

Appendix A

How to Set Up Schedules and How They Affect Automatic Assignment

What Are Schedules?

A schedule is nothing more than a list of your drivers and vehicles that are grouped in some way that you have determined. You can set up as many schedules as you need and your drivers and vehicles can be on as few or as many schedules as you need. Some districts use the schedules to organize their drivers and vehicles into groups that are available to drive field trips at certain times of the day or week. For example, a district may have the following 3 schedules:

MD - Mid Day

(All Field Trips taken during the week days before 3:00 PM)

WD - Week Day

(All Field Trips taken during the week days from 3:00 PM and later.)

WE - Week End

(All Field Trips taken during a weekend or holiday.)

In this case the drivers and vehicles are organized by availability. That is when that driver or vehicle is available to be assigned a field trip. You may also group drivers by qualifications, geography or any other factor that is important to you. For example you could set up schedules for; Out of Town, Over Night, East Side, West Side, High School, Elementary School, Etc. There are limitless numbers of ways that you can organize your schedules.

Each schedule consists of two lists: a list of drivers and a list of spare vehicles. Figure A-1 is an example of a schedule and its two lists:

Schedule: Week End

Drivers	Spare Vehicles
Randy Mills	Bus 100
Mike Wales	Mini Bus 12
Tom Weeks	Bus 112
Ed Most	Handicap Bus 45

Figure A-1. Sample Schedule

Driver List

The list of drivers for a schedule is simply a list of those drivers that can be assigned to a field trip that uses this schedule. When you enter a new field trip you select what schedule or schedules T.O.M. is to use when automatically assigning drivers and vehicles to the field trip. T.O.M. will use ONLY the drivers on the schedule or schedules that you selected when entering the field trip.



Spare Vehicle List

The list of spare vehicles for a schedule is a list of vehicles that may be assigned to the field trip when the driver's normal vehicle cannot be assigned. Usually, when a driver is assigned to a field trip, the vehicle that the driver normally drives is also assigned to the field trip. The vehicle that the driver normally drives is designated when you set up an employee in the system and select a vehicle for that employee.

Sometimes, however, either that vehicle is not available because it is already assigned to another field trip or the driver is required a different kind of vehicle than the one that he / she normally drives. When a field trip is entered into the computer, two vehicle types can be specified for that field trip. The system will then automatically ensure that only those types of vehicles are assigned to the field trip.

When the system has determined that the driver's normal vehicle cannot be assigned to the field trip, it then looks to see if an alternate vehicle can be assigned using the list of spare vehicles. By placing a vehicle on a schedule's list of spare vehicles, you are telling the system that this vehicle is available to be assigned to a field trip using that schedule.

When selecting those vehicles that should be spare vehicles for a schedule, you should only select those vehicles that can be assigned to any driver on that schedule. If you only want a vehicle to be assigned to field trips just when that vehicle's normal driver is assigned to a field trip, then you should NOT designate the vehicle as a spare vehicle. However, if a vehicle can be assigned to any field trip using the schedule no matter which driver drives the vehicle, you SHOULD designate the vehicle as a spare vehicle for the schedule. IT IS A GOOD IDEA TO ASSIGN AS MANY SPARE VEHICLES AS POSSIBLE TO EACH SCHEDULE SO THERE IS LITTLE CHANCE THAT THE SYSTEM WILL EXHAUST ALL SPARE VEHICLES WHEN ASSIGNING VEHICLES TO FIELD TRIPS USING THE SCHEDULE.

When you have completed setting up all of your schedules and designated all drivers and spare vehicles then you should have a set of schedules that resemble Figure A-2:

MID DAY		WEEK DAY		WEEK END	
Drivers	Spare Vehicles	Drivers	Spare Vehicles	Drivers	Spare Vehicles
Randy Mills	Bus 115	Nancy Moore	Mini Bus 17	Karen Tion	Bus 100
Mike Wales	Handicap Bus 43	Randy Mills	Bus 122	Tom Weeks	Mini Bus 12
Tom Weeks	Mini Bus 12	Lisa Nixt	Handicap Bus 45	Kim Small	Bus 112
Ed Most	Handicap Bus 45	Ed Most	Bus 100	Bob Noths	Handicap Bus 45
Wendy Myne					

Figure A-2. Sample List of Schedules

You will notice that several drivers and vehicles are on more than one schedule and some drivers and vehicles are on just one schedule. As was stated previously, you may have an unlimited number of schedules, and your drivers and vehicles can be on as many or as few of these schedules as necessary.

