

# Specialized Transportation Program

## FY 2010 - 2011 Vehicle Catalog and Selection Guide



**Ohio Department of Transportation**  
**Office of Transit**

Jerry Wray  
Director

John R. Kasich  
Governor





OHIO DEPARTMENT OF  
TRANSPORTATION

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The Ohio Department of Transportation  
1980 W. Broad St.  
Columbus, Ohio 43223  
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## Preface

Welcome to the 2010-2011 Ohio Department of Transportation's (ODOT) **Vehicle Selection Guide!** This Selection Guide provides you with the range of vehicles and optional vehicle equipment available through ODOT's state term contracts. This Selection Guide may be used by public transit systems and Specialized Transportation Program providers and other government entities to select appropriate vehicles for their clients' transportation needs.

While many agencies order and receive exactly the right equipment to meet their needs, a significant number do not have this expertise and may choose vehicles that are inappropriate for their service. This Selection Guide provides a guide to selecting the proper vehicle to match your service requirements.

Research has been conducted on the equipment, options, and seating arrangements to provide a wide variety of vehicles to meet most agencies needs. *If you feel your needs cannot be met with the equipment described, please discuss your special requirements with your ODOT program representative.* We also invite your comments and suggestions to further improve future editions of this Vehicle Selection Guide.

The vehicles offered in this Vehicle Selection Guide are of the size and type most commonly used by human service organizations in the provision of transportation to the elderly and people with disabilities; small urban and rural general public transit systems; and large urban transit systems offering complementary paratransit service. If you are interested in larger, transit-style vehicles, you may contact the Office of Transit for a list of agencies who purchase these types of vehicles on a regular basis and may be able to provide you with a sample set of specifications.

For further assistance in selecting your vehicle, feel free to contact:

Ohio Department of Transportation, Office of Transit  
1980 W. Broad Street, 2nd Floor  
Columbus, Ohio 43223  
(614) 466-8955 (phone)  
(614) 466-0822 (fax)  
<http://www.dot.state.oh.us/Divisions/TransSysDev/Transit/Pages/default.aspx>

# I. Introduction

## ***Background***

The ODOT Vehicle Selection Guide presents vehicles and equipment available to public transit providers (Section 5307 and 5311) and private non-profit corporations serving the transportation needs of elderly and disabled individuals (Section 5310 – Ohio’s Specialized Transportation Program (STP) and (Section 5316 – Ohio’s Job Access Reverse Commute (JARC Program) and (Section 5317 - Ohio’s New Freedom Program). This publication is to be used by public transit systems in Ohio and Specialized Transportation Program (STP), Job Access Reverse Commute and New Freedom providers.

To help ensure that you receive the proper equipment for your service, carefully review the chapter “Selecting the Proper Vehicle” (Chapter II). We strongly urge you to perform the self-evaluation located in this chapter regardless of your experience in purchasing vehicles. Once you have determined which vehicle is just right for your type of service, precede to the chapter “Available Vehicles” (Chapter III) for detailed vehicle descriptions and specifications, advantages and disadvantages, additional standard and optional equipment and available floor plans/seating options.

The chapter “Legislation and Regulations” (Chapter IV) offers insight into regulations, which may affect your vehicle choice.<sup>1</sup>

Finally, the appendices provide a definition of terms, selecting the proper vehicle examples with two case studies, and estimated vehicle costs.

While this publication illustrates the range of available equipment and acts as a guide to selecting the proper vehicle for your agency, we recommend that you examine examples of the actual vehicles. The Ohio Public Transit Conference and Trade Show offers one opportunity to view vehicles similar to those described in this Selection Guide. However, this event usually held in mid-May to early June may not always coincide with grant application deadlines. Therefore, another option would be to visit another agency currently operating vehicles similar to those you are interested in obtaining. Please contact the Office of Transit for assistance with referrals.

## **SELECTING THE PROPER VEHICLE**

This chapter is designed to help both the novice and experienced applicant determine the proper vehicle to meet their needs. Since you will be operating your vehicle for several years, it is worthwhile to take the time up front to review your transportation needs and requirements.

Inappropriate vehicles come in all shapes and sizes. A Converted Van may be just the vehicle for an agency operating in an urban area, but may be too high for rural gravel roads or an agency that must deal with height restrictions in parking garages. A Light Transit Vehicle might be a good match for the urban agency regularly carrying large groups from one place to another, but could be difficult to maneuver in rural areas or residential neighborhoods and may be more costly to operate, insure, and maintain for agencies which rarely need the larger capacity.

There are many issues to consider when selecting a vehicle. Major factors include:

- ◆ Capacity needs
- ◆ Client needs
- ◆ Purchase price
- ◆ Type of service
- ◆ Operating environment
- ◆ Operating Cost\*
- ◆ Safety and comfort
- ◆ Weight capacity
- ◆ Future needs
- ◆ Ability to meet regulatory requirements such as annual mandatory bus inspections<sup>1</sup>
- ◆ Ability to train or hire employees with Commercial Drivers Licenses (CDL)<sup>1</sup>
- ◆ Ability to meet Americans with Disabilities Act requirements (ADA)<sup>1</sup>

\* In addition to considering traditional operating costs (salary, insurance, fuel, etc.), you should also consider preventive maintenance costs over the life of the vehicle (most vehicles are operated for 6-7 years). If you are awarded a grant, the vehicle must remain in service until written disposition approval is received from ODOT. The estimated useful vehicle life is shown in the disposition table published in “A Guide to Preventive Maintenance” which can be viewed on ODOT’s website at:

<http://www.dot.state.oh.us/Divisions/TransSysDev/Transit/Pages/default.aspx>

Chapter II, “Selecting the Proper Vehicle” leads you through issues and guides you toward a vehicle that will best meet your needs. It also includes general descriptions of each vehicle type. Please take the time to use this chapter as part of your vehicle selection process, and remember to include the vehicle operators in this process. Another option to view the vehicle selection guide located on the web at:

<http://www.dot.state.oh.us/Divisions/TransSysDev/Transit/Documents/Programs/Specialized/Vehicle%20Catalog/2010-2011%20Vehicle%20Catalog.pdf>

## AVAILABLE VEHICLES

The Ohio Department of Transportation (ODOT) offers a wide variety of vehicle types, standard minivans, modified minivans, converted vans and Light Transit Vehicles with seating arrangements to meet most every need. Vehicles range from modified minivans carrying five passengers with no wheelchair accessibility through Light Transit Vehicles carrying up to 16 ambulatory passengers and two wheelchair passengers. This chapter offers detailed vehicle descriptions and dimensions, advantages and disadvantages, as well as additional standard and optional equipment (equipment options will be discussed in detail in Chapter III).

Vehicles in this Vehicle Selection Guide:

- ◆ **Standard Minivans (SMV)<sup>2</sup>** - These vehicles have a limited capacity and can accommodate a maximum of six ambulatory passengers. They are the most maneuverable and do not require special licensing to operate. They are the most fuel-efficient and environmentally safe. The purchase price, as well as operation and maintenance costs, is the most economical of any

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<sup>1</sup> See the brief discussion at the end of this section and also in Chapter IV: Legislation and Regulations for a full discussion of mandatory bus inspections, CDL, and ADA.

<sup>2</sup> SMVs and MMVs are the only vehicles offered by ODOT which meet the Ohio Department of Education’s definition of a “conforming van.” See Chapter V: Legislation and Regulations for further information.

vehicle offered in this program. Applicants requesting Standard Minivans must certify that a minimum of fifty percent of their fleet is wheelchair accessible. (There is no FTA eligible state term contract for standard minivans. Agencies requesting these vehicles will be responsible for bidding and awarding contracts for them and meeting all Federal Transit Administration requirements.)

- ◆ **Modified Minivan (MMV)<sup>2</sup>** – This vehicle is very similar to the Standard Minivan; however, it is capable of accommodating up to two wheelchair passengers. The capacity is somewhat limited for ambulatory passengers. They are fuel efficient and maneuverable. No special licensing is required to operate a Modified Minivan.

**Converted Vans (CV)** – The Converted Van without the lift can fit up to twelve ambulatory passengers. The CV with the lift option will seat six ambulatory passengers and one wheelchair passenger. The vehicle is large enough to fit groups of people, yet can still comfortably maneuver on most roads. The fuel and maintenance costs are greatly increased from the minivans, but the accessibility and space will help to recover the increased costs. The raised roof and modified seating arrangement allow for easy access and the ability to stand upright inside the vehicle. Maneuverability may be limited inside vehicle, depending on seating configurations.

- ◆ **Light Transit Vehicle, Narrow Body (LTN)** - This vehicle category shares many characteristics with the CV such as chassis, engine size, and no special licensing. However, it is a body on chassis vehicle, which makes the interior slightly larger, seating up to eight. Additionally, it is subject to mandatory Ohio State Highway Patrol annual bus inspections. Overall purchase price, fuel and maintenance costs will be higher than minivans, and slightly higher than the converted vans.

- ◆ **Light Transit Vehicles, Wide Body (LTV)** – This is the largest, most expensive, and most heavy-duty vehicle offered under this program. The largest LTV can accommodate up to 16 ambulatory passengers, plus two wheelchair passengers. Some LTVs require a Commercial Driver’s License (CDL). Additionally, it is subject to mandatory Ohio State Highway Patrol annual bus inspections.

## **LEGISLATION AND REGULATIONS**

Federal legislation, new and existing, will affect your current and future vehicle and equipment selection. The chapter “Legislation and Regulations” (Chapter IV) provides details on existing legislation and how it may affect your vehicle selection. This chapter includes detailed discussion of the following:

- ◆ The Americans with Disabilities Act (ADA) of 1990, as amended, 42 U.S.C. §§ 12101 et seq.
- ◆ The Commercial Vehicle Safety Act of 1986
- ◆ The Clean Air Act Amendments of 1990
- ◆ Mandatory Bus Inspections as specified in Sections 4513.51 & 4513.52 of the Ohio Revised Code
- ◆ Guidelines for Alcohol and Controlled Substances Regulations for Specialized Transportation Program (FTA Section 5310) Grantees
- ◆ Incidental Transportation of Students to School and School-related Events
- ◆ Civil Rights/Title VI
- ◆ Federal Transit Administration Charter Regulations
- ◆ Ohio Amended Substitute Senate Bill 87 (Ohio Medical Board Transportation)

## INDUSTRY STANDARDS, MANUFACTURING TECHNIQUES AND REGULATORY ISSUES

Within this Vehicle Selection Guide and in the ODOT specifications for a particular vehicle, you will find emphasis has been placed upon conformity to various industry standards and regulatory issues. This language is necessary for ODOT to describe and achieve a vehicle that meets its needs and also to indicate to the manufacturers exactly what ODOT is asking them to build in a very competitive market. Typically, purchasers of vehicles may reference technical and regulatory information in publications such as:

- ◆ **The Code of Federal Regulations 49 CFR Part 393.** Parts and accessories necessary for safe operation especially subpart G - Miscellaneous Parts and Accessories.
- ◆ **CFR 49 Parts 571-101 to 571-304.** These contain the full text of Federal Motor Vehicle Safety Standards (FMVSS).
- ◆ **Ford Motor Home and Transit Bus Guide.** Within this publication are guidelines for builders of buses based on Ford light truck chassis. This is part of Ford's commitment to help build vehicles with a greater degree of customer satisfaction and product acceptance.
- ◆ **The General Motors Truck Body Builder Book (1994).** This is a reference guide for bus body manufacturers.
- ◆ **The Society of Automotive Engineers (SAE) Ground Vehicle Standards Index.** This is a publication that assists manufacturers and specification development professionals in easily locating specific documents relating to vehicle standards in North America and abroad. Typically, the contributors to this book are from component and vehicle manufacturers, education, science, and other disciplines involved in standards, process design or management and technical organizations. A short list would reveal such notables as:
  - American Petroleum Institute (API),
  - The American National Standards Institute (ANSI), and
  - The American Welding Society (AWS).

### SUMMARY

The ODOT Vehicle Selection Guide is a comprehensive document offering information and discussion on a number of topics related to vehicle procurement. We hope you find this edition helpful and we welcome suggestions to improve the next edition. Send your written comments to Administrator, Office of Transit, Ohio Department of Transportation, 1980 W. Broad Street, 2nd Floor, Columbus, Ohio 43223.

## II. SELECTING THE PROPER VEHICLE

To select a suitable vehicle for your needs, you must first answer several questions about your service type, capacity requirements, passenger needs, and agency resources. This information, along with a general knowledge of basic vehicle operating characteristics and different operating environments, is essential to making an informed decision.

To help you better understand the issues involved in making your selection, a more detailed discussion of the issues and trade-offs involved is provided in the subsection “Considerations in Selecting a Vehicle.” You are strongly encouraged to consult this portion of the chapter to ensure that you make an informed decision and understand the resulting implications of your vehicle selection. Selecting and, ultimately, underutilizing the incorrect vehicle may result in its transfer to another agency or require you to reimburse the cost of the vehicle to the Federal government.

Finally, you may wish to read through Appendix B, which includes two examples that illustrate the decision-making process.

### CONSIDERATIONS IN SELECTING A VEHICLE

This section provides discussion about each of the issues used in the decision-making process in the subsection “Selecting Your Vehicle. Thinking carefully about your needs and requirements based on the issues discussed here will put you well “on the road” to selecting the proper vehicle.

#### Primary Issues

##### **Accessibility**

**Do you need an accessible vehicle?** If your vehicle will be used to transport individuals with disabilities who use wheelchairs, you will need to purchase a vehicle with an accessibility package including a lift or ramp, wheelchair securement, and other related equipment. Even if you do not routinely transport such individuals, you may be required to purchase an accessible vehicle due to Americans with Disabilities Act (ADA) (see Chapter IV: “Legislation and Regulations” for a discussion of ADA requirements) or ODOT requirements (50% of you fleet must be accessible vehicles).

Accessible vehicles ordered under this program will meet all ADA standards (including all forward-facing wheelchair securement locations and a minimum of two securement positions for vehicles in excess of 22 feet in length).

An accessibility package is standard on the following vehicles:

- ◆ MMV (all floorplans)
- ◆ LTN (all floorplans)

- ◆ LTV (all floorplans)
- ◆ CV\* (all floorplans except CV-12)

An accessibility package is not available on the following vehicles:

- ◆ SMV
- ◆ CV-12

## Capacity Needs

**What are your capacity needs?** You must consider a number of items with regard to vehicle capacity needs. Table II.1 provides a summary of the various capacity configurations available for each vehicle type. A range of floor plan options is available. Detailed descriptions and illustrations of all available seating options are provided in Chapter III, “Available Vehicles.”

The following discussion will assist you in determining capacity and needs:

- ◆ What is the maximum number of individuals this vehicle will transport at the same time on a regular basis? It is important to determine what your routine needs are, rather than exceptions such as large group trips that occur only occasionally. A good measure is to determine what 85% of your service demands are on a daily basis. In most cases, alternatives are available to meet the other 15% such as occasional large group needs. Options include: renting or leasing another vehicle, coordinating with or borrowing from another provider, contracting with a private operator, or using multiple smaller vehicles. Buying too large a vehicle can result in higher than necessary purchase price and on-going costs such as fuel, insurance, and maintenance.
- ◆ What is the mix of clients this vehicle will transport? You must determine how many ambulatory and how many non-ambulatory riders will be transported at the same time on a regular basis. Again, it is important to identify your standard needs, rather than occasional ones. Each accessible vehicle offers a variety of floor plans including single or multiple wheelchair securement positions.
- ◆ Will the vehicle you select constantly be loaded to capacity? While selecting too large a vehicle can be wasteful and generally more expensive to operate, the increased wear and tear of vehicles constantly loaded to capacity can diminish their useful life. Vehicles loaded to capacity may also be less safe, as they take longer to stop and tend to handle more sluggishly.
- ◆ What are your future needs? The period of time from initial application until vehicle delivery can be a year or longer. Once you receive your vehicle, it will be used for a number of years. Therefore, your capacity needs should reflect the anticipated future demand and rider mix.

**Based on the above discussion, answer the following three questions.**

For the purpose of the next three questions, a vehicle trip is starting point for the vehicle until the final client is delivered to their destination on a trip, i.e. A vehicle starts from your center in the morning, picks up six ambulatory and one wheelchair client and delivers them to a your center. The vehicle makes three additional trips, picking up 6 ambulatory passengers one wheelchair passenger on each trip to bring clients to your center. In the afternoon, the vehicle repeats this process but in reverse. For this example the number of vehicle trips per day is six. Based on this example these are the answers to the following questions:

1. What is the average number of vehicle trips your vehicle will make per day? 8  
(Four to pick up clients in the morning and four to return them in the afternoon.)
2. For the average vehicle run, what is the number of wheelchair clients the vehicle will need to pick up per vehicle trip? 1
3. For the average vehicle trip what is the average number of ambulatory passengers you will transport on a per vehicle trip basis? 6

Using the above guide answer these questions for your agency:

1. What is the average number of vehicle trips your vehicle will make per day? \_\_\_\_\_
2. For the average vehicle run, what is the number of wheelchair clients the vehicle will need to pick up per vehicle trip? \_\_\_\_\_
3. For the average vehicle trip what is the average number of ambulatory passengers you will transport on a per vehicle trip basis? \_\_\_\_\_

Using the answers to questions one through three and the chart on the next page select vehicles which may meet your needs. If your answer to the first question is two wheelchairs positions, there are six possible vehicles. (MMV, CV, LTN, LTV 22' and LTV 25'). The number of ambulatory clients will assist you making an appropriate size selection for your agency.

