

3.0 Environmental Consequences of the Proposed Action

3.1 Overview

The preparation of this EA included an analysis of the numerous possible impacts that the Transit Center project could have on the City and the Environment. **Table 3.1.1** presents the results of that research. The table includes a “Yes” when there is a potential positive or negative impacts associated with the particular “Area of Impact.” The following pages will address these issues in more detail. The background information supporting the information in this table, if not included in the text, is included in the Technical Reference Material, which is available upon request.

Table 3.1.1
Summary of Possible Impacts

Area of Impact	Possible Impacts
Land Acquisition	Yes
Land Use, Zoning and Consistency with Local, Regional and State Plans	Yes
Vehicular Traffic	No
Navigable Waters and Coastal Zones	No
Floodplains	Yes
Aesthetics and Visual Resources	Yes
Historic Resources	Yes
Contaminated Material	Yes
Bicycle and Pedestrian Circulation	Yes
Inter-modal Transportation	Yes
Air Quality	Yes
Parklands	Yes
Secondary/Cumulative Impacts	Yes
Construction Impacts	Yes
Displacement	No
Parking	No
Noise and Vibration	No
Energy Requirements	No
Surface Water/Water Quality/Storm Water	Yes
Hydrologic Conditions and Dewatering	No
Wetland	No
Soils and Geology	No
Endangered Species and Ecologically Sensitive Areas	No

Area of Impact	Possible Impacts
Community Disruption	No
Safety and Security	No
Environmental Justice	No
Economics	No

3.2 Land Acquisition

3.2.1 Existing Conditions

The Carr Lot is currently private property owned by Mr. Alan Carr. The property is currently being leased by the City and is used for municipal parking. This parking is considered to be temporary parking by the City. The City does not own the property and the lease on the property expires in 2006. The lease includes a 90 day cancellation provision, which can be exercised by either party, meaning that these parking spaces could be eliminated with a 90 day notice by the land owner. Consequently there is no guarantee that the parking on the Carr Lot will be continually available in the future.

The northwest corner of the site is currently in State ownership, but is also leased by the City for use as part of the Carr Lot parking lot. The five-year lease is automatically renewed.

3.2.2 Impacts of the No Build Alternative and the Proposed Action

The No Build Alternative

The No-Build Alternative will not require the relocation or displacement of people, business, or facilities.

The Proposed Action

The project will result in several permanent property or easement acquisitions and may also involve additional temporary easements to properties during construction.

The development of the Transit Center will include the City's purchase of the entire Carr Lot.

This project will result in the conversion of 23 of the approximately 95 temporary public parking spaces now available on the property to permanent public parking spaces. Because of the uncertain nature of the temporary public parking on the Carr Lot, this change is

considered a positive action. The change in the number of temporary parking spaces available on the Carr Lot is not considered to be solely a result of the construction of the Transit Center because the City's lease on the property will be ending in approximately one year. The City is currently addressing the need for public parking in the Downtown area through a separate federal project with FHWA. This project has its own independent need and utility and for which the City is preparing a separate Environmental Assessment. See **Section 3.14, Indirect and Cumulative Impacts**, for further information.

The Carr Lot also provides an office and bus depot for VTL regional bus service. The Proposed Action will continue this activity on site and therefore not alter the current land use on at least a portion of this property.

The City's lease with the State allows the construction of the Transit Center on the land. The construction of a building on the land, however, will necessitate the procurement of a longer lease, since it is not practicable to construct a four story Transit Center on land that may need to be vacated in five years or less if the State decides, for whatever reason, to not renew the lease.

Construction of the multi-use bridge over the North Branch River will require an easement from the Heney, Jacobs, and Vermont Association for the Blind and Visually Impaired (VABVI) properties. The construction of the pre-fabricated bridge will not remove parking spaces from the Heney, Jacobs or VABVI properties. The easement will connect to an existing City access easement that will provide a link to Main Street near the Barre Street Intersection. See **Section 3.10, Bicycle and Pedestrian Circulation** for additional information.

3.2.3 Mitigation

The City will negotiate a longer lease for the State land needed to construct the Transit Center. The State has continually supported the construction of the Transit Center so the City does not anticipate problems with securing a lease of at least 20 years for the property.

No other mitigation is deemed necessary.

