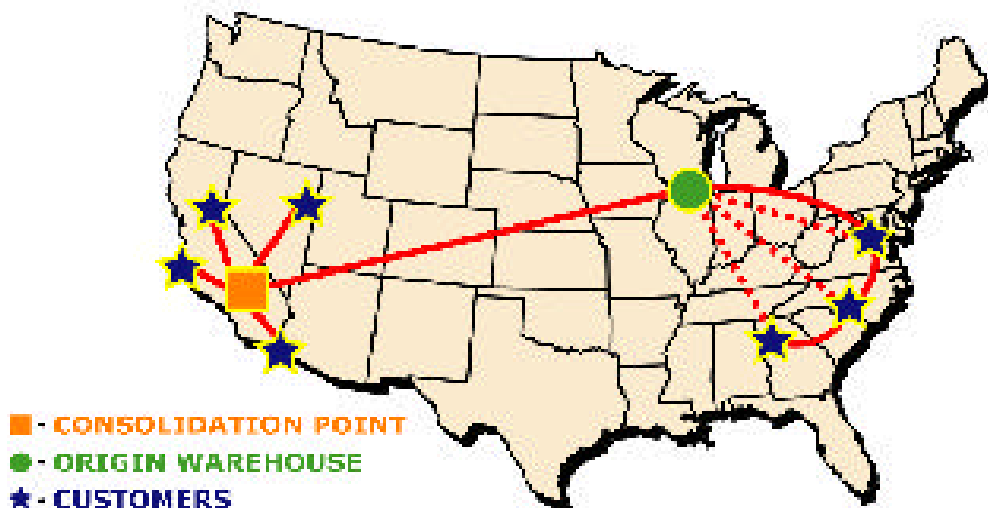


AR Traffic Consultants, Inc.

*The source for transportation software
and logistics solutions.*

CalcRoute User's Manual

Version 4 Release 2 Mod 41



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Introduction

CalcRoute is an outbound/inbound optimization module. Users can analyze groups of orders to determine the most cost effective routing scenarios. Using ARTC CalcRate and a Mileage database, multiple shipping scenarios maybe displayed for the traffic user to analyze.

CalcRoute will optimize the shipments by Least Cost or Minimum Miles. . . .

Least Cost Optimization will combine shipments and use pools to extract the very least cost for moving these shipments via LTL and Truckload carriers.

Minimize Miles Optimization will route the shipments to extract the very minimum miles via an in-house fleet.

Shippable orders may be automatically transferred to CalcRoute from the Primary Business System. In addition, manual entry capabilities are available.

CalcRoute integrates with CalcRate's rate database and a third party mileage database (i.e. Rand McNally, ALK, etc.)

Note: CalcRoute requires a third party mileage database.

This User's Manual will describe each option within the standard CalcRoute system, excluding any modifications done by the user.

Most fields in CalcRoute require a user to enter information:

Mandatory fields are shown in **blue**.

Optional fields are shown in **pink**.

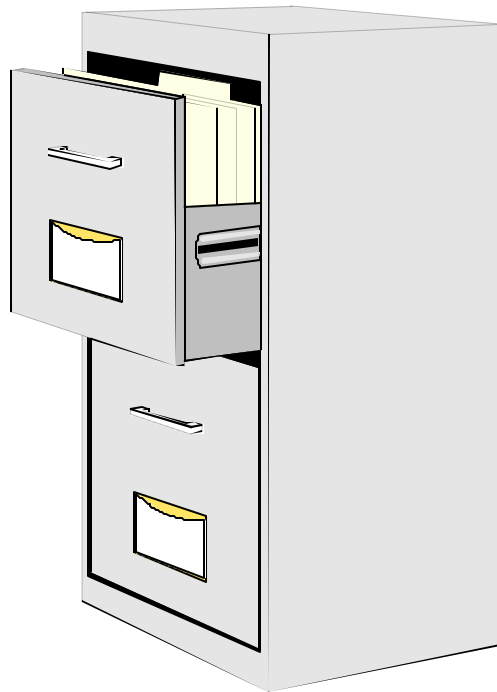
For more information or questions on CalcRoute, please call ARTC at (212)736-8565.

The following exhibit shows the CalcRoute Main Menu. Options available in CalcRoute are shown on this screen:

14:20:19	CalcRoute MAIN MENU	4/19/99
Select one of the following:		
Master File Maintenance	Optimization Processing	
1. Customer/Vendor Maintenance	20. Shipment Entry	
2. Pool Maintenance	21. Consolidation Maintenance	
3. Zone Maintenance	22. Shipment Maintenance	
4. Region Maintenance	23. Submit Optimization	
5. System Control Maintenance	24. Display Optimization	
6. Warehouse Control Maintenance	25. History Inquiry	
7. Optimization Constraints		
8. Non-Working Day Maintenance		
Selection ==> _	99. Return	F21=Command Entry

Section 1

Master File Maintenance



Customer/Vendor Maintenance

The purpose of this option is to create/maintain a master file of your customers/vendors. Information (delivery hours, address, contact, etc.) stored herein will print on confirmed load manifests printed by CalcRoute.

Note: If the user passes an order to CalcRoute and the customer is not defined herein, the order will still pass but the detail entered in this section will not be printed on the order.

Step 1: From the Main Menu in CalcRoute, select option 1 (Customer/Vendor Maintenance). You should see the following screen:

```
18:20:35                               CalcRoute                               3/15/99
ROUT01R                                CUSTOMER/VENDOR MAINTENANCE

Enter Customer/Vendor Name _____

=====
F1=Help                                F3=Exit
```

Step 2: When the above screen appears, you may enter the following information, or leave the field blank to see a list of all current customers/vendors:

Customer/Vendor Name

Enter the customer/vendor's name. The user may type in a name, or the first few letter of the name, to set a temporary lower limit for view the file.

Upon hitting "Enter," you will see the following screen:

```
18:27:14                               CalcRoute                               3/15/99
ROUT01R                                CUSTOMER/VENDOR MAINTENANCE

Type Options, Press Enter.
5=Display

Opt Cust/Vend Name      Cus/Ven Cd  Address #1      City      St Zip  Cty
_  A & P / FARMER JAC    4047002002  18718 BORMAN AVE DETROIT  MI 48227
_  A & P BAKERY SUPPL 0033009999  3590 NW 60TH ST   MIAMI  FL 33142
_  A & P BAKERY SUPPL 0FLA &MIA0 3590 NW 60TH ST   MIAMI  FL 33142 0
_  A & P BAKERY SUPPL 0FLA &MIA0 3590 NW 60TH ST   MIAMI  FL 33142 0
_  A & P TEA CO/SUPER 1277692001  4801 HOLLINS FERR  HALETTH MD 21227

=====
F1=Help      F3=Exit      F9=Add
```

Step 3: If you wish to edit an existing record place a "5" next to the record to display, otherwise, hit "F9=Add" to add a customer/vendor. The following screen will appear:

```
10:43:01                               CalcRoute                               3/16/99
ROUT01R                                CUSTOMER/VENDOR MAINTENANCE

Customer/Vendor Name : _____
Address 1 : _____
Address 2 : _____
Address 3 : _____
City : _____ St : __ Zip : _____

Phone# : _____ Fax# : _____
Contact : _____
Hours : _____
Spec Instruct : _____
Cust/Vend Code : _____
Backward Schedule Due Date Reqr : N (Y/N)
First/Last Stop: __ (F/L)

=====
F1=Help F3=Exit F4=Prompt F23=Delete
```

Step 4: When the previous screen appears, enter/edit the following:

Customer/Vendor Name

Enter the name of the vendor/customer.

Address 1,2,3

Enter the street address of the vendor/customer.

City

Enter the City in which the vendor/customer is located.

St

Enter the State in which the vendor/customer is located.

Zip Code

Enter the Zip Code of the vendor/customer.

Cust/Vend Code

This field is required upon entry of a new customer/vendor. It **may not** be modified when viewing an existing customer/vendor. The Cust/Vend Code **must** be unique.

Backward Scheduling Due Date Required

Enter a "Y" in this field if Backward Scheduling will be required.

First/Last Stop

Enter an "F" if, on a multi-stop truck, the pool **must be** the first stop, an "L" if the pool **must be** the last stop, or leave blank.

Note: In order to change a ship-to, the customer/vendor record must be deleted completely and then re-entered.

The following information is optional. If entered, it will appear on load manifests created by CalcRoute:

Phone #

Enter the vendor's/customer's phone #.

Fax #

Enter the vendor's/customer's faximile #.

Contact

Enter the main contact for the vendor/customer.

Hours

Enter the vendor/customer hours of operation during which they may be contacted.

Spec Instruct

Enter any Special Instructions for delivery or pickup you may have with regards to this vendor/customer.

Hitting “Enter” at this point will write the record to the Vendor/Customer Master File. If the vendor is a new vendor, a message should appear on you screen acknowledging that the vendor has been added.

Pool Maintenance

Potential pool distributors, already defined as CalcRate warehouses, that may be utilized during optimization are created/maintained herein. In addition, the destinations (zip codes) serviced by each pool are defined.

Note: Assigning a zip code to a servicing pool does not force shipments to the given point to flow through the assigned pool distributor. Although, each ultimate zip code may be assigned to a single pool distributor only.

Step 1: From the Main Menu in CalcRoute, select Option 2 (Pool Maintenance). You

11:22:39	CalcRoute	3/16/99
ROUT10R	POOL MAINTENANCE	
Enter Pool Code _____		
=====		
F1=Help F3=Exit F4=Prompt F5=File Contents		

Step 2: When the above screen appears, enter the following information or hit “F4=Prompt” for a window which will display all warehouses previously set up in CalcRate Option 1. You may also press F5=File Contents for all existing pools previously entered into CalcRoute.