**Table II.1: Vehicle Capacities**  
**(Ambulatory Seating and Wheelchair Securement Combinations)**  
 (Seating charts do not include drivers)

	No. of Wheelchair Securement Positions					
	0	1	2	3	4	6
	No. of Ambulatory Seats					
SMV	6					
MMV*	3 or 5**	1 or 3	1			
CV	12	6	4	2		
LTN			8	6	2	
LTV-22'		14	12			0
LTV-25'			14 or 16	12		

\* If the middle seat is ordered the vehicle can accommodate five (5) passengers, if the middle seat is not ordered the vehicle can accommodate three (3) passengers.

\*\*All MMVs come with the accessibility package, capable of accommodating two wheelchair positions, one in the front passenger seat and one in the middle aisle.

Abbreviation descriptions: SMV – Standard Minivan  
 MMV – Modified Minivan  
 LTN - Light Transit Narrow Body Vehicle  
 LTV - 22' – Light Transit Wide Body Vehicle  
 LTV – 25' Light Transit Wide Body Vehicle  
 (See chapter 3 for more details on vehicles)

### Road Conditions

**On what type and condition of roads will the vehicle operate?** There are a number of environmental factors which must be taken into account when determining which vehicle is right for your needs. Several scenarios are discussed below. While they are not all-inclusive, you should get an idea of how to determine which vehicles can handle your particular needs. Again, vehicle selection should be based on standard or recurring needs, not the occasional or potential occurrence.

Rural areas - These areas are generally characterized by narrow, twisting roads and often involve travel on unpaved (i.e. gravel and dirt) surfaces. Travel distances tend to be greater and speeds higher than in other types of service areas. The largest vehicles (LTVs) are probably not suited for these conditions since they are wider than all other vehicles, making

them less maneuverable and more unwieldy on narrow roads. CV, LTN, and LTV vehicles all have high roofs (10.5 feet), which may preclude operation in areas where they are likely to encounter height requirements such as parking garages, bank, pharmacy and other drive thru windows or lowered roofs. The lowered floor height of the MMV reduces ground clearance and may inhibit the ability to use this vehicle on unpaved roads. The only vehicles available that have neither height nor width problems are the SMV and the MMV.

Vehicles suggested to serve rural areas include:

- SMV
- MMV\*
- CV\*\*
- LTN\*\*

\* Not suggested where ground clearance must be considered.

\*\* Not suggested where vehicle height must be restricted.

Residential neighborhoods - Residential neighborhoods often have narrow, dead-end streets and cul-de-sacs. While height is generally not a problem, width and length can make for difficult maneuvering in tight areas, especially where backing up is required or where parked vehicles may be present. The largest vehicles (LTVs), therefore, are not as well-suited for serving many residential neighborhoods. All other vehicles should be fine in these areas.

Vehicles suggested to serve residential areas include:

- SMV
- MMV
- CV
- LTN

Cities and villages - These areas generally have through (i.e. not dead ends or cul-de-sacs) streets of sufficient width to accommodate any vehicle offered under the ODOT program. Height, however, may be a problem in accessing parking garages, apartment building entrance overhangs, and other similar structures. If vehicle height is not a problem, all vehicles should work well in these areas. If vehicle height needs to be restricted, only the SMV and MMV are suggested.

Vehicles suggested to serve cities and villages include:

- SMV
- MMV
- CV\*
- LTN\*
- LTV\*

\* Not suggested where vehicle height is restricted to less than 10.5 feet.

## Service Type

**What type of service will the vehicle be used to provide?** There are typically three types of service provided, though many different combinations are possible. The type of service provided and the vehicle selected are also interrelated with the clientele served (e.g. elderly persons, persons with disabilities, etc.) and the nature of the service area (rural, residential, or city/village).

- ◆ Demand response - Also known as paratransit, this service involves door-to-door or curb-to-curb transportation with routes and schedules that change daily in response to rider demands for service. For the most part, clientele served include elderly persons and persons with disabilities in both urban and rural areas, and general public riders in rural areas. Since most demand response transportation involves many different origins and destinations and/or service to riders with special needs, vehicle ride times can be quite long and unpredictable. To avoid excessive ride times, fewer individuals must be served at one time, thereby making large capacity vehicles unnecessary and potentially wasteful.

Suggested vehicles for demand response service include:

- SMV
- MMV
- CV
- LTN

- ◆ Repetitive route - This service operates over the same routes as long as the clientele is constant. A change in clients would mean a change in routes. Service involves many origins and only one destination.

Suggested vehicles for repetitive route service include:

- CV
- LTN
- LTV

- ◆ Group trips - This service generally entails transporting groups of individuals from the same origin to the same destination at the same time. Since all passengers travel together from beginning to end, selecting a vehicle to perform this type of service is dependent upon how many riders tend to make up a group and any special needs they may have, the expected journey time, and road conditions to be encountered. See Table II.1 and the seating/floor plan options in Chapter III, “Available Vehicles” for the range of capacities available for each vehicle type.

**How much will the vehicle cost?** Most, if not all, agencies have very limited budgets and are therefore restricted in their spending to purchase new vehicles. Table II.2 on page 16

includes the estimated base cost for the least expensive vehicle, and the fully loaded costs for the most expensive vehicle for each type (both your local share (grantee) and the full costs are provided.) For further detail on vehicle pricing, see Appendix C of this Vehicle Selection Guide.

If you need the lowest cost vehicle possible, the following are suggested:

- ◆ SMV
- ◆ CV

If you can afford a more expensive vehicle and it meets your other selection criteria, the following are suggested:

- ◆ MMV
- ◆ LTN
- ◆ LTV

### **Secondary Issues**

Depending on your situation, the secondary considerations may prove to be the deciding factors regarding which vehicle you ultimately choose.

Consequently, the implications of each issue should be given full consideration during the vehicle selection process.

### **Commercial Drivers License**

**Will drivers need a Commercial Drivers License (CDL)?** Drivers must obtain a CDL whenever they operate a vehicle originally configured to transport more than 15 persons plus the driver (see further discussion in Chapter IV, “Legislation and Regulations”). Obtaining a CDL is a time-consuming and rigorous process. Grantees using volunteer drivers or experiencing high driver turnover should strongly consider their ability to use CDL drivers. CDL drivers are also subject to the US DOT drug and alcohol testing requirements. Compliance with these regulations can also be an added cost.

If you cannot hire CDL drivers, the following vehicles are suggested:

- ◆ SMV
- ◆ MMV
- ◆ CV
- ◆ LTN

## Vehicle Operating Costs

**How much will the vehicle cost to operate?** The heavier and higher capacity the vehicle, the more it will cost to operate. Larger vehicles (LTVs, LTNs and CVs) tend to consume more fuel, have higher maintenance costs, and are more expensive to insure than smaller ones (SMV and MMV). Additionally, some of LTVs vehicles require drivers with CDLs, which may require higher salaries. All LTNs & LTVs are subject to mandatory Ohio State Highway Patrol annual bus inspections.

There have been concerns regarding the increased risk of rollover accidents with 15-passenger vans. In response to these concerns, many insurance companies have increased their premiums for these vehicles or refuse to insure them. Check with your insurance agent before ordering this vehicle.

If the lowest operating costs are an important consideration, the following vehicles are suggested:

- ◆ SMV
- ◆ MMV
- ◆ CV

## Client Comfort

**What level of comfort do your clients need?** Passenger comfort and interior mobility are important considerations. The type of clients you serve (e.g. elderly persons, persons with disabilities, etc.) and the type of service you operate (demand response, fixed route, group trips) will have a large bearing on your selection. Elements to consider include:

- ◆ Interior mobility - Generally, the smaller the vehicle, the more difficult it will be to maneuver within the interior and the fewer seating options available. The standard interior dimensions of the SMV, MMV and CV will often require passengers to disembark or climb over others to exit the vehicle in services where riders board and alight at different locations.
- ◆ For wheelchair users, maneuverability is more restricted in MMVs, CVs and LTNs than in larger vehicles and may, at times, necessitate unloading one rider before unloading another, then reloading the one taken off first.
- ◆ Step height - The height of the first step is an important consideration, especially when dealing with frail individuals. The first step in the CVs, LTNs and LTVs is 12 inches. Modified minivans are lower.
- ◆ Ride quality - This factor will depend on the vehicle size and number of riders transported at any given time. The SMV provides the smoothest ride, the MMV with its low floor tends to bottom out. Conversely, larger vehicles (CV's, LTNs & LTVs) tend to provide a more jarring ride under light and medium loads.

- ◆ Jump seats - These are fold-down seats, installed at wheelchair securement locations. They can be used to increase the seating capacity of the vehicle when the wheelchair securement positions are not needed. Generally, they are less comfortable than standard seats and should, therefore, be considered for occasional use only. The more wheelchair securement positions ordered, the fewer standard seats are provided. Again, elderly persons may consider jump seats more uncomfortable than other clients.

If overall passenger comfort and interior mobility are essential to your vehicle selection, the following are suggested:

- ◆ LTN
- ◆ LTV

If overall passenger comfort and interior mobility are not essential to your vehicle selection, the following are suggested:

- ◆ SMV
- ◆ MMV
- ◆ CV

Table II.2 on page II-7 provides approximate vehicle dimensions. Also refer to the table of relative advantages/disadvantages of each vehicle, and to the seating/floor plans available for each vehicle type in Chapter III, "Available Vehicles."

### **Vehicle Storage**

**Can you store and clean a large vehicle?** Large vehicles require more storage room. If you are storing the vehicle outside, make sure your lot is large enough (Note: outside storage in winter may cause problems for operating hydraulic equipment, such as the lift). If storing in a garage, make sure the vehicle will clear the entrance on the top and sides and that there is adequate room inside to store and maneuver the vehicle. The larger and higher vehicles will require a garage with a minimum of 10 feet high by 9 feet wide doors. Also, consider how you will clean the exterior of the vehicle. If you plan to order anything other than a MMV or SV, washing the top may be a problem. Table II.2 on page 16 shows approximate vehicle dimensions.

If large vehicle storage is a problem, the following are suggested:

- ◆ SMV
- ◆ MMV

Hopefully, the preceding discussion has helped you select the right vehicle to meet your service needs. If you are still having difficulty making a final decision, contact ODOT for assistance.

## **SELECTING YOUR VEHICLE**

Selecting the proper vehicle to meet your unique service needs is an involved process and one that deserves considerable thought whether this is your first vehicle, a replacement purchase, or a fleet expansion. There are many issues which must be considered, most of them involving trade-offs of one kind or another. The relative importance of each issue will vary by agency.

The questions asked are designed to help you narrow the vehicle options through a process of elimination (see Figure II.1 for an illustration of this process). The following discussion will guide you through the decision-making process, including the use of the individual and summary worksheets.

Capacity and accessibility is a primary issue because you must ensure that the vehicle you select will be of sufficient size to transport the average number of ambulatory and non-ambulatory passengers that routinely ride in your vehicle at the same time. The tables are designed to give a quick reference to size and number of people that can be accommodated by each vehicle.

The secondary issues include requirements for Commercial Driver's Licensing (CDL), operating costs, vehicle life, passenger comfort and interior mobility, and vehicle storage.

Drivers must obtain a Commercial Drivers License (see Chapter IV, "Legislation and Regulations") to operate the larger vehicles offered under this program. If you use volunteer drivers, have a high driver employment turnover, or have a limited payroll budget, you may find it difficult to hire and retain CDL drivers. CDL drivers are also subject to the Federal Motor Carrier Safety Administration's (FMCSA) drug and alcohol testing requirements. Compliance with these regulations can also be an added cost.

Generally, the larger the vehicle, the more it will cost to operate, which is an important consideration for agencies operating on a limited budget.

Expected vehicle life is an important consideration, because you need to know when replacement will be needed in order to properly budget for your next new vehicle. The current expected life cycle of the SMV and MMV is 130,000 or six years and the larger vehicles 150,000 miles and six years.

Passenger comfort and interior mobility varies from one vehicle to another and its importance will depend upon the type of service you provide and the type of clientele you serve.

The ability to store your vehicle should also be considered when making your selection, since larger vehicles require more space and larger garage door openings.

**Table II.2: Typical Vehicle Characteristics at a Glance:**

		Standard Minivan (SMV)	Modified Minivan (MMV)	Converted Van (CV)	Light Transit Vehicle, Narrow Body (LTN)	Light Transit Vehicle, Wide Body (LTV)	
						22 Feet	25 Feet (LTV-25)
Wheelchair Securement Positions		Not Applicable	1 or 2	1, 2 or 3	4	6	3
See floorplans for ambulatory seating capacities of vehicles.							
Lift or Ramp Equipped Locations		Not Applicable	Ramp/side	Lift/Side	Lift/Side (Rear)*	Lift/Side (Rear)*	Lift/Side (Rear)*
Average Estimated Cost		Total					
		\$25,000	\$38,368	\$46,800	\$48,300	\$52,500	\$53,700
		Local Share (20%)					
		\$5,000	\$7,674	\$9,360	\$9,660	\$10,500	\$10,740
Fuel Economy (MPG)		20	20	10	9	9	9
CDL Required?		No	No	No	No	See Below**	See Below***
Mandatory bus inspection		No	No	No	Yes	Yes	Yes
Overall length		16'	16'	20'	21'	22'	25'
Overall Width		72"	72"	80"	80"	96"	96"
Overall Height		79"	75"	108-115"	108-115"	108-115"	108-115"
Interior Width		68"	59"	72"	81.5"	90"	90"
Interior Height		47"	58"	72 – 80"	72 – 80"	72 – 80"	72 – 80"
First Step Height		12"	8-10"	11"	12"	12"	12"
Entry Way Door width		Standard	Standard	27"	32"	32"	32"
Vehicle Weight				9,200	11,500	12,500	14,500
Rear Wheels				Single Rear Wheels	Dual Rear Wheels	Dual Rear Wheels	Dual Rear Wheels

- ◆ \*Lift located on side behind rear axle.
- ◆ \*\*CDL required for LTV-15-1, 16-2, 12-3 and 14-2 (any vehicle designed to carry fifteen passengers and a driver.)

### **III. AVAILABLE VEHICLES**

The Ohio Department of Transportation (ODOT) offers a variety of vehicles with a wide range of standard and optional equipment. Also available are several options for items such as seating arrangements, floor plans, and wheel chair securement configurations. This chapter offers the following information for each vehicle type:

- ◆ Descriptions of vehicle types
- ◆ Table of vehicle characteristics
- ◆ Table of advantages and disadvantages
- ◆ Standard and optional vehicle equipment
- ◆ Table and discussion of available vehicle configurations
- ◆ Diagrams of floor plans

Vehicles available under this program include:

- ◆ SMV- Standard Minivan (no ODOT eligible state term contract)
- ◆ MMV- Modified Minivan
- ◆ CV- Converted Van
- ◆ LTN – Light Transit Vehicle, Narrow Body
- ◆ LTV- Light Transit Vehicle, Wide Body

#### **STANDARD FEATURES**

ODOT requires that all vehicles be delivered with a large number of standard items. These features are intended to ensure the safety and security of the passengers as well as the convenience of the driver. Standard equipment on all vehicles includes:

- ◆ Fully-insulated side walls and roof
- ◆ Air conditioning
- ◆ Tilt steering wheel
- ◆ Cruise control
- ◆ Adjustable driver's seat
- ◆ Intermittent windshield wipers
- ◆ Back-up alarm
- ◆ Automatic transmission
- ◆ Power steering and power brakes
- ◆ Heavy-duty equipment (cooling system, springs, and shock absorbers)
- ◆ Rear auxiliary heater (where necessary)
- ◆ Tinted glass on all windows
- ◆ Radial tires with a full-size spare
- ◆ Drive shaft guard (rear wheel drive and four wheel drive only)
- ◆ Standard gauges
- ◆ Emergency exits
- ◆ Rubber floor covering (Except Standard Minivan)
- ◆ Slip-resistant material on all steps, aisles and wheelchair securement locations (where applicable)
- ◆ OEM Standard Horn
- ◆ Emergency equipment

- ◆ Rust proofing on chassis (body on LTN and LTV)
- ◆ Seat belts (driver and passenger)
- ◆ Left and right hand outside mirrors with vision expansion system
- ◆ Priority seating signs for persons with disabilities
- ◆ Stanchions, grab rails, and barrier panels (excludes MMV and SMV)
- ◆ International accessibility symbol
- ◆ AM-FM radio with CD player

Table III.1 Vehicle Features depict typical characteristics of each vehicle type relative to the others. While this chapter provides information about each vehicle type, we strongly recommend that you complete the vehicle selection process worksheets in Chapter II and carefully read the section titled “Considerations in Selecting a Vehicle” in the same chapter before making a final decision.