3.3 Land Use and Zoning

3.3.1 Existing Land Uses and Zoning

Overview

Land use in Montpelier is regulated by the City's Zoning and Subdivision Regulations. The regulations are, in turn, formed in response to the City's Master Plan. The Master Plan is influenced by or includes numerous other studies, including the Capital District Master Plan and the Designated Downtown map.

The Carr Lot is located in the Central Business District I (CB-I). This site also falls within the Montpelier Design Control District, the Designated Downtown of Montpelier, and Montpelier's Flood Plain District. These designations are also discussed in the Capital District Master Plan.

Development on the Carr sites will require a Zoning Permit and Flood Plain Approval from the Development Review Board (DRB). Signs will require a sign permit. Before either permit may be issued, the designs must be approved by the Design Review Committee. The DRB will also conduct a Site Plan Review as part of the Zoning Permit application review. Before the structure can be occupied, the City, as owner, must obtain a Certificate of Compliance from the Zoning Administrative Officer and a Building Permit from the Building Inspector.

Montpelier Zoning and Subdivision Regulations

The CB-I District requires a setback of 20 feet from the rear lot line, but no setback from the side lot lines along the Winooski River or railroad and no setback from the front lot line along Taylor Street. This district allows structures up to 6 stories in height, but the portions of the building over 20 feet must be set back an additional foot from the front property line for each foot of height over 20 feet. This additional requirement may be waived by the Development Review Board.

The proposed transit, commercial, and residential uses planned for the Carr Lot are allowed uses in the CB-I District, which allows the development of multi-family dwellings, as well as buildings that can include art galleries, public assembly areas, office and business services, eating and drinking establishment even with take-out, offices, outdoor markets, commercial parking, retail sales and services, theaters, passenger terminals, recreational facilities, and parks.

The zoning regulations control several aspects of the site design, including the number of parking spaces and landscaping. While the specific parking requirements can be modified or waived by the DRB, especially since this parcel is located within the CB-I District, the regulations call for one parking space for each dwelling unit, one parking space for each 400 SF of net office floor space, one parking space for each 1.2 employees of a transportation facility, and one space for every three seats in an eating or drinking establishment. The regulations also allow for shared use parking, meaning that one space can be applied towards two different requirements, such as daytime commercial and evening residential uses. If no waivers are granted, the Transit Center will generate the need for approximately 38 parking spaces. For buildings with commercial space, the zoning regulations also require one off-street loading space for every 10,000 SF of gross floor area.

The zoning regulations require planting of at least one shade tree per eight parking spaces. It also requires the planting of street trees a maximum of 60 feet apart along public streets.

Montpelier City Master Plan

The Montpelier City Master Plan, adopted September 13, 2000, contains numerous provisions that directly or indirectly support the development of the Carr Lot site as a transit/welcome center and park. The overall vision of Montpelier's future includes a hope to:

- Discourage automobile-dependent growth in the downtown core,
- Improve and enrich pedestrian, bicycle, rail and shuttle access,
- Revitalize the Winooski River and all its associated branches as a special focus of the City,
- Ensure efficient and reliable community services, including transportation, and
- Use transportation options effectively to encourage suitable types of housing.

In the discussion of Montpelier's natural features and environment, the Master Plan outlines recommendations for a park at the confluence of the North Branch and Winooski Rivers. It also outlines several recommendations for improving the access to the City's rivers. The Transportation and Circulation section includes the general goal of encouraging alternative means of mobility and public transportation services that reinforce and strengthen our community, including addressing the transportation needs for residents who do not drive and/or own a car. Recommendations under this goal include:

- Providing for bicycle storage areas and bicycle racks throughout the City,

- Securing a downtown location for an intercity transit station, and
- Encouraging measures that improve the effectiveness of the Downtown Shuttle.

The Transportation section also recommends the construction of Phase II of the Winooski West Shared Use Path.

The economic development strategies for the City include the evaluation of future multi-modal transportation access and circulation needs and the development and implementation of appropriate solutions.

Finally, the Land Use and Development section includes a recommendation to encourage the provision of public amenities in future development, such as parks, community rooms and exhibition space.

Capital District Master Plan

The Capital District Master Plan (CDMP), which **Figure 3J** shows, calls for a Transit Center and urban park to be developed on the Carr Lot. The CDMP also shows the development of a new road extending Barre Street west across the North Branch River to Taylor Street. This new street is meant to provide additional vehicular circulation in the downtown area, alleviating the heavy traffic volumes at the intersection of State and Main Streets. The new street is also meant to create more frontage to spur additional pedestrian scale development.

