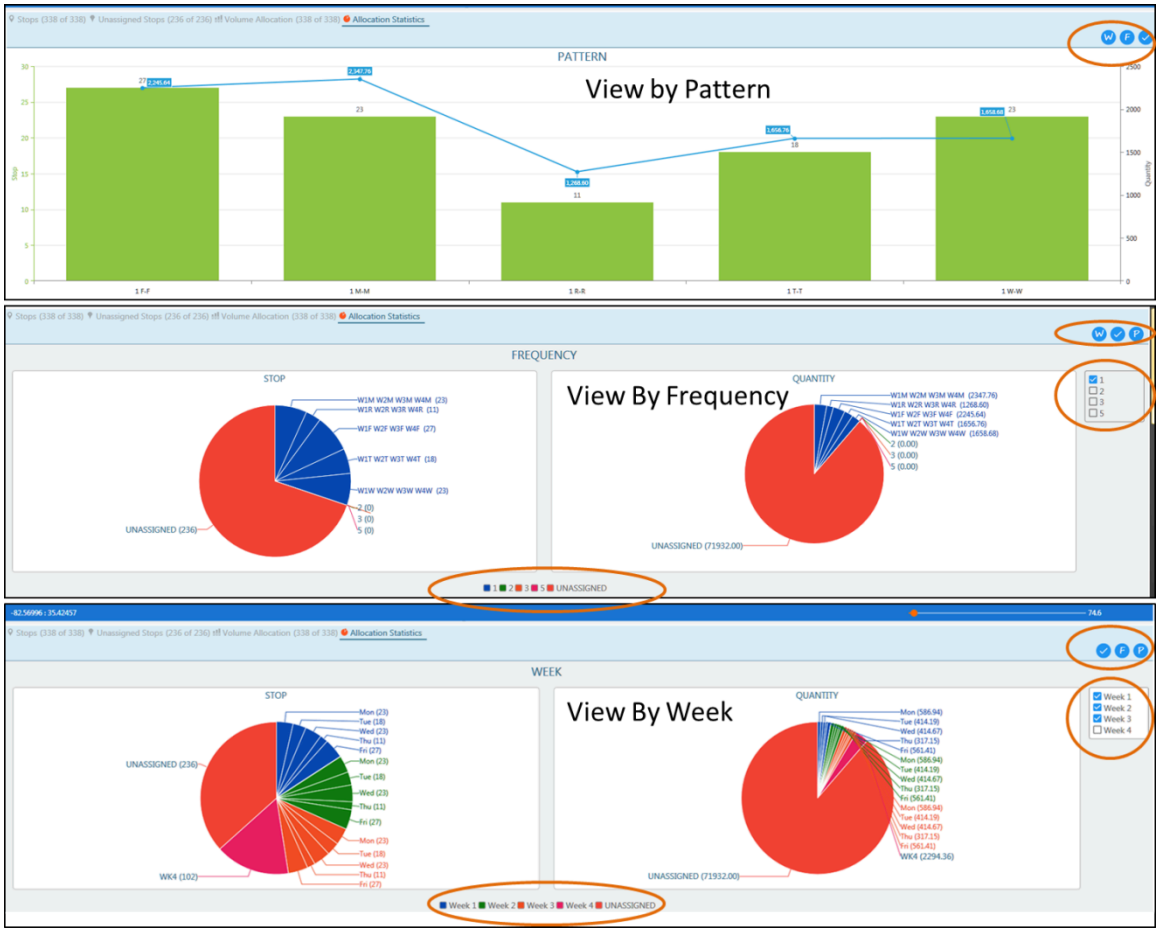
Stops (142 of 142) | Unassigned Stops (142 of 142) | Volume Allocation (142 of 142) | Allocation Statistics

