



Initial Facility Requirements

This section provides an overview of an initial list of facility requirements based upon meetings with the Project Team and LSC’s experience with similar site selection projects. This section also provides a description of the site selection process used by the Regional Transportation Planning Office (RTPO) and Grand Valley Transit (GVT) to evaluate potential sites and determine the best location for the planned Administrative Center and Transfer Center. Based upon foreseeable requirements, initial site evaluation criteria can be developed which allow scoring of each site to determine an index score for suitability. Since this planning project was undertaken, a new contracted provider is providing services in the Grand Junction area. This new contractor is responsible for providing for their own operational offices. The facility requirements did not change due to this, as the administrative functions of the RTPO for transit would need to be located on the final site—hence, the need for a site that would accommodate bus transfer operations and administrative functions, such as planning.

ADMINISTRATION CENTER

The Administration Center is envisioned to house activities vital for GVT planning. These include the following basic elements:

- Administrative office space for RTPO functions
- Training rooms/areas
- Space for ticket operations

As this project progressed, it was envisioned that the co-location of the administration center and transfer center would be beneficial to GVT and the community for several reasons. These include having planning staff available at the transfer center to observe operations, being more readily available to patrons, financial considerations, a co-located site would better use the land resources, and others.

TRANSFER CENTER

The Transfer Center will provide a facility which will improve the capability for passengers to transfer between buses. GVT operates as a timed-transfer pulse system. Buses used to meet at three transfer points—Mesa State College (Downtown Center), Coronado Plaza, and Mesa Mall. As a pulse system, many passengers must transfer between routes at these transfer centers. Currently, approximately 37 percent of all passengers make transfers as part of their trip, according to the 2030 Transit Element.

Until just recently, buses pulled into a surface parking lot at Mesa State College at the corner of Orchard Avenue and 12th Street. Figures IV-1 and IV-2 show current photographs of the old transfer station at the college.



The recommended system for GVT is to retain the pulse with convenient transfers Downtown, at Coronado Plaza, and at Mesa Mall. Downtown is a major destination and is well-suited as a location for a transfer center. According to the recent GVT Origin-Destination Study, many of the origins and destinations are located in the downtown area of Grand Junction, with destinations such as the Courthouse and City Hall area. While the greatest proportion of boardings and alightings occurred in the 12th and Orchard area, that was mainly due to the fact that the old transfer point resided at the College.

FACILITY REQUIREMENTS

Facility requirements and desirable features were identified through the Project Team and are described in the following section. From these requirements, specific criteria were then developed and were used to evaluate the sites. The criteria are described further in this section. The initial set of requirements for the Operation Center (storage and bus operations) and the Transfer Center were divided into two categories—those which are essential and those which are desirable but not essential for operation of each facility. Many of the desirable elements are those which may not necessarily impact the type or size of site which can be developed, but impact design and construction of that site.

Operations/Maintenance Center

Based upon the recent Transit Element and Project Team meetings, a preliminary listing of essential and desirable facility requirements was compiled. This list is not a comprehensive listing of all the requirements for the Operations Center to function; however, in site planning these help to define the needed footprint of space. These form the basis for evaluation criteria.

Minimum Facility Requirements

- Secure space to store up to 35 buses, a mix of large and small. A covered site is considered to be a desired, but not essential, requirement.
- On-site parking for 40 spaces. On-site parking will be required for employees, visitors, and deliveries to the Operations Center.
- Convenient access to downtown to minimize deadhead time. The site should not incur substantial shifts in employee hours or deadhead miles to start shifts at the downtown transfer center.
- Site will require three maintenance bays, one wash bay, one lube bay, parts storage, tire room, welding area, battery room, office space for up to eight employees.
- Site will require adequate space for offices for GVT staff and future expansion capability for RTPO staff. This will require space for dispatching/scheduling, supervisory staff, planning, and management.

Initial Facility Requirements

- The site must have no known or observable environmental issues. The site must meet the requirements for a Categorical Exclusion under the National Environmental Policy Act (NEPA) and FTA regulations.
- City- or county-owned property would be favorable but not a requirement.

Additional Facility Features

In addition to these minimum requirements for the Operations Center, a number of desired features were also identified. The additional features would increase the size of the building and lot.