Central Vermont Regional Plan

There are several objectives in the Central Vermont Regional Planning Commission's Regional Plan that are directly supportive of the creation of the Transit Center, or which the development of the Transit Center will advance. Specifically, they include:

- Encouraging historic settlement patterns,
- Encouraging infill development,
- Preserving access to scenic, natural and recreational resources in new development,
- Promoting multi-modal transportation, including physical and operational connections between various modes,

- Encouraging development which preserves the historic and architectural character of downtown areas,
- Supporting high architectural standards for terminal buildings, shelters, garages, and other transportation related facilities;
- Supporting the creation of recreation paths, and
- The retention of undisturbed areas of vegetation along the banks of surface waters.

Appendix C provides additional information in a letter from the Central Vermont Regional Planning Commission as to where these items can be found in the Plan.

Adjacent Land Use

The Carr Lot is bounded on the south by the Winooski River, on the east by the North Branch River, on the north by the Washington County Railroad and on the west by Taylor Street.

The Winooski West Shared Use Path ends at Taylor Street directly adjacent to the north side of the Winooski River west of Taylor Street; the Path crosses the River via a pedestrian bridge. A State of Vermont parking lot lies across Taylor Street from the Carr Lot. The parking lot for the Chittenden Bank building on State Street lies just north of the railroad tracks and the State parking lot on the west side of Taylor Street. The historic 110 State Street building lies between the Chittenden parking and State Street, on the southwest corner of the intersection of Taylor and State Streets. A small, non-historic gas station lies on the southeast corner of this intersection.

The Capitol Plaza parking area and one currently unused wooden structure lie directly north of the railroad, as **Figure 3K** shows. The parking area is accessed via a narrow entrance on Taylor Street just north of the railroad tracks and an entrance on State Street between the Capitol Plaza Hotel and the Christ Church. The Capitol Plaza Hotel itself occupies the northern portions of its property along State Street. Further east, the Christ Church sits on the north side of the parking lot along State Street. The property line between the Church and Capitol Plaza runs through the parking area and is visually indistinct.

A public parking area lies east of the Capital Plaza and Church parcels. The parking area is leased from the private landowner, who has informed the City that he intends to end the leasing arrangement as he proceeds with plans to put a building on the property. One additional parcel that is occupied by an historic brick structure in which the National Wildlife Federation is located lies between the public parking and the North Branch River.

In addition, the center line of Taylor Street marks the eastern boundary of the Capitol Complex, a district created by Title 29 Vermont Statutes Annotated, Chapter 6, within which land uses and building alterations are governed by the Capitol Complex Commission. The Capitol Complex, which is coterminous with the City's Civic District, extends from Taylor and Governor Davis Streets on the east to Bailey Avenue to the west, the Winooski River to the south, and Baldwin Street to the north.

Figure 3K provides further information on the existing land uses in the vicinity of the Project Area.

3.3.2 Impacts of the No-Build Alternative and the Proposed Action on Land Use

The No Build Alternative

The No-Build Alternative would have no impact on current land use.

The Proposed Action

The proposed Multi-modal Transit and Welcome Center, as well as the park on the eastern side of the Carr Lot are fully allowed by the City's current zoning regulations. Their development, as currently anticipated, will require a waiver of providing all of the required parking on site and the provision to setback the portions of the building higher than 20 feet. The current amount of parking for all of the uses anticipated in the transit center will be provided by a combination of on-site and existing or future off site parking.

Based on the current plans, there should be no issue in obtaining a Flood Plain Approval for either the Transit Center itself or the shared use path bridge over the North Branch River. See **Section 3.6, Floodplains**, for further information.

The proposed Transit Center, as well as the park on the eastern portion of the Carr Lot and the shared use path, is supported by the City's Master Plan. The Center would provide a coordinated transit alternative to visitors, commuters, and other travelers who do not intend to drive to or park in the downtown.

The proposed Transit Center is in compliance with the CDMP and the Central Vermont Regional Planning Commission Regional Plan

The proposed Transit Center will not create conflicts with the adjacent land uses.