Pool Code

Enter the pool code.

Note: All pools must be set up as warehouses in ARTC CalcRate Option 1 (Warehouse Maintenance).

Once a pool code has either been entered or selected from the window, hit “Enter.” You will see the following screen:

11:42:33	CalcRoute	3/16/99
ROUT10R	POOL MAINTENANCE	
Enter Pool Code 187	Cory's Storage Warehouse	
Address 1	123 82nd Avenue	
Address 2	Queens, NY	
Zip Code	11415	
Minimum Pool Weight	_____	
Maximum Pool Shipment Weight	_____	
Stop (F=First, L=Last, *Blank)	_	
Charge Per CWT	_____	
Minimum CWT Charge	_____	
Charge Per Piece	_____	
Minimum Per Piece Charge	_____	
Flat Charge	_____	
Pool Carrier	_____	

F1=Help F3=Exit F4=Prompt F7=Pool Points F23=Delete

Step 3: Enter the following information when the above screen appears:

Minimum Pool Weight

Enter the minimum weight that an entire load **must have**, when shipped in order to be considered for shipment to the pool.

Maximum Pool Weight

Individual shipments whose weight exceeds this value, **will not** be considered for shipment to the pool.

Stop

Enter an "F" if, on a multi-stop truck, the pool **must be** the first stop, an "L" if the pool **must be** the last stop, or leave blank.

Charge per CWT

Enter the CWT charge/handling fee for the pool.

Minimum CWT Charge

Enter the minimum CWT charge/handling fee for the pool.

Charge Per Piece

Enter the charge per piece/handling fee for the pool.

Minimum Charge per piece

Enter the minimum charge per piece/handling fee for the pool.

Flat Charge

Pool Carrier

Enter the delivery carrier SCAC (i.e. RDWY-Roadway). This is the carrier that provides “pick-up” service at the pool and delivers the product to the customer.

Hitting “Enter” at this point will write the record to the Pool Master File.

Step 4: Select “F7=Pool Points” to define the points serviced by the pool. You should see the following screen:

13:02:48	CalcRoute	3/16/99
ROUT70R	POOL POINT MAINTENANCE	
Pool 187	Queens, NY	11415
St	From	To
---	-----	-----
---	-----	-----
---	-----	-----
---	-----	-----
---	-----	-----
---	-----	-----
=====		
F1=Help F2=Previous Screen F4=Prompt		

When the above screen appears, enter the following information:

Note: A zip code may only be assigned to a single pool.

St

Enter the state that will be serviced by the pool.

From

Enter the lower zip code range for this state.

To

Enter the upper zip code range for this state.

Note: If a state is entered, but the from and to zip code fields are left blank, CalcRoute will automatically fill in the entire range of zip codes for the state.

Zone Maintenance

This option creates zones to impact the logic employed by CalcRoute when optimizing. Typically, CalcRoute gives preference to shipments within a state and in a close proximity to one another. Creating zones here will allow the user to further “crop” the intrastate logic preference.

Note: Zones may only be defined within states (e.g. Eastern and Western PA).

Step 1: From the Main Menu in CalcRoute, select Option 3 (Zone Maintenance). The following screen should appear:

```
15:11:37                               CalcRoute                               3/16/99
ROUT12R                                ZONE MAINTENANCE

Enter Warehouse Code  _____

=====
F1=Help  F3=Exit  F4=Prompt  F5=File Contents
```

Enter the following information when the above screen appears:

Warehouse Code

Enter the warehouse code or select “F4=Prompt” to view a window of current warehouses available. You may also press “F5=File Contents” for a window of warehouse with previously entered zones.

```
13:02:48                               CalcRoute                               3/16/99
ROUT12R                                ZONE MAINTENANCE
Pool 187      Queens, NY      11415

St   From   To   Zone
--   -
--   -
--   -
--   -
--   -
--   -
--   -
--   -

=====
F1=Help  F2=Previous Screen  F4=Prompt
```

When the above screen appears, enter the following information:

Note: If you define the same zone number for points within multiple states, they will be treated as different zones.

St

Enter the state that you wish to work with. You may press F4 for a window of the two digit state codes.

From

Enter the lower zip code range for this state.

To

Enter the upper zip code range for this state.

Zone

Enter the zone number you wish this range to be.

Note: If a state is entered, but the from and to zip code fields are left blank, CalcRoute will automatically fill in the entire range of zip codes for the state.

Hitting "Enter" at this point will save the zones serviced by the pool. Defining information here will give preference order consolidation within the zone defined.

Region Maintenance

The purpose of this option is to provide the user an additional sort mechanism prior to optimization. CalcRoute will display on the screen the assigned region for each order to be optimized. Defining information herein is optional for each shipping point.

Step 1: From the CalcRoute Main Menu, select Option 4 (Region Maintenance). You should see the following screen:

```
15:11:37                               CalcRoute                               3/16/99
ROUT35R                                REGION MAINTENANCE

Enter Warehouse Code  _____

-----
F1=Help  F3=Exit  F4=Prompt  F5=File Contents
```

Enter the following information when the above screen appears:

Warehouse Code

Enter the warehouse code or select "F4=Prompt" to view a window of current warehouses available. You may also press "F5=File Contents" for a window of warehouse with previously entered zones.

```
13:02:48                               CalcRoute                               3/16/99
ROUT35R                                REGION MAINTENANCE
Pool 187      Queens, NY      11415

  St   From   To   Rg
  ---  -
  ---  -
  ---  -
  ---  -
  ---  -
  ---  -
  ---  -
  ---  -

-----
F2=Previous Screen
```

When the above screen appears, enter the following information:

Note: A single destination may only be assigned to one region.

St

Enter the state that will be serviced by the pool.

From

Enter the lower zip code range for this state.

To

Enter the upper zip code range for this state.

Rg

Enter the region serviced by the pool.

Note: If a state is entered, but the from and to zip code fields are left blank, CalcRoute will automatically fill in the entire range of zip codes for the state.

Hitting "Enter" at this point will save the regions serviced by the pool.

System Control Maintenance

The purpose of this option is to identify additional fields, the user wishes to capture. (i.e. pallets, cases, etc.)

Note: If assigned, “cube” is the only measurement field defined herein, CalcRoute allows the user to define maximum limits (See Option 6, Optimization Constraints).

Step 1: From the Main Menu in CalcRoute, select Option 5 (Shipment Entry Fields Maintenance). You should see the following screen:

15:49:15	CalcRoute	3/16/99
ROUT04R	SHIPMENT ENTRY FIELDS MAINTENANCE	
<u>Y</u>	FAX FLAG(Y/N)	
<u>N</u>	LOAD PLANNER(Y/N)	
Place an "X" next to the fields needed for shipment entry.		
<u>X</u>	CUBE	
_	PALLETS	
_	POINTS	
_	CASES	

F1=Help F3=Exit		

Step 2: When the above screen appears enter the following information.

Fax Flag

Enter a “Y” if you wish the load manifest to be automatically faxed from the Display Optimization (option 24) to the specified warehouse.

Load Planner

If you wish to use the Load Planner please contact ARTC.

Place an “X” to the left of the additional fields that you will require an entry for an order to enter the Optimization Module.

Note: Although fields with an “X” will not be required to process a shipment through CalcRoute, you may wish to set up entry procedures that require these fields to be captured.

Cube

This value represents the cubic measurement of a shipment

Pallets

This represents the total number of pallets used for the shipment.

Cases

This represents the case count of the shipment.

Points

This represents a user defined value. Users may assign points to each product (i.e. 1 part number xyz= two points). This point value may be derived by a user defined algorithm.

Warehouse Control Maintenance

Use this option to define how orders are processed when CalcRoute receives them. (i.e. order consolidation and carrier selection routes.)

Note: CalcRoute can automatically consolidate orders moving to the same customer/ship- to, into shipments. In addition, CalcRoute may automatically review and/or select the initial default direct carrier.

Step 1: From the Main Menu in CalcRoute, select Option 6 (Shipment Entry Fields Maintenance). You should see the following screen:

```
15:11:37                               CalcRoute                               3/16/99
ROUT35R                               Warehouse Control Maintenance

Enter Warehouse Code  _____

=====
F1=Help  F3=Exit  F4=Prompt  F5=File Contents
```

Step 2: Enter the following information when the above screen appears:

Warehouse Code

Enter the warehouse code or select "F4=Prompt" to view a window of current warehouses available. You may also press "F5=File Contents" for a window of warehouses which have defined preferences.

```
9:34:10                               CalcRoute                               10/20/99
ROUT97R                               WAREHOUSE CONTROL MAINTENANCE

Enter Warehouse Code 123  Cory's Queens Warehouse

Address 1          123456 Queens Blvd
Address 2          Queens, NY
Zip Code          11415
Preconsolidation (Y/N)  __
Replace Carrier    __ Preferred Carrier  __

=====
F1=Help  F3=Exit  F23=Delete
```

Step 3: Enter the following information when the previous screen appears:

PreConsolidation

If set to a 'N', for each batch of orders received through the CalcRoute interface (non-manual), CalcRoute automatically consolidates orders moving to the same customer ship-to, into direct shipments. These shipments will display in the Shipment Maintenance option.

Note: If multiple orders weight exceeds the capacity of a single truck, CalcRoute will automatically select which orders are placed on each truck. Contact your ARTC representative for consolidation logic.

If set to a 'Y', CalcRoute will place orders into a temporary consolidation file (Option 21) For the user to manually assign to specific trucks. Only orders received through the interface will be considered. i.e. manually entered bills (through Option 20) always circumvent this file.

An order will hit this file if:

There is at least one other order, moving to the same ship-to, already residing in the consolidation file.

or

If at least one other order, within the batch that is currently moving to CalcRoute, is moving to the same ship-to.

