

TRANSPORTING PASSENGERS

WITH SPECIAL NEEDS

“Treat with Respect & Dignity at all Times”





Vehicle Inspections

- Outside the Vehicle
 - Overall condition:
 - obvious damage
 - loose parts
 - All exterior lights
 - All exterior mirrors
 - Tires
 - Inflation
 - Tread depths
 - Doors
 - Wipers

Vehicle Inspections (cont.)

Inside the Vehicle

- Passenger Area

- Floor
- Seats, safety belts
- Safety equipment
 - fire extinguishers
 - first aid kit
 - fire blanket
 - flashlight
 - spare tire
 - reflective triangles

- Driver Area

- Horn
- Under seat
- Floor areas
- Dashboard
- Seat
- Steering wheel
- Mirrors
- Guages
- Brakes

Vehicle Inspections (cont.)

Wheelchair Tie-Down & Restraint System

- Pre-Trip / Start of Work Day

- - Verify all vehicle securement components are in the vehicle
 - - Inspect condition of these components and webbing
 - - Verify a web cutter is available
-
- When not in use, make sure securement components are properly stored so they will not present a flying object hazard in the event of an accident and they are not exposed to any unnecessary damage.

Vehicle Inspections (cont.)

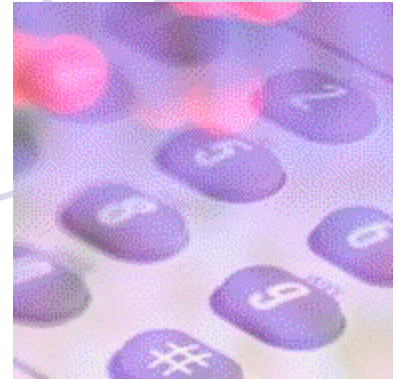
- *“Vehicle Inspection (cont.)*
- *If a problem or repair is needed please report to transportation and/or maintenance via the communication process that is established at each program.*

Vehicle Breakdown Procedures

- Pull to side of road as quickly as possible
- Turn on hazard lights
- Set out triangles (Place on traffic side of vehicle)
 - Two lane Road: One within 10 ft. from rear of vehicle, the other two about 100 ft. behind and 100 ft. in front of vehicle.
 - One Way Traffic: One within 10 ft. from rear of vehicle, the other two about 100 ft. behind vehicle.



Vehicle Breakdown Procedures (Cont.)



- Call designated supervisor or support staff via the vehicle phone.
- Keep passengers in vehicle if conditions are safe.
- If passengers must leave vehicle, keep them together
- Stay with passengers at all times.
- Talk calmly to passengers and explain what has happened.
- Your first and foremost responsibility is the safety of your passengers.



Accident Procedures

- Assess the safety of the current situation.
- Provide necessary medical care if needed and able to.
- Maintain control of passengers.
- Gather names of witnesses and bystanders.
- Cooperate with emergency personnel fully.
- Never admit liability or fault.
- Complete the *Accident Report Form*

Wheelchairs

- Handling a Wheelchair Efficiently & Safely

- Your passenger is vulnerable. Be sensitive to their needs.
- Ensure a safe & comfortable ride
 - Be gentle in vehicle movements
- A wheelchair is designed for smooth surfaces. Any other surface will change the movement of the wheelchair.
- Always maintain solid control of the wheelchair.
- Scan at least 3 to 5 ft. ahead for barriers or impediments.
- Advise passengers to place hands on laps and keep elbows in to avoid injury.
- Make sure passenger's feet are on foot rest supports before moving the wheelchair.
- Advise passenger when you are going to tilt or maneuver the wheelchair.





Wheelchairs (cont.)

- Negotiating a Wheelchair up over a curb or barrier
 - Set the foot plate close to the curb.
 - Put foot on tilt bar.
 - Use full body weight to elevate and push forward so casters are on top of barrier.
 - Push chair flush against barrier, with both wheels touching the barrier.
 - Position your body weight to roll the wheels over the barrier.



Wheelchairs (cont.)

- Negotiating a Wheelchair down a curb or barrier
 - Back chair to barrier.
 - Step down and position your feet firmly.
 - Take the wheels to edge of barrier.
 - Use your hip to cushion the chair on the way down.
 - Let the wheels touch down.
 - Back up and put your foot on the tilt bar to lower chair.

Wheelchairs (cont.)

- Safety Procedures While using a Wheelchair Lift
 - Secure the open doors
 - Stand away from the lift to avoid the lift coming down on your toes.
 - Move the wheelchair, outward facing, all the way onto the lift.
 - If you need to use a handhold, use one indicated by the manufacturer.
 - Set both wheelchair brakes
 - Fasten safety belt if there is one.
 - Never ride the lift with your passenger.
 - Utilize wheelchair chocks when loading all electric wheelchairs.



*vehicles that load from the back may need to go on the lift facing forward



Wheelchairs (cont.)

- When the vehicle is moving, the recommended position for the wheelchair passengers is facing forward. The wheelchair is more stable. This should occur in any vehicle that has a forward facing system.
- If the passenger sits in a regular seat, ensure wheelchair is secured inside vehicle.

Passenger Pick-up Site

- 1) Signal well in advance
- 2) Move to right early
- 3) Brake in advance
- 4) Turn on 4-way flashers
- 5) Set parking brake





Passengers

- Factors to Consider When Communicating with a Passenger with special needs
 - 1) Treat your passenger with respect and dignity at all times .
 - 2) Get his/her attention.
 - 3) Be clear in your verbal and visual commands.



Accountability Factors:

- A head count must be done before leaving for the trip
- A head count must be done when unloading is completed and frequently during the trip
- A head count must be done before returning from the trip
- A head count must be completed when unloading upon return from a trip and before securing the vehicle