Is Assigned	Row	Salescheck	Customer	City	State	Zip	Territory	Frequency	Weeks	Days	Wk1Sun	Wk1Mon	Wk1Tue	Wk1Wed	Wk1Thu	Wk1Fri	Wk1Sat
✖	2	A54068	FELDMAN LARRY	GRAND PRAIRIE	TX	75050-3301		1	1	1 M-M	0	106	0	0	0	0	0
✖	3	A54069	Demicco Claudette	ARLINGTON	TX	76010-2844		3	1	3 MWF-MWF	0	181.5	0	108.9	0	72.6	0
✖	4	A54070	Devore Estra	CARROLLTON	TX	75006-1375		3	1	3 MWF-MWF	0	265.5	0	159.3	0	106.2	0
✖	5	A54071	Lovett D	DALLAS	TX	75204-7156		1	1	1 W-W	0	0	0	342	0	0	0
✖	6	A54075	Angelone Jessica	DALLAS	TX	75253-5001		2			0	0	0	0	0	0	0
✖	7	A54076	Krishnamurthy Melissa	MANSFIELD	TX	76063-2501		3			0	0	0	0	0	0	0
✖	8	A54077	DUDDY CHRIS	DALLAS	TX	75229-5728		4	1	4 TWRF-TWRF	0	0	353	353	353	353	0
✖	9	A54079	Russo Susan/Anthon	DALLAS	TX	75229-4604		4			0	0	0	0	0	0	0
✖	10	A54080	Rosenblatt Debrah	DALLAS	TX	75243-6904		2			0	0	0	0	0	0	0
✖	11	A54081	Leicht Chrisopher	GARLAND	TX	75041-5998		1			0	0	0	0	0	0	0
✖	12	A54082	Kenny Suzanne	DALLAS	TX	75218-2526		4			0	0	0	0	0	0	0
✖	13	A54084	Desimpliciis T	DALLAS	TX	75230-2711		5			0	0	0	0	0	0	0
✖	14	A54085	Leon D	MABANK	TX	75156-5320		5			0	0	0	0	0	0	0
		Total Stops: 142									0	553	353	963.2	353	531.8	0

4.5. Allocation Statistics Results

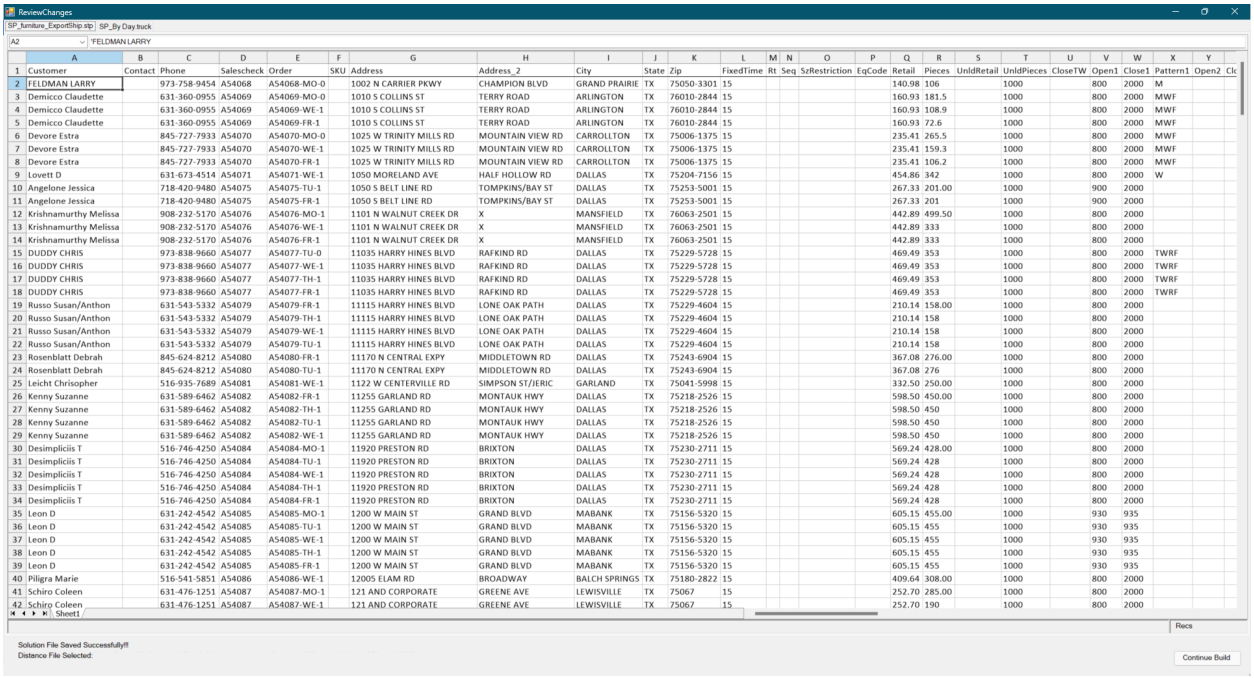
Allocation Statistics provides statistical charts for assigned versus unassigned stops.

- Choose statistics to display by Pattern, Frequency, or Week; select the W (Week), F (Frequency), or P (Pattern) in the upper right corner (current view identified by a checkmark).
- Choose which week, or all weeks to display by selecting the week number on the right side of the screen.



After viewing the ***Schedule Build*** results, click **Save Solution and Build Routes** at the top right. The next screen returned will be the new files created from the saved solution.