Please note the following:

- ◆ For the purpose of this publication the term “wheelchair” includes all types of mobility aids used by non-ambulatory persons including but not limited to three or four wheeled motor scooters and manual or electric devices for individuals with disabilities. These mobility aids will not exceed a 30” width or 48” length, and the combined aid and passenger weight will not exceed 800 pounds.
- ◆ All vehicles supplied for the Specialized Program are white in color. Upon delivery you can stripe and letter your vehicle as desired.
- ◆ Light Transit Vehicles (LTVs) seating 16 people including the driver require drivers who have a Commercial Driver’s License (CDL). Obtaining a CDL is a time-consuming and rigorous process that can be very expensive; therefore, some agencies find it difficult to hire CDL drivers. Additionally, the Light Transit Narrow Vehicles (LTN) and Light Transit Wide Body Vehicles (LTV) are subject to mandatory Ohio State Highway Patrol annual bus inspections. There is a charge per vehicle for this inspection. The inspection must be scheduled with the highway patrol and takes approximately 1 hour. In addition, the vehicle will be out of service while traveling to and from the inspection site. For more information refer to Chapter IV.

**Table III.1: Vehicle Features**

<b>Features</b>	Standard Minivan	Modified Minivan	Converted Van	Light Transit Narrow Body – LTN	Light Transit Wide Body LTV LTV - $\geq 22'$	Light Transit Wide Body LTV LTV $\geq 25'$
Maneuverable	X	X	X			
Standard Parking	X	X				
Fuel Efficient	X (20 mpg)	X (20 mpg)	X(20 mpg)	10 mpg	10 mpg	10 mpg
Accessible/Ramp		X				
Accessible/Lift			X	X	X	X
Interior Height			72"	72"	72"	72"
Aisle Width	N/A	N/A	9"	20??	14"	14"
Seating Capacity*	7	3-5	6-12	6-10	6-14	15-18
Not Accessible	X					
Limited Headroom	X	X				
Limited Interior space and maneuverability	X	X				
Low Ground Clearance		5"				
Roof Clearance			11'	11'	11'	11'
Vehicle Width			80"	82"	90"	90"
Entryway Door			27"	32"	32"	32"
Vehicle Weight			9,200	11,500	12,300	14,050
Yearly Highway Patrol Inspection				X	X	X

## STANDARD MINIVAN (SMV)

### General Description

The Standard Minivan is available in a six-passenger size. Standard Minivans are the least expensive of all available vehicles and include only minor modifications to the factory-provided vehicle. These vehicles are not wheelchair accessible.

Seating is factory standard, providing limited access to the rear bench seat. Headroom is also standard, requiring most individuals to stoop when entering, exiting, and moving within the vehicle. Additionally, the standard step height of this vehicle is higher than modified vehicles, which may limit access for some individuals.

The Standard Minivan is not only fuel-efficient and economical, it is easy to maintain and maneuver. This vehicle can operate properly on most roads and in most environments. The passenger can enjoy a pleasant, safe ride no matter what environmental conditions exist.

### Vehicle Summary

Capacity Options (Ambulatory / Non-ambulatory)	6/0
Wheelchair Accessible	No
Overall Length	16'
Overall Width	72"
Overall Height	79"
Road Conditions	No restrictions
Suggested Service Type	Demand Response
Capital Cost	Highest cost to passenger capacity ratio
Maintenance	Normal preventive maintenance suggested
Miscellaneous Requirements	Applicants must certify that 50% of their current fleet is wheelchair accessible

### Standard Vehicle Equipment

The equipment listed below is included at no extra charge when you select this vehicle. Please refer to this chapter's introduction for a list of standard equipment on all vehicles purchased through this program.

Engine	3.0 Liter, V6 engine
Battery Capacity	500 CCA single battery capacity
Alternator	90 amp
Fuel Tank	Minimum 20 gallons
Rear Window Defroster	Included
Rear Window Washer/Wiper	Included
Carpeted Interior with Floor Mats	Included
Sliding Side Door	Included
Adjustable Driver's Seat	Included
Body Panels	Metal Panels
Exhaust	Stainless steel with aluminized muffler and tail pipe
Headlamps	Composite halogen

### **Floor Plan Discussion**

This vehicle will consist of factory-standard seating and will accommodate 6 passengers plus the driver. Floor plans include one passenger seat to the right of the driver; one two-passenger bench seat behind the driver; and one three-passenger bench seat at the rear of the vehicle.

**Note: The interior mobility is very limited in the SMV. Passengers seated in aisle locations may need to exit the vehicle to allow those seated next to them to exit.**

## **MODIFIED MINIVAN (MMV)**



### **General Description**

This vehicle is a standard production minivan modified by lowering the floor and, in some cases, modifying the roof at the entryway to provide the 58” headroom required by the Americans with Disabilities Act (ADA). It is the smallest accessible vehicle available, accommodating up to two wheelchairs and one permanent seat, with an option for quick-release seats for three additional ambulatory persons in the wheelchair securement locations.

Modified Minivans are equipped with a ramp (located in the right side passenger entranceway) for access by riders using wheelchairs. Lifts are not available on this vehicle. The manual ramp is a convenient device, which unfolds for riders using wheelchairs. With the lowered floor, the ramp entry angle is quite low which, in some situations, allows riders using wheelchairs to board the vehicle unassisted.

Post production vendors make modifications after the vehicle has been produced at the manufacturer level. The floor area between the front and rear wheel wells is removed, side panels are lowered and replacement body frame elements and flooring components are then added and secured to the original factory vehicle frame. The vehicle is also reinforced with sturdy cross-members, giving it a lower center of gravity for a smoother ride while maintaining full driving capabilities. Due to the vehicle being lower to the ground, it may be harder to operate on some terrain.

### **Vehicle Summary**

Capacity Options (Ambulatory / Non-ambulatory)	3/0, , 1/2, 2/1, 4/0
Wheel Chair Accessible	Yes (side mounted ramp)
Overall Length	16’
Overall Width	72”
Overall Height	75”
Road Conditions	Not recommended in low ground clearance areas
Suggested Service Type	Demand Response
Capital Cost	Highest cost to passenger capacity ratio for an accessible vehicle
Maintenance	Standard preventive maintenance program, with added care to the accessibility components.

**Note: Applicants should seriously consider all advantages and disadvantages before deciding to request a MMV. The Modified Minivan is generally used by agencies that provide long distance service for a limited number of passengers.**

**Standard Vehicle Equipment**

The equipment listed below is included at no extra charge when you select this vehicle. Please refer to this chapter's introduction for a list of equipment standard on all vehicles purchased through this program.

Engine	3.0 Liter, V6 Engine
Battery Capacity	630 CCA single battery capacity
Alternator	100 amp
Fuel Tank	Minimum 20 gallons
Rear Window Defroster	Included
Rear Window Washer/Wiper	Included
Sliding Side Door	Included
Adjustable Driver's Seat	Included
Body Panels	Metal Panels
Exhaust	Stainless steel with aluminized muffler and tail pipe
Headlamps	Composite halogen
Accessibility Package includes:	
Manual Swing-away Ramp	Included
Wheelchair Securement System	Included
Wheelchair Occupant Securement System	Included

**Available Vehicle Configurations**

The following table presents the seating/mobility aid positions available on the Modified Minivan. Please refer to the floor plan diagrams following the discussion for further clarification.

**Table III.2: Available Vehicle Configurations  
Modified Minivan (MMV)  
(Seating capacity does not include driver)**

Vehicle Designation	Seating Option	Seating Configuration	Ambulatory Seating	Wheelchair Positions	Total Seating
Variation 1	Basic with folding seat option	Basic with center seat down	5	0	5
		Basic with center mobility position used	2	1	3
		With Front mobility position	4	1	5
		With Front and Center Mobility Position	1	2	3
Variation 2	Basic without center seat no center seat	Middle Mobility Position	2	1	3
		Front and Center Mobility Position	1	2	3
		No mobility position	3	0	3

**Floor Plan Discussion**

This vehicle offers two basic floor plans, one with a folding middle seat, which accommodates up to two ambulatory passengers and a version without the middle seat. Each version offers two mobility aid positions, one in the front curbside passenger position and one in the middle of the vehicle. The middle seat folds up when the middle mobility aid is used.

**Floor Plan 1 with middle seat**

This option offers a two passenger fold-away seat for use when there is no wheelchair in the middle position.

**Variation 1, center seat used:**

This variation accommodates five ambulatory passengers - one in the right front passenger seat and two in the rear bench seat and two in the middle bench seat.

### **Variation 3: Middle and Front Mobility position**

This variation accommodates two wheelchair positions, one in the front curbside passenger seat and one in the middle and one ambulatory person in the rear. The front wheelchair position loads from the curbside middle of the vehicle, therefore, the middle wheelchair position would have to exit the vehicle for the front position to enter or leave the vehicle. One additional ambulatory passenger may be seated.

### **Variation 4: Front Mobility Position used**

This variation accommodates one wheelchair position in the front curbside passenger seat, two ambulatory passengers in the middle seat and two ambulatory passengers in the rear seat. The middle and rear seat passengers must exit the vehicle in order to load or unload the wheelchair into the front position.

### **Floor Plan 2 Middle seat removed:**

**Variation 1,** This variation accommodates three ambulatory passengers – one in the right front seat and two in the rear bench seat with no wheelchair position used.

**Variation 2, middle wheelchair position** This variation accommodates two ambulatory passengers – one in the passenger curbside seat and one in the rear, and one wheelchair position in the middle of the vehicle.

### **Variation 3, front and middle wheelchair positions used.**

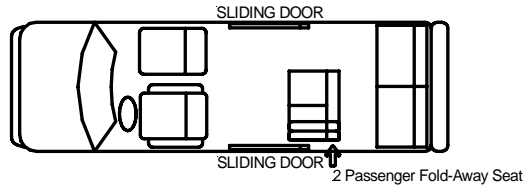
This variation accommodates one ambulatory passenger in the rear seat, and one wheelchair in the curbside front passenger seat and one middle wheelchair position. In order for the front wheelchair to enter or exit the vehicle, the middle wheelchair would have to exit the vehicle.

-

*Note: Given the MMV's small size, interior mobility is quite restricted, which may necessitate unloading/reloading one wheelchair user to unload/reload a second wheelchair user. This is true if the front curbside wheelchair position is used.*

## Floor Plans Version 1 - Middle Jump Seat Included

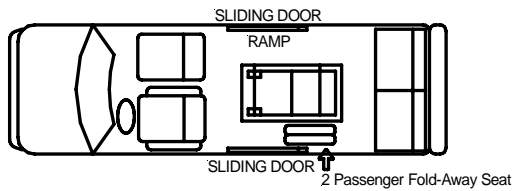
### Variation 1A



No mobility aids:

Driver, front passenger, two middle seat passengers and two rear passengers.

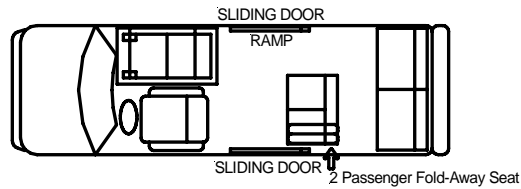
### Variation 1B



One mobility aid in center of vehicle:

Driver, front passenger, middle seat with mobility aid, one rear passenger

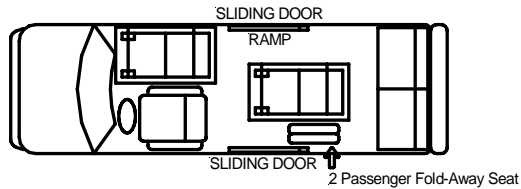
### Variation 1C



One mobility aid in front passenger area of vehicle:

Driver, front seat with mobility aid, two middle seat passengers (fold down seat) and two rear passengers.

### Variation 1D

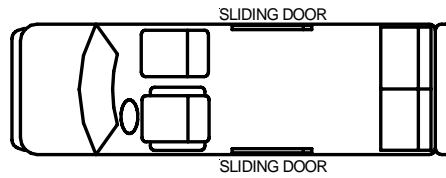


Two mobility aids:

Driver, front seat with mobility aid, middle seat with mobility aid, one rear passenger.

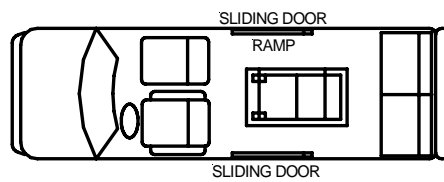
## Floor Plans Version 2 - Middle Jump Seat Excluded

### Variation 2A



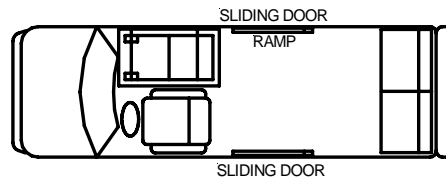
No mobility aids:  
Driver, front passenger and two rear passengers.

### Variation 2B



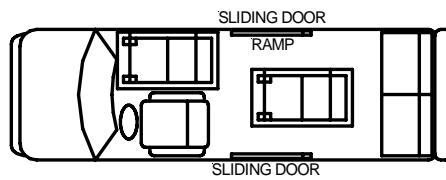
One mobility aid in center of vehicle:  
Driver, front passenger, middle with mobility aid, one rear passenger

### Variation 2C



One mobility aid in front passenger area of vehicle:  
Driver, front seat with mobility aid and two rear passengers.

### Variation 2D



Two mobility aids:  
Driver, front seat with mobility aid, middle with mobility aid, one rear passenger.

## CONVERTED VAN (CV)



### General Description

The Converted Van (CV) improves the utility of the standard production 15-passenger van for transit use. These vehicles have been altered to increase headroom, thereby eliminating the need to stoop upon entering, exiting, and moving about the vehicle. Boarding and exiting problems are further eased with the addition of steps in the passenger side entrance doorway. CVs can transport a widely-varying combination of ambulatory and non-ambulatory passengers, ranging from five to twelve total passengers. CVs have a narrow nine inch aisle way.

Converted Vans can be ordered with or without an accessibility package, depending on your client needs and ability to meet American with Disabilities Act (ADA) requirements. Applicants requesting the non-accessible CV must certify to ODOT that a minimum 50% of their current fleet is wheelchair accessible. If the accessibility package is selected, the lift is installed in the vehicle's side cargo door.

CVs are modified by removing the standard roof at or below the roofline and replacing it with a raised roof, typically of reinforced fiberglass with an internal roll cage to provide minimum interior headroom of 72 inches. Providing an extended transit-style door also modifies the front service entrance. Similar modifications are made to the side cargo door if a lift is installed. Vendors make modifications after the vehicle is produced by the original manufacturer. **Side facing seats are not allowed in this vehicle.**

Even with the improvements listed above, interior spacing and in-cabin passenger mobility is greatly limited. With multiple wheelchair positions, the number of ambulatory seats is greatly reduced creating a smaller passageway for entering and exiting passengers.

These vans are 15 passenger vans that have been implicated in rollover collisions and are hard to handle in windy conditions. Insurers may charge higher premiums for this vehicle.

### **Vehicle Summary**

Capacity Options (Ambulatory / Non-ambulatory)	12/0, 6/1, 4/2, 2/3
Wheel Chair Accessible	Yes
Overall Length	20'
Overall Width	80"
Overall Height	108"-115"
Road Conditions	Overhead clearance may be a problem
Suggested Service Type	Recommended for any service type
Capital Cost	Reasonable cost for passenger capacity offered
Maintenance	Additional maintenance is recommended for this vehicle.
Miscellaneous Requirements	An applicant requesting the CV-12-0 must certify that a minimum 50% of their current fleet is wheelchair accessible.

### **Standard Vehicle Equipment**

The equipment listed below is included at no extra charge when you select this vehicle. Please refer to this chapter's introduction for a list for equipment standard on all vehicles purchased through this program.

Engine	325 cubic inch (5.4 liters)
Battery Capacity	750 CCA single battery capacity; Two batteries (main 650 CCA, aux 625 CCA)
Alternator	130 amp
Fuel Tank	Minimum 32 gallons
Rear Window Defroster	Included
Transit-Style Entry Door	Included
Power Mirrors	Included
Power Door Locks	Included
Cruise Control	Included
Adjustable Driver's Seat	Included
Body Panels	Metal panels
Exhaust	Stainless steel with aluminized muffler and tail pipe
Headlamps	Composite halogen
Accessibility Package	Included
Entryway Steps	No more than 12 inches from ground

**Optional Equipment**

The following equipment may be purchased as an extra option when you order this vehicle.

<b>Option</b>	<b>Use and description</b>
Accessibility Package: Includes a wheelchair lift, wheelchair securement position, and a wheelchair occupant securement system	This option provides the ability to transport individuals using mobility aid devices.
Single Integrated Child Restraint Seat	This option provides forward facing high-backed ambulatory seats, which contain integrated child securement devices (for children 20 to 40 pounds) for their safe transport. Only available on the curbside of the vehicle. Limited to installation on the curb side of the vehicle.
Public Information System*	This option permits the driver or a recorded digitized human speech message to announce stops and provide other passenger information within the vehicle.
Slip Resistant Smooth Flooring	This option is smooth slip resistant vinyl-sheet flooring in lieu of the standard ribbed rubber floor covering.
Powered Transit-Style Door	This option replaces the traditional manual swing operation of the transit-style door with an electrical opening mechanism.