Replace Carrier

Enter a "Y" if you wish CalcRoute to review the initial carrier (received from the PBS), and replace it with the cheapest applicable carrier.

Note: If the "preferred carrier" flag is also set at "Y," then CalcRoute will only consider cheaper carriers which are defined as primary and secondary in CalcRate Option 20 (Routing Preferences). If no Preferred Carrier is found, CalcRoute assigns the cheapest possible carrier.

Preferred Carrier

If set at "Y," CalcRoute will consider only those carriers defined as primary or secondary carriers in CalcRate when assigning carriers.

Note: Preferred carriers are defined in CalcRate Option 20 (Routing Preferences). See the CalcRate User Manual for further details.

Optimization Constraints Maintenance

The default optimization "rule sets," for each individual warehouse, are defined herein.

Note: Just prior to submitting each individual optimization, the user will have the ability to modify these rules on a "one-time" basis.

Step 1: From the Main Menu in CalcRoute, select Option 7 (Optimization Constraints Maintenance). You should see the following screen:

```
15:11:37                               CalcRoute                               3/16/99
ROUT03R      OPTIMIZATION CONSTRAINTS MAINTENANCE

Enter Warehouse Code _____

=====
F1=Help  F3=Exit  F4=Prompt  F5=File Contents
```

Enter the following information when the above screen appears:

Warehouse Code

Enter the warehouse code or select "F4=Prompt" to view a window of current warehouses available. You may also press "F5=File Contents" for a window of warehouses with constraints entered.

```
16:05:32                               CalcRoute                               3/16/99
ROUT03R      OPTIMIZATION CONSTRAINTS MAINTENANCE

Warehouse Code 187  Queens, NY          11415

          Enter the default constraints to run optimization
Pool Shipments.....N                   Drive On Saturdays? (Y/N)..... N
Part of Multi/Stop..... N               Drive On Sundays? (Y/N)..... N
Maximum Stops..... _____
Maximum Weight..... _____
Maximum Cube..... _____            Forward Scheduling? (Y/N).....N
                                         Number Days From Order Date.... _____

Individual Shipment                      Backward Schedule?(Y/N).....N
Optimization Parameters:                 Miles Per Hour..... _____
Minimum Direct Cost..... _____       Maximum Hous Driven Per Day..... _____
Minimum Shipment Wgt..... _____       Number Of Hrs To Unload Full Truck _____
Maximum Shipment Wgt..... _____       Minimum Unloading Time (Hours)..... _____
                                         Maximum Stops Per Day..... _____

=====
F1=Help  F3=Exit
```

Step 3: Enter the following information when the previous screen appears:

Pool Shipments

Enter a "Y" if pool will be considered for optimization. If set at "Y", CalcRoute **may** recommend pool distributors in its solution set. The default is "N."

Part of Multi-Stop

If set to "Y", along with the above flag, pool distributors may be recommended as individual stops on a truckload shipment.

Maximum Stops

Enter the maximum number of stops for a multi-stop truck. CalcRoute will not create truck with more total drop-offs than the defined value.

Maximum Shipment Weight

Enter the maximum shipment weight. A shipment or order exceeding this value will not be considered for consolidation during the optimization process.

Maximum Cube

Enter the maximum cubic feet for truckload optimization. CalcRoute will not build a truck exceeding this value.

Individual Shipment Parameters

Minimum Direct Cost

Enter the minimum direct cost. A shipment or an order whose direct cost is below this value, will not be considered for consolidation during the optimization process.

Minimum Shipment Weight

Enter the minimum shipment weight. A shipments or an order whose direct weight is below this value will not be considered for consolidation during the optimization process.

Maximum Shipment Weight

Enter the maximum shipment weight. A shipment or order exceeding this value will not be considered for consolidation during the optimization process.

The following fields are used to calculate delivery timing.

Drive On Saturdays

Enter a "Y" or "N" If you wish to include or exclude Saturday as a work day.

Drive On Sundays

Enter a "Y" or "N" If you wish to include or exclude Sunday as a work day.

NOTE: If you have set any of the above fields to "Y", but wish to exclude certain days see Option 8 (Non-Working Days).

Forward Scheduling

A Y/N flag that is used to determine whether a shipment is "HOT." The logic behind forward scheduling says: Take the order date, add a user defined # of days, to get the latest possible date that a shipment must leave your facility. If the current date is greater than, or equal to this date, the shipment will be flagged as "HOT."

Backward Scheduling

A Y/N flag which is used to determine whether a shipment is "HOT." The logic behind backwards scheduling says: Take the customer due date, less the transit time, to get the latest possible date that a shipment must leave by. If the current date is greater than, or equal to this date, the shipment will be flagged as "HOT."

The following must be entered if the Backward Scheduling flag is "Y":

Miles Per Hour

Enter the Average MPH the trailer is estimated to travel.

Maximum Hours Driven Per Day

Enter the Maximum hours the trailer will be driven a day.

Number of Hrs To Unload Full Truck

Enter the time it will take to unload a full trailer.

Minimum Unloading Time.

Enter the least possible time it will take to unload a full trailer.

Maximum Stops Per Day

Enter the most possible number of stops in one day.

Hitting "Enter" at this point will save the optimization constraints for the warehouse.

Non-Working Day Maintenance

This option is used to set non-working days. These days will be excluded in the optimization process when calculating the delivery time.

NOTE: If you define "Drive On Saturdays or Sundays" in option 7 (Optimization Constraints Maintenance), then you must exclude those days which you want ignored.

Step 1: From the Main Menu in CalcRoute, select Option 8 (Non-Working Day

14:20:15	CalcRoute	1/21/00
ROUT111R	NON-WORKING DAY MAINTENANCE	
Date		

=====		
F2=Previous Screen		

Step 2: Enter the date in a YYYYMMDD format for which you want to exclude as a working day. Press "F2" to enter the data. See the following screen.

14:18:22	CalcRoute	1/21/00
ROUT111R	NON-WORKING DAY MAINTENANCE	
Type Options, Press Enter.		
2=Change 4=Delete		
Opt Date		
__ 2000/01/06 THURSDAY		
=====		
F3=Exit F9=Add		

Step 3: Enter the following information when the previous screen appears:

Opt

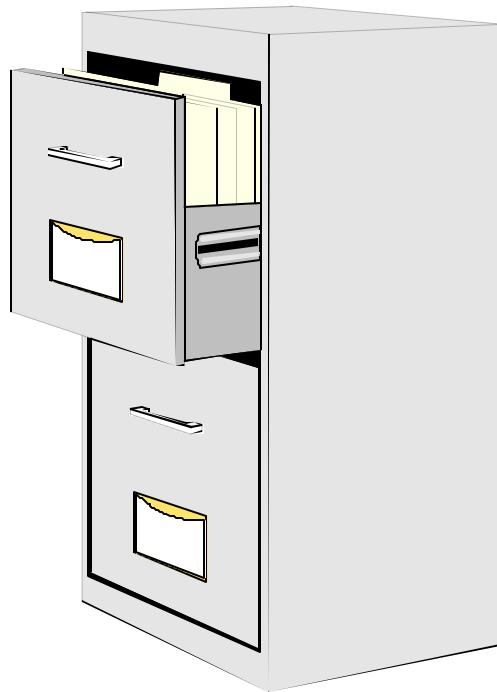
Enter a “2” in the Option Field to change the previously entered date.

Enter a “4” in the Option Field to delete a previously entered date.

Step 4: Press “F9” to add a date to the Non-Working Day list.

Section 2

Shipment Processing



Shipment Entry

The purpose of this option is to manually enter shipments into the system for optimization consideration.

Step 1: From the Main Menu in CalcRoute, select Option 20 (Shipment Entry). You should see the following screen:

18:10:46	CalcRoute	3/16/99
ROUT05R	SHIPMENT ENTRY	
Shipment Number	Customer/Vendor _____	Hot Flag <u>N</u>
Due Date YYYY/MM/DD _____	Carrier _____	Warehouse _____
In/Outbound <u>O</u>	Terms <u>P</u>	Accessorial Code _ _ _ _ _ Pool _____ Div _____
=====		
F1=Help F3=Exit F4=Prompt F7=Add Vendor		

Step 2: Enter the following information when the above screen appear:

Vendor/Customer

Enter the vendor/customer code, or hit "F4=Prompt" to view a window of all the current vendors/customers set up in the Vendor/Customer Master.

Note: Please take note of the "F7=Add Vendor" function key. Selecting this option will allow you to add a Vendor/Customer just as described in CalcRoute Option 1 (Vendor/Customer Maintenance), without backing out of the Shipment Entry Option.

Hot Flag

Enter a "Y" if this is a Hot shipment. The default is "N." A shipment flagged hot will appear in red text in Option 22 Shipment Maintenance.

Due Date

Enter the scheduled delivery date in YYYY/MM/DD format.

Carrier

Enter the carrier that is currently assigned to the shipment (pre-optimization). i.e. the carrier which will be employed if the shipment is not consolidated with others.

Note: If a carrier is not predetermined the user may subsequently access a rate comparison to manually select the carrier or a default will automatically be assigned (based upon optimization "preferred" constantly).

Warehouse

Enter the origin warehouse.

In/Outbound

Enter the direction of the optimization. "I" represents inbound shipments, and "O" represents outbound shipments.

Terms

Enter the freight terms for the shipment. Valid options are "P" for pre-pay, "A" for pre-pay and add, and "C" for collect shipments.

Acs Code

If applicable, enter the accesorial code that applies to this shipment. Refer to Option 3 (Accesorial Fees) from the ARTC CalcRate Main Menu.