- Space for other ancillary functions
- Covered parking
- Landscaping
- City- or county-owned property or other property which could be obtained at little or no cost

The ability to incorporate these additional features is dependent on the final site selection, interest on the part of other users, and design of the facility.

Initial Site Evaluation Criteria

Following is a list of criteria which were used for the initial site evaluation. The sites were ranked based on a relative comparison using each of the criteria.

- Adequate size and shape: The site must be adequate to accommodate the minimum space requirements for maintenance and storage, as well as operational requirements by staff.
- Access to major streets: The site should provide convenient access to major streets within downtown.
- Environmental constraints: Any known or observable environmental issues must be considered. Sites adjacent to property owned by the railroad have a potential for significant unknown environmental mitigation.
- Proximity to Downtown: Several of the routes start and end at the current downtown transfer center. As this siting progresses, an Operations Center which limits deadhead time to the downtown area is of importance from financial and operations standpoints.
- Adjacent uses: Are the adjacent uses compatible with a transit center?

- Consistency with City Master Plan: Will an operations/maintenance facility be consistent with development plans as envisioned in the City Plan?
- Land development: Would use of the site improve the existing land and site?
- Safety and security: How does this site relate to safety and security issues for bus storage and building security?
- Site preparation: How much work is required to prepare the site for an Operations Center? Sites with major demolition requirements are scored lower.
- Utilities to relocate: Are there obvious above-ground utilities which would have to be relocated to accommodate the Operations Center?
- Relocation of uses: Are there existing uses which would have to be relocated? Sites with residential uses score lower because of the regulatory requirements specific to relocation of residential uses. The higher the number of uses, the lower the ranking of the site.
- Acquisition potential: What is the relative availability for the city to acquire the specific site? Sites with multiple owners would be more difficult to acquire than sites with one or two individual owners.
- Displaced parking: Is there existing public or private parking that would be displaced by the transit center? Would the parking have to be replaced as part of the transit center development? Are there opportunities for replacement parking?
- Regulatory problems: Are there obvious regulatory issues with the selected site? For example, use of park lands for federal transportation projects has a number of regulatory issues which make the use very difficult.
- Politics: Are there political issues involved with using the individual site? Would community reaction be positive or negative toward using the site for the Operations Center?
- Joint uses: Does the site offer opportunities for joint development? Is there additional space that could be used for other uses as part of the Operations Center development?

Table IV-1 provides an estimate of initial space requirements needed for the Operations/Maintenance Center.

Table IV-1				
Transit Operations/Maintenance Facility Preliminary Requirements				
	Quantity	Type	Unit	Units in sq. ft.
Vehicle Maintenance/Storage/Washing				
Mechanic Bays	3	Bays	800	2,400
Lube Bay	1	Bays	800	800
Washing	1	Bay	800	800
Wash Bay	1	Bay	1,000	1,000
Tire Shop	1	Room	200	200
Battery Room	1	Room	100	100
Small Parts Storage	1	Room/Area	100	100
Large Parts Storage	1	Room/Area	200	200
Solvent/Lubricant/Liquid Storage	2	Room	100	200
Fueling Tanks/Pad	1	Area	750	750
Welding Area	1	Area	100	100
Reference Library	1	Room/Area	100	100
<i>Subtotal</i>				6,750
Operations Space				
Dispatch/Administration	1	Room	1,500	1,500
Locker Room	1	Room	200	200
Restrooms	2	Area	150	300
Break/Training Room	1	Room	500	500
Mechanical Room	1	Room	100	100
Circulation	-	Area	300	300
Conference/Meeting Room	2	Rooms	150	300
Office Space	8	Rooms	150	1,200
Library	1	Room	300	300
<i>Subtotal</i>				4,700
Total Transit Operations Building				11,450
Parking and Circulation ¹				74,750
Total Transit Operations Facility ²				87,000
<i>Note 1: Parking for 35 buses, 40 staff vehicles, additional parking, plus circulation drives.</i>				
<i>Note 2: Rounded to nearest thousand.</i>				
<i>Source: LSC, 2005.</i>				

Transfer/Administration Center

A preliminary listing of essential and desirable facility requirements was developed for the Transfer/Administration Center. The following presents both essential and desired elements of the Transfer Center. A refined listing of criteria and space requirements is presented in the next section of this chapter.