3.4 Vehicular Circulation

3.4.1 Existing Vehicular Circulation

Study Area Roadways

Overview

The Transit Center will be located on Taylor Street, one of five north-south streets in Montpelier that bridge the Winooski River. The historic Taylor Street Bridge, while slated to be restored in the near future, is still a narrow two-lane bridge and tends to slow traffic as it comes north across the toward State Street. Thus, northbound traffic is generally traveling at approximately the 25 MPH speed limit when it passes the site. Southbound traffic passing the site is in the process of accelerating as it leaves the Taylor Street intersection with State Street. It is also headed toward the Taylor Street Bridge and is consequently traveling at or lower than the speed limit. Interstate buses currently access the Carr Lot via the Taylor Street Bridge.

State Street and Memorial Drive on either end of Taylor Street are the two most adjacent roadways to the Carr Lot, other than Taylor Street itself. Main Street is the other street in the Downtown area most likely to be affected by the Transit Center. Below is additional information on these and other roads close to the proposed Transit Center.

State Street

State Street serves as a major access into downtown Montpelier. State Street, also known as Business Route 2, is primarily two lanes wide within the study area with parking provided on both sides of the roadway. Adjacent land uses are primarily business, commercial, retail, government and parking areas. Sidewalks are also provided along State Street on both sides of the roadway between Bailey Avenue and Main Street. The Main Street/E. State Street/State Street intersection is currently signalized.

Main Street

Main Street (Business Route 2 and Route 12) runs in a north-south direction in downtown Montpelier. Main Street is primarily a two-lane roadway in the downtown with parking provided on both sides of the roadway. A turn lane is provided on Main Street at the Barre Street intersection. Sidewalks are provided on both sides along Main Street between Memorial Drive and the roundabout. High levels of pedestrian activity can be observed along Main Street between Barre Street and School Street. The segment of Main Street between

Memorial Drive and the Main Street/Spring Street roundabout consists of business, commercial, and retail uses. The City Hall is also located on Main Street.

Memorial Drive

Memorial Drive is an east-west roadway providing access to/from the downtown and I-89. This roadway contains a four lane cross section between the I-89 Ramps and Main Street. At certain intersection locations along Memorial Drive, one of the travel lanes is used as a turn lane. There is very limited access to/from Memorial Drive through its entire length. Parking is not allowed along Memorial Drive. Adjacent uses are primarily business or commercial uses.

Elm Street

Elm Street is a north-south roadway between State Street and the City's northern municipal boundary. The roadway contains a two lane cross section for its entire length in the downtown with left and right turn lanes at State Street. North of Spring Street, Elm Street is also known as Route 12. Adjacent uses along Elm Street are primarily residential.

Study Area Intersections

Memorial Drive/Taylor Street

Memorial Drive/Taylor Street is a "T" intersection. The eastbound Memorial Drive approach contains an exclusive left turn lane and a through lane. The westbound Memorial Drive approach contains a through lane and a shared through and right turn lane. The southbound Taylor Street approach contains a shared left and right turn lane. The signal operates in three phases at this intersection. There is no pedestrian phase at this intersection.

State Street/Taylor Street/Governor Davis Avenue

State Street/Taylor Street/Governor Davis Avenue is a four way intersection with stop-controls on northbound Taylor Street and southbound Governor Davis Avenue. The westbound approach on State Street contains single travel lane. The eastbound approach on State Street has an exclusive right turn lane and a shared left turn/through lane. Northbound Taylor Street and southbound Governor Davis Avenue both contain a single travel lane.

State Street/Elm Street

State Street/Elm Street is a four way intersection with stop-control on Elm Street and the exit from the 60 State Street Parking Lot. All approaches, except the southbound Elm Street

approach have a single travel lane. The southbound Elm Street approach contains an exclusive right-turn lane and a shared left and through lane. The Elm Street and 60 State Street Parking Lot approaches are offset from each other.

Main Street/State Street/East State Street

Main Street/State Street/East State Street is a four way intersection. The State Street and East State approaches are offset from each other. The northbound Main Street approach contains an exclusive left turn lane and a through/right turn lane. The southbound Main Street approach contains a through/left turn lane and an exclusive right turn lane. The eastbound State Street approach contains through left and right turn lanes. The westbound East State Street approach contains a single lane approach. Parking is provided along Main Street, State Street, and East State Street. The intersection operates in four phases not including an exclusive pedestrian phase which is called every cycle during high activity periods. The State Street and East State Street approaches are split-phased in operation due to the offset in the two approaches.