Wheelchair Tie Down Straps

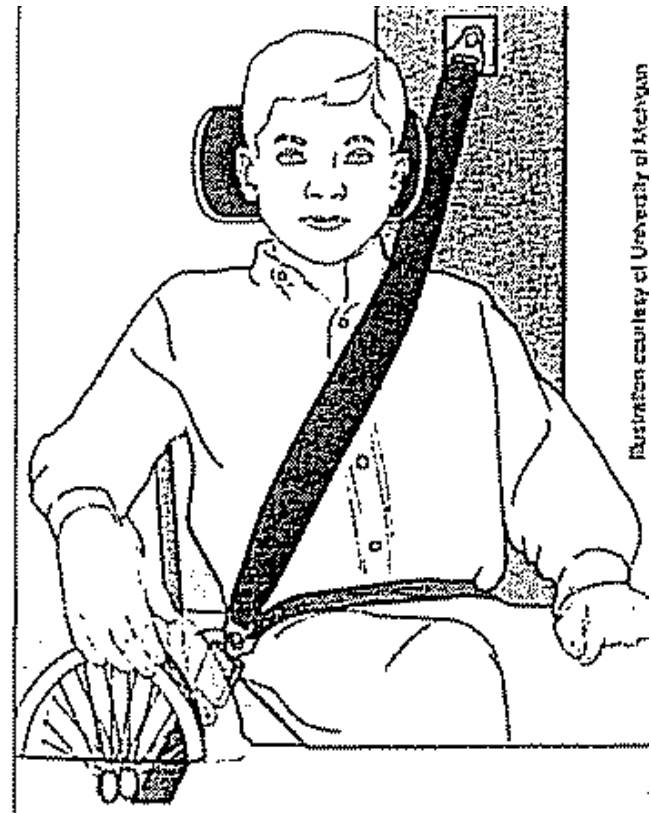
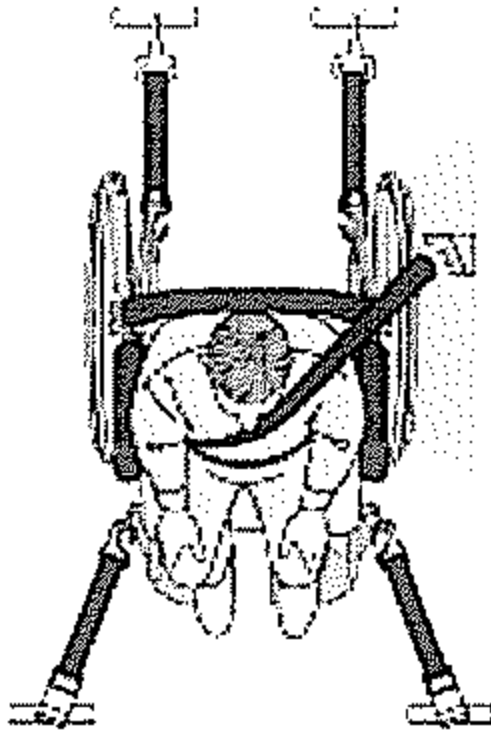


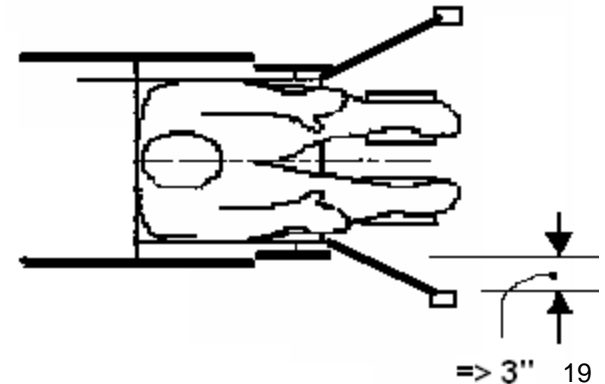
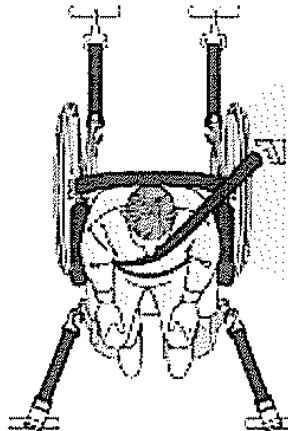
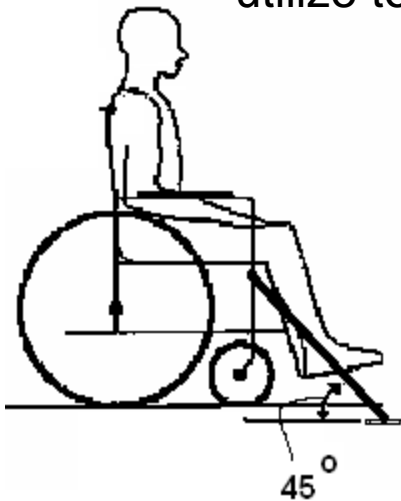
Illustration courtesy of University of Michigan

Wheelchair Tie Down Straps

- Position the Wheelchair
 - Center between anchorages on the floor
 - Set Brakes on both sides
 - If electric, turn off the power
- Check Straps.
 - At a minimum the front straps must be the same type and the back straps must be the same type
 - Do not interchange straps. Use only one manufacturer's tie-down system for each chair.

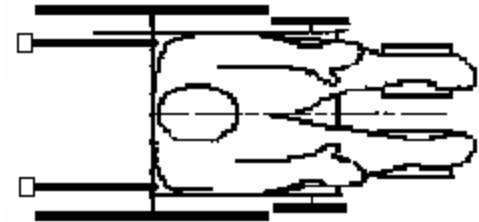
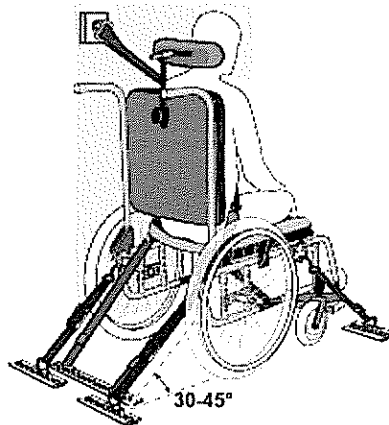
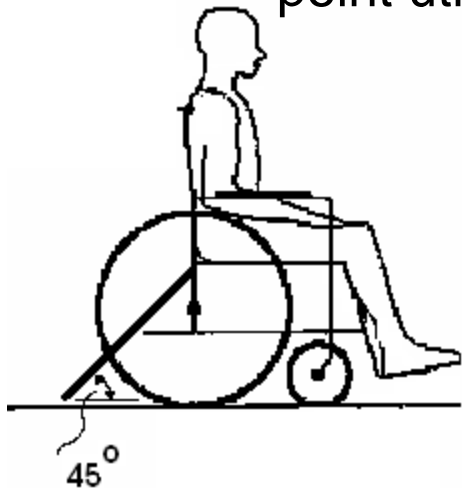
Wheelchair Tie Down Straps

- Secure the front straps
 - Choose an anchorage point that is at least 3" outside the front wheel of the wheelchair.
 - Aim for a 45 degree angle between the strap and the floor.
 - Secure to structural frame area as close to the bottom of the seat as possible. If necessary use a quick strap.
 - If the wheelchair comes equipped with a tie down anchorage point utilize to secure the tie downs.



Wheelchair Tie Down Straps

- Secure the Rear straps
 - Choose an anchorage point that is just inside the rear wheel of the wheelchair.
 - Aim for a 45 degree angle between the strap and the floor.
 - Secure to structural frame area as close to the bottom of the seat as possible. If necessary use a quick strap.
 - If the wheelchair comes equipped with a tie down anchorage point utilize to secure the tie downs.