\*not available for Specialized Transportation Program Vehicles.

**Available Vehicle Configurations**

The following table presents the seating/mobility aid position options available on the Converted Van. Please refer to the floor plan diagrams following the discussion for further options, clarification, and selection.

**Table III.3: Available Vehicle Configurations  
Converted Van (CV)**

Vehicle Designation	Ambulatory Seating	Wheelchair Positions	Total Seating if accessibility used	Additional Tri-fold Seats (no accessible seating used)
CV-12-0	12	0	12	0
CV-6-1	6	1	8	10
CV- 4-2	4	2	7	9
CV- 2-3	2	3	5	9

**Floor Plan Discussion**

The Converted Van is available in four different configurations ranging from a non-accessible vehicle (no wheelchair positions) capable of carrying up to 12 ambulatory passengers to a lift equipped vehicle capable of carrying one to three wheelchair passengers and two to eight ambulatory passengers.

## **CV-12-0**

This vehicle seats up to 12 ambulatory passengers and does not include any wheelchair positions. Seating consists of four double seats behind the driver and four single seats on the curbside of the vehicle. If child seats are ordered in this vehicle they must be installed on the curbside single seat positions. This seating configuration along with the vehicle's increased interior height improves passenger mobility over the Standard Van.

## **CV-6-1**

This vehicle seats up to six ambulatory passengers and one wheelchair passenger. The forward facing wheelchair position is located directly opposite the side lift entrance. Standard fold-up passenger seats help improve mobility but may entail asking passengers to move when loading or unloading someone using a wheelchair. Two double three-way folding seats are included for additional seating when the wheelchair position is not in use. Maximum vehicle seating when wheelchair position is not used is ten.

## **CV- 4-2**

This vehicle seats up to four ambulatory passengers and two wheelchair passengers. The forward facing wheelchair positions are located opposite the side lift entrance, one behind the other. Interior mobility is somewhat restricted, particularly when both wheelchair positions are in use. Standard fold-up passenger seats help improve mobility but may entail asking passengers to move when loading or unloading someone using a wheelchair. Ambulatory seating consists of four forward facing positions at the back of the vehicle, two double three step fold-aways and one single three-step foldaway seat for up to five additional ambulatory passengers. They will be located at the wheelchair positions and may be used when the wheelchair positions are not used. Maximum seating capacity when the wheelchair position is not used is nine.

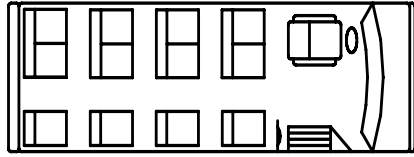
## **CV-2-3**

This vehicle offers the greatest flexibility. The seating options range from two ambulatory passengers and three wheelchair passengers to nine ambulatory passengers and no wheelchairs. Three forward facing wheelchair positions are located opposite the side lift entrance, one behind the other. Interior mobility is quite restricted, particularly when all three wheelchair positions are in use. Ambulatory seating consists of two forward facing positions located at the rear on the lift side of the vehicle. Additionally, three forward facing two-passenger, three-step foldaway seats and one single three-step foldaway seat are provided at the wheelchair positions and may provide traditional ambulatory when the wheelchair position is not used is nine.

# EXAMPLE FLOOR PLANS

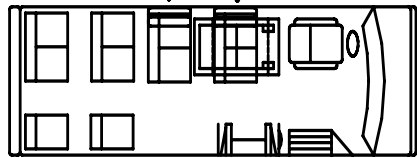
## CONVERTED VANS

CV-12-0



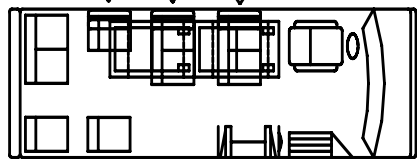
CV-6-1

2 - TWO PERSON, 3-STEP, FOLD-AWAY SEAT

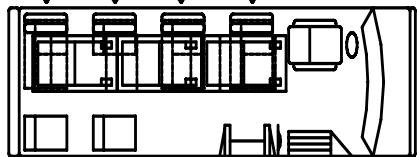


CV-4-2

1 - ONE PERSON, 3-STEP, FOLD-AWAY SEAT    2 - TWO PERSON, 3-STEP, FOLD-AWAY SEAT



1 - TWO PERSON, 3-STEP, FOLD-AWAY SEAT    1 - ONE PERSON, 3-STEP, FOLD-AWAY SEAT    2 - TWO PERSON, 3-STEP, FOLD-AWAY SEAT



### III. AVAILABLE VEHICLES (CONT')

#### LIGHT TRANSIT VEHICLE, NARROW BODY (LTN)



#### General Description

Light Transit Vehicles, Narrow Body, fit into a category between Converted Vans and Light Transit Vehicles, Wide Body. Although Converted Vans suit many service needs very well, there are some limitations imposed by the shape and length of the vehicles. The height and width dimensions of the LTN surpass those of the Converted Van.

Another advantage LTNs have over CVs is greater interior space (81.5" for the LTN versus 72" for the CV) for wheelchairs and passenger maneuverability as well as larger entrances. The ambulatory entryway door is wider (32" in the LTN and 27" in the converted van). The aisle width in a LTN is 12 inches. A CDL is not required for these vehicles but they are subject to mandatory Ohio State Highway Patrol annual bus inspections. LTNs handle the same as CVs. Depending on the floor plan ordered, LTNs may range from less than \$500 difference to \$3,000 difference in costs.

In comparison to LTVs, the LTNs have less interior space (LTV width 90", LTN width 81.5") for wheelchairs and passenger maneuverability. They both have corrosion free bodies; good ground clearance, and share the same vehicle options.

All LTNs are equipped with an accessibility package. The lift is installed on the right rear side of the vehicle. A transit-style passenger door and steps are standard on this vehicle.

The LTN uses a cutaway chassis, which features dual tires on the rear axle. A full body passenger compartment is then added to the chassis. These bodies are custom designed and generally feature large windows and one piece exterior body panels to present a smooth, pleasing exterior appearance.

The Light Transit Vehicle, Narrow Body, has had technological changes in the construction and structure, which makes it a sturdier vehicle. The suspension has added support for the wheelchair lift, which provides for a smoother ride and longer under carriage component life. The entire chassis of the vehicle is coated with a robust anticorrosive treatment, which limits the effects of rust and corrosion.

### **Vehicle Summary**

Capacity Options (Ambulatory / Non-ambulatory)	8/2, 6/3, 4/2
Wheel Chair Accessible	Yes
Overall Length	21'
Overall Width	88"
Overall Height	108"-112"
Road Conditions	Overhead clearance may be a problem
Suggested Service Type	Recommended for any service type
Capital Cost Maintenance	Additional maintenance is recommended for this vehicle.

### **Standard Vehicle Equipment**

The equipment listed below is included at no extra charge when you select this vehicle. Please refer to this chapter's introduction for a list of equipment standard on all vehicles purchased through this program.

Engine	325 cubic inch (5.4 liter) V8
Battery Capacity	Two batteries, main 650 CCA, aux 625 CCA
Alternator	200 amp
Fuel Tank	Minimum 30 gallons
Passenger Service Entry Door with Standing Headroom in Doorway	Included
Rear Tow Hooks	Included
Power Mirrors	Included
Power Door Locks	Included
Adjustable Driver's Seat	Included
Body Panels	Fiberglass over steel frame
Exhaust	Stainless steel with aluminized muffler and tail pipe, exit on street side
Headlamps	Composite halogen
Accessibility Package	Included; wheelchair lift, wheelchair securement position, and an occupant securement system
Entryway Steps	No more than 12 inches from ground
Exterior Paint	All white

**Optional Equipment**

The following equipment may be purchased at an extra cost when you order this vehicle.

<b>Option</b>	<b>Use and description</b>
Jump Seats	This option increases the vehicle’s seating capacity for ambulatory passengers when mobility aid positions are not in use. Jump seats should be considered for occasional use only.
Integrated Child Restraint Seat	This option provides forward facing high-backed ambulatory seats which contain integrated child securement devices (for children 20 to 40 pounds) for their safe transport.
Diesel Engine	This option gives systems the ability to upgrade the factory engine to a diesel fuel alternative. (May not be available)
Passenger Call Bell System*	This option includes a call bell cord and switch allowing passengers to communicate with the driver when a vehicle stop is requested.
Public Information System*	This option permits the driver or a recorded digitized human speech message to announce stops and provide other passenger information within the vehicle.
Slip Resistant Smooth Flooring	This option is smooth slip resistant vinyl-sheet flooring in lieu of the standard ribbed rubber floor covering.
Powered Transit-Style Door	This option replaces the traditional manual swing operation of the transit-style door with an electrical opening mechanism.
Solid Color Paint Scheme *	This option provides for the entire vehicle to be painted in any manufacturer offered solid color.
Energy-Absorbing Bumper	This option provides an energy-absorbing bumper in lieu of the standard front or rear bumper.
Flat Floor	This option offers a completely flat interior floor where there are no bumps in the floor for wheel wells. Required on LTN-4-4.
Rear Bumper Sensor	Notifies driver of obstacles when backing
Underseat luggage rack w/o reading light	Store luggage under seats
Underseat luggage rack w/reading light	Stores luggage under seats

\*not available for Specialized Transportation Program Vehicles

**Available Vehicle Configurations**

The following table presents the seating/mobility aid positions available on the Light Transit Vehicle, Narrow Body. Please refer to the floor plan diagrams following the discussion for further options, clarification, and selection.

**Table III.4: Available Vehicle Configurations**

Light Transit Vehicle, Narrow Body (LTN) Vehicle Designation	Ambulatory Seating	Wheelchair Positions	Total Seating	Jump Seat Positions
LTN 8-2	8	2	10	2
LTN-6-3	6	3	8	2
LTN 4-4	4	4	8	3

**Floor Plan Discussion**

The Light Transit Vehicle, Narrow Body, is available in three different configurations. All configurations use rear lifts (lifts behind the rear axle). Please note that a two-passenger, three-step foldaway seat is used in lieu of the standard two-passenger seat for the rear-most seating position located in front of the wheelchair position of the LTN 8-2, LTN 6-3 and the LTN-4-4 floor plans. The three-step foldaway seats back folds down against the seat bottom. The entire apparatus may then be folded against the wall to provide better access for securing a wheelchair. The seat may then be returned to its normal position.

**LTN 8-2**

This vehicle seats up to eight ambulatory passengers and two wheelchair passengers. The two forward facing wheelchair positions are located opposite the rear lift entrance. Interior wheelchair maneuverability is severely limited when using both wheelchair positions at once. Ambulatory seating includes six-regular forward facing seats and a forward facing, two-passenger, three-step fold away seat directly in front of the wheelchair position. Forward facing jump seats for up to two additional ambulatory passengers may be ordered as an option. They will be located at the wheelchair positions, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats.

**LTN 6-3**

This vehicle seats up to six ambulatory passengers and three wheelchair passengers. Two of the wheelchair positions are located opposite the rear lift entrance. The third position is located at the left front of the vehicle, ahead of the fold up seats. All wheelchair positions are forward facing. Interior wheelchair maneuverability is severely limited when using all three wheelchair positions at once. Ambulatory seating consists of one row of four aisle facing regular seats and two aisle facing fold up seats. The fold up seats will ease wheelchair maneuverability but may entail asking ambulatory passengers to move when loading or unloading a wheelchair passenger. No forward facing regular passenger seats are provided. Two aisle facing and two forward facing jump seats providing seating for up to four additional ambulatory passengers may be ordered as an option. They will be located at the wheelchair positions, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats.

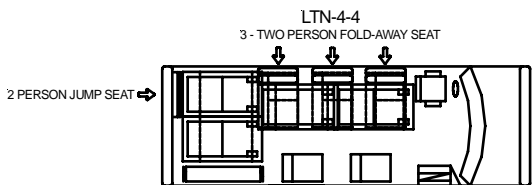
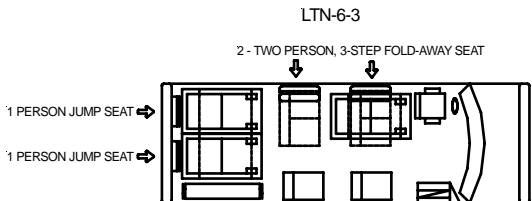
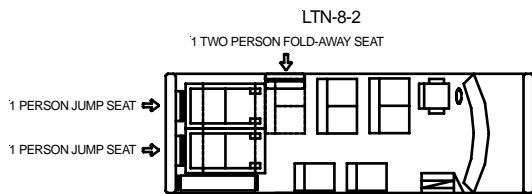
**LTN 4-4**

This floor plan may offer the greatest flexibility in the LTN category. The seating options range from two ambulatory passengers and four wheelchair passengers to 10 ambulatory passengers and no wheelchairs. Interior wheelchair maneuverability is severely limited when using all four wheelchair

positions at once. Ambulatory seating consists of two single forward facing seats, three two-passenger fold-down seats located along the right side that provides six permanent seating locations, and two jump seats at the rear of the vehicle, when no wheelchairs are being transportation. Additionally, there are two wheelchair positions, one directly behind the other, located behind the driver. Two more wheelchair positions are located beside each other along the rear wall. The two-passenger, three-step, foldaway seats and jumps seats may not be used when the wheel chair positions are being used. All LTV 4-4s must be ordered with a flat floor.

# EXAMPLE FLOOR PLANS

LIGHT TRANSIT VEHICLE - NARROW BODY



## LIGHT TRANSIT VEHICLE (LTV)



### General Description

The Light Transit Vehicle (LTV) is the largest vehicle available under this program. It is available in two different body sizes with the largest accommodating as many as sixteen ambulatory positions and two wheelchair positions. In all, six different floor plans are offered, making the LTV the most versatile vehicle under this program.

All Light Transit Vehicles are equipped with an accessibility package. The lift is installed either on the right front curbside of the vehicle (in front of the rear axle) or the right rear curbside (behind the rear axle). LTVs on the 25 foot chassis (over 22 feet long) will be equipped with a minimum of two mobility aid positions to meet the Americans with Disabilities Act (ADA) requirements. LTVs offer superior boarding, exiting and interior mobility. A transit-style passenger door and steps are standard on this vehicle.

The LTVs consist of a cutaway van chassis with a full body passenger compartment added. These bodies are custom designed and generally feature large windows and one-piece exterior body panels to present a smooth, pleasing exterior appearance.

The Light Transit Vehicle is a fiberglass over steel construction.

**Fiberglass Steel Cage:** This vehicle is the body on chassis type and involves construction of a body on heavy-duty cut-away van chassis or light to medium duty truck chassis. A primer coated steel cage forms this body with all exterior skins created from high gloss fiberglass. The metal used in the steel cage is commercial quality and is thick enough to support the entire vehicle on its roof.

A commercial driver's license is required to operate the LTV-16-2, LTV-14-2, LTV-12-3 and the LTV-15-1. Additionally, all LTV vehicles are subject to mandatory Ohio State Highway Patrol annual bus inspection requirements.

### Vehicle Summary

Capacity Options (Ambulatory / Non-ambulatory)	Smaller Vehicle, 14/1,12/2, 0/6 Large Vehicle 16/2, 14/2, 12/3
Wheel Chair Accessible	Yes
Overall Length	22' or 25'
Overall Width	96"
Overall Height	108"-112"
Road Conditions	Overhead clearance may be a problem. Not suited for narrow twisting roads that restrict the vehicle width.
Suggested Service Type	LTV-21 and LTV -25 are not recommended for some demand responsive type service
Capital Cost	Most expensive vehicle
Maintenance	Extensive maintenance requirements

### Standard Vehicle Equipment

The equipment listed below is included at no extra charge when you select this vehicle. Please refer to this chapter's introduction for a list of equipment standard on all vehicles purchased through this program.

Engine	415 cubic inch (6.8 Liter)
Battery Capacity	Two batteries, main 650 CCA, aux 625 CCA
Alternator	200 amp
Fuel Tank	Minimum 55 gallons
Passenger Service Entry Door with Standing Headroom in Doorway	Included
Rear Tow Hooks	Included
Power Mirrors	Included
Power Door Locks	Included
Adjustable Driver's Seat	Included
Body Panels	May be metal over steel cage, fiberglass over steel cage, or honeycomb fiberglass.
Exhaust	Stainless steel with aluminized muffler and tail pipe, exit on street side
Headlamps	Composite halogen
Accessibility Package	Included; wheelchair lift, wheelchair securement position, and occupant securement system
Entryway Steps	No more than 12 inches from ground
Exterior Paint	All white

### Optional Equipment

The following equipment may be purchased at an extra cost when you order this vehicle.