Main Street/Pitkin Court/North Branch Parking Lot Driveway

The junction of Main Street, Pitkin Court, and the driveway to the North Branch parking lot is a four-way intersection, with no traffic control on Pitkin Court and the North Branch parking lot driveways. The Pitkin Court and North Branch parking lot approaches are offset from each other. All approaches, except the northbound Main Street approach, have a single shared left, through and right lane. The northbound Main Street approach contains a shared left turn and through lane, which is actually the east end of the left turn lane at the State Street intersection, and a shared through and right turn lane. Due to the proximity of this intersection to the State Street intersection, it is likely that most travelers on Main Street do not perceive it as an identifiable intersection.

Main Street/Barre Street/Parking Lot

Main Street/Barre Street/parking access is a four-way intersection, with stop sign control on the Barre Street and parking access approaches. The eastbound parking access and the westbound Barre Street approaches contain a shared left, through and right lane. The parking access is also less than two full lanes wide, because it is squeezed between the railroad and the M & M Beverage building. Vehicular traffic regularly drives over the railroad tracks when entering and exiting the parking in this area. Both the northbound and southbound Main Street approaches contain an exclusive left turn lane and a shared through/right turn lane.

Main Street/Memorial Drive/Berlin Street/Northfield Street

Main Street/Memorial Drive/Berlin Street/Northfield Street is a four-way intersection. The eastbound Memorial Drive contains an exclusive left turn lane, a through lane, and an exclusive right turn lane. The westbound Berlin Street approach also contains an exclusive left turn lane, a through lane, and an exclusive right turn lane. The northbound Northfield Street approach contains a shared left/through lane and an exclusive right turn lane. The southbound Main Street approach contains an exclusive left turn lane and a shared through/right turn lane. The intersection operates in four phases, not including an exclusive pedestrian phase which is push-button actuated.

Existing (2005) PM Peak Hour Volumes

Overview

Existing (2003) traffic volumes were used from the “Downtown Montpelier Circulation Study” dated March 1, 2005 for the following locations:

- Memorial Drive/Taylor Street,
- Memorial Drive/Main Street/Northfield Street,
- Main Street/Barre Street/parking access,
- Main Street/Pitkin Ct./North Branch Parking Lot driveway,
- Main Street/State Street/East State Street,
- State Street/Elm Street, 60 State Street, and
- State Street/Gov. Davis Avenue/Taylor Street.

The existing (2003) PM peak hour traffic volumes were projected to year 2005 based on a 1 percent per year growth factor. The growth factor used in this study was the same as the one in the Downtown Montpelier Circulation Study.

Supplemental traffic counts were taken at the Taylor Street/Carr Lot and the State Street/Capitol Plaza parking lot on Thursday, March 31, 2005. **Figure 3B** shows the existing 2005 PM peak hour traffic volumes in the study area.

Intersection Levels of Service

The intersection turning movement volumes developed for existing (2003) PM Design Hour conditions were used in combination with intersection control type (stop sign or traffic signal) and geometric characteristics to determine “Levels of Service” (LOS). LOS is the standard measure used to quantify the operational performance of highway facilities as perceived by the user. The Levels of Service A, B, C, D, E and F are the six possible LOS ratings; “A” indicates excellent conditions with free flow, “E” indicates intolerable conditions with unstable flow, and “F” indicates that demand exceeds capacity.

Table 3.4.1 summarizes qualitative differences between the LOS ratings.

Table 3.4.1
Qualitative Level-of-Service Descriptions

Level-of-Service	Traffic Operations
LOS A	Free flow conditions, vehicles are completely unimpeded, and minimal delay at intersections
LOS B	The ability to maneuver in a traffic stream is only slightly restricted and there are insignificant delays at intersections.
LOS C	Traffic flow is stable but the ability to maneuver and change lanes is more restricted than LOS B. Vehicles begin to back-up at intersections.
LOS D	A small increase in traffic may cause substantial increases in delay at intersections and decreases of travel speeds on road segments.
LOS E	Significant delays at intersections with road segment travel speeds at approximately 1/3 of the posted speed.
LOS F	Extremely slow travel speeds, high delays, and extensive vehicle back-ups at intersections

Source: Highway Capacity Manual, 2000 Edition, Transportation Research Board, Washington, D.C.