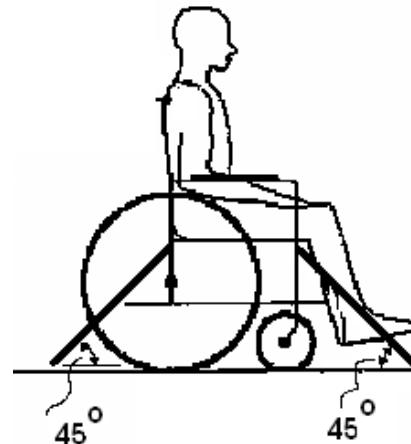
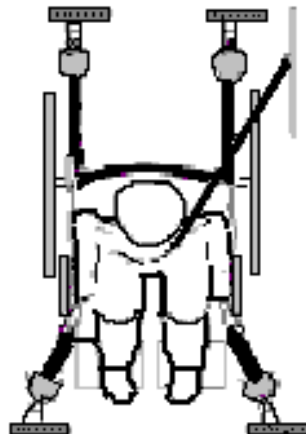


Wheelchair Tie Down Straps

- Once all straps are attached

Unlock wheel locks

- Test for movement. If the wheelchair moves more than 2" in any direction re-adjust straps and reapply brakes.
- If the individual is in a tilt in space chair the chair should be between 15 and 30 degrees during transport.



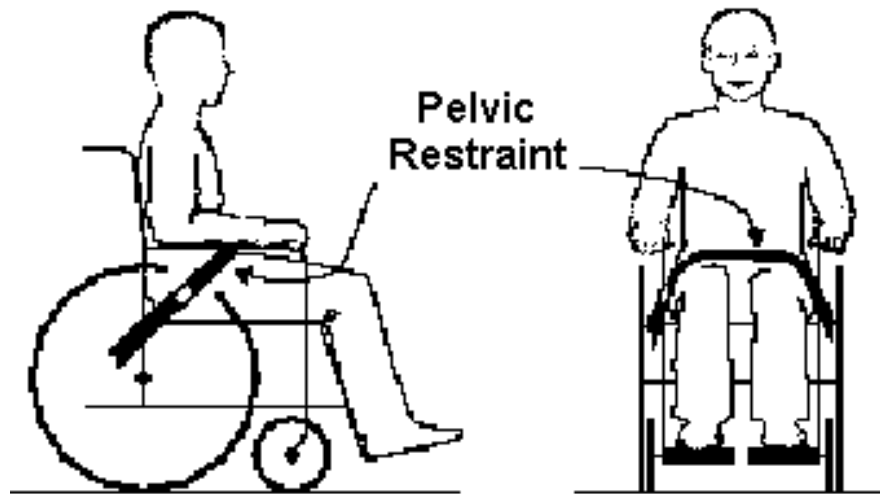
Wheelchair Tie Down Straps

- Do Not
 - Cross Straps
 - Attach to the wheel or other detachable item
 - Bend or wrap strap around parts – you need a straight clear path between the chair and the anchorage
 - Rub against any sharp pieces
 - Use cam buckles for the rear straps

Wheelchair Tie Down Straps

- Do
 - Report damaged parts immediately and get replacements
 - Ask your supervisor for help with difficult to attach wheelchairs or if you are not comfortable with how the equipment is used.

Passenger Securement



Pelvic Restraint*

Is the portion of the occupant restraint system intended to limit movement of the pelvis by application of restraint forces to the pelvis.

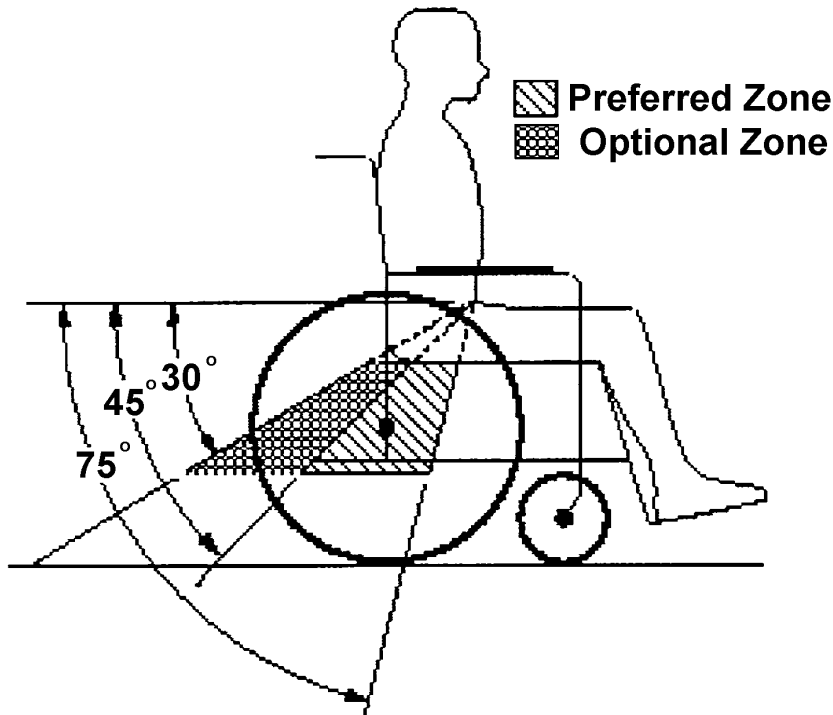
*The wheelchair seat belt is not considered to be a pelvic restraint as part of the vehicle restraint system

- Securement should be low across front of pelvis
- Belts should not be held away from the body by wheelchair components or parts, such as the wheelchair armrests or wheels.
- Ensure the belts are tight & have room for two finger spacing.



- ❖ This is how proper positioning should look.
- ❖ The lap/shoulder belts should always be used on your passengers to keep them safely in their wheelchair, should you need to stop quickly, or make a sudden driving maneuver or experience an impact.

Passenger Securement (cont.)