<b>Option</b>	<b>Use and description</b>
Jump Seats	This option increases the vehicle's seating capacity for ambulatory passengers when mobility aid positions are not in use. Jump seats should be considered for occasional use only.
Integrated Child Restraint Seat	This option provides forward facing high-backed ambulatory seats which contain integrated child securement devices (for children 20 to 40 pounds) for their safe transport.
Diesel Engine	This option gives systems the ability to upgrade the factory engine to a diesel fuel alternative. (May not be available)
Passenger Call Bell System	This option includes a call bell cord and switch allowing passengers to communicate with the driver when a vehicle stop is requested.
Public Information System	This option permits the driver or a recorded digitized human speech message to announce stops and provide other passenger information within the vehicle.
Slip Resistant Smooth Flooring	This option is smooth slip resistant vinyl-sheet flooring in lieu of the standard ribbed rubber floor covering.
Powered Transit-Style Door	This option replaces the traditional manual swing operation of the transit-style door with an electrical opening mechanism.
Solid Color Paint Scheme*	This option provides for the entire vehicle to be painted in any manufacturer offered solid color.
Energy-Absorbing Bumpers	This option provides an energy-absorbing bumper in lieu of the standard front or rear bumper. (Energy absorbing front bumpers cannot be used if bike racks will be added to vehicle)
Flat Floor	This option offers a completely flat interior floor in lieu of or in addition to the standard floor.
Brake Retarder	This option provides a driveline retarder to assist in slowing the vehicle at stops helping to reduce brake wear.
Back up Bumper Sensor	This option provides an audible warning to alert the driver if something is in the way when the vehicle is backing up.
Underseat luggage rack w/o reading light	Store luggage under seats
Underseat luggage rack w/reading light	Stores luggage under seats

\*Not available for specialized agencies.

## Available Vehicle Configurations

The following table presents the seating/wheelchair position options available on the LTV. Please refer to the floor plan diagrams following the discussion for further options clarifications and selection.

**Table III.5: Available Vehicle Configurations – Light Transit Vehicles**

	Vehicle Designation	Ambulatory Seating	Wheelchair Positions	Total Seating	Jump Seat Positions
22-Foot Vehicle	14-1*	14	1	15	1
	12-2	12	2	14	2
	0-6	0	6	6	0
25-Foot Vehicle	16-2*	16	2	18	2
	14-2*	14	2	16	4
	12-3*	12	3	15	4
* Requires CDL license					

## Floor Plan Discussion

The LTV is available in two body sizes (22 feet and 25 feet) and a total of 6 floor plan configurations.

### **Light Transit Vehicle 22 FEET VEHICLE.**

#### **LTV 14-1**

This vehicle seats up to 14 ambulatory passenger and one wheelchair passenger. The forward facing wheelchair position is located opposite the rear side lift entrance. Wheelchair maneuverability is ample. Ambulatory seating includes fourteen forward facing seats and three aisle-facing seats. One forward facing jump seat to provide seating for an additional ambulatory passenger may be ordered as an option. It will be located at the wheelchair position location, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats. **This vehicle requires a CDL.**

#### **LTV 12-2**

This vehicle seats up to 12 ambulatory riders and two wheelchair passengers. Both forward facing wheelchair positions are located directly opposite the rear side lift entrance. Wheelchair maneuverability may become difficult when using both wheelchair positions at once. Ambulatory seating includes 12 forward facing positions. Forward facing jump seats for up to two ambulatory passengers may be ordered as an option. They will be located at the wheelchair position locations, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats

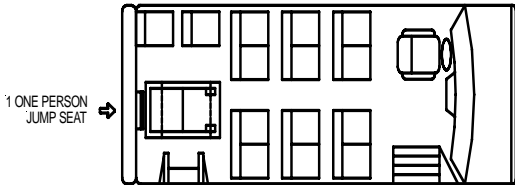
#### **LTV 0-6**

This vehicle seats up to six wheelchair passengers. Wheelchair positions are located throughout the body of the vehicle and are all forward facing. Four three-step foldaway seats are located in front of the wheelchair positions to provide ambulatory seating for four passengers when the wheelchair positions are not used. The flat floor option must be chosen when requesting this configuration.

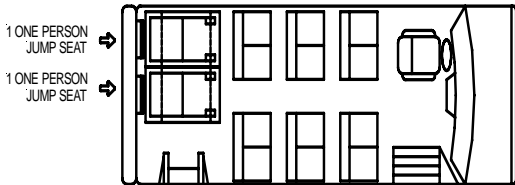
# EXAMPLE FLOOR PLANS

LIGHT TRANSIT VEHICLES  
21 PASSENGER BODY SIZE

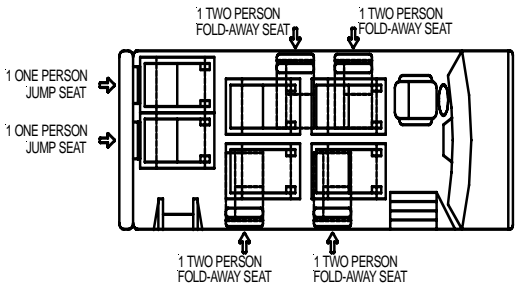
LTV-14-1



LTV-12-2



LTV-0-6



## **Large Transit Vehicle 25 FEET VEHICLE (Requires CDL)**

Note: The ADA requirements mandate that vehicles longer than 22 feet must have a minimum of two mobility aid positions. Therefore, a floor plan with only one mobility aid position (as offered with the other LTV sizes) is not available on this model. These vehicles also come with two mandatory positions for child restraints. **All floorplans under this category require a CDL.**

### **LTV 16-2**

This vehicle seats up to 16 ambulatory passengers and two wheelchair passengers. Both forward facing wheelchair positions are located directly opposite the rear side lift entrance. Wheelchair maneuverability may become difficult when using both wheelchair positions at once. Ambulatory seating includes 16 forward facing seats. Forward facing jump seats for up to two additional ambulatory passengers may be ordered as an option. They will be located at the wheelchair position locations, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats. **This vehicle requires a CDL.**

### **LTV 14-2**

This vehicle seats up to 14 ambulatory passengers and two wheelchair passengers. Both forward facing wheelchair positions are located opposite of the front side lift entrance, one behind the other. Ambulatory seating includes 14 forward facing seats. Aisle facing jump seats for up to four additional ambulatory passengers may be ordered as an option. They will be located at the wheelchair position locations, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats. **This vehicle requires a CDL.**

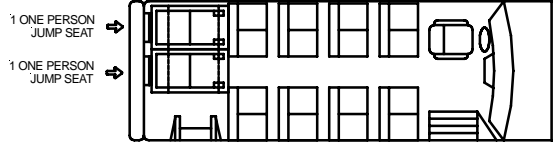
### **LTV 12-3**

This vehicle seats up to twelve ambulatory passengers and three wheelchair passengers. Two of the wheelchair positions are located directly opposite the rear side lift entrance, while the other is located just forward the other two with all facing forward. Ambulatory seating includes eight forward facing regular seats and four aisle facing fold up seats. The fold up seats will ease wheelchair maneuverability but may entail asking passengers to move when loading or unloading a wheelchair passenger. Jump seats (two forward facing, two aisle facing) for up to four additional ambulatory passengers may be ordered as an option. They will be located at the wheelchair position locations, should be used only on an occasional basis and should not be counted as part of the total number of ambulatory seats. **This vehicle requires a CDL.**

# EXAMPLE FLOOR PLANS

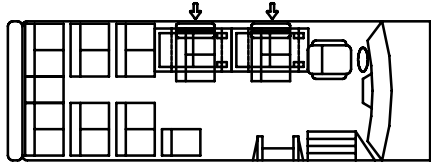
LIGHT TRANSIT VEHICLES  
25 PASSENGER BODY SIZE

LTV-16-2



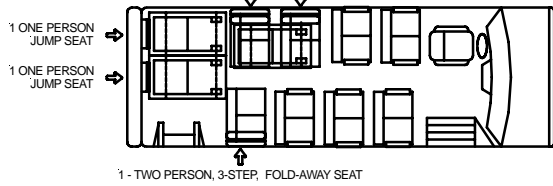
LTV-14-2

2 - TWO PERSON, 3-STEP, FOLD-AWAY SEAT



LTV-12-3

2 - TWO PERSON, 3-STEP, FOLD-AWAY SEAT



## IV. LEGISLATION AND REGULATIONS

Over the past few years, several significant pieces of legislation have been enacted which may impact your vehicle selection and operation.

This chapter includes the following sections:

### List of Legislative Laws

- ◆ The Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq.
- ◆ The Commercial Vehicle Safety Act of 1986 which addresses Commercial Drivers License (CDL) requirements
- ◆ The Clean Air Act Amendments of 1990 (CAAA) which addresses new air conditioner refrigerants and alternative fuel vehicles
- ◆ Mandatory Ohio State Highway Patrol Annual Bus Inspections
- ◆ Limited English Proficiency

### List of Regulations

- ◆ Guidelines for Alcohol and Controlled Substances Regulations for Specialized Transportation Program (FTA Section 5310) Grantees with CDL drivers under the Federal Motor Carrier Safety Administration and safety-sensitive employees as defined in the Federal Transit Administration Guidelines
- ◆ Ohio Medical Transportation Board – Preemployment Drug and Alcohol Testing, driver's age requirements, driver training, vehicle equipment, two way communications, Ohio House Bill 85, effective April 14, 2006
- ◆ Incidental Transportation of Students to School and School-related Events
- ◆ Federal Motor Carrier Safety Administration Regulations for Interstate Transportation
- ◆ Bloodborne Pathogens exposure control plans that meets OSHA standards

The following summary information is provided to keep you up to date on issues, which may affect your operation. For more details, please contact ODOT or your local Metropolitan Planning Organization (MPO).

### LEGISLATION

***The Americans with Disabilities Act of 1990 (ADA)*** as amended, 42 U.S.C. §§ 12101 et seq.

On July 26, 1990, new civil rights legislation was signed into law. The Americans with Disabilities Act of 1990 (ADA) mandates equal opportunity in employment, transportation, telecommunications and places of public accommodation for individuals with disabilities. The ADA continues to have a significant impact on transit services and how those services are

provided. The legislation has also had a profound impact on the vehicles and equipment you are permitted to acquire and, thus, what ODOT can offer.

On September 6, 1991, the U.S. Department of Transportation (USDOT) published its final rule implementing the ADA provisions requiring public and private transportation providers, after August 25, 1990, to solicit for and procure accessible vehicles (some exceptions apply and are noted below). The rule applies to both public and private entities, regardless of whether transportation is a primary or ancillary function, and covers both fixed-route and demand-responsive systems.

Throughout this Vehicle Selection Guide, ODOT has made appropriate changes to conform with the ADA requirements. While ODOT has made best efforts to provide accurate information and adequate background discussion, it is the grantee's statutory responsibility, under the ADA, to ensure compliance with applicable laws and regulations.

ODOT will offer assistance to help grantees determine if and when the ADA vehicle requirements are applicable. Please refer to Table IV-1 for a summary chart of accessible vehicle requirements.

***Note: This section of the catalog provides an overview of ADA requirements; it is not intended to replace the USDOT's implementing regulations. Please refer to the September 6, 1991 Federal Register "Part IV, Department of Transportation, 49 CFR Parts 27, 37 and 38, revised 10/1/2007 Transportation for Individuals With Disabilities: Final Rule" for more details on ADA requirements.***

### **Who Must Comply?**

#### **A. Public Operators of Fixed-Route Services**

Under the USDOT rule, new vehicles procured after November 29, 2006 for use in fixed-route public transit service must be accessible to people with disabilities (see Part 37, Subpart D, page 45630 of the aforementioned October 30, 2006 **Federal Register** for details of public entity procurement of accessible vehicles). When procuring used vehicles, public entities must make a good faith effort to procure accessible used vehicles. Additionally, when procuring a remanufactured vehicle (or having a vehicle remanufactured), the vehicle must be made accessible to the extent possible.

#### **B. Public Operators of Demand Responsive Services**

Regarding demand responsive transportation, new vehicles procured must be accessible unless, when viewed in its entirety, the system provides equivalent levels of service to persons with disabilities and other passengers. There is no requirement for used or remanufactured vehicles.

**Table IV-1: Accessible Vehicle Requirements**

<b>Accessible Vehicle Acquisition Requirements for Public Entities</b>				
Primarily Transportation	System Type	New/Used	Vehicle Capacity	Requirement
Yes or No	Fixed Route	New	All	Accessible vehicle unless service is equivalent
		Used	All	Accessible vehicle unless unable to purchase with good faith efforts
		Remanufactured	All	Accessible vehicle unless on National Register of Historic Places
	Demand Responsive	New	All	Accessible vehicle unless waiver for non-availability of lifts or equivalent level of service
		Used or Remanufactured	All	No requirement
<b>Accessible Vehicle Acquisition Requirements for Private Entities</b>				
Yes	Fixed Route	New	7 Passengers or less	Accessible vehicle unless service is equivalent
			8 Passengers or more	Accessible vehicle
		Used or Remanufactured	All	No requirement
	Demand Responsive	New	All	Accessible vehicle unless service is equivalent
		Used or Remanufactured	All	No requirement
No	Fixed Route	New, Used or Remanufactured	Over 16 passengers	Accessible vehicle
			16 passengers or less	Accessible vehicle unless service is equivalent
	Demand Responsive	New, Used or Remanufactured	Over 16 passengers	Accessible vehicle unless service is equivalent
			16 passengers or less	Equivalent service through direct provision or alternate arrangement

Standards for equivalent service include:

- ◆ response time
- ◆ fares
- ◆ geographic service area
- ◆ service hours and days
- ◆ trip purpose restrictions or priorities
- ◆ information availability
- ◆ reservations capability
- ◆ any capacity or service availability constraints

C. Private Operators Primarily Engaged in Transporting People

Any new vehicle procured after November 30, 2006 must be accessible (see Part 37, Subpart E, **page 45633** of the (this may be a different page in the newer circular) aforementioned October 30, 2006 **Federal Register** for details of private operator procurement of accessible vehicles). Exceptions to this requirement include automobiles and vehicles which will be used solely in a demand responsive system where the provider can demonstrate that the system, when viewed in its entirety, provides equivalent service (see the earlier standards for equivalent service).

There are no requirements concerning the purchase of used or remanufactured vehicles.

D. Private Operators Not Primarily Engaged in Transporting People

If a private fixed-route operator, which is not primarily engaged in the business of transporting people, procures vehicles with seating capacities in excess of 16 persons, the vehicle must be accessible. If such an operator solicits for and procures a vehicle with a seating capacity of 16 passengers or less, the vehicle must be accessible unless the system, when viewed in its entirety, provides an equivalent level of service to persons with disabilities (see the earlier standards for equivalent service).

Private providers of demand response service not primarily engaged in transporting people must procure accessible vehicles unless the system, when viewed in its entirety, provides an equivalent level of service to persons with disabilities (see the earlier standards for equivalent service).

These requirements also apply to procuring used and remanufactured vehicles. Seating capacity is defined as the number of seats, prior to accessibility modifications, including the driver.

E. Private Operators Providing Service under Contract to Public Entities

Private operators providing service under contract to public entities are subject to the same accessible vehicle acquisition provisions as the public agency. In other words, private contractors "stand in the shoes" of the public agency.

## What Is An Accessible Vehicle?

The USDOT's standards for accessible vehicles state that vehicles must include a lift or other level-change mechanism (i.e., ramp), which can accommodate "common wheelchairs" (see *Appendix A: Definition of Terms*). Side-facing wheelchair positions are prohibited. Vehicles in excess of 22' must provide at least two wheelchair positions. Vehicles 22' or shorter must provide at least one wheelchair position. Accessibility standards also require that the vehicle allow sufficient space for passengers using wheelchairs to access a securement position.

Accessible vehicle requirements are quite detailed and vary based on a number of factors. Additional requirements include the following:

- ◆ lifts and ramps design and dimensional standards
- ◆ securement system design standards
- ◆ priority seating signs
- ◆ interior circulation, handrails, and stanchions
- ◆ exterior and interior lighting
- ◆ farebox placement
- ◆ public information system
- ◆ stop request sign
- ◆ destination and route signs

The USDOT implementing regulations are very explicit. Readers may refer to Part 38, Subpart B (page 45757) **this may be a different page in the newer circular** of the aforementioned October 1, 2007 Federal Register for detailed descriptions of required equipment, tolerances, and dimensions. All applicable requirements will be incorporated into the ODOT vehicle procurement specifications.

For further clarification of the ADA and its application to human service agencies, you may want to obtain a copy of, "Providing Non-Discriminatory Public Human Service Agency Transportation Services" October 20, 1998, from the Office of Transit.

### **The Commercial Vehicle Safety Act of 1986**

On October 26, 1986, Congress enacted the Commercial Vehicle Safety Act of 1986. The Act requires that all states meet uniform minimum commercial drivers licensing (CDL) standards. As of April 1, 1992, every commercial motor vehicle operator was required to have a state issued driver's license meeting the minimum requirements established by the USDOT.

Drivers employed to transport people will need a CDL if the work entails operating either of the following vehicles:

- ◆ A single vehicle with a gross vehicle weight rating (GVWR) of more than 26,000 pounds; or

- ◆ A vehicle designed (as originally configured) to transport more than 15 persons, including the driver (LTVs in this catalog).

CDL holders are subject to the Federal Motor Carrier Safety Administration drug and alcohol testing requirements (see page V-9).

ODOT staff will provide additional assistance in determining when and if a CDL is required.