Multiple Schedules

T.O.M. allows you to select up to five schedules to a field trip. When you select more than one schedule for a field trip you are telling T.O.M. in what priority you want T.O.M. to use when automatically assigning drivers to the field trip. When automatically assigning drivers to the field trip T.O.M. will first try every driver on the first schedule until the field trip is fully assigned or until all the drivers have been eliminated as candidates to perform the field trip before it moves on to the second schedule. T.O.M. will then try every driver on the second schedule until the field trip is fully assigned or until all the drivers on the schedule have been eliminated as a candidates to perform the field trip before T.O.M. moves on to the third schedule. And so on. This feature allows you to place a priority on certain lists of drivers when T.O.M. automatically assigns drivers to field trips. For example, if your school has a group full time field



trip drivers that will perform most of the field trips and your regular route driver will perform the rest of the field trips. To instruct T.O.M. to assign field trips in this manner you would setup one schedule with your full time field trip drivers and another schedule for your regular route drivers. Then when entering field trips you would first select the schedule of full time field trip drivers then select the schedule of regular route drivers. If you enter all of your field trips this way the result during automatic assignment is that T.O.M. will assign most of the field trips to the full time field trip drivers and the remaining field trips to the regular route drivers.



How Are Schedules Used in the Automatic Assignment of Drivers to Field Trips Using the Rotation Method?

When a field trip is entered into the system, you must specify from which schedule the field trip will draw drivers and spare vehicles. When automatically assigning drivers to a field trip, the system will go to that schedule, determine which driver was to be assigned next and select the appropriate number of drivers required in the order that they appear in the schedule. When the system has completed assigning drivers to a field trip, it will automatically remember which driver to begin with the next time it uses this schedule. See Figure A-3. (**NOTE:** Before selecting drivers from a schedule, the system may first determine if there are any canceled drivers or drivers with makeups to be replaced available to schedule. This is discussed in the Users Manual in the chapter labeled - Understanding Automatic Assignment.)

If T.O.M. tries to assign all of the drivers on the schedule and still does not have the field trip assign T.O.M. will look to see if you have entered any additional schedules for the field trip. If you have then T.O.M. will move to the next schedule and continue the assigning process. If you have not then T.O.M. will display a warning message to you informing you that the field trip has not been fully assigned.