- The saved solution files are saved in the DirectRoute Data Folder, with a .schpro file extension.
- The Stop File is copied and renamed to include *ExportShip.stp* (the original file will be left intact and unchanged); the new name(s) appear in the top right corner of the screen.
- A message in the bottom left corner indicates the solution was saved successfully.
- To exit from the saved solution without building the routes, click the X in the upper right corner to close the solution.
- To continue and build the routes, click **Continue Build Routes** at the bottom-right.



	Customer	Contact	Phone	Salescheck	Order	SKU	Address	Address_2	City	State	Zip	FixedTime	Rt	Seq	SzRestriction	EqCode	Retail	Pieces	UnldRetail	UnldPieces	CloseTW	Open1	Close1	Pattern1	Open2	Clo
2	FELDMAN LARRY		973-758-9454	A54068	A54068-MO-0		1002 N CARRIER PKWY	CHAMPION BLVD	GRAND PRAIRIE	TX	75050-3301	15					140.98	106		1000		800	2000	M		
3	Demicco Claudette		631-360-0955	A54069	A54069-MO-0		1010 S COLLINS ST	TERRY ROAD	ARLINGTON	TX	76010-2844	15					160.93	181.5		1000		800	2000	MWF		
4	Demicco Claudette		631-360-0955	A54069	A54069-WE-1		1010 S COLLINS ST	TERRY ROAD	ARLINGTON	TX	76010-2844	15					160.93	108.9		1000		800	2000	MWF		
5	Demicco Claudette		631-360-0955	A54069	A54069-FR-1		1010 S COLLINS ST	TERRY ROAD	ARLINGTON	TX	76010-2844	15					160.93	72.6		1000		800	2000	MWF		
6	Devore Estra		845-727-7933	A54070	A54070-MO-0		1025 W TRINITY MILLS RD	MOUNTAIN VIEW RD	CARROLLTON	TX	75006-1375	15					235.41	265.5		1000		800	2000	MWF		
7	Devore Estra		845-727-7933	A54070	A54070-WE-1		1025 W TRINITY MILLS RD	MOUNTAIN VIEW RD	CARROLLTON	TX	75006-1375	15					235.41	159.3		1000		800	2000	MWF		
8	Devore Estra		845-727-7933	A54070	A54070-FR-1		1025 W TRINITY MILLS RD	MOUNTAIN VIEW RD	CARROLLTON	TX	75006-1375	15					235.41	106.2		1000		800	2000	MWF		
9	Lovett D		631-673-4514	A54071	A54071-WE-1		1050 MORELAND AVE	HALF HOLLOW RD	DALLAS	TX	75204-7156	15					454.86	342		1000		800	2000	W		
10	Angelone Jessica		718-420-9480	A54075	A54075-TU-1		1050 S BELT LINE RD	TOMPKINS/BAY ST	DALLAS	TX	75253-5001	15					267.33	201.00		1000		900	2000			
11	Angelone Jessica		718-420-9480	A54075	A54075-FR-1		1050 S BELT LINE RD	TOMPKINS/BAY ST	DALLAS	TX	75253-5001	15					267.33	201		1000		900	2000			
12	Krishnamurthy Melissa		908-232-5170	A54076	A54076-MO-1		1101 N WALNUT CREEK DR	X	MANSFIELD	TX	76063-2501	15					442.89	499.50		1000		800	2000			
13	Krishnamurthy Melissa		908-232-5170	A54076	A54076-WE-1		1101 N WALNUT CREEK DR	X	MANSFIELD	TX	76063-2501	15					442.89	333		1000		800	2000			
14	Krishnamurthy Melissa		908-232-5170	A54076	A54076-FR-1		1101 N WALNUT CREEK DR	X	MANSFIELD	TX	76063-2501	15					442.89	333		1000		800	2000			
15	DUDDY CHRIS		973-838-9660	A54077	A54077-TU-0		11035 HARRY HINES BLVD	RAFKIND RD	DALLAS	TX	75229-5728	15					469.49	353		1000		800	2000	TWRF		
16	DUDDY CHRIS		973-838-9660	A54077	A54077-WE-1		11035 HARRY HINES BLVD	RAFKIND RD	DALLAS	TX	75229-5728	15					469.49	353		1000		800	2000	TWRF		
17	DUDDY CHRIS		973-838-9660	A54077	A54077-TH-1		11035 HARRY HINES BLVD	RAFKIND RD	DALLAS	TX	75229-5728	15					469.49	353		1000		800	2000	TWRF		
18	DUDDY CHRIS		973-838-9660	A54077	A54077-FR-1		11035 HARRY HINES BLVD	RAFKIND RD	DALLAS	TX	75229-5728	15					469.49	353		1000		800	2000	TWRF		