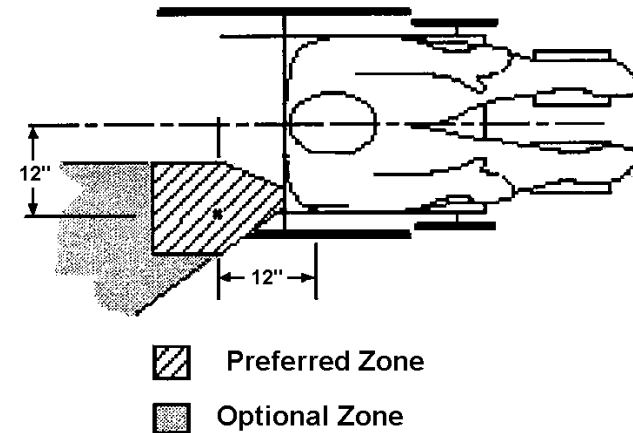
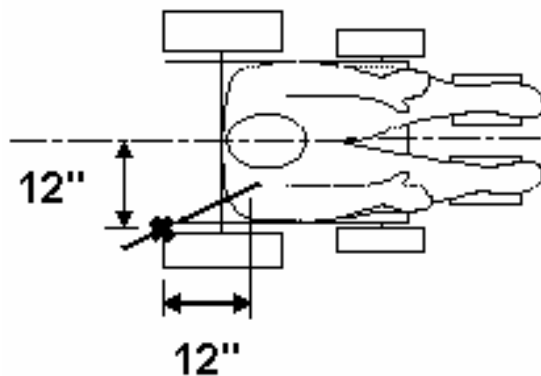
Pelvic Restraint

- Preferred at between 45 and 75 degree angle
- No less than 30 degree angle to the horizon

Staff should run belts through wheelchair components, i.e. do not run over top of armrest or other obstructions. If run over armrest, the armrest could fail under impact and be driven into the person causing injury.

Passenger Securement (cont.)

Upper Torso Restraint

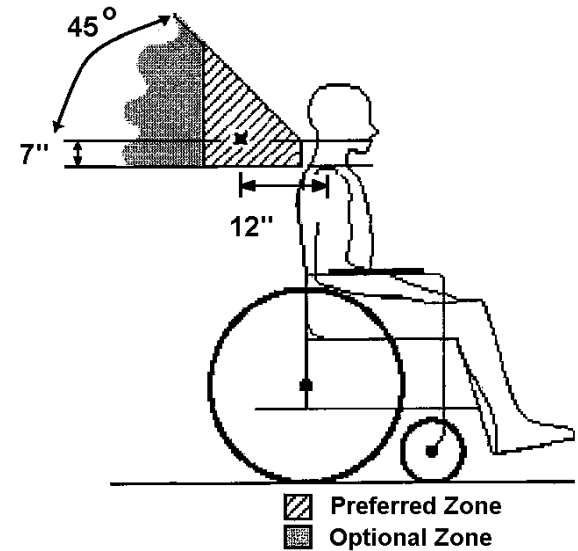
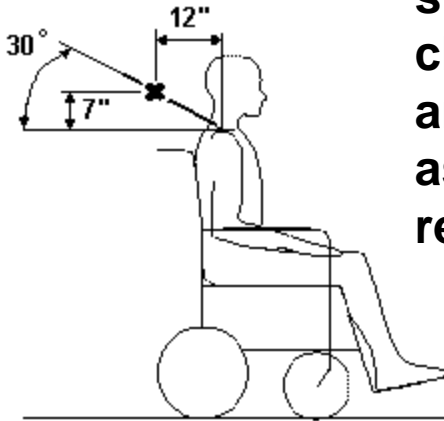


Anchor Point can be at either side of the wheelchair and is located relative to the top center of the persons shoulder

Passenger Securement (cont.)

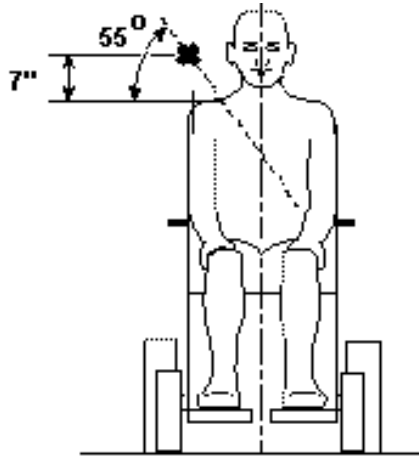
Upper Torso Restraint*

- The standard chest strap on the wheel chair is not considered an upper torso restraint as part of the vehicle restraint system



- Preferred position for anchor point.
 - Approximately ear level, 1 foot behind the person.
 - Angle of restraint belt between the shoulder and the anchor at 30 degrees from horizontal

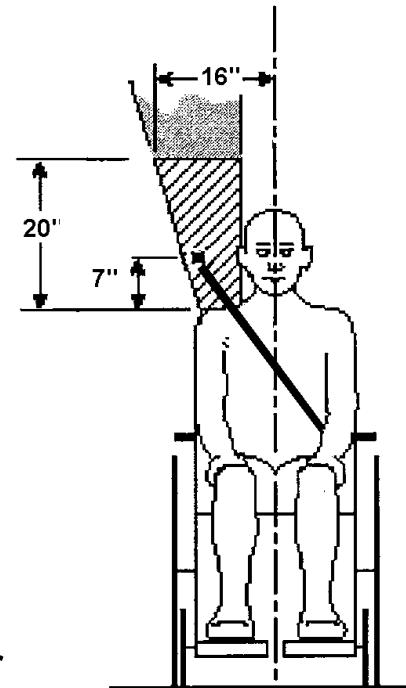
Passenger Securement (cont.)



Anchor Point

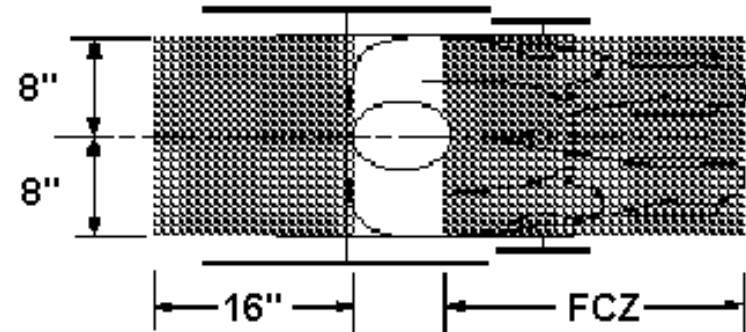
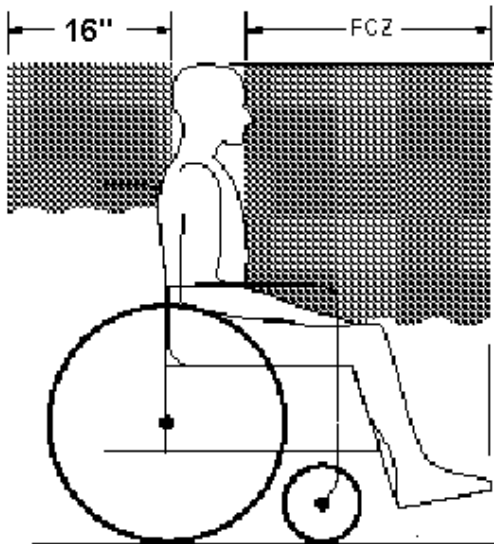


- In line with the top center of persons shoulder
- Adjust for good fit on chest and shoulder
- Best position for belt is centered between neck and outside of shoulder



Passenger Securement (cont.)

Clear Zones



- Frontal Clear Zones (FCZ) need to be larger when upper torso restraints are not used

Passenger Securement (cont.)