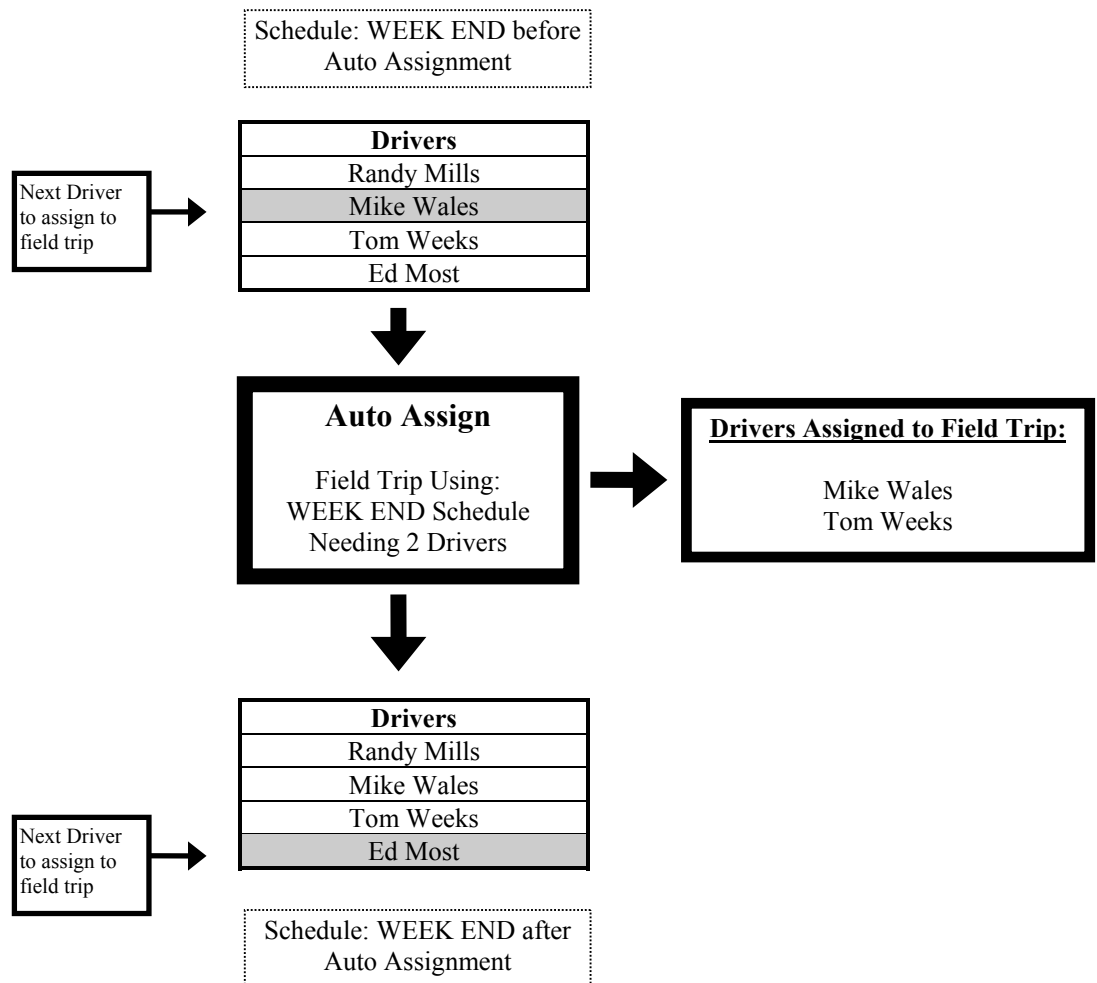


Figure A-3. Automatic Assignment of Drivers to a Field Trip Using Rotation



How Are Schedules Used in the Automatic Assignment of Drivers to Field Trips Using the Hours Averaging Method?

When a field trip is entered into the system, you must specify from which schedule the field trip will draw drivers and spare vehicles. When automatically assigning drivers to a field trip, the system will go to that schedule, determine which drivers have the lowest field trip hours (if there is a tie between several drivers then the senior most driver is selected) and assign the appropriate number of drivers to the trip in the order of least number of field trip hours to the most number of field trip hours. T.O.M. will only use the drivers on the schedule and no other drivers. If T.O.M. tries to assign all of the drivers on the schedule and still does not have the field trip completely assigned T.O.M. will look to see if you have entered any additional schedules for the field trip. If you have then T.O.M. will move to the next schedule and continue the assigning process. If you have not then T.O.M. will display a warning message to you informing you that the field trip has not been fully assigned.

Exactly How Does T.O.M. Total Driver Field Trip Hours?

Depending on the hours averaging options that you selected in the District Options Screen T.O.M. will periodically recalculate each driver's field trip hours. When T.O.M. recalculates these hours T.O.M. first will select all field trip assignments from the date that you specified in the Hours Averaging Options in the District Options Screen. T.O.M. will then total up all the assigned driver's hours. When possible T.O.M. will always use the driver's actual hours for the field trip. If the driver has no actual hours T.O.M. will use the field trip's estimated driver hours.

T.O.M. will then total all of the driver refusal field trip hours. Again, where possible T.O.M. will use the actual field trip hours before estimated field trip hours. You may ask, "How can T.O.M. use actual driver hours to calculate the hours to charge against a driver refusal?" Obviously, the refused driver has no actual hours. The drivers that actually did perform the field trip do, however, have actual hours. If a driver that performed the actual field trip has actual hours then T.O.M. will use that driver's hours as the hours to charge the driver refusal. If more than one driver performed the field trip and have actual hours then T.O.M. will calculate the average of the actual hours of all the drivers that performed the field trip and charge the driver refusal with that average number of hours.

Let's look at an example to better understand how T.O.M. calculates the hours to charge a driver refusal. Janet and Bill were assigned to Trip # 100 that had an estimate number of hours of 3. Janet refused the field trip and Debbie was assigned the trip to replace Janet. At this point Janet will be charged for 3 hours for her driver refusal. Later, it turns out that the trip went longer than expected and Bill turns in actual hours for Trip #100 of 5 hours and Debbie turns in actual hours of 5 and ½ hours. At this point Janet is charged 5.25 hours for her refusal of the assignment to field trip 100.