Pool

If applicable, enter the Pool Code that you wish the optimizer to consider, as set up in Pool Maintenance. This will NOT automatically assign the load to a pool.

Note: If you enter any Pool Code in this field, it will override any pre-designated pool assigned in (Option 4) for this destination zip code.

Div

If applicable, enter the division that is responsible for the shipment.

18:31:35	CalcRoute	3/16/99
ROUT05R	SHIPMENT ENTRY	
Shipment Number	Vendor AR TRAFFIC CONSULTANTS	
Hot Flag N	7 PENNSYLVANIA PLAZA	
	NEW YORK NY 10001	
Due Date YYYY/MM/DD 1999/04/01	Carrier RDWY Pro Number	
I/O O Whse 11 West Warwick	Terms P Acs Code Pool 187 Div	
Order Nbr	Class Weight Pcs Cube	
1	-----	-----
2	-----	-----
3	-----	-----
4	-----	-----
5	-----	-----
6	-----	-----
7	-----	-----
8	-----	-----
9	-----	-----
10	-----	-----
=====		
F1=Help F3=Exit F5=Comparison F6=Skus Info		

Step 3: Enter the following information when the above screen appears:

Order Nbr

Enter the order number.

Class

Enter the NMFC. Valid commodity classes are 50-500.

Weight

Enter the Weight of the order.

Pcs

Enter the number of pieces (i.e. cartons) which make up the order.

Cube, Pallets, Points, Cases

Enter the cubic dimensions, if known. (these fields will only display if assigned Option 5 System Control Maintenance).

Note: At this point you may call ARTC CalcRate for a rate comparison by selecting the "F5=Comparison" function key. A window will appear showing a rate comparison between all applicable carriers, just as CalcRate Option 22 (Rate Comparison).

Step 4: If Sku information is available, select the "F6=Sku Info" function key. the following

18:31:35	CalcRoute	3/16/99
ROUT05R	SHIPMENT ENTRY	
Shipment Number	Vendor AR TRAFFIC CONSULTANTS	
Hot Flag N	7 PENNSYLVANIA PLAZA	
	NEW YORK NY 10001	
Due Date YYYY/MM/DD 1999/04/01	Carrier RDWY Pro Number	
I/O O Whse 11 West Warwick	Terms P Acs Code Pool 187 Div	
Skus Nbr	Skus Value	G/L Account Number
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____
9	_____	_____
10	_____	_____
	More...	

F1=Help F3=Exit F6=Class/Weight		

Step 5: Enter the following information when the above screen appears:

Skus Number

Enter the Sku (Product) Number.

Sku Value

Enter a dollar value for the sku if available

G/L Account Number

Enter the G/L Code associated with the Sku.

Note: You may toggle between the two entry screens in this option by selecting the F6 function key.

Hitting "Enter" at this point will bring you to the following screen:

8:45:04	CalcRoute	3/17/99
ROUT05R	SHIPMENT ENTRY	
Shipment Number	Vendor AR TRAFFIC CONSULTANTS	
Hot Flag N	7 PENNSYLVANIA PLAZA	
	NEW YORK	NY 10001
Due Date YYYY/MM/DD	1999/04/01	Pro Number
I/O O Whse 11	West Warwi Terms P	AcS Code Pool 187 Div
Total Weight.....	1200	
Total Pieces.....		
Total Cube.....		
Total Pallets.....		
Total Points.....		
Total Cases.....		
Carrier.....	RDWY	
TL Carrier/Rate....	HJBT	1.50
Miles.....	166	
=====		
F1=Help F3=Exit F9=Accept		

The following information is given to you by CalcRoute.

Total Weight

This is the total weight of all orders in the shipment.

Total Pieces

This is the total number of pieces for all orders in the shipment.

Total Cube

This is the total cubic dimension of the shipment.

Total Pallets

This is the total number of pallets which make up the shipment.

Total Points

This is the total number of points (assuming point values have been assigned) in the shipment.

Carrier

This is the carrier that is currently assigned to the shipment.(Pre-Optimization)

TL Carrier/Rate

This is the cheapest applicable truckload carrier that can make the move.

Miles

This is the total number of miles from origin to destination.

Note: To use CalcRoute, you must have a mileage database. CalcRate's mileage file serves only as an exception file.

Step 6: If the shipment entry is acceptable, select "F9=Accept." You should see a message confirming that the shipment has been added to the system.

SHIPMENT HAS BEEN ADDED TO SYSTEM: SHIPMENT NUMBER IS AT TOP LEFT OF SCREEN

In the top left of the previous screen, an order number will now be assigned. Selecting "Enter" at this point will move the shipment to Shipment Maintenance where you will be able to make changes later.

Consolidation Maintenance

This file allows the user to consolidate multiple orders to the same customer ship-to, into shipments. This option may only be used if Preconsolidate is set to "Y" in the Warehouse Control Maintenance (Option 6)

Note 1: Manually entered orders, through option 21, will never display in this file.

Note 2: Orders written to CalcRoute, in the same batch with the same ship-to number, will go to the consolidation file regardless of the customer name or zip code.

Note 3: Orders received into CalcRoute from the primary business system will move into this consolidation file if other orders moving to the same ship-to currently reside there.

Step 1: From the Main Menu in CalcRoute, Select Option 21 (Consolidation Maintenance).

```
11:38:31                               CalcRoute                               10/20/99
ROUT95R                                CONSOLIDATION MAINTENANCE

Enter Warehouse Code _____
Enter I/O Code (I/O)  ___

=====
F1=Help  F3=Exit  F4=Prompt  F5=File Contents
```

Step 2: Enter the following information when the above screen appears:

Warehouse Code

Enter the warehouse code or select "F4=Prompt" to view a window of current warehouses available. You may also press "F5=File Contents" for a window of warehouse with constraints entered.

In/Outbound

Enter the direction of the optimization. "I" represents inbound shipments, and "O" represents outbound shipments.

Hitting "Enter" at this point should bring you to the following screen:

11:42:27	CalcRoute	10/20/99			
ROUT95R	CONSOLIDATION MAINTENANCE				
Warehouse Code 123	Queens, NY	11415 Outbound Shipments			
Type Options, Press Enter. 3=Combine 5=Display					
Opt	Customer#	Order#	Name	Weight	Cube
—	263	22	AMERICAN EAGLE	4,300	
<u>3</u>	263	220	AMERICAN EAGLE	4,300	
<u>3</u>	263	225	AMERICAN EAGLE	4,300	
			TOTAL	12,900	
—	404	33	THE GAP	1,700	
			TOTAL	1,700	
=====					
F1=Help F3=Exit F5=Drop					

NOTE: If the preconsolidation flag is "Y" in Option 6, all customers (ship-to and zip codes) with multiple orders being shipped to them will display here. The user will then review the orders so as to group them into specific trucks and release them to the Shipment Maintenance File.

NOTE: Future orders will display in this file if at least one order to the specific customer is displayed herein.

NOTE: In order to create more than one shipment, repeat this process.

NOTE: A shipment may consist of any number of orders.

Enter the following information when the previous screen appears.

Opt

Enter a "3" in the option field of each order you want to combine into a shipment, press Enter. See the following screen.

NOTE: If you try to combine shipments where their total combined weight exceeds the maximum weight limit set in option 7, the weight fields will highlight and you will not enter

Customer: 263	AMERICAN EAGLE	
Total Weight	12,900	Total Cube
Order Number	Weight	Cube
=====	=====	=====
22	4,300	
220	4,300	
225	4,300	
Bottom		
Carrier.....	RDWY	
TL Carrier/Rate.....	HJBT	1.55
Miles.....	2782	PC*MILER
F9=Accept F12=Exit		

Press F9 to accept the shipment or F12 to return to the previous screen.

CalcRoute gives you the following information:

Carrier

The LTL Carrier initially assigned by CalcRoute or received from the Primary Business System.

TL Carrier/Rate

The least expensive TL carrier that can make this move and its rate per mile.

Miles

The total miles to make this move.

NOTE: The mileage database used to calculate the miles will appear in red next to the total number of miles.

Enter a "5" in the option field to display the detail of each order. See the following Screen.

```
14:25:02                               CalcRoute                               12/06/99
ROUT96R                                CONSOLIDATION MAINTENANCE

Warehouse Code TEST  Chatsworth, CA      90040 Outbound Shipments
Cust 263   Ord 22      AMERICAN EAGLE   NEW YORK  NY 10001
Total Weight  4,300 Total Cube

Class  Weight  Cube  Cartons  Pallets  Points  Pieces  Cases
50.0  2,500
50.0  1,800

=====
F1=Help  F3=Exit
```

This screen will show you the class, weight, cube, carton, pallets, points, and cases, if valid, of each order.

Press F5 to view the customer's address. See the following Screen.

```
11:42:27                               CalcRoute                               10/20/99
ROUT95R                                CONSOLIDATION MAINTENANCE

Warehouse Code 123  Queens, NY          11415 Outbound Shipments
Type Options, Press Enter.
3=Combine 5=Display

Opt  Customer#  Order#      Name                Weight  Cube
--  -
_   263        22         AMERICAN EAGLE     4,300
  City NEW YORK  St NY Zip 10001
_   263        220         AMERICAN EAGLE     4,300
  City NEW YORK  St NY Zip 10001
_   263        225         AMERICAN EAGLE     4,300
  City NEW YORK  St NY Zip 10001
                                TOTAL                12,900
_   404        33         THE GAP             1,700
  City NEW YORK  St NY Zip 10001

                                                                MORE

=====
F1=Help  F3=Exit  F5=Drop
```

Shipment Maintenance

The purpose of this option is to maintain individual shipments at the detail level. The user may add or drop orders from shipment.

Note: A message will display if orders currently exist in the “Preconsolidation File” (Option 21) for this warehouse.