19	Russo Susan/Anthon		631-543-5332	A54079	A54079-FR-1		11115 HARRY HINES BLVD	LONE OAK PATH	DALLAS	TX	75229-4604	15					210.14	158.00		1000		800	2000			
20	Russo Susan/Anthon		631-543-5332	A54079	A54079-TH-1		11115 HARRY HINES BLVD	LONE OAK PATH	DALLAS	TX	75229-4604	15					210.14	158		1000		800	2000			
21	Russo Susan/Anthon		631-543-5332	A54079	A54079-WE-1		11115 HARRY HINES BLVD	LONE OAK PATH	DALLAS	TX	75229-4604	15					210.14	158		1000		800	2000			
22	Russo Susan/Anthon		631-543-5332	A54079	A54079-TU-1		11115 HARRY HINES BLVD	LONE OAK PATH	DALLAS	TX	75229-4604	15					210.14	158		1000		800	2000			
23	Rosenblatt Debrah		845-624-8212	A54080	A54080-FR-1		11170 N CENTRAL EXPY	MIDDLETOWN RD	DALLAS	TX	75243-6904	15					367.08	276.00		1000		800	2000			
24	Rosenblatt Debrah		845-624-8212	A54080	A54080-TU-1		11170 N CENTRAL EXPY	MIDDLETOWN RD	DALLAS	TX	75243-6904	15					367.08	276		1000		800	2000			
25	Leicht Chrisopher		516-935-7689	A54081	A54081-WE-1		1122 W CENTERVILLE RD	SIMPSON ST/JERIC	GARLAND	TX	75041-5998	15					332.50	250.00		1000		800	2000			
26	Kenny Suzanne		631-589-6462	A54082	A54082-FR-1		11255 GARLAND RD	MONTAUK HWY	DALLAS	TX	75218-2526	15					598.50	450.00		1000		800	2000			
27	Kenny Suzanne		631-589-6462	A54082	A54082-TH-1		11255 GARLAND RD	MONTAUK HWY	DALLAS	TX	75218-2526	15					598.50	450		1000		800	2000			
28	Kenny Suzanne		631-589-6462	A54082	A54082-TU-1		11255 GARLAND RD	MONTAUK HWY	DALLAS	TX	75218-2526	15					598.50	450		1000		800	2000			
29	Kenny Suzanne		631-589-6462	A54082	A54082-WE-1		11255 GARLAND RD	MONTAUK HWY	DALLAS	TX	75218-2526	15					598.50	450		1000		800	2000			
30	Desimpliciis T		516-746-4250	A54084	A54084-MO-1		11920 PRESTON RD	BRIXTON	DALLAS	TX	75230-2711	15					569.24	428.00		1000		800	2000			
31	Desimpliciis T		516-746-4250	A54084	A54084-TU-1		11920 PRESTON RD	BRIXTON	DALLAS	TX	75230-2711	15					569.24	428		1000		800	2000			
32	Desimpliciis T		516-746-4250	A54084	A54084-WE-1		11920 PRESTON RD	BRIXTON	DALLAS	TX	75230-2711	15					569.24	428		1000		800	2000			
33	Desimpliciis T		516-746-4250	A54084	A54084-TH-1		11920 PRESTON RD	BRIXTON	DALLAS	TX	75230-2711	15					569.24	428		1000		800	2000			
34	Desimpliciis T		516-746-4250	A54084	A54084-FR-1		11920 PRESTON RD	BRIXTON	DALLAS	TX	75230-2711	15					569.24	428		1000		800	2000			
35	Leon D		631-242-4542	A54085	A54085-MO-1		1200 W MAIN ST	GRAND BLVD	MABANK	TX	75156-5320	15					605.15	455.00		1000		930	935			
36	Leon D		631-242-4542	A54085	A54085-TU-1		1200 W MAIN ST	GRAND BLVD	MABANK	TX	75156-5320	15					605.15	455		1000		930	935			
37	Leon D		631-242-4542	A54085	A54085-WE-1		1200 W MAIN ST	GRAND BLVD	MABANK	TX	75156-5320	15					605.15	455		1000		930	935			
38	Leon D		631-242-4542	A54085	A54085-TH-1		1200 W MAIN ST	GRAND BLVD	MABANK	TX	75156-5320	15					605.15	455		1000		930	935			
39	Leon D		631-242-4542	A54085	A54085-FR-1		1200 W MAIN ST	GRAND BLVD	MABANK	TX	75156-5320	15					605.15	455		1000		930	935			
40	Piligra Marie		516-541-5851	A54086	A54086-WE-1		12005 ELAM RD	BROADWAY	BALCH SPRINGS	TX	75180-2822	15					409.64	308.00		1000		800	2000			
41	Schiro Coleen		631-476-1251	A54087	A54087-MO-1		121 AND CORPORATE	GREENE AVE	LEWISVILLE	TX	75067	15					252.70	285.00		1000		800	2000			
42	Schiro Coleen		631-476-1251	A54087	A54087-WE-1		121 AND CORPORATE	GREENE AVE	LEWISVILLE	TX	75067	15					252.70	190		1000		800	2000			