Minimum Facility Requirements

- Space to accommodate a minimum of 8 full-size buses, preferably 10 buses, as well as one out-of-service vehicle. The current downtown transfer location has space for eight buses. The additional spaces will provide flexibility to adjust schedules to meet passenger needs as well as operational requirements into the future. Safe and efficient access to and from adjacent arterial streets is an important consideration. As well, circulation for all buses pulsing must be planned.
- On-site parking for six spaces: On-site parking will be required for employees working at the downtown transit center, drivers who may report to the downtown center to start their workday, taxis, maintenance workers, and deliveries to the transit center.
- Convenient access to the major north/south and east/west travel corridors: Good access is required to major north/south and east/west streets within downtown to minimize the running times on bus routes. Two access points on major streets should be provided. Access points should be a minimum of 150 feet from the centerline of the nearest intersection to avoid traffic conflicts, when feasible.
- Public restrooms: Restrooms should be provided for passengers. The restrooms must be ADA-accessible.
- Drivers' break room: A separate room should be provided for drivers reporting for work, to use the restroom, and on breaks.
- Outside waiting area: Outdoor space for pedestrian circulation and waiting must be provided. Sufficient space is required for deployment of wheelchair lifts (5 feet by 8 feet extending 8 feet from the bus).
- Bicycle storage space: Outdoor space for 8 to 12 bike racks. GVT passengers frequently use bicycles to access the transit system. The bicycle racks on the buses are used frequently throughout the year. Bicycle storage space is required to accommodate the needs of these passengers.
- Benches: Benches or seating is required at the outdoor waiting areas. Sufficient space must be provided for the seating areas as well as for passengers standing and pedestrian circulation.

Initial Facility Requirements

- Landscaping: Space should be provided for landscaping around the transit center to avoid the appearance of a large mass of concrete and asphalt. Space is required to provide an attractive appearance when viewing the transit center from the adjacent streets and neighboring properties.
- Location: The transit center must be located within the core downtown area. This is to ensure that all routes can operate within designated running times to support a 60-minute pulse system. If the transit center is located outside this area, route running times for some routes will be increased by more than two minutes and exceed 60 minutes. This would force modification of the timing for the pulse system to more than 60 minutes. Schedules which do not operate in even increments of “clock time” are difficult for users to remember.

Additional Facility Features

In addition to these minimum requirements for the transit center, a number of desired features were also identified. The additional features would increase the size of the building.

- On-site parking
- Convenient access
- As much natural light as possible
- Inside waiting area
- Provide pleasant area resistant to vandalism
- Lighting
- Security monitoring
- Space for other functions
- Ticket sales
- Heating units for passengers
- Vending machines

The ability to incorporate these additional features is dependent on the final site selection, interest on the part of other users, and design of the facility.

Initial Site Evaluation Criteria

Following is a list of criteria which were used for the initial site evaluation. These sites were ranked based on a relative comparison using each of the criteria.

- Adequate size and shape: The site must be adequate to accommodate the minimum space requirements for buses and passengers.
- Ease of access to travel corridors and major streets within downtown.
- Environmental constraints: Any known or observable environmental issues must be considered. Sites adjacent to property owned by the railroad have a potential for significant unknown environmental mitigation.

- Proximity to Downtown: As much of the passenger activity at the downtown transit center is made up of passengers traveling to and from the downtown area, the transit center should be located in proximity to the core area of downtown. This proximity to the downtown core should be within a reasonable walking distance from the transfer center.
- Adjacent uses: Are the adjacent uses compatible with a transit center?
- Consistency with area Master Plan: Is a transit center compatible with the downtown Master Plan?
- Economic development: Would use of the site as a transit center stimulate additional economic development?
- Safety and security: How does this site relate to safety and security issues for transit passengers as well as traffic safety for buses entering and exiting the adjacent streets system?
- Good visibility: The transit center will be the most visible facility for GVT. Does the site provide good visibility in the community for this prominent public facility?
- Site preparation: How much work is required to prepare the site for a transit center? Sites with major demolition requirements are scored lower.
- Utilities to relocate: Are there obvious above-ground utilities which would have to be relocated to accommodate the transit center?
- Relocation of uses: Are there existing uses which would have to be relocated? Sites with residential uses score lower because of the regulatory requirements specific to relocation of residential uses. The higher the number of uses, the lower the ranking of the site.
- Acquisition potential: What is the relative availability to acquire the specific site? Sites with multiple owners would be more difficult to acquire than sites with one or two individual owners.
- Displaced parking: Is there existing public or private parking that would be displaced by the transit center? Would the parking have to be replaced as part of the transit center development? Are there opportunities for replacement parking?
- Regulatory problems: Are there obvious regulatory issues with the selected site? For example, use of park lands for federal transportation projects has a number of regulatory issues which make the use very difficult.
- Politics: Are there political issues involved with using the individual site? Would community reaction be positive or negative toward using the site for the transit center?