T.O.M. then takes each drivers total field trip hours and total refusal hours and adds them to any employee base hours that you may have entered for the drivers. This total represents the total field trip hours that T.O.M. bases the field trip assignments on. When automatically assigning drivers to field trips T.O.M. will take the drivers in the schedule of the field trip being assigned, sort them by their total field trip hours and assign the driver or drivers with the least number of hours within the schedule to the field trip. See Figure A-4.

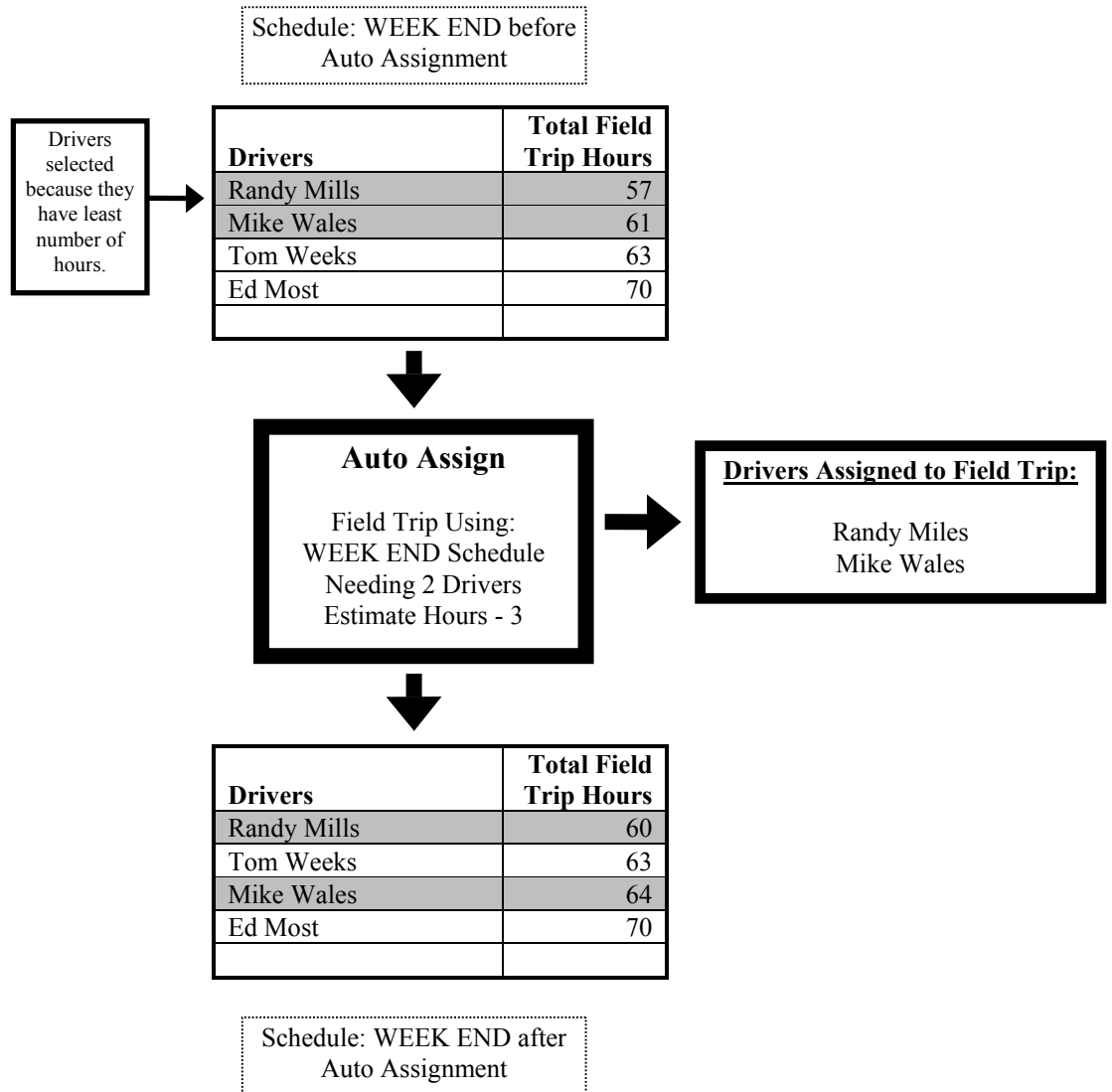


Figure A-4. Automatic Assignment of Drivers to a Field Trip Using Hours Averaging



Exactly How Does T.O.M. Total Driver Field Trip Hours If You Instructed T.O.M. to Average Hours Within Schedules?