Step 1: From the Main Menu in CalcRoute, Select Option 22 (Shipment Maintenance). The following screen should appear:

```
23:16:06                               CalcRoute                               3/16/99
ROUT07R                               SHIPMENT MAINTENANCE

Enter Warehouse Code _____
Enter Inbound/Outbound Code (I/O) _
Enter Opt.Type (1/2) _
  1=Least Cost
  2=Minimize Miles
Sequence by . . . . . _ Default Sequence to Shipment Number
      1. Vendor Name
      2. Entry Date
      3. Due Date
      4. Order Date
      5. State
      6. Zip
      7. Region
      8. Division

=====
F1=Help F3=Exit F4=Prompt
```

Step 2: Enter the following information when the above screen appears:

Whse Code

Enter the warehouse code as set up in ARTC CalcRate Option 1 (Warehouse Maintenance).

Inbound/Outbound

Enter an “I” for Inbound Shipments, and “O” for Outbound shipments.

Opt Type

Enter an “1” for the Least Cost Type.

The Least Cost Optimization will optimize the shipments and extract the least expensive scenario.

Enter a “2” for the Minimum Miles Type.

The Minimum Miles Optimization will optimize the shipments and extract the scenario with the least miles.

Sequence by

Enter a number 1 through 8, corresponding to the options on the screen above. The

Hitting "Enter" at this point will show you a screen similar to the following (i.e. sequence by Entry date):

```

23:31:55                               CalcRoute                               3/16/99
ROUT07R                               SHIPMENT MAINTENANCE

Warehouse Code 11  West Warwick, RI    02893 Outbound Shipments
Type Options, Press Enter.

Sequence by ..... ENTRY DATE

From ..... 1999/11/01
To ..... 1999/11/23

-----
F1=Help  F3=Exit
    
```

Step 3: Enter the following information when the above screen appears:

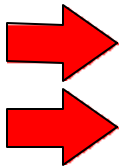
From

Enter the entry date, in a YYYYMMDD format, you want to start at.

To

Enter the entry date, in a YYYYMMDD format, you want to end at.

If orders exist in the Preconsolidation File, This message will appear.



If highlighted in red, the shipment is



If highlighted in pink, the shipment will be received on the due day if shipped

```

23:41:15                               CalcRoute                               3/16/99
ROUT08R                               SHIPMENT MAINTENANCE

Warehouse Code 11  West Warwick, RI    02893 Outbound Shipments
Type Options, Press Enter.
1=Fax 2=Change 3=Build 4=Delete 5=Display 6=Release 7=Print 8=Comments
9=Status Red Indicates Hot Shipment/Comments Pink Indicates Due Day Delivery
Orders exist in Pre-Consolidation File
Opt Shipment#  Ent Date  Due Date  Ord Date  Vendor          City          St  Zip  Rg  Dvsn*
-   18   98/11/09  98/01/01  BAER FOOD      HAGERSTOW    MD  21740  *
-   19   98/11/09  98/01/01  C. EBERLE      CINCINNAT    OH  45223
-   20   98/11/09  98/01/01  D & L DIS      MIAMI        FL  33169
-   21   98/11/09  98/01/01  EAT N' PA      PITTSBRUG    PA  15205
-   23   98/11/09  98/01/01  G & L DIS      NORWALK      CT  06851
-   24   98/11/09  98/01/01  H.T. HACK      NEWTON       NC  28658
-   25   98/11/09  98/11/09  A E GALST      WATERTOW    NY  13601
-   26   98/11/09  98/01/01  J & J FOO      GAHANA       OH  43230
-   29   99/03/15  99/03/30  99/03/15  A & J PRO      GALLUP       NM  87301
-   30   99/03/16  99/03/22  99/03/16  AR TRAFFI     NEW YORK     NY  10001

-----
F1=Help  F3=Exit  F4=Prompt  F5=Drop
    
```

NOTE: A Hot shipment is when a order in a shipment is going to be late. Backward or Forward scheduling has to be on in option 7 (Optimization Constraints).

NOTE: A Due Day is the last possible day a order in a shipment can be received without being late. Backward or Forward scheduling has to be on in option 7 (Optimization Constraints).

All information from the above screen comes directly from the received/entered shipment. Region, however, is assigned by CalcRoute if the vendor/customer's zip code has a corresponding entry in CalcRoute Option 4 (Region Maintenance).

Step 4: Enter the following information:

Opt

Enter a "1" to fax this information.

Enter a "2" to add/change the order date. In the dropdown screen, you may change either the carrier currently assigned to the shipment or the pool code.

Enter a "3" for each shipment you want to build one truck with.

Enter a "4" to delete a record. CalcRoute will ask you if you are sure you want to delete the record. Select "F12=Cancel" to avoid deletion, otherwise hit "Enter."

Enter a "5" to display the detailed line items for each shipment. See next page.

Enter a "6" to release the shipment to the History file. If you release two or more at the same time, they consolidate into one shipment. The following screen will appear.

```
Shipment # 0000000080
Carrier CFWY Consolidated Fre
Release # 11 000080999

F12=Cancel
```

release the shipment to the History file. If you release two or more at the same time, they consolidate into one shipment. The following screen will appear.

Hitting "**Enter**" here will accept the shipment and release the shipment to the History file. By pressing **F12=Cancel**, the specified shipments will return to the Shipment Maintenance screen.

Carrier

The cheapest carrier which can make this move.

Release #

The release Number of the consolidated shipment.

Enter a "7" to print the

Enter an "8" to write or view any comments written about the shipment.

Note: If a comment is written about a shipment, the Shipment # will be RED.

Enter a "9" to view the status of the shipment.

Select the "F5=Drop" function key. The following screen will appear:

11:55:49	CalcRoute	3/17/99
ROUT08R	SHIPMENT MAINTENANCE	
Warehouse Code 11 West Warwick, RI 02893 Outbound Shipments		
Type Options, Press Enter.		
1=Fax 2=Change 3=Build 4=Delete 5=Display 6=Release 7=Print 8=Comments		
9=Status		
Opt Shipment#	Ent Date Due Date Ord Date Vendor	City St Zip Rg Dvsn*
18	98/11/09 98/01/01	BAER FOOD HAGERSTOW MD 21740
Carr: <u>YFSY</u> Frt Amt: 555.55 TL Carr: HJBT TL Rate: 1.41 Miles: 403		
Cust/Vend: Status: __ Pool: _____		
19	98/11/09 98/01/01	C. EBERLE CINCINNAT OH 45223
Carr: <u>CFWY</u> Frt Amt: 444.44 TL Carr: HJBT TL Rate: 1.01 Miles: 809		
Cust/Vend: Status: __ Pool: _____		
20	98/11/09 98/01/01	D & L DIS MIAMI FL 33169
Carr: <u>ABFS</u> Frt Amt: 333.33 TL Carr: SCNN TL Rate: 1.10 Miles: 1425		
Cust/Vend: Status: __ Pool: _____		
21	98/11/09 98/01/01	EAT N' PA PITTSBRUG PA 15205
Carr: <u>RDWY</u> Frt Amt: 222.22 TL Carr: HJBT TL Rate: 1.00 Miles: 533		
Cust/Vend: Status: __ Pool: _____		
More...		
=====		
F1=Help F3=Exit F4=Prompt F5=Drop		

When the previous screen appears, CalcRoute gives you the following:

Carrier

The carrier currently assigned to the shipment

Freight Amount

The carrier's rate for that shipment

Note: If the carrier is changed, the freight amount will be updated accordingly.

TL Carrier

The cheapest applicable truckload carrier that can make the move.

TL Rate

The TL Carrier's rate for that shipment

Miles

The miles from the origin to the destination for that shipment.

Customer/Vendor

The customer or vendor involved in that shipment.

Status

If "F1" is used to Fax, a "F" will appear in the this field.

Pool

The applicable Pool Code for that shipment. If blank, CalcRoute will use the Pool Warehouse, as defined in Option 2, when considering Pool Shipments.

Selecting Opt 5 From either screen will display the shipment record as follows:

23:57:56	CalcRoute	3/16/99				
ROUT09R	SHIPMENT MAINTENANCE					
Shipment Number 18	Vendor BAER FOODS/HAGERSTOWN					
Hot Flag	300 W. FRANKLIN					
Total Weight 7000	HAGERSTOWN MD 21740					
Due Date YYYY/MM/DD 1998/01/01	Carrier YFSY	Pro Number 39994				
In/Outbound O	Warehouse 11	West Warwi Terms P Accessorial Codes *				
Type Options, Press Enter. 2=Change 4=Delete 9=Add						
Opt	Line#	Order Nbr	Class	Weight	Pcs	Cube
-	1	89449944	77.5	7000	_____	_____
-	2	_____	_____	_____	_____	_____
-	3	_____	_____	_____	_____	_____
-	4	_____	_____	_____	_____	_____
-	5	_____	_____	_____	_____	_____
-	6	_____	_____	_____	_____	_____
-	7	_____	_____	_____	_____	_____
F1=Help F3=Exit F5=Comparison F6=Sku Info						

Step 5: At this point the user may add/delete or edit orders on the shipment. You may enter the following information when the above screen appears:

Note: Orders may change between when the time an order is taken, and the time it is actually shipped. ARTC recommends strict internal procedures with regards to modifying orders when using CalcRoute. Ideally, if an order changes, you should: delete it from CalcRoute, modify the order in the Primary Business System, then re-submit to CalcRoute.

Order Nbr

Enter the order number.

Class

Enter the NMFC. Valid commodity classes are 50-500. CalcRoute will not allow an entry that is not one of the 18 valid freight classes.

Weight

Enter the Weight of the order.