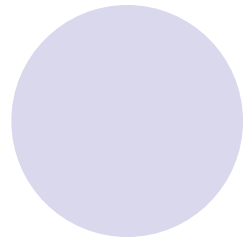
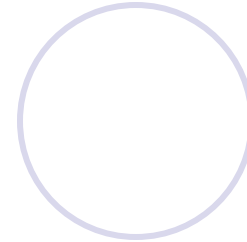
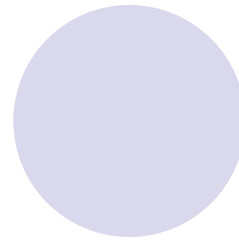
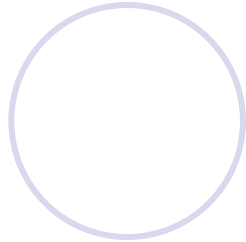
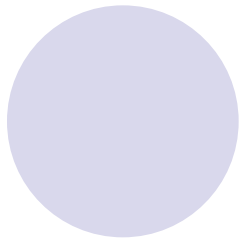
General

- Securement should not be held away from the body by wheelchair components or parts, such as the wheelchair armrests or wheels
 - Securement webbing should not be worn twisted in a manner that significantly reduces the area of contact of the restraint with the occupant
 - When not in use, make certain all components are properly stored so they will not present a flying object hazard in the event of an accident and they are not exposed to any unnecessary damage.
- Pre-Trip / Start of work day
 - Verify all securement components are in the vehicle
 - Inspect condition of components and webbing
 - Verify a web cutter is available

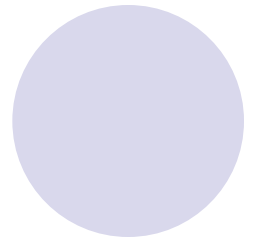
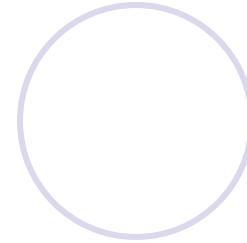
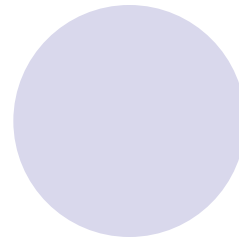
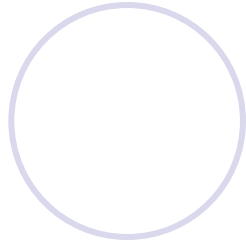
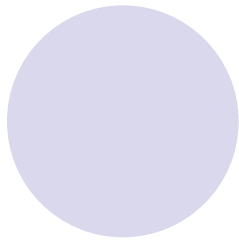


AVS Vehicle Protocol

- Each vehicle will be equipped with a binder to include at least:
 - Outline of the type of securement system for the particular vehicle
 - Pictures of the proper system while in the vehicle
 - Vehicle accident form
 - Vehicle log
- Staff must use the complete securement system as identified in the binder
- All movable objects such as first aid kits, oxygen tanks, walkers and trays must be properly secured at all times during transport



- ❖ All Q'STRAIT equipment should be stored in the identified pouch located on the vehicle.
- ❖ Secure any unused safety equipment back in the pouch.
- ❖ Report any damaged or missing equipment to your supervisor or the transportation department.



❖ Remove all equipment before beginning to secure the individuals wheelchair .



- ❖ It is recommended that all wheelchair trays are removed and secured when transporting individuals in wheelchairs on the bus unless otherwise indicated by the Physical Therapist.
- ❖ All buses are equipped with a lap tray securement belt as indicated in the picture.
- ❖ Each facility will have a list of approved transportation equipment.



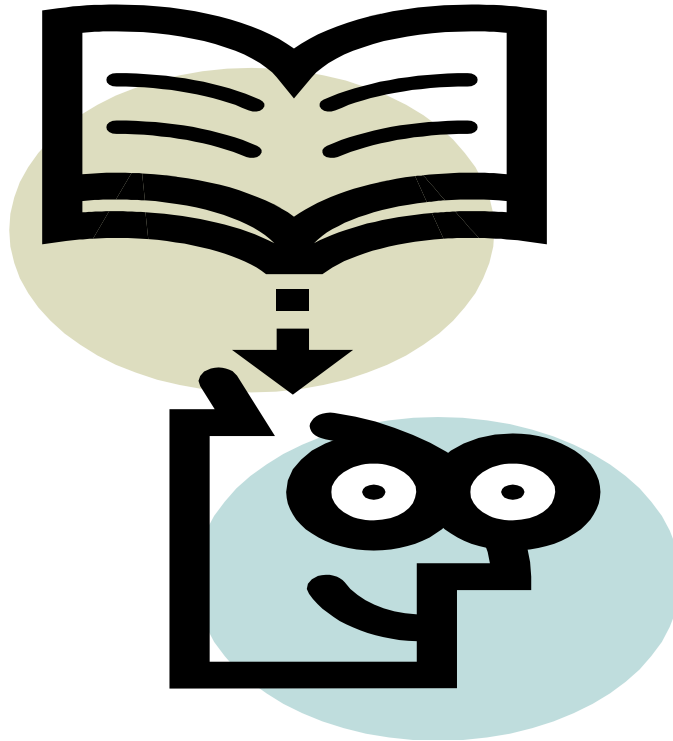
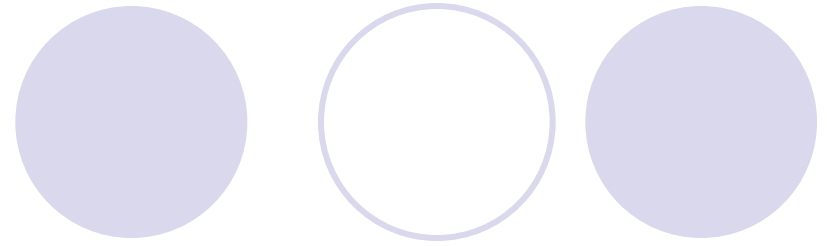
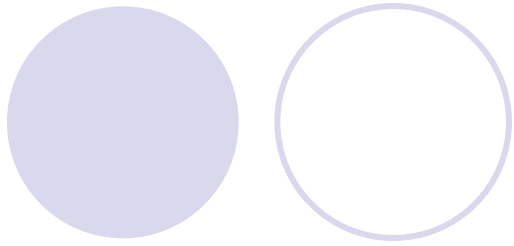
❖ For those individuals identified to use a wheel chair tray for transportation a cushion barrier will be placed on the wheelchair tray to provide protection to the individual in the event of vehicle impact.



- ❖ The cushion barrier will be placed on the inner lip of the wheelchair tray.
- ❖ There should be a two finger distance between the individual and the cushion barrier.
- ❖ Additional equipment such as a chest strap or anterior chest support (ACS) may be utilized if indicated by the Physical Therapist or IDT.