### **The Clean Air Act Amendments of 1990**

The Clean Air Act Amendments of 1990 (CAAA) renew and expand upon previous clean air legislation aimed at reducing air pollution from both mobile (i.e. buses, cars, trucks) and stationary (e.g., factories) sources. Reduction or elimination of several types of pollutants is called for through a variety of methods. Although your vehicle purchase may not include any mechanical changes as a result of the CAAA, future purchases may be affected. Two of the more notable changes are discussed here: air conditioner refrigerants and clean fuel vehicles.

#### **Air Conditioner Refrigerants**

The CAAA sets a timetable for the phase out of currently used chlorofluorocarbons (CFCs) in refrigerant and aerosol propellant systems, according to their ozone depletion potential (ODD). The refrigerants R-12, R-500, and R-502 were phased out in the year 2000. The fourth refrigerant, R-22, is considered less hazardous and can remain in unlimited production until the year 2015, after which it must be gradually phased out with production ending by the year 2030.

R-22 has been used quite extensively by the transit industry in prior years, but was largely abandoned in favor of the R-12 fluid because the latter's lower operating pressures produced lower maintenance costs and more reliable operation than R-22. With the phase out of R-12 underway, R-22 is now returning to widespread use in heavy duty transit vehicles. Today, all production vehicles use a CFC-free refrigerant.

#### **Alternative Fuel Vehicles**

With respect to exhaust emissions, the CAAA and many state and regional initiatives are encouraging the use of alternatively fueled vehicles. The CAAA is specifically concerned with locales designated by the Environmental Protection Agency as "non-attainment areas" which are mainly larger urban areas and corridors.

Changing to alternative fuels is a major step for any operator, whether it is a complete or a partial switchover, regardless of which alternative is chosen. The major alternatives are electricity, methanol, compressed natural gas (CNG), propane, or compressed liquefied petroleum gas (LPG). Each of these requires the installation of a special fueling system or access to such a system at a fuel terminal.

Many vehicle conversions have been of the dual fuel variety, whereby the original gasoline system is retained for use either as a reserve or for operation outside of their normal area where the alternative fuel may not be readily available.

Unless the use of alternative fuels is mandated, such a decision can and should be made only after thoroughly examining all of the implications. Considerations include:

- ◆ What will it cost to equip the vehicles?
- ◆ Is equipment approved by the original equipment manufacturer -- will it affect warranties?
- ◆ How and where will the vehicles be fueled and what will it cost?
- ◆ What approvals are needed for the new facilities?
- ◆ What fuel consumption can be expected compared to the current type of fuel?
- ◆ What new training and skills will personnel need?
- ◆ Is there local experience on which to base projections?

### **Mandatory Ohio State Highway Patrol Annual Bus Inspections**

The State of Ohio requires all commercial vehicles to display a valid safety inspection sticker in order to be legally operated. One will not be able to register their vehicle without a valid inspection sticker. Additionally, anyone operating a vehicle without the sticker may be convicted of a first-degree misdemeanor, facing a maximum of six months in jail and a \$1,000 fine per vehicle. The Ohio State Highway Patrol will perform the annual inspections and issue the inspection stickers.

**ALL** Light Transit Vehicles - Narrow Body and Wide Body - are subject to the inspections. The inspection requirement does not apply to church buses as defined in Ohio Revised Code Section 4503.07 or a school bus unless those vehicles are used in transportation of passengers for hire. Additionally, the following are excluded from the inspection requirement:

- ◆ Any vehicle operated exclusively on a rail or rails;
- ◆ A trolley bus operated by electric power derived from a fixed overhead wire furnishing local passenger transportation similar to street-railway service; or
- ◆ Vehicles owned or leased by government agencies or political subdivisions.
- ◆ Or vehicles operating with government license plates

A vehicle with an ODOT lien is not exempt from the inspection requirement unless they meet one of the five exemptions listed above.

For additional information, please contact the Ohio State Highway Patrol for your particular area or visit their website at [www.state.oh.us/ohiostatepatrol/](http://www.state.oh.us/ohiostatepatrol/).

## **REGULATIONS**

### **1) Guidelines for Alcohol and Controlled Substances Regulations**

#### **Specialized Transportation Program (FTA Section 5310) Grantees**

The Federal Motor Carrier Safety Administrations (FMCSA), controlled substance and alcohol testing regulations apply to employers that operate vehicles where the drivers are required to have a commercial driver's license (CDL). Specialized Transportation Program (FTA Section 5310) grantees whose drivers do not have CDLs are exempt from the FMCSA drug and alcohol requirements, but are required to do pre-employment alcohol and drug testing. This is a requirement of the Ohio Medical Transportation Board.

FMCSA regulations require a commercial drivers license for any person who operates a motor vehicle designed to transport 16 or more persons, including the driver. For the purpose of the Specialized Transportation Program, the only vehicles awarded in this year's program that fall into this category are the some of the light transit wide body vehicles (LTV).

The goal of the FMCSA drug and alcohol regulations is to promote safe transportation by assisting employers in deterring the misuse of alcohol and the use of controlled substances.

The FMCSA regulations were originally published in the Federal Register on February 15, 1994 and March 8, 1996, as "Controlled Substances and Alcohol Use and Testing" (49 CFR Part 382). These regulations, along with "Procedures for Transportation Workplace Drug and Alcohol Testing Programs" (49 CFR Part 40) originally published on February 15, 1994, and updated on a regular basis will assist employers in complying with the requirements of the Department of Transportation (DOT) regulation.

A complete description of these guidelines as well as additional regulatory information can be found in the Specialized Transportation Program (Section 5310) Manual. It is crucial that you are aware of all the requirements of these federal regulations, as it could impact your program. Refer to 49 CFR Part 382, as amended, and 49 CFR Part 40, as amended, for the entire regulation.

#### **Rural Transportation Program (Section 5311)**

The Federal Transit Administration (FTA) published two regulations in February of 1994, prohibiting drug use and alcohol misuse by transit employees and requiring that transit agencies test for prohibited drug use and alcohol misuse. These regulations were updated in August of 2001 and consolidated into Part 655, "Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations." In addition to this regulation the DOT issued 49 CFR Part 40, "Procedures for Transportation Workplace Drug and Alcohol Testing Programs."

Recipients or sub recipients of federal financial assistance under 49 USC 5311 must comply with these regulations. FTA recipients, sub recipients or hired contractors who perform “safety-sensitive functions”: drivers, dispatchers, mechanics, and armed security officers must be included in an FTA compliant substance abuse management program and participate in the drug and alcohol testing program.

A complete description of these guidelines as well as additional regulatory information can be found in the Rural Transit Manual. It is crucial that you are aware of all the requirements of these federal regulations, as it could impact your program. Refer to 49 CFR Part 655, as amended and 49 CFR Part 40, as amended for the entire regulation.

## **2) Incidental Transportation of Students to Schools and School-related Events**

As previously mentioned, Ohio laws and regulations may impact your vehicle selection. For example, although Specialized Transportation vehicles may not be used for exclusive school transportation under the FTA Section 5310 Program, they can be used for incidental transportation of students to school and school-related events. However, this incidental use may only occur in accordance with the Ohio Department of Education’s (ODE) Ohio Pupil Transportation Operation and Safety Rules, 3301-83-19, and the Ohio Revised Code.

According to these rules, transportation of students to school and school-related events may only be provided on 1) school buses which meet or exceed Federal regulations and the Ohio school bus construction standards or 2) ODE-defined conforming vans. ODE defines a conforming van as any vehicle designed by the manufacturer to carry nine or fewer passengers, excluding the driver, and which is marked with a rooftop “school transportation” sign. Under this definition only standard minivans (SMVs) and modified minivans (MMVs) meet the ODE-defined conforming vans. However, no permanent school transportation signs may be affixed or mounted on Specialized Transportation Program vehicles. Further, no school transportation flashing lights of any kind may be mounted to these vehicles.

There are certain exceptions to ODE’s rules for public transit vehicles owned and operated by regional transit authorities or privately owned vehicles operated under contract to a board of education or county board of mental retardation and developmental disabilities and when vehicles are operated on routes designed for the purpose of transporting fare-paying passengers and eligible students simultaneously. However, agencies should not assume they qualify under one of these exceptions and should contact the Ohio Department of Education, Pupil Transportation Section at (614) 466-4320 for further information. In no situation, however, will ODOT approve a Specialized Transportation Program (Section 5310) vehicle or a Rural Transportation Program vehicle (Section 5311) for the primary purpose of school transportation.

### 3) **Federal Motor Carrier Safety Administration Regulations for Interstate Transportation**

In addition to drug and alcohol testing, commercial driver's licenses, and mandatory bus testing, the Federal Motor Carrier Safety Administration (FMCSA) also regulates the provision of interstate transportation. **Whether you are a public or local governmental agency or a private nonprofit corporation, if you provide transportation across state lines, you are subject to of the FMCSA regulations, and you must comply.**

The information provided in this section is an excerpt from ODOT's **Guide to Compliance with Interstate Passenger Transportation Regulations**. If you currently provide, or plan to provide with the vehicle you are receiving through either the Specialized Transportation Program (Section 5310) or the Rural Transportation Program (Section 5311), transportation across state lines, you should immediately contact the ODOT Office of Transit at (614) 466-8955 and request this guide so that you can thoroughly understand the regulation requirements and ensure that you are in compliance. The guide is also available on the website at [www.dot.state.oh.us/ptrans](http://www.dot.state.oh.us/ptrans). The following information, however, is offered to give you a brief summary of the regulations and accompanying requirements.

The FMCSA's definition of interstate transportation is given in 49 CFR part 390.5 and reads as follows:

Interstate commerce means trade, traffic, or transportation in the United States...

- ◆ Between a place in a State and a place outside of such State (including a place outside of the United States);
- ◆ Between two places in a State through another State or a place outside of the United States; or
- ◆ Between two places in a State as part of trade, traffic, or transportation originating or terminating outside the State or the United States.

This definition includes passenger transportation.

The definition encompasses two critical elements for Ohio transportation providers. In the first example, "interstate transportation" will include any trip that originates in Ohio and has a destination in another state. For example, an agency in Putnam County may transport individuals from their program to medical facilities in Fort Wayne, Indiana. Or, a transportation service provider in Gallia County may transport clients to medical facilities in Charleston, West Virginia. In both examples, the agency must cross the state line from Ohio to reach their destination.

The second part of the example would include a transportation provider originating a trip in Ohio, and because of highway routing, crosses into another state, then returns to Ohio

en route to the final destination. For example, a Scioto County agency may need to transport passengers to Cincinnati. The agency believes that routing through Kentucky, from an origin in Portsmouth, to the final destination in Cincinnati, is the best route.

Both examples are considered interstate transportation and fall under the FMCSA regulations.

There are three requirements imposed on providers of interstate transportation: 1) registration requirements, 2) insurance requirements and 3) safety requirements.

1. Registration requirements

If you are engaged in interstate transportation, you must register with FMCSA. There are some exceptions to this requirement which will be further explained later.

2. Safety Requirements

Interstate motor carriers of passengers must meet a series of safety requirements, collectively referred to as the Federal Motor Carrier Safety Regulations (FMCSRs). As with the registration requirements, there are some exceptions to these requirements that will also be further explained later.

3. The agency must carry valid insurance in both states. Minimum insurance requirement for Ohio per the Ohio Medical Transportation Board's requirements are liability \$500,000 per occurrence, \$500,000 in the aggregate; \$100,000 for bodily injury to or death of any one person arising out of any one accident and the sum of not less than \$300,000 for bodily injury or death of more than one person in any one accident and the sum of \$50,000 to property damage arising from any one accident.

Agencies which transport passengers across state lines will fall into one of the following categories:

- ◆ For-hire carrier
- ◆ Municipal carrier,
- ◆ Private motor carrier of passengers (PMCP-business)
- ◆ Private motor carrier of passengers (PMCP-nonbusiness)

There are regulatory requirements imposed on all of these carriers. No agency is exempt from the regulations simply because they are a public agency or private nonprofit corporation. Only vehicles transporting less than eight passengers are exempt from these regulations.

## **Carrier Definitions**

### ***For Hire***

A for-hire motor carrier is defined as a person (or organization) engaged in the transportation of goods or passengers for compensation. Generally, three factors must be present for a motor carrier to be classified as a for-hire carrier:

- ◆ The motor carrier provides interstate transportation in furtherance of a commercial purpose;
- ◆ The motor carrier is compensated, either directly or indirectly, for the transportation service provided; and
- ◆ The transportation service is generally available to the public at-large.

Generally, this class of carriers includes intercity bus service, charter bus operations, and can include other service providers such as bus services provided for hotels, convention centers, and other commercial enterprises. An agency operating outside of its stated transportation directives may be operating a charter service. i.e. if your normal clientele is elderly and disabled but you are providing shuttle service to the local fair for anyone, the service could be considered charter.

Carriers in this classification must follow all registration and Federal Motor Carrier Safety Regulations (FMCSRs).

### ***Municipal or Government Carrier***

Municipal or government carriers are not really a FMCSA classification, but rather an exempt category or partially exempt category when determining the applicability of most FMCSRs and registration requirements.

While the Secretary of Transportation is empowered to regulate municipal or governmental transportation services, the U.S. DOT has elected to follow the following exemptions:

1. Transportation provided entirely in a municipality, in contiguous municipalities, or in a zone that is adjacent to, and commercially a part of, the municipality or municipalities.
  - a. This exemption means that if a public entity operates within its own jurisdiction, or in contiguous municipalities, the entity is not required to register with FMCSA, even if the transportation service crosses state lines.
  - b. This citation also introduces the concept of a “commercial zone.” Commercial zones effectively extend the area a passenger transportation carrier can operate without need for registration.

2. There is also a “governmental exception” to the application of some, but not all, FMCSRs. The general section of the FMCSRs (49 CFR part 390.3(f)(2)) states that the following services are not subject to FMCSRs:
  - a. “Transportation performed by the Federal government, a State, or any political subdivision of a State or an agency established under a compact between States that has been approved by the Congress of the United States.

In summary:

- ◆ If a municipal corporation provides passenger transportation across state lines, but remains within a contiguous jurisdiction or within the municipality’s commercial zone, there is no requirement for the municipality to register with the FMCSA.

### ***Private Motor Carrier***

A private motor carrier means a person or organization that provides transportation of property or passengers, by commercial motor vehicle, and is not a “for hire” motor carrier.

Once a private carrier is determined not to be a for-hire carrier, FMCSA categorizes private operators as either a business or nonbusiness private carrier. The two types of private carriers are defined as follows:

- ◆ Private motor carrier of passengers (PMCP) (business) - A private motor carrier engaged in the interstate transportation of passengers that is provided in the furtherance of a commercial enterprise and is not available to the public at large. These carriers are referred to as “Business PMCPs.”
- ◆ Private motor carrier of passengers (PMCP) (non-business) - A private motor carrier involved in the interstate transportation of passengers that does not otherwise meet the definition of a private motor carrier of passengers (business). These carriers are referred to as “Non-business PMCPs.”

Your specific type of agency (public entity or private non-profit) will determine the extent of the regulations to which you must comply. If you are a county government, regional transit authority, county transit board, or municipal corporation, you are considered a public entity and must follow the guidelines stated for such. If you are a private nonprofit corporation, you will either be considered a business PMCP or a non-business PMCP, and must follow the guidelines stated for these types of organizations.

As a reminder, if you provide or intend to provide transportation across state lines, you are subject to the regulations of the Federal Motor Carrier Safety Administration for interstate transportation. For more information or a copy of the ODOT guide previously mentioned, contact the ODOT Office of Transit at (614) 466-8955.

## ***Ohio Medical Transportation Board Ambulette Regulations***

### **Requirements**

1. Ensure adequate and proper vehicle maintenance as evidenced by a formal written maintenance program, following at a minimum the manufacturer's recommended maintenance requirements, which includes a record keeping system and clear chain of command showing date and service or repair and name of person who performed service or repair.
2. Drivers must be at least 18 years of age and have no more than six points on their driver's abstract.
3. Conduct a criminal records check through the Bureau of Criminal Identification and Investigation for all applicants and have a policy of how to handle the outcome of background checks.
4. Before hiring applicant, have a valid copy of a signed statement from a licensed physician acting within the scope of the physician's practice declaring the applicant does not have a medical, physical or vision impairment that cannot be corrected, that could interfere with safe driving, passenger assistance and emergency treatment activity or could jeopardize the health and welfare of a client or the general public.
5. All drivers must have passed a pre-employment drug and alcohol test. If the vehicle the grantee operates requires a driver to have a CDL, the grantee must follow the FMCSA drug and alcohol requirements. All drivers must have bloodborne pathogens and wheelchair securement training, first aid training, CPR and passenger assistance training within six months.
6. Every vehicle must be equipped with one isolation and biohazard disposal trip permanently installed or secured on the vehicle.
7. Applicant must be capable of two-way communications with all vehicles either via radio and/or cellular phone.

Specialized Transportation Program Grantees must check with other funding sources to determine if there are additional requirements.

## **APPENDIX A: GLOSSARY**

***Accessible vehicle*** - A vehicle equipped with a wheelchair accessibility package which allows passengers using wheelchairs, including three and four wheel scooters and other mobility aid devices, to enter, exit, and ride in the vehicle.