Clicking **Continue Build Routes** will save the solution and the results will be displayed in the Route Book.

SchedulePro Project Results

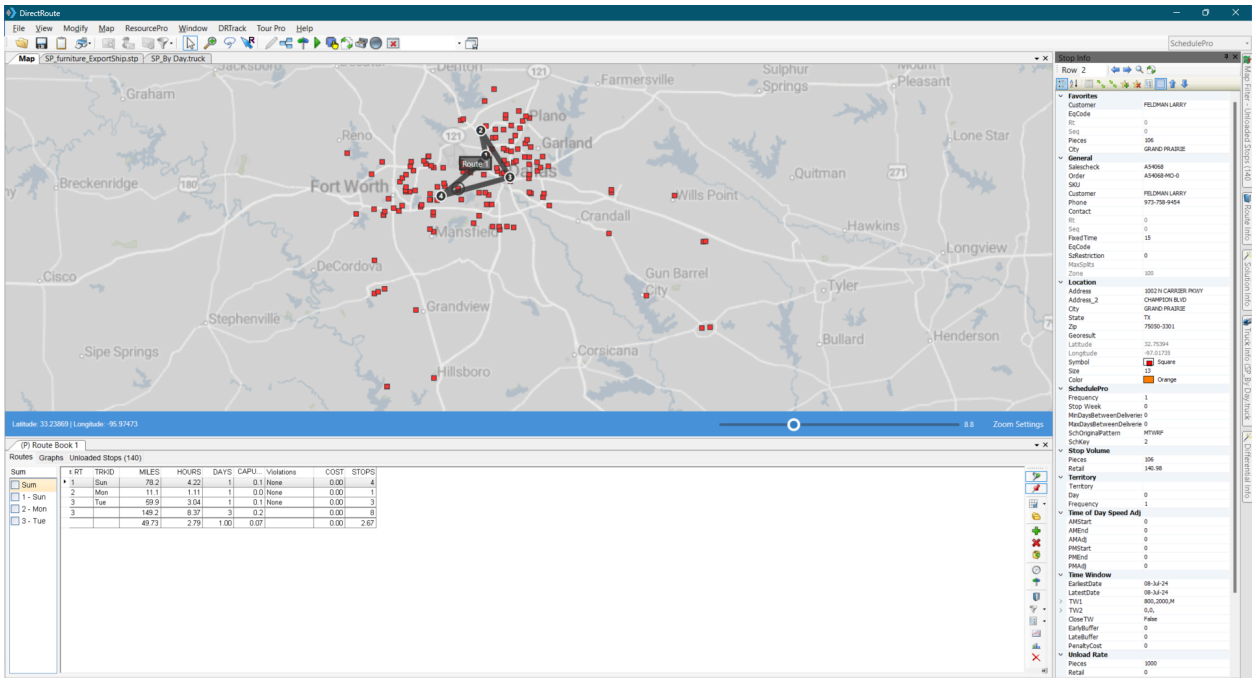
The Route Book is created for every routing scenario. It provides a detailed picture of every route and a summary of the entire routing solution.

- Customized summary information about the routing solution.
- Customized view of individual routes and stops.
- Modify routes by adding or deleting stops.
- Display capacity, drive time, and work time gauges for each route.
- Generate turn-by-turn directions for each route.

The Route Book provides three separate reports, each having different formats that can easily be customized.

- **Summary Report:** Pertains to the summary page of the Route Book.
- **Detail Report**: The body of the report, listing all the individual route details.
- **Header Report**: Contains the column headings information.

Included in the Route Book are the project Info boxes. The Route Info, Stop Info, Truck Info, Solution Info, Differential Info, and Map Filter Info boxes all display various information about the individual routes and/or stops that are present in the Route Book.



TIP: Resize the info boxes by dragging the border left or right, or drag the Route Book tab or other open file tabs anywhere in the main window to reposition them.

The newly created route schedules can be modified and/or edited using any of the tools available in the Route Book. For additional information on editing options, see Route Modifications.