- ❖ At AVS we take a great deal of pride providing opportunities for our individuals to participate in community outing and activities for work, leisure and socialization.
- ❖ Safe transportation is everyone's responsibility.
- ❖ Each time we get into a vehicle we need to be proactive in providing a safe and secure environment.



- ❖ Understanding proper procedures is our first line of defense to prevent injuries in the event of an accident.
- ❖ Please see a supervisor or the transportation department with any questions or concerns about securing wheelchairs and equipment on vehicles.



- This presentation was developed utilizing information from the Philadelphia Insurance Company with modifications to meet the needs of the AVS Defensive Driving Program.

revised: 12/14/09 (CGE)

05/18/10 (CGE)

08/10/10 (CGE)

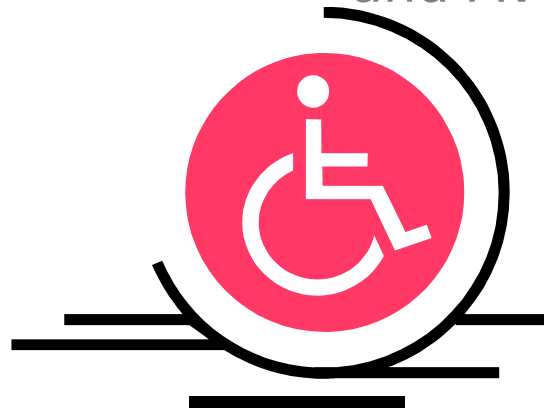
10/18/11 (CGE)

Part 2 of 3



Q'STRAIT Vehicle System

and AVS Vehicle Adaptations





❖ All Q'STRAIT equipment should be stored in the identified pouch located on the vehicle.



❖ Remove all equipment before beginning to secure the individuals wheelchair .



- ❖ This is a picture of the retractor with floor anchorage fittings.
- ❖ This system is easy to use.
- ❖ The fitting is designed to slide onto the anchorage from any direction.
- ❖ Simply hold the retractor in one hand lay the fitting down flat adjacent to the anchorage and slide until it locks.
- ❖ Shake the fitting to ensure it is completely locked into the anchorage.

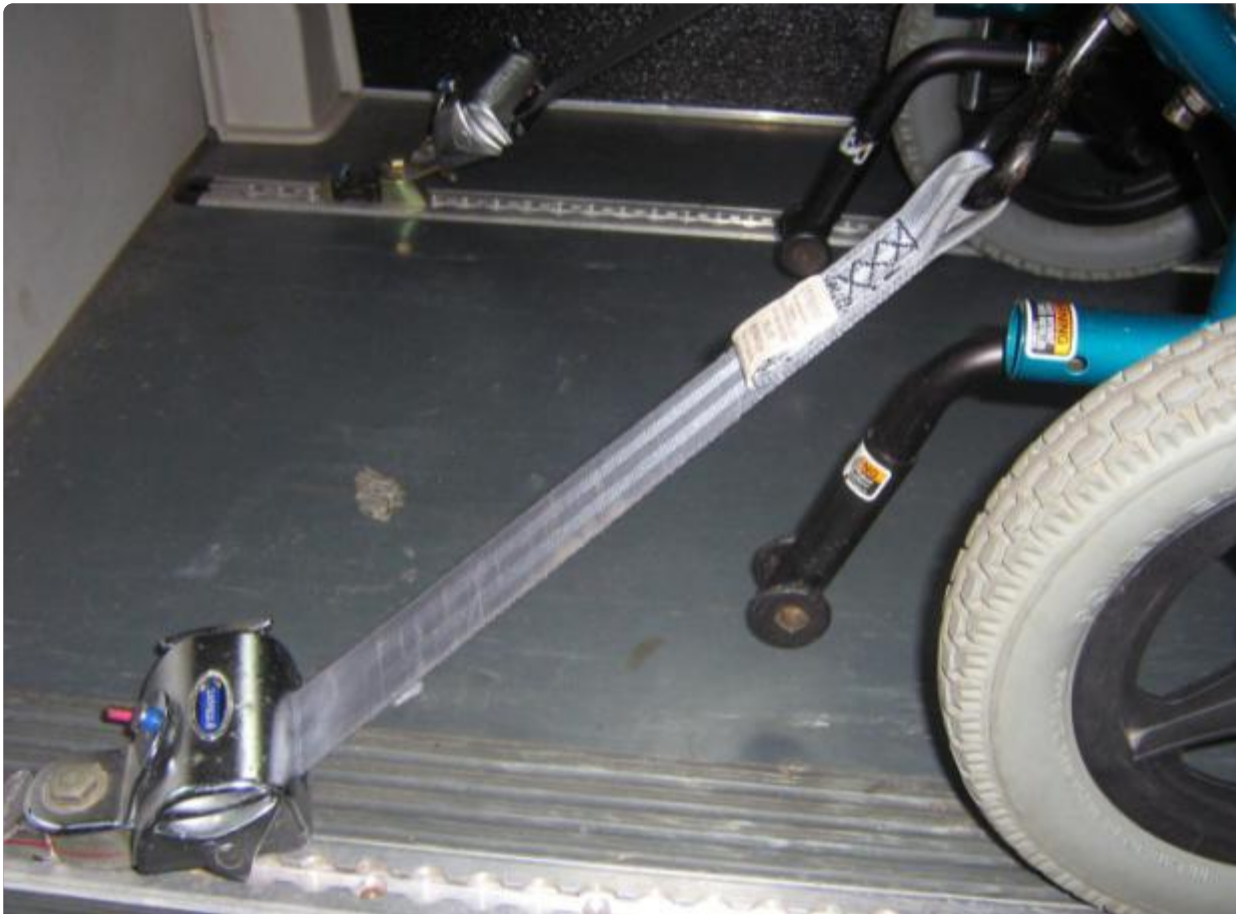


- ❖ The belts must take a direct path from the wheelchair securement points to the floor anchorage, without going around or through wheels or other parts that would prevent a straight line.
- ❖ Anchorages should be as free of dirt and debris as possible to reduce the false feeling of the fitting being totally engaged into the anchorage, when in fact it may only be wedged with dirt.
- ❖ Always remove the retractors from the floor and place them into the wall pouch when not in use to prevent tripping hazards.



❖ The blue webbing strap is used when it is difficult or impossible to connect the "J" hook directly to the wheelchair frame.

❖ The blue webbing straps are normally stored in the front of the vehicle.



- ❖ The webbing is wound around the spool that is spring loaded, so that any movement in the wheelchair while the vehicle is in motion will be systematically adjusted through these automatic features
- ❖ Twist or turn the tension adjusters as tight as possible.
- ❖ Some wheelchairs have defined anchor points built into the wheelchair
- ❖ These attachment locations are identified by a "hook symbol" that is indicated on the securement point.
- ❖ When these securement points are present, they should be used.