***Accessibility package*** - See wheelchair accessibility package.

***Alternative fuel vehicle*** - Class of vehicles powered by fuels other than gasoline and diesel.

***Ambulatory*** - Describes an individual that can ambulate (move) without the use of a wheelchair, but may require the assistance of devices such as crutches or a walker.

***Americans with Disabilities Act of 1990 (ADA)*** - Civil rights legislation that mandates equal opportunity in employment, transportation, telecommunications, and places of public accommodation for individuals with disabilities.

***Capital cost*** - Expenses related to the purchase of vehicles and equipment described in this document.

***Chlorofluorocarbons (CFCs)*** - A classification of chemicals used in air conditioner refrigerants which is considered harmful to the environment and must be phased out under Clean Air Act requirements.

***Clean Air Act Amendments of 1990 (CAAA)*** - Legislation which renews and expands upon previous clean air legislation aimed at reducing air pollution.

***Cold Cranking Amps (CCA)*** - The discharge load in amps which a battery can sustain for 30 seconds at 0 degrees F. and not fall below 1.2 volts per cell (7.2V on 12V battery). This battery rating measures a burst of energy that a vehicle needs to start on a cold morning.

***Commercial Drivers License (CDL)*** - A special operating permit required for drivers of vehicles with seating designed to carry a driver and 15 or more passengers.

***Converted Van (CV)*** - A 15-passenger standard van modified by raising the roof and providing a passenger entryway. Ohio only allows 12passenger seating in this vehicle.

***Cutaway chassis*** - A vehicle which is begins as a truck body and is modified by cutting away the rear of the vehicle and modifying to accommodate transit passengers.

***Demand responsive***- A type of service involving door-to-door or curb-to curb transportation with routings that change daily in response to rider demands.

***Disabled*** - See Individual with disabilities.

***Federal Transit Administration (FTA)*** - Division of the U.S. DOT providing funding to state and local governments for specialized and public transit services.

***Fixed route*** - A type of transit service which operates over a prescribed route according to specific timetables, stopping at pre-arranged locations to pick up and discharge passengers.

**Flat floor** - An LTV body compartment floor that has been raised to a height equal to the rear wheelwells in order to present a smooth surface from front to rear the entire width of the vehicle.

**Grab rail** - Railing installed at vehicle entrances to assist in boarding and alighting the vehicle. They may also be included on custom seats to assist riders in moving around the vehicle, as well as standing up and sitting down.

**Headroom** - The amount of space inside the vehicle between the floor and ceiling, usually measured at the ceiling centerline.

**Individual with disabilities** - An individual having a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment.

**Integrated child restraint seats** - Seats installed in CV, LTN, and LTV vehicles that accommodate adults but also contain securement devices for the safe transport of children from 20 to 40 pounds.

**International accessibility symbol** - A symbol designating a vehicle or facility as accessible to individuals with disabilities.

**Jump seats** - Small folding seats that are mounted within the wheelchair position for use when that location is not occupied. They are designed for use only when all other ambulatory seats are full and the wheelchair positions are not in use.

**Lift** - Device which raises and lowers a mobility-aid and its user between ground level to the level of the vehicle floor so that the user can enter or leave the vehicle.

**Light Transit Vehicle, Narrow Body (LTN)** - A vehicle composed of a body attached to a small cutaway chassis which features dual wheels on the rear axles.

**Light Transit Vehicle, Wide Body (LTV)** - A vehicle which is either 22 or 25 feet long, and is a body attached to a cutaway chassis and features dual rear wheels for stability.

**Low bid procurement** - A form of competitive procurement where the contract is awarded based on the lowest responsive, responsible bid.

**Metropolitan Planning Organization (MPO)** - The agency charged with the conduct of the urban transportation planning process. Together with the state, it carries out the planning and programming activities necessary for the Specialized Transportation Program.

**Modified Minivan (MMV)** - A standard extended minivan made wheelchair accessible by lowering the floor in the passenger area and providing a ramped entryway.

**Non-ambulatory** - Describes an individual who must rely on a mobility aid such as a wheelchair or a scooter.

**ODOT** - The Ohio Department of Transportation.

**Operating cost** - Expenses associated with operating a vehicle (such as labor, fuel, and insurance).

**Optional equipment** - Equipment you may add to your vehicle at a cost additional to the base price.

**Preventive maintenance (PM)** - Performance of certain regularly scheduled maintenance procedures required to minimize malfunctions, rather than simply making repairs when something goes wrong. At a minimum, PM includes following the manufacturer's suggested service and repair schedule.

**Quick release seats** - A front passenger and center two passenger bench seats in an MMV equipped with a mechanism to allow these seats to be removed to accommodate wheelchair passengers.

**Ramp** - A manually operated inclined device which permits individuals using wheelchairs to access the vehicle (used in place of a lift).

**Road call** - Service required when a vehicle breaks down away from the garage.

**Rural Transportation Program (Section 5311)** - The FTA program, which provides federal funds for operating and the purchase of equipment, for agencies that provide transportation services to rural populations (less than 50,000 people.) The funds available under this program may be used to purchase vehicles and associated equipment, such as radios and other items in support of transportation services.

**Scooter** - A three or four wheeled electric device similar to a wheelchair typically used by individuals with breathing disorders or having limited mobility.

**Securement devices** - The equipment used to secure a wheelchair or wheelchair occupant in a vehicle.

**Securement position location** - The location where a wheelchair is secured in a vehicle.

**Specialized Transportation Program (Section 5310)** - The FTA program which provides federal funds for operating and the purchase of equipment used by private, nonprofit agencies in providing transportation services to elderly persons and persons with disabilities. The funds available under this program may be used to purchase vehicles and associated equipment, such as radios and other items in support of transportation services.

**Standard equipment** - Equipment that is automatically ordered for your vehicle and which is included in the base price.

**Standard Minivan** - A standard six passenger minivan produced in the US meeting FTA Buy America requirements (65% domestic content).

**Stanchion** - A pole attached to the ceiling and floor to assist riders in moving around the vehicle, as well as standing up and sitting down.

**Three-step, fold-away seat** - A seat that provides regular seating capacity yet "folds away" to allow access to wheelchair positions.

**Transit style entry door** - A door that is opened via a mechanical device or electronically. (May also be referred to as ambulatory door).

**U.S. DOT** - United States Department of Transportation.

**Wheelchair** - For the purposes of this publication, this term includes all types of mobility aids used by nonambulatory persons (e.g., standard wheelchairs, electric wheelchairs, three and four-wheeled

scooters, etc). The devices do not exceed 30" in width and 48" in length measured two inches above the ground, and do not weigh more than 600 pounds when occupied.

***Wheelchair accessibility package*** - The complete package offered by ODOT which is designed to allow individuals with disabilities to use the vehicle. It includes a lift or ramp, wheelchair securement system, occupant restraint system, and other equipment required by the Americans with Disabilities Act.

***Wheelchair lift*** - See Lift.

Wheelchair occupant restraint system – The set of seatbelts designed to hold both the wheelchair and passenger in the wheelchair securely in the vehicle.

***Wheelchair securement system*** - The combination of equipment necessary to secure wheelchairs inside a vehicle.

## **APPENDIX B: SELECTING THE PROPER VEHICLE EXAMPLES**

The following examples are designed to illustrate the vehicle selection process presented in *Chapter II: Selecting the Proper Vehicle*. These are hypothetical examples that are patterned after peer providers in Ohio. The processes used to determine which vehicle met their needs are similar to that which you will follow with this guide. We strongly encourage you to carefully read all of Chapter II and the table in Chapter 3 comparing the advantages and disadvantages of each vehicle. This information should assist you to thoroughly examine your needs and determine the vehicle that meets your needs.

Does your agency need accessible vehicles? Yes No  
(If your fleet is less than 50% accessible you must choose an accessible vehicle)

If no, vehicle choices are limited to standard minivan or the converted van (CV-12).

How many people will be using the vehicle on a regular basis?  
Six passengers – Standard Minivan  
More than six passengers – Converted Van

### **EXAMPLE 1**

Agency A is a multi-purpose provider serving elderly persons 60 years of age and older. A large portion of the budget is used to provide a county-wide transportation service. The vehicle fleet consists of two 11-passenger standard vans and one ramp-equipped minivan (the minivan is not an ODOT-supplied vehicle).

The transportation department has a manager, two drivers, and a substitute driver on-call. The vans operate on a set schedule, traveling to different parts of the county each day. The transportation program emphasizes health and safety, therefore, medical appointments and related activities have the highest priority. The typical client is a female, living alone, 70 years of age, residing in a rural part of the county.

### **Vehicle Selection Process**

**Capacity and Accessibility** - In order to serve disabled clients and be in compliance with the Americans with Disabilities Act, a lift-equipped vehicle is required. However, only one wheelchair securement position is needed because most of the disabled passengers will be transported in the minivan. The primary purpose of the new vehicle will be to transport ambulatory passengers. Past ridership patterns have indicated that six or seven ambulatory passengers commonly ride on each scheduled vehicle trip. Average Number of clients per vehicle trip is 6.

Wheelchair positions needed 1.

Number of ambulatory clients per vehicle trip is 6.

Using the chart below select a vehicle or vehicles that meet the agency's needs.

**Table II.1: Vehicle Capacities**  
**(Ambulatory Seating and Wheelchair Securement Combinations)**  
 (Seating charts do not include drivers)

	No. of Wheelchair Securement Positions					
	0	1	2	3	4	6
	No. of Ambulatory Seats					
SMV	6					
MMV*	5	1 or 3	1			
CV	12	6	4	2		
LTN			8	6	2	
LTV-22'		14	12			0
LTV-25'			14 or 16	12		

(Vehicle designations are determined by the number of Ambulatory Seats and the number of wheelchair positions second.)

Ex:

Using the chart above, the agency in example one requires one wheelchair position. Go across the top No. of Wheelchair positions until you find the one. In the example the agency needs a vehicle capable of transporting 6 ambulatory adults. Using the above graph the agency would select the CV-6-1.

If the agency needs only one wheelchair position, the vehicle options would be the following:

MMV – Standard seating for one or three ambulatory passengers and one wheelchair position.

CV-6-1 -Standard seating for six ambulatory passengers with one wheelchair position

LTV-14-1 –Standard seating for fourteen ambulatory passenger and one wheelchair position

The agency may also want to consider this vehicle:

LTN-8-2 Standard seating for 8 ambulatory passengers with two wheelchair positions

The MMV is too small, it cannot accommodate 6 people. The CV-6-1, the LTN-8-2 and the LTV-14-1 may work for the agency.

**License Requirements:**

The LTV-14-1 will require a CDL driver. The agency cannot afford to hire a driver with a CDL and knows that it is very hard to find and retain someone with a CDL license.

Therefore, the LTV-14-1 is eliminated leaving the CV-6-1 and the LTN-8-2.

**Road Conditions** - The vehicle will often operate on rough, gravel rural roads that are hard on vehicles. The vehicles must be small enough to make sharp turns on narrow roads and have high ground clearance.

**Example 1**

The converted van (CV-6-1) and the Light Transit Narrow Body (LTN- 8-2) are recommended for rough gravel rural roads because they are able to operated on narrow roads and have high ground clearances. The LTV-14-1 is not recommended for narrow streets. If not already eliminated, this requirement would eliminate it from consideration.

**Service Type** - The service is primarily demand response. The vehicle must be conducive to this type of service.

The CV and LTN are both recommended for this type of service.

**Operating Funds** – the agency anticipates sufficient funding to operate the vehicle over the next six years.

**Facility Size** – the agency vehicles are stored outside in a fenced area and maintenance facilities have ample room to accommodate the converted van. (If the agency were storing the vehicles inside, then the facility must be able to accommodate vehicles that are at least 11 feet high.)

**Capital Cost** - The agency only has \$10,000 available in local monies to be used for match.

Prices below are for the standard vehicle without any options.

Vehicle	Total Cost	Federal Share	Local Share
CV-6-1	\$45,369.00	\$36,295.00	\$9,074.00
LTN-8-2	\$48,242.00	\$38,593.00	\$9,649.00

Based on price the agency may order the CV-6-1. However, the agency should also review the positives and negatives of the CV-6-1 and the LTN-8-2.

See table on next page.

# VEHICLE WORKSHEET

Feature	Proposed Vehicle	Proposed Vehicle	Proposed Vehicle
(List Vehicle)	CV-6-1	LTN-8—2	
<b>Seating Capacity Needed</b>			
Standard Ambulatory Seating for selected vehicle	6	8	
Accessible	X	X	
Mobility (wheelchair) Positions	1	2	
Maximum Ambulatory Seating *	10	10	
*Maximum ambulatory seating capacity if no mobility positions are used.			
<b>Interior Dimensions</b>			
Interior Vehicle Width	67"	81.5	
Interior Vehicle Height	72"	72"	
Middle Aisle width	9"	13"	
May require passengers to exit vehicle to allow other passengers to enter or leave vehicle	Yes	No	
<b>Exterior Dimensions</b>			
Exterior Vehicle Width	72"	80"	
Full Height Entryway Door	Yes	Yes	
Door Entrance Width	27"	32"	
Roof clearance 10'6" for CV, LTN and LTV	Yes	Yes	
<b>Additional Considerations</b>			
Maneuverable On Most Roads	Yes	Yes	
Service Type Demand Response (DR) or Fixed Route (FR)	DR	DR	
Insurance Cost**	\$	\$	
**Insurance cost may be higher on converted vans due to higher rollover risk, please check with your insurance agent.			
CDL Required	No	No	
If CDL required, availability of CDL drivers in area and agency's ability to hire and retain CDL drivers	N/A	N/A	
Yearly Highway Patrol Inspection	No	Yes	
Will Vehicle Fit In Storage Facility?	Yes	Yes	
Driver's vehicle preference	No	Yes	
Estimated Vehicle Cost	\$45,369	\$48,242	
Local Share	\$9,074	\$9,649	
<b>Vehicle Selected</b>			

## **EXAMPLE 2**

Agency B is a nonprofit, tax-exempt social service agency serving the needs of the disabled. Its corporate purpose is to promote the general welfare of persons with disabilities including, but not limited to, persons with Cerebral Palsy and other disabilities. The agency's mission is to provide a diverse range of services for persons with disabilities and their families. Transportation is among the services offered. The transportation program includes three major elements:

- ◆ services for the Adult Services Program;
- ◆ services for the elderly, primarily for those residing in the County, funded by the Area Agency on Aging; and
- ◆ contracted services for a variety of other agencies and organizations.

The agency encourages community-wide use of their vehicle fleet by means of a contract service. An integrated fleet of standard and lift-equipped vehicles permits flexible vehicle assignment to meet individual and group needs, as they arise. Convertible seating for ambulatory or wheelchair clients in existing agency vans provides greater flexibility in the use of the vehicles.

The Transportation Department operates 34 vehicles, including four school buses, 12 lift-equipped vans, and 18 conventional 14-passenger vans. All drivers are required to obtain a Commercial Drivers License.

In 2008, the Department traveled 546,000 miles providing approximately 94,000 passenger trips and served over 800 clients.

### **Vehicle Selection Process**

Agency B feels that proper vehicle selection is a key element in the ongoing effort to cope with changing community transportation needs. They also believe that vehicle characteristics are an important element in the effectiveness and efficiency of any transportation service, and that these characteristics may act as a barrier or an aid to service provision. Consequently, the decision to select a type of vehicle must be directly connected to its anticipated uses and consideration of passenger needs. They consult with passengers and drivers and find their input helpful in making a decision.

Due to the large number of non-ambulatory passengers transported, it was determined that the vehicle must be wheelchair accessible. A review of past vehicle usage patterns and anticipated future demand by persons with disabilities indicated that the vehicle must have at least two wheelchair securement positions. The vehicle will also be used for group shopping trips, therefore, it must be able to seat at least six ambulatory passengers at the same time.

Average number of ambulatory clients per trip 6.

Wheelchair positions needed 2.

Use the chart below to determine vehicle meeting the clients needs.

Using the chart below determine which vehicles meet the agency’s needs.

**Table II.1: Vehicle Capacities**  
**(Ambulatory Seating and Wheelchair Securement Combinations)**  
 (Seating charts do not include drivers)

	No. of Wheelchair Securement Positions					
	0	1	2	3	4	6
	No. of Ambulatory Seats					
SMV	6					
MMV*	5	1 or 3	1			
CV	12	6	4	2		
LTN			8	6	2	
LTV-23'		14	12			0
LTV-25'			14 or 16	12		

(Vehicle designations are determined by the number of passengers first and the number of wheelchair positions second.)

i.e.

A converted van with no wheelchair position would be designated as 12-0. A converted van with one wheelchair position would be CV-6-1,

A Light Transit Wide Body vehicle would be designated as a LTV-14-1.

Using the above worksheet, the vehicle which meets the agency needs for an average of six passengers and two wheelchair positions is the LTN-8-2.

**Capacity and Accessibility**

Using the above information about the agency, the agency needs a vehicle that can accommodate six ambulatory passengers and two wheelchair positions. The initial selection from the above chart is an MMV or an LTN-8-2. The MMV is eliminated because it cannot carry six people and accommodate two wheelchair positions.