Pcs

Enter the number of pieces (i.e. cartons) which make up the order.

Cube

Enter the cubic dimensions if known.

To edit Sku information, select “F6=Sku Info.” Enter the following:

Skus Number

Enter the Sku (Product) Number.

Skus Value

Enter a dollar value for the sku if available.

G/L Account Number

Enter the G/L Code associated with the Sku.

Step 6: Select “F5=Comparison” for a rate comparison of all applicable carriers that could make this move prior to optimization. You will see the following screen:

<u>Opt</u>	<u>Mde</u>	<u>Rte</u>	<u>Carrier Name</u>	<u>Amount</u>	<u>Days</u>	<u>D/I</u>
-	L		CMW Integrated Logis	465.50		I
-	T		JB Hunt	500.00	D	
-	L	PRI	Yellow Freight Syste	865.08	3	D
-	L		Preston Trucking Com	1,190.40		D
-	T		Schneider National	1,220.00	D	
-	L		Roadway Express	1,258.32		D
-	L		APA Transport	1,960.84	I	
-	L		ABF	2,480.00	I	

F12=Exit Use -x- to select

Step 7: When ARTC CalcRate’s Rate Comparison window appears. Place Opt “X” to select a carrier for the shipment. (i.e. CMW Integrated Logistics). By hitting “Enter”, or “F12=Exit”, the window will go away and the following screen will appear:

14:28:55	CalcRoute	3/18/99
ROUT09R	SHIPMENT MAINTENANCE	
Shipment Number	19	Vendor C. EBERLE & SONS
Hot Flag	3222 BEEKMAN ST.	
	CINCINNATI	OH 45223
Due Date YYYY/MM/DD	1998/01/01	Pro Number 484994
In/Outbound O	Warehouse 11	West Warwi Terms P Accessorial Codes
Total Weight.....	8000	
Total Pieces.....	3	
Total Cube.....		
Total Pallets.....		
Total Points.....		
Total Cases.....		
Carrier.....	CORY	465.50
TL Carrier/Rate.....	HJBT	1.01
Miles.....		

F1=Help F3=Exit F9=Accept		

Notice that the carrier assigned to the order has changed to reflect your selection from the rate comparison.

Please note the following:

Total Weight

This is the total weight of all orders in the shipment.

Total Pieces

This is the total number of pieces for all orders in the shipment.

Total Cube

This is the total cubic demension of the shipment.

Total Pallets

This is the total number of pallets which make up the shipment.

Total Points

This is the total number of points (assuming point values have been assigned) in the shipment.

Carrier

This is the carrier that is currently assigned to the shipment.(Pre-Optimization)

TL Carrier/Rate

This is the cheapest applicable truckload carrier that can make the move.

Miles

This is the total number of miles from origin to destination.

Note: To use CalcRoute, you must have a mileage database. CalcRate's mileage file serves only as an exception file.

Step 8: Selecting "F9=Accept" will cause a message to display confirming that the shipment has been updated. Hit "Enter" to continue. You may select "F3=Exit" to leave this option.

Submit Optimization

Shipments are reviewed and submitted for optimization. No maintenance may be performed within this option.

NOTE: Shipments submitted for optimization continue to reside in this file until deleted from Shipment Maintenance (Option 22) or released from Display Optimization (Option 24). i.e. multiple optimizations may be performed on a single shipment.

Step 1: From the Main Menu in CalcRoute, select Option 23 (Submit Optimization). You should see the following screen:

```
23:16:06                               CalcRoute                               3/16/99
ROUT06R                               SUBMIT OPTIMIZATION

Enter Warehouse Code _____
Enter Inbound/Outbound Code (I/O) _
Enter Opt.Type (1/2) _
  1=Least Cost
  2=Minimize Miles
Sequence by . . . . . _ Default Sequence to Shipment Number
      1. Vendor Name
      2. Entry Date
      3. Due Date
      4. Order Date
      5. State
      6. Zip
      7. Region
      8. Division

=====
F1=Help F3=Exit F4=Prompt
```

Whse Code

Enter the warehouse code as set up in ARTC CalcRate Option 1 (Warehouse Maintenance).

Inbound/Outbound

Enter an "I" for Inbound Shipments, and "O" for Outbound shipments.

Opt Type

Enter an "1" for the Least Cost Type.

The Least Cost Optimization will optimize the shipments and extract the least expensive scenario.

Enter a "2" for the Minimum Miles Type.

The Minimum Miles Optimization will optimize the shipments and extract the scenario with the least miles.

Sequence by

Enter a number 1 through 8, corresponding to the options on the screen above. The default sequence is by shipment number.

Hitting "Enter" at this point will bring you to a screen like the following:

The screenshot shows a terminal window with the following text: 23:31:55, CalcRoute, 3/16/99, ROUT07R, SUBMIT OPTIMIZATION. Below this, it says 'Warehouse Code 11 West Warwick, RI 02893 Outbound Shipments' and 'Type Options, Press Enter.' The 'Minimum Miles' field is highlighted with a red box and an arrow pointing to it from a text box that says 'CalcRoute Displays the type you've selected.' The 'Sequence by' field is set to 'SHIPMENT NUMBER' and is highlighted with a red box and an arrow pointing to it from the text 'Default Value'. The 'From' field is set to '17' and the 'To' field is set to '999999999'. At the bottom, it says 'F1=Help F3=Exit'.

Step 2: Enter the following information when the above screen appears:

From

Enter the lowest sequence limit.

To

Enter the upper sequence limit.

Hitting "Enter" will bring you to the following screen:

If highlighted in pink, the shipment will be received on the due day if shipped

23:41:15 CalcRoute
3/16/99
ROUT11R SUBMIT OPTIMIZATION

Warehouse Code 11 West Warwick, RI 02893 Outbound Shipments
Type Options, Press Enter. Orders exist in Pre-Consolidation File
X=Do not optimize

Red Indicates Hot Shipment Pink Indicates Due Day Delivery

Opt Shipment#	Ent Date	Due Date	Ord Date	Vendor	City	St	Zip	Rg
18	98/11/09	98/01/01		BAER FOOD	HAGERSTOW	MD	21740	*
19	98/11/09	98/01/01		C. EBERLE	CINCINNAT	OH	45223	
20	98/11/09	98/01/01		D & L DIS	MIAMI	FL	33169	
21	98/11/09	98/01/01		EAT N' PA	PITTSBRUG	PA	15205	
23	98/11/09	98/01/01		G & L DIS	NORWALK	CT	06851	
24	98/11/09	98/01/01		H.T. HACK	NEWTON	NC	28658	
25	98/11/09	98/11/09		A E GALST	WATERTOW	NY	13601	
26	98/11/09	98/01/01		J & J FOO	GAHANA	OH	43230	
29	99/03/15	99/03/30	99/03/15	A & J PRO	GALLUP	NM	87301	
30	99/03/16	99/03/22	99/03/16	AR TRAFFI	NEW YORK	NY	10001	

If orders exist in the Pre-consolidation File, This message will appear.

F1=Help F3=Exit F5=Drop F7=Entire Warehouse F9=Submit F10=Constraints

NOTE: A Hot shipment is when a order in a shipment is going to be late. Backward or Forward scheduling has to be on in option 7 (Optimization Constraints).

NOTE: A Due Day is the last possible day a order in a shipment can be received without being late. Backward or Forward scheduling has to be on in option 7 (Optimization Constraints).

Step 4: Enter the following information when:

"X"

Shipments with an "X" will not be submitted to optimization.

F5=Drop

To display the carrier assigned, the cheapest TL carrier, and pool code, select this function key. See Step 3A in Shipment Maintenance for further detail.

F7=Entire Warehouse

Selecting this function key will submit all the shipments for the current warehouse, without an "X", and which meet the user's sequence criteria, to optimization.

F9=Submit

Selecting this function key will submit all shipments for the current warehouse, without an "X", that the user has viewed, to optimization. (i.e. shipments on the current screen.

F10=Constraints

Selecting this function key will allow you to temporarily edit the optimization constraints for this warehouse. Any parameters changed, via this function key, will be used for the next optimization. Default parameters will revert back to their original values. See Optimization Constraints for further details.

Display Optimization

This is the option where shipments are confirmed and released. Additionally, the user can review recommendations and manipulate (break-up and build trucks, change carriers, etc.) the solution(s).

Step 1: From the Main Menu in CalcRoute, select Option 24 (Display Optimization). You should see the following screen:

```
16:51:26                               CalcRoute                               3/18/99
ROUT20R                               DISPLAY OPTIMIZATION

Type Options, Press Enter.
5=Display

Opt Whse
__ 11  West Warwick, RI

Bottom

-----
F1=Help  F3=Exit
```

Step 2: Enter a “5” to display optimizations for the current warehouse. The following screen will appear:

```
17:09:07                               CalcRoute                               3/18/99
ROUT21R                               DISPLAY OPTIMIZATION
Warehouse 11  West Warwick, RI          02893

Type Options, Press Enter.
4=Delete 5=Display

Opt  Opt#  I/O  Date      Method
_    300  O    1998/11/11  Least Cost
_    301  O    1998/11/12  Least Cost
_    302  O    1999/02/10  Minimize Miles
_    303  O    1999/02/11  Least Cost
_    304  I    1999/03/10  Minimize Miles

Bottom

-----
F1=Help  F3=Exit
```

CalcRoute gives you the method of optimization you selected in option 22 (Shipment Maintenance).

You may enter the following options:

4=Delete

Selecting a "4" will delete the entire optimization record. CalcRoute will ask you if you are sure you want to delete the record. You may hit "F12=Cancel", otherwise hit "Enter" to delete the record.

5=Display

Selecting a "5" will display the optimization.