- ❖ The two front tie downs should be attached to a solid frame member that is closest to the base of the seat.
- ❖ Same process should be repeated for the rear.
- ❖ Once all securement belts have been attached, unlock the wheel locks and try to move the chair forward and backward.
- ❖ This movement will take up any initial slack
- ❖ Anyone that is in a tilt in space wheelchair should be tilted back 15 to 30 degrees during transportation.



- ❖ The vehicle safety belt has a stiffener on each section to help thread it around the passenger.
- ❖ The safety belt should be threaded between the arm rest and the chair frame.
- ❖ The safety belt must be on the bony structure of the body and worn as low as possible across the front of the pelvis.



❖ After the two sections of the lap belt have been properly threaded around the passenger, attach the ends to the pin connectors on top of the two rear retractors.



- ❖ At this point attach the 2 sides of the safety belt together across the pelvic area.
- ❖ The buckle should always be facing out towards the aisle.
- ❖ Remember the seat belt attached to most wheelchairs are for positioning purposes only and are not a safety belt.



- ❖ Attach the shoulder belt to the wall anchor.
- ❖ The lap/shoulder belts operate just like the one on your driver's seat or your personal vehicle.



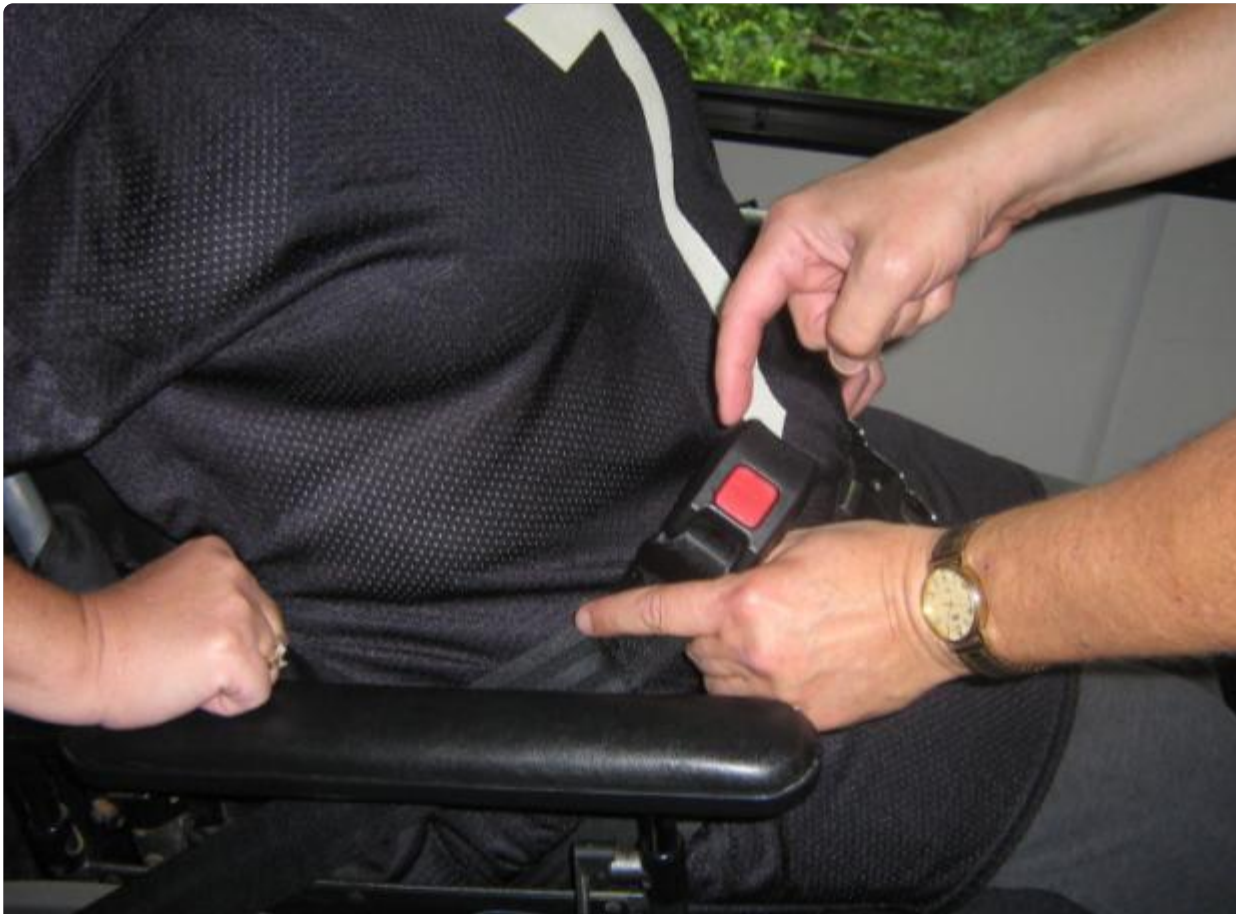
❖ If you have an adjustable shoulder belt anchorage, the belt attachment point must always be slightly higher than the passenger's shoulder and at least even with the rear tie downs.



- ❖ Bring the shoulder belt over the center of the shoulder of the passenger.
- ❖ The lap shoulder belt should be across the chest and not across the neck or throat area as indicated in the picture.



- ❖ Attach the loose end to the pin connector on the male portion of the safety belt.
- ❖ The lap belt has a traditional seat belt buckle with a center release button.
- ❖ The connection point of the lap/shoulder belt must always be on the hip of the seated passenger.



❖ Always check to ensure the belts are tight but have room for two finger spacing.