Initial Facility Requirements

- Joint uses: Does the site offer opportunities for joint development? Is there additional space that could be used for other uses as part of the transit center development?

Table IV-2 provides an estimate of initial space requirements needed for the Transfer Center. This includes space needed for an appropriate administrative building and parking required for those employees.

Table IV-2 Transit Transfer/Administration Facility Requirements				
	Quantity	Type	Unit	Units in sq. ft.
Operations Space				
Dispatch/Reception	1	Room	800	800
Locker Room	2	Room	600	1,200
Restrooms	2	Area	150	300
Break/Training Room	1	Room	500	500
Mechanical/Janitor Room	1	Room	250	250
Conference/Meeting Room	1	Rooms	300	300
Office Space	13	Rooms	100	1,300
Library	1	Room	200	200
<i>Subtotal + additional 25%</i>				6,063
Transfer Space				
Pedestrian Plaza	-	Area	5,000	5,000
Pedestrian Shelters	8	Covered	100	
Public Restrooms	1	ADA Unisex	100	100
Storage	1	Room	200	200
Public Phone	1	Area	15	15
Vending Machines	1	Area	20	20
Parking and Circulation ¹				37,700
Landscapping			3,500	3,500
<i>Subtotal Transfer Space</i>				46,535
Acres				
Total Transit Operations Facility				53,000
Acres				1.2
Note: 1 Parking assumes 12 employees * 300 sq/ft + 1,200 sq.ft per bus * 15 +30,000 sq.ft circulation and setbacks				

INITIAL EVALUATION CRITERIA

Initial site selection criteria were developed based upon discussions with the Project Team and previous work by LSC. It was the intent that these draft criteria be discussed and debated by all those concerned with GVT operations. A separate evaluation matrix for both the siting of the Operations/Maintenance Center and Transfer/Administration Facility was developed. It was once thought that the future sites of both facilities should occupy the same site; however, given the space requirements, this became impossible. Obviously there would be a cost savings if one site could be found which suited both facilities, residents, passengers, and staff needs. This was explored as sites were evaluated in detail throughout this study. The following list provides the initial evaluation elements which were used to construct a site selection evaluation matrix for each site. Sites were scored using a plus and minus system and can also be scored as neutral. Tables IV-3 and IV-4 present the initial evaluation criteria for the Operations/Maintenance Center and the Transfer/Administration Center.

Table IV-3	
Initial Operations/Maintenance Center Site Evaluation	
Site Evaluation Criteria	
Site	<ul style="list-style-type: none"> Adequate Size/Shape (2-acre minimum) Access to Major Streets Environmental Constraints
Location/Context	<ul style="list-style-type: none"> Proximity to Downtown Adjacent Uses Consistency with Master Plan Land Development Safety/Security
Implementation	<ul style="list-style-type: none"> Site Preparation Utilities to Relocate Relocation of Uses Acquisition Potential Displaced Parking Regulatory Problems Politics Joint Uses
Committee Input	<ul style="list-style-type: none"> Ranking by Committee
Community Input	<ul style="list-style-type: none"> Input from Community on Sites

Table IV-4 Initial Transfer Center Site Evaluation	
Site Evaluation Criteria	
Site	Adequate Size/Shape (1.5-acre minimum) Access to Major Streets and Travel Corridors Environmental Constraints
Location/Context	Proximity to Downtown and within Reasonable Walking Distance to Core Adjacent Uses Consistency with Master Plan Economic Development Safety/Security Good Visibility
Implementation	Site Preparation Utilities to Relocate Relocation of Uses Acquisition Potential Displaced Parking Regulatory Problems Politics Joint Uses
Committee Input	Ranking by Committee
Community/User Input	Input from Community on Sites Travel/Transfer Patterns (if available)