When T.O.M. recalculates driver's field trip hours to average hours within schedules it uses almost identically the same logic that was previously described in the section titled 'EXACTLY HOW DOES T.O.M. TOTAL DRIVER FIELD TRIP HOURS?' with one difference. T.O.M. will now subtotal each driver's field trip hours by schedule. So for example T.O.M. may calculate that driver Janet has 32 hours for weekend field trips, 20 hours for week day field trips and 10 hours for mid day field trips for a total of 62 hours for the year.

When automatically assigning drivers to field trips T.O.M. will take the drivers in the schedule of the field trip being assigned, sort them by their total field trip hours FOR THE SCHEDULE and assign the driver or drivers with the least number of hours within the schedule to the field trip. See Figure A-5. Notice that the drivers with the least total field trip hours are not necessarily the drivers that are selected for the field trip. Rather, the drivers with the least total field trip hours WITHIN the schedule are the drivers assigned to the field trip.

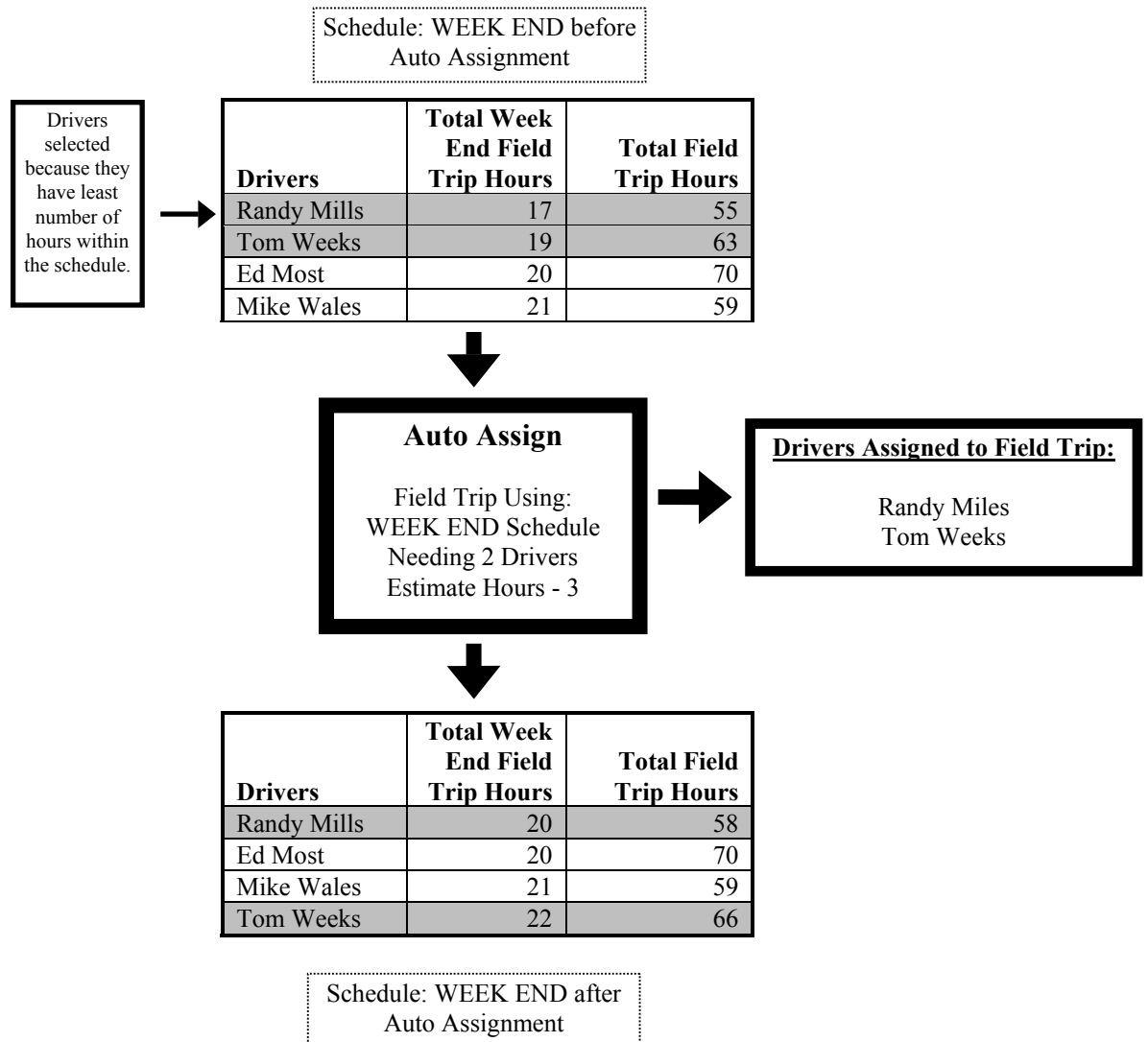


Figure A-5. Automatic Assignment of Drivers to a Field Trip Using Hours Averaging Within the Schedule



How Are Schedules Used in the Automatic Assignment of Drivers to Field Trips Using the Bid Allowance Method?

Basically, T.O.M. does not use the schedules when automatically assigning drivers to field trips using the Bid Allowance method. Instead T.O.M. chooses the driver(s) to assign to a field trip from a list of drivers that have bid on that particular trip. T.O.M. will automatically assign the driver with the highest point bid and with no conflicts to the field trip. *For more information about the Bid Allowance Method of automatically assigning drivers to field trips see Appendix B – How to Use the Bid Allowance Automatic Assignment Method in this book.*