Step 3: Select Option "5=Display." The optimization will display as follows:

```
16:15:34                               CalcRoute                               12/06/99
ROUT22R                                DISPLAY OPTIMIZATION
Whse TEST Chatsworth, CA              90040 Opt# 481 Date 1999/08/31
** Constraints For Optimization Max Stops 10 Max Wgt 40000 Max Cube 3800 **
Type Options, Press Enter.
1=Fax 2=Change Carrier 4=Break Load 5=Display 6=Release 7=Print 8=Comments
9=Status
Opt Load Qty Cube Weight Dir Chgs Carr Rate Miles Carr Chgs Typ Sts Stps
--- 1 12000 3,791.34 SCNN 1.00 2153 2,263.00 T 3
--- 2 9500 1,138.68 HJBT 1.01 454 508.54 T 2
--- 3 9000 1,247.66 HJBT .90 1304 1,223.60 T 2
--- 888 2000 396.93 L
--- 889 3200 651.73 SCNN 1.00 1474 1,529.00 T 2
Bottom
=====
F1=Help F3=Exit F6=Reprint Optimization
```

Notice the options 1=Fax, 2=Change Carrier, 4=Break Up Load, 5=Display Load, 6=Release Load, 7=Print Load, 8=Comments, 9=Status. The following section will examine each of these options by selection from this screen (ROUTE22R)

CalcRoute gives you the following information:

Load

Each load number represents an instance where CalcRoute combined shipments. "888" represents a file containing all shipments that were optimized, but failed to combine with other shipments. These orders may be re-submitted to optimization in the future. Loads above "888" represent consolidations created by the user.

Dir Charges

This represents the freight charge you would expect, had the shipments of this load not combined, thus be moved direct.

Carr

In this case, Carr represents the TL carrier assigned. Notice the rate, miles, and charges you could expect by combining the shipments into a load.

Press F=6 to reprint the optimization. *See Appendix 2* for a sample Optimization Report.

1=Fax

Step 1: From (ROUTE 22R) enter a “1” in the option field to automatically fax a load manifest. *See Appendix-1 for load manifests.*

If “Least Cost optimization” has been used, the manifest will be faxed to the specified carrier.

If “Minimize Miles Optimization” has been used, the manifest will be faxed to the specified warehouse.

NOTE: Fax numbers are entered into CalcRate in Warehouse Control Maintenance (Option 1) and Carrier Maintenance (Option 2.2).

WARNING: IBM Facsimile 400 must be installed to use the fax option.

2=Change Carrier

Step 1: From (ROUTE22R), enter a “2” in the option field. The following screen will appear.

```
10:28:38                               CalcRoute                               3/19/99
ROUT26R                               DISPLAY OPTIMIZATION
Whse 11  West Warwick, RI  02893  Opt#  301  Date 1998/11/12  Load  1
Carr HJBT JB Hunt          Rate 1.01  Miles 662  Chg  718.62  Wgt 22000
Type Options, Press Enter.
  2=Change

Opt   Carr  Name                Rate  Tot Chgs
-     HJBT  JB Hunt                    550.00
-     SCNN  Schneider Nation  9.00  1,104.00

-----
F1=Help  F3=Exit
```

Step 2: From this screen, you may view all the applicable truckload carriers that could make this move. Select “2=Change” for SCNN. You will return to ROUTE22R with the updated carrier now assigned to the load.

4=Break Up Load

This option is to break up a load.

Step 1: From ROUTE22R enter a "4" in the option field, CalcRoute will ask if your are sure of your decision. You may select "F12=Cancel", otherwise hit "Enter" to confirm your decision.

Note: The shipments from this load can then be included in a future optimization.

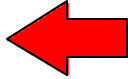
5=Diplay Load

This option is to display the Load to view the shipments that where combined.

Note: Displays of TL, LTL, and Consolidated Shipments Follows:

Step 1: From ROUTE22R, enter a "5" in the option field, the following screen will appear:

11:12:24	CalcRoute	3/19/99
ROUT23R	DISPLAY OPTIMIZATION	
Whse 11	West Warwick, RI	02893 Opt# 301 Date 1998/11/12 Load 1
Carr SCNN	Schneider National	Rte 9.00 Mls 662 Amt 6,013.00 Sav 4,724.68-
Type Options, Press Enter.	LEAST COST	
4=Remove	5=Display	
Opt Shipment #	Location	St Seq Zip Mls Cube Wgt Carr Dir Chgs
- 21	PITTSBRUGH	PA 1 15205 533 12000 RDWY 222.22
- 17	MAPLE HTS.	OH 2 44137 129 10000 RDWY 1,066.10
=====		

 F6 will only appear if ALK-PC Miler is

Notice the savings by combining these shipments! If vendor detail is needed, hit "F5=Fold" to view the vendor/customer name and address.

Step 2: When the above screen appears, you have the option to select "4=Remove" to a shipment from the load. CalcRoute will ask you if you're sure of your decision. You may select "F12=Cancel," otherwise hit "Enter" to confirm your decision.

Note: This option functions the same as Break Up Load, freeing the orders for future

Step 3: Press F6-Print Directions to see directions. The following screen will appear.

NOTE: ALK-PC Miler must be purchased and installed. (See CalcRate Mileage Database Maintenance (Option 5.2)).

15:59:54	CalcRoute	2/10/00
ALKROUTR	DISPLAY OPTIMIZATION	
38557 Crossville, TN, Cumberland To 33334 Fort Lauderdale, FL, Broward		
2 Stops, 824 Miles		
State	Route	Miles Interchange Leg Total
	Origin:	38557 Crossville, TN, Cumber
TN S	US-127	4 +US127 TN 68, TN 4 4
TN S	TN-68	24 +US 27 TN 68, TN 28 28
TN S	US-27	40 +US 27 TN153, TN 67 67
TN S	TN-153	13 I 75 X4, TN 80 80
TN S	I-75	5 TN/GA State Line 85 85
GA S	I-75	70 I 75 X123, GA 155 155
Stop 1:		
GA S	US-41	26 I 285 X13, GA 27 182
GA S	I-285	24 +I 75 I 285S, GA 24 206
GA S	I-75	73 +I 16 I 75, GA 73 279
GA E	I-16	6 I 16 X5, GA 6 285
GA S	US-23	30 +US 23 GA112, GA 30 315
GA S	GA-112	2 Cochran, GA 2 317
More...		
=====		
F3=Exit F6=Print Directions		

CalcRoute gives you the following information:

State

The state the route is in and the direction to travel on the specified route.

Route

The road that will be used.

Miles Interchange

Miles in between each route.

Leg

Total miles for that leg of the haul.

Total

Total miles for the entire haul.

Press F6 to Print the Directions.

Display Less-Than TruckLoad:

```
16:50:14                               CalcRoute                               12/06/99
ROUT23R                               DISPLAY OPTIMIZATION
Whse TEST Chatsworth, CA 90040 Opt# 481 Date 1999/08/31 Load 888
Carr      Rte  Mls  Amt  Sav
Type Options, Press Enter.           LEAST COST
2=Change Carrier 4=Delete 5=Display 6=Release Shipment 7=Build Truck

Opt Shipment #  Location      St  Seq  Zip  Qty  Cube  Wgt  Carr  Dir  Chgs
-----
   30  Iowa City    IL  1  60607  477  4401  YFSY  265.28
   33  Davenport    MO  2  64507  1500 13827 YFSY  598.65
   26  Cedar Rapids TX  3  75110  1013 9343  YFSY  286.74
   29  Dubuque      TX  4  78218  2053 18921 YFSY  469.89

=====
F1=Help F3=Exit F5=Fold F6=Print Directions
```

When the above screen appears, Enter the following information.

Opt

Enter a “2” in the option field to change the carrier presently selected to make the move.
For Detail of this option, refer to pp 24-C ([2=Change Carrier](#))

Enter a “4” in the option field to delete that particular shipment. See the following

```
10:24:36                               CalcRoute                               3/03/00
ROUT23R                               DISPLAY OPTIMIZATION
Whse TEST Crossville,TN 38557 Opt# 1113 Date 2000/02/24 Load 888

Confirm Delete of Shipments
Press Enter to confirm your choice for Delete.
Press F12 to return to change your choice.
Shipment #  Location  St  Seq  Zip  Qty  Cube  Wgt  Carr  Dir  Chgs
-----
   10026      VA  1  23456  2528 ESTE  147.55

=====
F12=Cancel
```

screen:

Enter a "5" in the option field to display

Enter a "6" in the option field to release the shipment as a direct LTL shipment.

For detail on this option, refer to pp 22-C (Opt 6).

Enter "7"s in the option fields of all the shipments you want to build together on a single truck. These shipments will be removed from this screen and appear as one shipment on Screen ROUT22R (pp24-B).

You may also select F5=Fold to view the customer/vendor information or press F6 to print Directions. See page 24-E, Step 3 for information on F6=Print Directions.

Display Consolidated Shipments:

```
12:32:21                               CalcRoute                               12/15/99
ROUT23R                               DISPLAY OPTIMIZATION
Whse 11  West Warwick, RI  02893 Opt#  323 Date 1999/11/11 Load  1
Carr HJBT JB Hunt          Rte 1.01 Mls 1118 Amt 1,129.18 Sav 3,852.82
Type Options, Press Enter.                               LEAST COST
4=Remove 5=Display

Opt Shipment #   Location   St Seq   Zip   Mls Cube Wgt Carr  Dir Chgs
-----
   78 POOL----STL  MO  1 63144 1118    20000    4,982.00

=====
F1=Help F3=Exit F5=Fold
```

Enter the following information when the above screen appears:

Opt

Enter a "4" in the option field to delete the specified consolidated shipment.

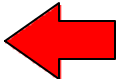
Enter a "5" in the option field to display the shipments combined in the consolidation. See the following screen.