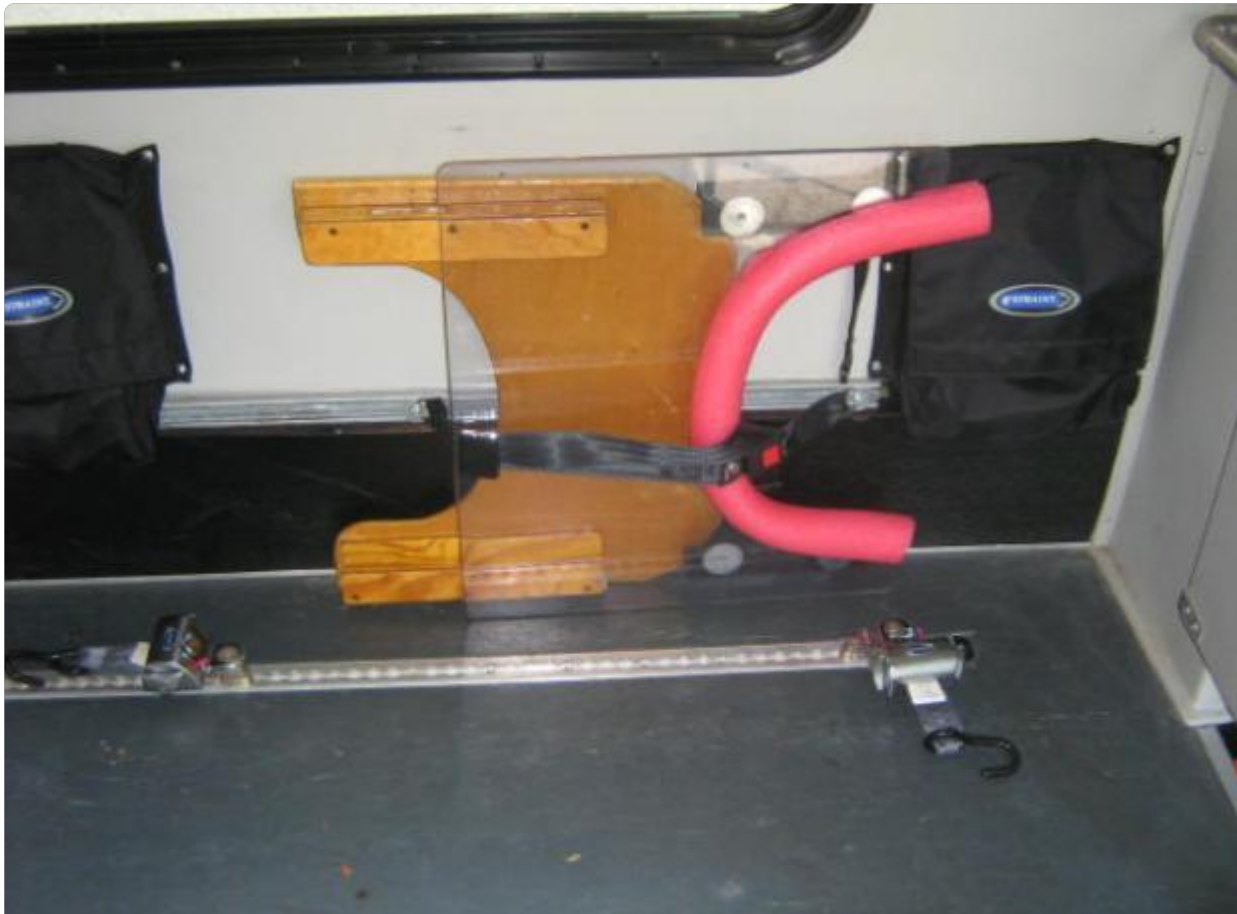
❖ Safety belt should be snug across the pelvic area.



- ❖ This is how proper positioning should look.
- ❖ The lap/shoulder belts should always be used on your passengers to keep them safely in their wheelchair, should you need to stop quickly, or make a sudden driving maneuver or experience an impact.



- ❖ Secure any unused safety equipment back in the pouch.
- ❖ Report any damaged or missing equipment to your supervisor or the transportation department.



- ❖ It is recommended that all wheelchair trays are removed and secured when transporting individuals in wheelchairs on the bus unless otherwise indicated by the Physical Therapist.
- ❖ All buses are equipped with a lap tray securement belt as indicated in the picture.
- ❖ Each facility will have a list of approved transportation equipment.



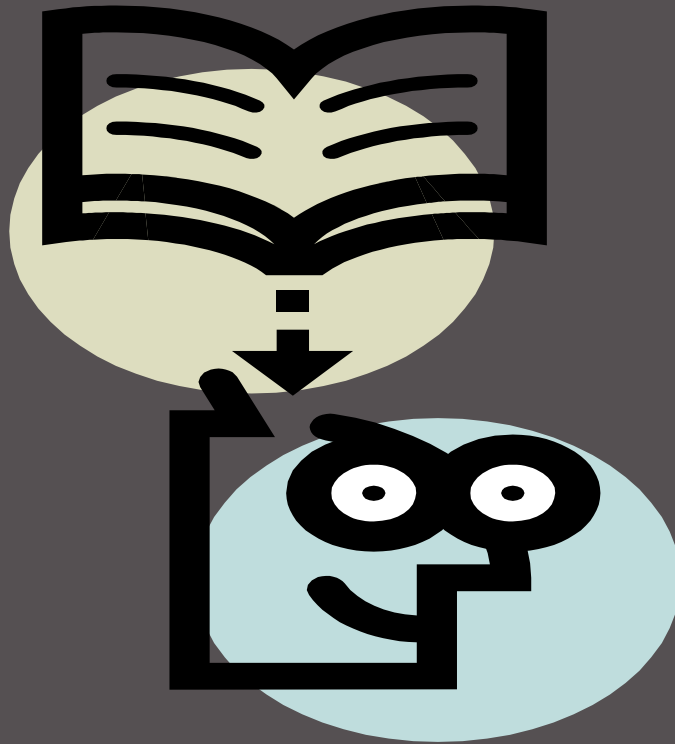
❖ For those individuals identified to use a wheel chair tray for transportation a cushion barrier will be placed on the wheelchair tray to provide protection to the individual in the event of vehicle impact.



- ❖ The cushion barrier will be placed on the inner lip of the wheelchair tray.
- ❖ There should be a two finger distance between the individual and the cushion barrier.
- ❖ Additional equipment such as a chest strap or anterior chest support (ACS) may be utilized if indicated by the Physical Therapist or IDT.



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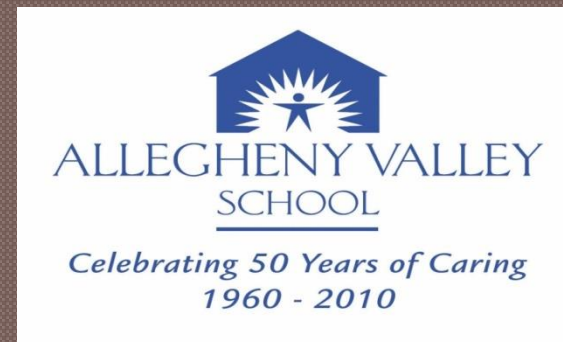


- ❖ Understanding proper procedures is our first line of defense to prevent injuries in the event of an accident.
- ❖ Please see a supervisor or the transportation department with any questions or concerns about securing wheelchairs and equipment on vehicles.

Devised 10/11 HRC/CGE

Part 3 of 3

Transporting Oxygen Tanks Safely



-
- Oxygen tanks are to be transported in busses or vans based on the needs of the individuals.



-
- Each tank is to be taken out of the tank carrier and secured into a tank holder.



-
- The empty tank carrier is to be secured to the bus with the lap tray securement belts.



-
- Oxygen tanks are not to be transported on wheelchairs unless they are carried in an approved tank holder.