T.O.M. does, however, use schedules if either no driver has bid on a field trip or all of the driver bid's for a field trip have been exhausted and the field trip is not fully assigned. In such a case T.O.M. will then use the Rotation method of automatically assigning drivers for that field trip. In this case the schedules play a critical role in which drivers are automatically assigned to field trips. In fact Gecko recommends that if an organization is going to use the Bid Allowance method of automatic assignment then that organization should also read and understand how the Rotation Method works. This is because of the fact that the Rotation Method is used by T.O.M. as a fall back method when no more driver bids can be found for a field trip T.O.M. is attempting to assign. ***Please see the section titled “How Are Schedules Used in the Automatic Assignment of Drivers to Field Trips Using the Rotation Method?” earlier in this chapter for more information about this fall back method that T.O.M. uses to assign drivers and vehicles to your field trips automatically.***



How Are Schedules Used in the Automatic Assignment of Drivers to Field Trips Using the Seniority Method

When a field trip is entered into the system, you must specify from which schedule the field trip will draw drivers and spare vehicles. When automatically assigning drivers to a field trip, the system will go to that schedule, start with the senior most driver within the schedule and select the appropriate number of drivers required in seniority order. When the system has completed assigning drivers to a field trip, it will automatically start again with the senior most driver in that schedule when it assigns another field trip using this schedule. See Figure A-6. **(NOTE: Before selecting drivers from a schedule, the system may first determine if there are any canceled drivers or drivers with makeups to be replaced available to schedule, if these features are turned on in Your District Options. This is discussed in the Users Manual in the chapter labeled - Understanding Automatic Assignment.)**

If T.O.M. tries to assign all of the drivers on the schedule and still does not have the field trip assign T.O.M. will look to see if you have entered any additional schedules for the field trip. If you have then T.O.M. will move to the next schedule and continue the assigning process. If you have not then T.O.M. will display a warning message to you informing you that the field trip has not been fully assigned.