**License Requirement:**

The Light Transit Narrow Body vehicle does not require a CDL. All agency drivers are currently required to obtain CDLs, consequently this is not a factor.

**Road Conditions** - The agency vehicles operate primarily on city and village streets or rural state routes. Occasionally, they must travel on rural roads where ground clearance is a problem.

The LTN is recommended for city, village streets, state routes and rural roads.

**Service Type** - The vehicles are used primarily in demand response service, but are also commonly used for group shopping trips.

The LTN is recommended for both demand response service.

**Facility Size** - The agency vehicles are stored outdoors in a fenced area and maintenance facilities have ample room to accommodate this vehicle type.

**Operating Funds** - The agency anticipates sufficient funding to operate the vehicle over the next six years.

**Capital Cost** - The agency would prefer to spend as little money as possible on the vehicle, however, they have budgeted \$10,000 for a new vehicle.

Prices are for base vehicles without any options.

Vehicle	Total Cost	Federal Share	Local Share
LTN-8-2	\$48,242.00	\$38,593.00	\$9,649.00

The agency has the funding to order the LTN-8-2.

## VEHICLE WORKSHEET

Feature	Proposed Vehicle		Proposed Vehicle
(List Vehicle)	LTN-8-2		
<b>Seating Capacity Needed</b>			
Standard Ambulatory Seating for selected vehicle	8		
Accessible	X		
Mobility (wheelchair) Positions	2		
Maximum Ambulatory Seating *	10		
*Maximum ambulatory seating capacity if no mobility positions are used.			
<b>Interior Dimensions</b>			
Interior Vehicle Width	81.5		
Interior Vehicle Height	72"		
Middle Aisle width	13"		
May require passengers to exit vehicle to allow other passengers to enter or leave vehicle	No		
<b>Exterior Dimensions</b>			
Exterior Vehicle Width	80"		
Full Height Entryway Door	Yes		
Door Entrance Width	32"		
Roof clearance for CV, LTN and LTV	10'6"		
<b>Additional Considerations</b>			
Maneuverable On Most Roads	Yes		
Service Type Demand Response (DR) or Fixed Route (FR)	DR		
Insurance Cost**	\$	\$	
**Insurance cost may be higher on converted vans due to higher rollover risk, please check with your insurance agent.			
CDL Required	No		
If CDL required, availability of CDL drivers in area and agency's ability to hire and retain CDL drivers	N/A		
Yearly Highway Patrol Inspection	Yes		
Will Vehicle Fit In Storage Facility?	Yes		
Driver's vehicle preference	Yes		
Estimated Vehicle Cost	\$48,242		
Local Share	\$9,649		
<b>Vehicle Selected</b>	X		

**Comfort and Interior Mobility** - Given the frequent use of the vehicle for non-ambulatory passengers, interior mobility is considered a high priority.

Based on the high priority of interior mobility, the LTN is recommended.

**Vehicle selected: LTN-8-2**

## APPENDIX C: 2011 ESTIMATED VEHICLE AND EQUIPMENT COSTS

The following pages contain the **estimated costs** for each vehicle plus estimated costs for optional equipment that may be added to the vehicle offered through the 2010-2011 ODOT term contracts. Transit systems ordering vehicles should use the prices listed on the ODOT contracts at website: <https://extranet.dot.state.oh.us/groups/contracts/Lists/PurchasingCurrent/CurKs.aspx>

The tables will list the costs by vehicle designation number. Complete descriptions of vehicles and ancillary equipment are contained in Chapters III of the Vehicle Selection Guide.

The estimated cost for a basic vehicle includes the costs of the chassis and all standard equipment. The total cost of an equipped vehicle to the agency is a sum of the basic vehicle cost plus the cost of all selected (by the agency) optional equipment.

An example of how to estimate the cost of a vehicle with desired options follows.

### ***COST ESTIMATION EXAMPLE***

Vehicle Desired: A Light Transit Vehicle with a wheelchair lift, seating twelve ambulatory passengers and two wheelchair positions.

Vehicle Designation: LTV 12-2

Options Desired: Jump Seats

Computation:	Standard Vehicle	\$41,643
	Wheelchair Lift	\$ 3,788
	Mobility Position	\$ 1,898
	Flat Floor	\$ 564
	Radio Ground Plane	\$ 193
Standard Seating (with jump seats)*		<u>\$ 3,324</u>
	<b>Vehicle Total w/jump seats*</b>	<b>\$51,410</b>
	(jump seats removed)*	<u>\$ (476)</u>
	<b>Vehicle Total w/o jump seats*</b>	<b>\$50,934</b>

\*Jump seats are included in the standard seating package estimates in this appendix, but are an optional item and may be deleted from the seating package.

## I: Standard Minivans

### Basic Vehicle Estimate

Vehicle Designation	Cost Estimate
SMV-6	<b>\$25,000</b>

## 6II: Modified Minivans

### Basic Vehicle Estimate

Vehicle Designation	Cost Estimate
MMV with middle seat	<b>\$34,882</b>

**Integrated child seats are not available on modified minivans.**

Optional middle seat \$800 additional cost. There are two floor plans for this vehicle, one with the middle seat and one without the middle seat. The front passenger seat is removable and the middle seat, if ordered, can be folded. Without the middle seat Floor Plan I, with variations 1 and 2 can be accommodated. The floorplan with the middle seat can be arranged in variation 1, 2, 3 and 4 by the recipient. (Page III-12 of the “2010-2011 Vehicle Selection and Catalog Guide”)

## III: Converted Vans

### Basic Vehicle Estimate

Vehicle Designation					Total
	Basic Vehicle	Wheelchair Lift	Mobility Position(s)	Passenger Seating	
CV 12	\$ 35,190	N/A	N/A	\$2,868	<b>\$38,058</b>
CV 2-3	\$35,190	\$3,788	\$1,773	\$2,811	<b>\$43,562</b>
CV 4-2	\$35,190	\$3,788	\$1,182	\$3,275	<b>\$43,435</b>
CV 6-1	\$35,190	\$ 3,788	\$543	\$3,830	<b>\$43,399</b>

### Optional Equipment

Optional Equipment	Cost Estimate
Integrated Child Restraint Seats*	\$700 for single
Public Information System	\$204
Slip Resistant Smooth Flooring	\$1,025
Electrically Powered Transit Door	\$507

Middle aisle width on this vehicle is 9 inches.

\*Integrated child seats may only be placed along the curbside of the vehicle.

Integrated child seats replace regular seats and are slightly wider than standard seats which will slightly reduce the distance between seats. All vehicles that carry over 10 passengers come with a minimum of two seats designed with integrated latches to attach standard child car seats. The maximum number of integrated child seats that can be requested are:

CV-12	4	CV-6-1	2
CV-4-2	2	CV-2-3	2

## IV: Light Transit Vehicles, Narrow Body

### Basic Vehicle Estimate

Vehicle Designation	Basic Vehicle	Wheelchair Lift	Mobility Position(s)	Passenger Seating *	Total
LTN 8-2	\$38,303	\$3,788	\$1,300	\$2,982	<b>\$46,373</b>
LTN 6-3	\$38,303	\$3,788	\$1,950	\$2,840	<b>\$46,882</b>
LTN 4-4	\$38,867	\$3,788	\$2,600	\$3,719	<b>\$48,974</b>

\*LTN 4-4 price includes flat floor.

### Optional Equipment

Optional Equipment	Cost Estimate	
Jump Seats (included in prices listed above)	LTN 8-2	\$476
	LTN 4-4	\$476
Integrated Child Restraint Seats	\$873 for single \$1,804 for double	
Flat Floor	\$564	
Solid Color Paint Scheme*	\$2,539	
Front Energy Absorbing Bumper	\$1,315	
Rear Energy Absorbing Bumper	\$806	
Public Information System	\$204	
Passenger Call Bell System	\$655	
Slip Resistant Smooth Flooring	\$1,025	
Radio Ground Plane	\$193	
Dual Compressor	\$1,349	
Heavy Duty Suspension	\$1,015	
Electrically Powered Transit Door	\$507	
Overhead Luggage Rack	\$1,016	
Light for overhead luggage rack	\$304	

\*Not available on Specialized Vehicles

Integrated child seats replace regular seats and are slightly wider than standard seats which will slightly reduce the distance between seats. All vehicles that carry over 10 passengers come with a minimum of two seats designed with integrated latches to attach to standard child car seats. The maximum number of integrated child seats that can be requested are:

LTN-8-2	6
LTN 6-3	2
LTN 4-4	2

## V: Light Transit Vehicles, Wide Body

### Basic Vehicle Estimate

	Vehicle Designation	Cost Estimate				
		Basic Vehicle	Wheelchair Lift	Mobility Position(s)	Passenger Seating	Total
22 feet vehicle	LTV 14-1	\$41,643	\$3,788	\$ 650	\$3,857	<b>\$49,938</b>
	LTV 12-2	\$41,643	\$3,788	\$1,898	\$3,586	<b>\$50,915</b>
	LTV 0-6*	\$42,207	\$3,788	\$3,901	\$4,664	<b>\$54,560</b>
25 feet vehicle	LTV 16-2	\$44,554	\$3,788	\$1,300	\$4,588	<b>\$54,201</b>
	LTV 14-2	\$44,554	\$3,788	\$1,300	\$5,380	<b>\$55,022</b>
	LTV 12-3	\$44,554	\$3,788	\$1,950	\$5,716	<b>\$56,008</b>

LTV-12-2 and LTV 0-6 do not require CDL. The price listed for LTV-0-6 includes the required flat floor. Each wheelchair position includes the cost of four webbing loops.

### Optional Equipment Costs

Optional Equipment	Cost Estimate	
Jump Seats (included in prices listed above, deduct this amount if not wanted)	LTV-14-1	\$238
	LTV-0-6	\$ 476
	LTV-12-2	\$ 476
	LTV-12-3	\$ 476
	LTV-16-2	\$ 476
Integrated Child Restraint Seats	\$873 for single \$1,804 for double	
Seat designed to accommodate child seat	\$438	
Flat Floor	\$ 564	
Solid Color Paint Scheme*	\$2,539	
Front energy Absorbing bumper	\$1,315	
Rear Energy Absorbing Bumper	\$806	
Public Information System	\$204	
Passenger Call Bell System	\$655	
Slip Resistant Smooth Flooring	\$1,025	
Radio Ground Plane	\$193	
Electrically Powered Transit Door	\$507	
Driveline Retarder	\$7,272	
Dual Compressor	\$1,349	
Heavy Duty Suspension	\$1,015	
Overhead luggage carrier	\$1,016	
Reading light for luggage carrier	\$304	

\*Not available on Specialized Vehicles

Integrated child seats replace regular seats and are slightly wider than standard seats which will slightly reduce the distance between seats. All vehicles that carry over 10 passengers come with a minimum of two seats designed with integrated latches to attach standard child car seats. The maximum number of integrated child seats that can be requested are:

LTV-16-2	14
LTV-12-2	12
LTV-14-2	5
LTV-12-3	8

FOR BUILDING SAMPLE VEHICLES Information to be entered on Vehicle Request Form							
Base Vehicles						Base Price	
SMV	\$25,000	Standard Minivan				\$25,000	
MMV	\$35,707	Modified Minivan				\$35,707	
			\$800	With seat		\$36,507	
<b>Converted Van</b>							
<b>Seating</b>	<b>Base Vehicle</b>		<b>Wheelchair lift</b>	<b>Mobility Positions</b>	<b>Seating</b>	<b>Vehicle Price</b>	<b>Your vehicle</b>
CV-12	\$35,190		N/A	N/A	\$2,868	<b>\$38,058</b>	
CV-2-3	\$35,190		\$3,788	\$1,773	\$2,811	<b>\$43,562</b>	
CV-4-2	\$35,190		\$3,788	\$1,182	\$3,275	<b>\$43,435</b>	
CV-6-1	\$35,190		\$3,788	\$591	\$3,830	<b>\$43,399</b>	
<b>Light Transit Narrow Body</b>							
LTN-8-2	\$38,303		\$3,788	\$1,300	\$2,981	<b>\$46,373</b>	
LTN-6-3	\$38,303		\$3,788	\$1,950	\$2,841	<b>\$46,882</b>	
LTN-4-4*	\$38,867		\$3,788	\$2,600	\$3,719	<b>\$48,974</b>	
<b>Light Transit Wide Body 22'</b>							
LTV-14-1	\$41,643		\$3,788	\$650	\$3,857	<b>\$49,938</b>	
LTV-12-2	\$41,643		\$3,788	\$1,898	\$3,324	<b>\$50,653</b>	
LTV-0-6*	\$42,207		\$3,788	\$3,901	\$4,664	<b>\$54,560</b>	
<b>*LTN -4-4 and LTV-0-6 includes required flat floor in price</b>							
<b>Light Transit Wide Body 25'</b>							
LTV-16-2	\$44,554		\$3,788	\$1,300	\$4,558	<b>\$54,201</b>	
LTV-14-2	\$44,554		\$3,788	\$1,300	\$5,380	<b>\$55,022</b>	
LTV-12-3	\$44,554		\$3,788	\$1,950	\$5,717	<b>\$56,009</b>	
<b>OPTIONAL EQUIPMENT</b>							
<b>CV, LTN, LTV</b>						Access	
Additional Webbing loops	(Order 4 per mobility position)					\$12	
Single Child Seat	CV with lifts can only use single child seat					\$873	
Public Information System						\$204	
Passenger Call Bell System						\$655	
Slip Resistant Flooring						\$1,025	
Power Transit Door						\$507	
Radio Ground Plane						\$193	
Enhanced Front Bumper						\$1,315	
Enhanced Rear Bumper						\$806	
Heavy Duty Suspension						\$1,015	
Dual Compressor						\$1,349	
<b>LTN, LTV, CV-12</b>							
Double Child Seat						\$1,804	
Single Jump Seats (LTN-8-2, ,4-4, :LTV: 12-2, 0-6, 16-2, 14-2, 12-3 (-\$476)*						(\$476)	
*Deduct if jump seats not wanted in vehicle.						\$473	
Single Seat modified to accommodate standard child seat						\$438	
Flat Floor						\$564	
Rear Door						\$485	
Overhead Luggage Rack						\$1,016	
Overhead Luggage Rack Light						\$304	
<b>LTV</b>							
Driveline Retarder (Only available on LTV-16-2, 14-2 and 12-3)						\$7,272	
Estimated Vehicle Cost						\$	

**Table 11.2 Advantages**

<b>Features</b>	Standard Minivan	Modified Minivan	Converted Van	Light Transit Narrow Body – LTN	Light Transit Wide Body LTV LTV - 22'	Light Transit Wide Body LTV LTV 23'
Maneuverable	X	X	X			
Standard Parking	X	X				
Fuel Efficient	X (20 mpg)	X (20 mpg)	10 mpg	10 mpg	10 mpg	
Accessible/Ramp		X				
Accessible/Lift			X	X	X	
Interior Height			72"	72"	72"	72"
Aisle Width	N/A	N/A	9"	12"	12"	12"
Seating Capacity*	7	3-5	6-12	6-10	6-14	15-18

See floorplans for actual seating layouts.

**Table III.1 Disadvantages**

<b>Features</b>	Standard Minivan	Modified Minivan	Converted Van	Light Transit Narrow Body	Light Transit Wide Body 22' vehicle	Light Transit Wide Body 25' vehicle
Not Accessible	X					
Limited Headroom	X	X				
Limited Interior space and maneuverability	X	X				
Low Ground Clearance		5"				
Roof Clearance			11'	11'	11'	
Vehicle Width			80"	82"	90"	90"
Entryway Door			27"	32"	32"	32"
Aisle Width			9"	12"	12"	12"
Highway Patrol Inspection				X	X	X

# VEHICLE WORKSHEET

Feature	Proposed Vehicle	Proposed Vehicle	Proposed Vehicle
(List Vehicle)			
<b>Seating Capacity Needed</b>			
Standard Ambulatory Seating for selected vehicle			
Accessible			
Mobility (wheelchair) Positions			
Maximum Ambulatory Seating *			
<b>Interior Dimensions</b>			
Interior Vehicle Width			
Interior Vehicle Height			
Middle Aisle width			
May require passengers to exit vehicle to allow other passengers to enter or leave vehicle			
<b>Exterior Dimensions</b>			
Exterior Vehicle Width			
Full Height Entryway Door			
Door Entrance Width			
Roof clearance 10'6" for CV, LTN and LTV			
<b>Additional Considerations</b>			
Maneuverable On Most Roads			
Service Type Demand Response or Fixed Route			
Insurance Cost*			
CDL Required			
If CDL required, availability of CDL drivers in area and agency's ability to hire and retain CDL drivers			
Yearly Highway Patrol Inspection			
Will Vehicle Fit In Storage Facility?			

\*Maximum ambulatory seating capacity if no mobility positions are used.

\*\*Insurance cost may be higher on converted vans due to higher rollover risk, please check with your insurance agent.



OHIO DEPARTMENT OF  
TRANSPORTATION

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The Ohio Department of Transportation  
1980 W. Broad St.  
Columbus, Ohio 43223  
An Equal Opportunity Employer