You may also select F5=Fold to view the customer/vendor information.

```
12:41:01                               CalcRoute                               12/15/99
ROUT25R                               DISPLAY OPTIMIZATION
Whse 11  West Warwick, RI  02893 Opt#  323 Date 1999/11/11 Load  1
Ship #   78 Pool STL   St. Louis, MO   63144
Total Wt 20000 Deficit Wgt 22000 Deficit Amt 1,242.09 Pool Savings 2,098.71
Type Options, Press Enter.
4=Remove

Opt Shipment #   Location   St Seq   Zip   Qty Cube Wgt Carr  Dir Chgs
-----
   69 ST LOUIS   MO  1 63111   44    15000 RDWY 3,637.50
   70 ST LOUIS   MO  2 63776   33     5000 RDWY 1,344.50

=====
F1=Help F3=Exit F5=Fold F6=Pool Candidates
```



CalcRoute will give you the savings from using the

Enter the following information when the previous screen appears:

Opt

Enter a "4" in the option field to remove the shipment from consolidation. See the following screen:

```
11:02:38                               CalcRoute                               3/03/00
ROUT25R                               DISPLAY OPTIMIZATION
Whse 11  West Warwick, RI  02893 Opt#  324 Date 2000/02/23 Load  1
Ship #   84 Pool STL  St. Louis, MO   63144
Total Wt 20000 Deficit Wgt 22000 Deficit Amt 1,242.09 Pool Savings 2,098.71
Press ENTER to confirm your choice for delete
Press F12 to return to change your choice
  Shipment #  Location  St Seq Zip  Qty Cube Wgt Carr Dir Chgs
           69 ST LOUIS   MO  1 63111  44  15000 RDWY 3,637.50
=====
F12=Cancel
```

Press Enter to confirm your choice to delete this shipment or press F12 to return to change your choice.

```
12:41:01                               CalcRoute                               12/15/99
ROUT25R                               DISPLAY OPTIMIZATION
Whse 11  West Warwick, RI  02893 Opt#  323 Date 1999/11/11 Load  1
Ship #   78 Pool STL  St. Louis, MO   63144
Total Wt 20000 Deficit Wgt 22000 Deficit Amt 1,242.09 Pool Savings 2,098.71
Type Options, Press Enter.
  4=Remove
Opt Shipment #  Location  St Seq Zip  Qty Cube Wgt Carr  Dir Chgs
  _           69 ST LOUIS   MO  1 63111  44  15000 RDWY 3,637.50
L/H Chgs  846.89 Dst Chgs  937.50 Tot Chgs 1,784.39 Savings 1,853.11
Customer/Vendor TARGET                1 MAIN ST
  _           70 ST LOUIS   MO  2 63776  33   5000 RDWY 1,344.50
L/H Chgs  282.30 Dst Chgs  816.60 Tot Chgs 1,098.90 Savings 245.60
Customer/Vendor KMART                  2 GREEN ST
=====
=
```

CalcRoute gives you the following:

Line Haul Charges

This specific portion (allocated by weight) of the shipment charges for the line haul truckload shipment to the pool.

Delivery Charges

Charges for the direct shipments from the pool to the customer/vendor.

Total Charges

Total charges (line haul percentage + delivery costs) to make this shipment.

Savings

Savings from combining shipments for the specific direct shipment.

Customer Vendor

Name and address of the Customer/Vendor in which the shipment will be received.

Press F6=Pool Candidates to view possible shipments the specified Pool can service. See the following screen:

```
10:36:24                               CalcRoute                               2/18/00
ROUT28R                               DISPLAY OPTIMIZATION
Whse 11  West Warwick, RI  02893 Opt#  323 Date 1999/11/11 Load  1
Ship #   78 Pool STL  St. Louis, MO  63144
Total Wt 20000 Deficit Wgt 22000 Deficit Amt 1,242.09 Pool Savings 2,098.71
Type Options, Press Enter.
9=Add          POOL CANDIDATES
Opt Shipment #  Location  St Seq Zip  Qty Cube Wgt  Savings

=====
F1=Help F3=Exit F5=Fold
```

CalcRoute gives you the Shipments that can be serviced by the specified Pool.

Enter a “9” in the option field to manually add a shipment to the Pool location.

6=Release

This option is to Release the Load to be shipped.

7=Print

This option allows you to print a hard copy of the loads. *See Appendix-1 Load Manifest.*

8=Comments

This option allows you to enter or view any comments about that particular load.

Note: The Load Number will be RED if there is a comment written about that particular load.

History Inquiry

This option shows the history of all shipments entered into CalcRoute.

Step 1: From the Main Menu in CalcRoute, select Option 25 (History Inquiry). You should see the following screen:

```
9:58:08                               CalcRoute                               10/25/99
ROUT53R                               HISTORY INQUIRY

Sequence by . . . . . __ Default Sequence to Carrier Code
      1. Release Date
      2. Division
      3. B/L Number
      4. Warehouse Code
      5. Order Number

=====
F1=Help  F3=Exit
```

Step 2: Enter a number 1 through 5, corresponding to the options on the screen above. The default sequence is by carrier code. Upon hitting enter the following screen will display:

```
10:34:59                               CalcRoute                               10/25/99
ROUT53R                               HISTORY INQUIRY

Type Options, Press Enter.

Sequence by . . . . . CARRIER CODE

From . . . . . _____
To . . . . . _____

Date Range

From . . . . . 1999/10/01
To . . . . . 1999/10/25

=====
F1=Help  F3=Exit
```

Step 3: Enter the following information when the above screen appears:

From

Enter the lowest sequence limit.

To

Enter the upper sequence limit. Press enter and the following screen will appear.

10:43:40	CalcRoute	10/25/99			
ROUT54R	HISTORY INQUIRY				
Type Options, Press Enter.					
2=Change Status 5=Display Load 7=Reprint Load Manifest 8=Comments					
Op Carr	Whse	Div Rls Date	Release Number	Rate	Miles
_	11	1998/11/24 11	000299888		
_	HJBT 11	1999/03/19 11	000301002	1.41	1386
_	HJBT 11	1999/04/27 11	000019777	1.10	5697
_	SCNN 11	1999/04/27 11	000025777	1.10	3543
_	HJBT 11	1999/07/19 11	000311002	1.01	1015

F1=Help F3=Exit F5=Fold					

CalcRoute gives you the following information:

Carrier

The carrier used to move the shipment.

Warehouse

The warehouse from which the load originated.

Release Date

Date the shipment was released from CalcRoute.

Release Number

Unique load number given by CalcRoute to the shipment upon the release from CalcRoute.

Rate

Mileage rate the carrier charged for this shipment. Applicable for truckload carriers charging by the mile only.

Miles

Step 4: Enter the following information when the previous screen appears:

Option

Enter a 2 in the Option field:

To change the status of a specific shipment. See Step 5 to view the Status Field.

Enter a 5 in the Option field:

To view the detail of a specific shipment. See the following screen.

Press F5=Fold to view the detail of the shipment. See [Step 5](#) (pp 25-D) for more information on this option.

```
11:11:57                      CalcRoute                      2/11/00
ROUT55R                      HISTORY INQUIRY
Whse 11  West Warwick, RI  02893 Opt#  19 Date 1998/11/09 Load 777
Carr HJBT JB Hunt          Rte 1.10 Mls 3798 Amt 2,198.90 Sav 204.73-
Type Options, Press Enter.
5=Display

Opt Shipment #  Location      St Seq Zip   Mls Cube Wgt Carr Dir Chgs
-              20 MIAMI        FL 1 33169 1899          SCNN 333.33
-              32 NORRIS       TN 2 37828 1899          HJBT 1,528.67
-              19 CINCINNATI OH 3 45223 1899          HJBT 465.50

=====
F1=Help F3=Exit F5=Fold
```

The above screen displays the direct shipments that were combined into the specific optimized shipment.

Enter the following information when the above screen appears:

Opt

Enter a 7 in the Option field:

To reprint the load manifest. See *Appendix-1 Load Manifest*.

Enter an 8 in the Option field:

To view any comments written about the shipment.

Press F5=Fold to view Customer/Vendor name and address.

Step 5: To view the detail of the shipment, press F5=Fold. See the following screen.

11:01:54	CalcRoute	10/25/99		
ROUT54R	HISTORY INQUIRY			
Type Options, Press Enter.				
2=Change Status 5=Display Load 7=Reprint Load Manifest 8=Comments				
Op Carr Whse	Div Rls Date	Release Number Rate Miles		
_ 11	1998/11/24 11	000299888		
Qty Cube	Weight	Dir Chgs	.00 Carr Chgs	.00 Sts _
_ HJBT 11	1999/03/19 11	000301002	1.41 1386	
Qty Cube	Weight	Dir Chgs	751.42 Carr Chgs	999.99 Sts _
_ HJBT 11	1999/04/27 11	000019777	1.10 5697	
Qty Cube	Weight	Dir Chgs	2198.90 Carr Chgs	2327.50 Sts _
_ SCNN 11	1999/04/27 11	000025777	1.10 3543	
Qty Cube	Weight	Dir Chgs	1409.10 Carr Chgs	666.66 Sts _
_ HJBT 11	1999/07/19 11	000311002	1.01 1015	
Qty 30 Cube	Weight 5000	Dir Chgs 1075.15	Carr Chgs 1113.36	Sts _
=====				
F1=Help F3=Exit F5=Fold				

CalcRoute gives you the following information:

Quantity

Number of pieces on the shipment.

Cube

Cubic dimensions of shipment, if applicable.

Weight

Total weight of the shipment.

Direct Charges

Charges if the shipment would have been shipped direct.

Carrier Charges

Status