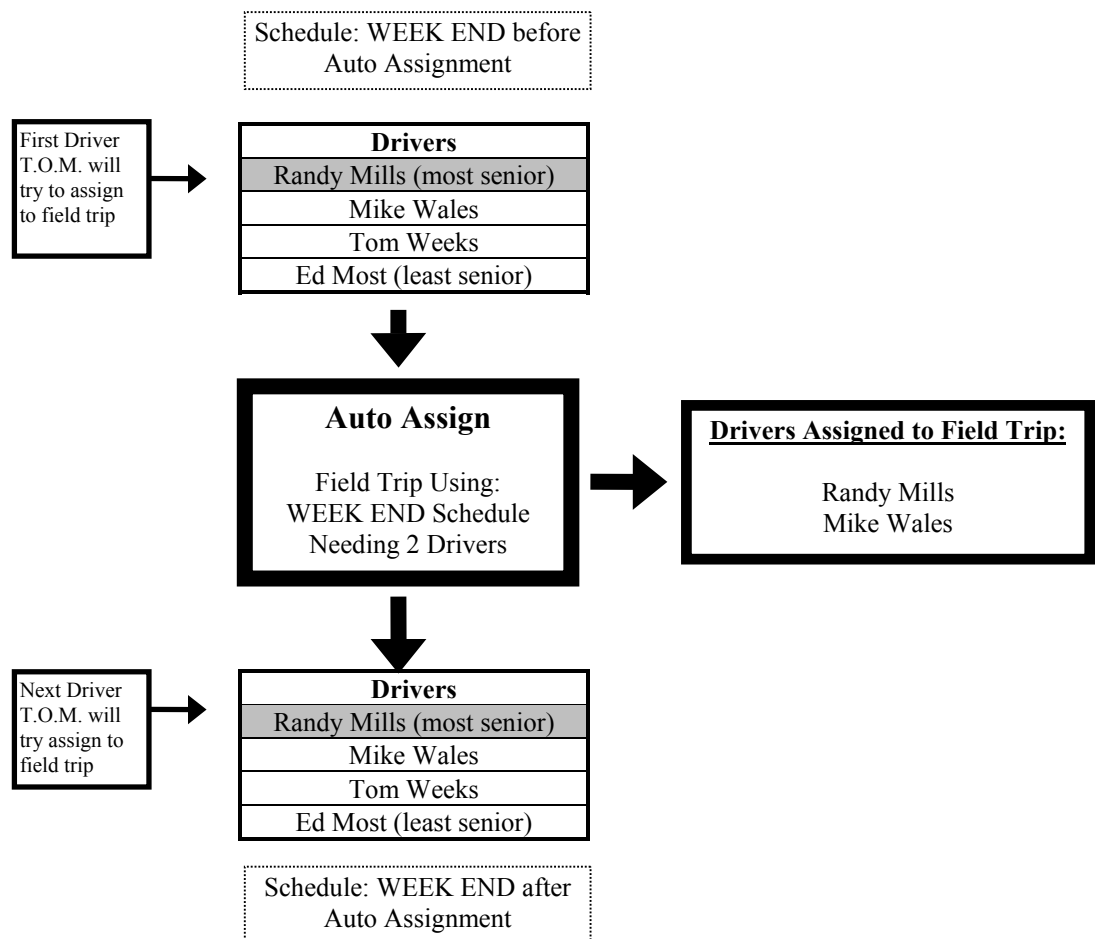


Figure A-6. Automatic Assignment of Drivers to a Field Trip Using Seniority Within the Schedule

See Figure A-7 for a detailed example of how T.O.M. automatically assigns vehicles to field trips.



How Are Schedules Used in the Automatic Assignment of Vehicles to Field Trips?

Whether your district has T.O.M. automatically assign drivers to field trips using the rotation method or the hours averaging method. T.O.M. always uses the same method for automatically assigning vehicles to the field trip. The following is a detailed description of how T.O.M. assigns vehicles:

When automatically assigning vehicles to a field trip, the system first attempts to assign the vehicle that is normally driven by the driver that is being assigned. The vehicle that the driver normally drives is designated when you set up an employee in the system and select a vehicle for that employee. Sometimes, however, either that vehicle is not available because it is already assigned to another field trip or the driver is required a different kind of vehicle than the one that he / she normally drives.

When a field trip is entered into the computer, two vehicle types can be specified for that field trip. The system will then automatically ensure that only those types of vehicles are assigned to the field trip.

When assigning spare vehicles T.O.M. will automatically select the vehicle that has the oldest date of last use. This information is automatically kept and tracked by the system. Before assigning a spare vehicle to a field trip, the system will first verify that the vehicle is not already assigned to a field trip with **the same date and schedule** as the current field trip. If there is a scheduling conflict, the system will then select a different spare vehicle of the correct vehicle type with the next oldest date of last use and check that vehicle's availability.