REVIEW OF GOVERNMENT REGULATIONS AND REQUIREMENTS

It is essential in any site planning that governmental regulations and rules be followed. There are a host of regulations under the Federal Transit Administration requirements as well as ADA regulations, the Clean Air Act Amendments (CAAA), the Clean Water Act (CWA), Environmental Protection Act (EPA) regulations, and Occupational Safety and Health Administration (OSHA) regulations. Many of these requirements may have an effect on space considerations.

FTA Site Planning Requirements

Prior to the federal government allotting funding for facilities, a series of requirements must be met and regulations followed. One of the first and major steps in

Initial Facility Requirements

securing these funds is the current process of selecting a suitable site. In the eyes of the FTA, federal dollars should be well spent on facilities planning prior to major decisions by an agency to construct a site. If the planning process fails to take into consideration something such as contacting the appropriate environmental authorities prior to purchasing and constructing of a site, these funds can be recouped and the agency forced to pay for the facility cost out-of-pocket. Therefore, a careful approach to ensure regulations and requirements are followed and filled is essential to the success of a facility.

There are several requirements for facility planning, and in this case, some which are only applicable to one type of facility. For instance, Environmental Justice issues for an operations facility versus a transfer facility are somewhat different and therefore are planned differently. One of the largest concerns in siting any facility is environmental. In the case of a transfer facility and an operations facility, the environmental process follows the same type of planning and research. Typically, a Categorical Exclusion (CATEX Section 771.117(d)) is sought so as to eliminate the need to perform a full Environmental Impact Statement (EIS), which is a lengthy and costly process. A CATEX requires a list of information which is reviewed by FTA to determine if a full EIS is needed. This information is provided during the grant application process for federal funds.

FTA Considerations for Categorical Exclusion

An example of the necessary information for a CATEX is provided in Appendix A. This type of information will be necessary to meet FTA requirements and receive federal funding for facilities. The following elements are considerations for a Categorical Exclusion by the FTA.

- Air quality conformity
- Zoning
- Traffic impacts
- CO hot spots
- Historic resources
- Noise impacts
- Vibration
- Acquisitions and relocations required
- Hazardous materials
- Community disruption and environmental justice
- Use of public parkland and recreation areas

- Impacts on wetlands
- Floodplain impacts
- Impacts on water quality, navigable waterways, and coastal zones
- Impacts on ecologically-sensitive areas and endangered species
- Impacts on safety and security
- Impacts caused by construction

As well, a host of other requirements are provided as a basis for discussion. These types of regulations are addressed through both the siting of facilities as well as during design and construction phases of the project.

American with Disabilities Act (ADA) Regulations

- Larger rest rooms
- Parking areas will accommodate fewer cars in the same space
- More space required for elevators, if any
- Wider walkways

Clean Air Act Amendments of 1990

The Clean Air Act is the comprehensive federal law that regulates air emissions from area, stationary, and mobile sources.

- Accommodate alternative fuels
- Fuel handling
- Hazardous vapor venting
- Explosion-proof fixtures
- Special sensing devices
- Automatic controls to provide early warning of trouble
- Special exhaust systems in the fueling area and repair area
- Pits designed with floor exhaust

Clean Water Act

The Clean Water Act regulates the amount of chemicals/toxins released by the facility via direct and wastewater discharges. These standards usually set concentration-based limits on the discharge of a given chemical by the facility.

Requirements include some of the following:

- Recycle wash water which may add additional square footage.
- Provide facilities for processing the site drainage before draining into the municipal sanitary sewer system.
- Using oil/water separators for the drain water to flow into before being discharged into the sewer system.

Initial Facility Requirements

- The storage and distribution of oils, fluids, and lubricants must also be carefully considered.

Environmental Protection Agency (EPA) (Example)

Regulations on Underground Storage Tanks for Fuel

- Double-walled tanks with spill prevention features. Underground piping to and from the tank must also be double-walled.
- Consider using above-ground storage tanks for storing fuels (steel).