The system will repeat this process until: 1) a spare vehicle of the correct type that has no scheduling conflicts has been found, or 2) the system exhausts all spare vehicles and can find no vehicle of the correct type that does not have a scheduling conflict.

See Figure A-7 for a detailed example of how T.O.M. automatically assigns vehicles to field trips.

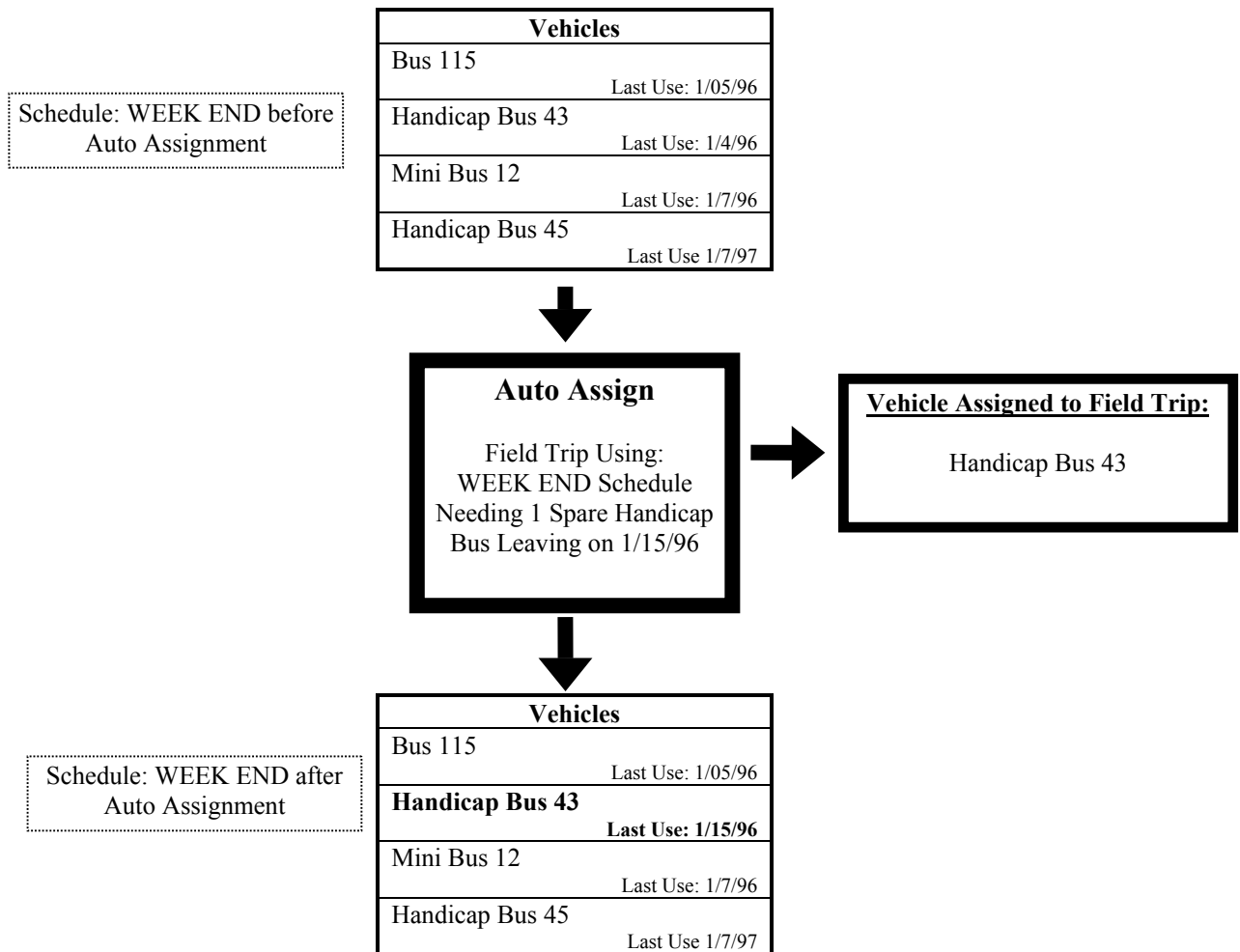


Figure A-7. Automatic Assignment of Vehicles to a Field Trip Using Schedules