LOS for both signalized and stop-controlled intersections is measured in terms of average delay per vehicle. The delay, referred to as “control delay”, includes the time required to slow down when approaching an intersection, the time a vehicle is stopped, the time required for a line of vehicles (the queue) to move up to the intersection, and the time required to accelerate.

Table 3.4.2 presents the relationship between LOS and control delay as specified in the 2000 Edition of the Highway Capacity Manual (HCM). The level-of-service methodology as documented in the HCM is widely accepted in the transportation planning and traffic engineering field and by the Federal Highway Administration (FHWA).

Table 3.4.2
Intersection Level-of-Service Criteria (seconds)

LOS	Characteristics	Stop Controlled	Traffic Signal
A	Little or no delay	< 10	< 10
B	Short delays	> 10 and < 15	> 10 and < 20
C	Average delays	>15 and < 25	>20 and < 35
D	Long delays	> 25 and < 35	> 35 and < 55
E	Very Long delays	> 35 and < 50	> 55 and < 80
F	Extreme delays	> 50	> 80

Source: Highway Capacity Manual, 2000 Edition, Transportation Research Board, Washington, D.C.

There is almost universal agreement that levels of service A, B and C are acceptable and LOS F is not. Because level-of-service ratings attempt to measure how well a facility is operating as perceived by the driver, the acceptability of LOS D varies by location of the facility and the policies of state departments of transportation, and other municipal, county, and regional organizations involved in transportation planning. On rural highway facilities where speeds are often higher and drivers expect a higher level of mobility, LOS D may not be acceptable. On the other hand, in urban areas and activity centers where drivers expect and are accustomed to greater delays, an LOS D is often considered acceptable and is often wide spread. In some cases, LOS E may be acceptable in urban areas and activity centers.

For this study, the level-of-service analyses was conducted using the SYNCHRO software package. SYNCHRO software is used by transportation planners and engineers in municipal, county, and regional organizations to calculate the level-of-service at intersections. The methodology used in SYNCHRO is consistent with HCM procedures. The SYNCHRO software package allows the user to optimize traffic signal timing plans.

The SYNCHRO model was fine tuned and adjusted to represent existing operations in the study area based on field observations and input received by the City and CVRPC. Saturation flow rates were also adjusted at key intersections to reflect existing conditions. The Technical Reference Material contains data input and analysis related to use of the SYNCHRO Model.

Signalized Intersection Performance

Table 3.4.3 presents overall intersection levels of service and delay for signalized intersections during the PM peak hour under existing 2005 conditions.

**Table 3.4.3
Signalized Intersection Performance Measures,
Existing 2005 PM Conditions**

	2005 Existing Traffic
<i>Memorial Drive and Taylor Street</i>	
Intersection LOS	C(24.1)
<i>Memorial Drive and Main Street</i>	
Intersection LOS	F(84.0)
<i>State Street and Main Street</i>	
Intersection LOS	F(94.1)

Note: Delay measured in seconds per vehicle is shown in the parenthesis.
Source: Wilbur Smith Associates

Un-signalized Intersection Performance

Table 3.4.4 presents the results of the levels of service analysis for un-signalized intersections in the immediate vicinity of the immediate Study Area for the 2005 existing conditions.

**Table 3.4.4
Un-signalized Intersection Performance Measures
Existing 2005 Conditions**

Intersection	2005 Existing
<i>State Street and Gov. Davis Avenue/Taylor Ave.</i>	
Left turn from State Street EB	A(4.4)
Left turn from State Street WB	A(4.6)
Taylor Ave. NB	F(**)
Gov. Davis Avenue SB	F(196.0)
<i>Taylor Ave. and Carr Lot B</i>	

Intersection	2005 Existing
Carr Lot B WB	B(14.0)
Left turn from Taylor Street SB	A(0.0)
<i>Taylor Ave. and Carr Lot A</i>	
Carr Lot A WB	B(12.8)
Left turn from Taylor Ave. SB	A(0.1)
<i>Taylor Ave. and Capital Plaza Drive B</i>	
Capital Plaza Dr. B WB	B(14.3)
Left turn from Taylor Ave. SB	A(0.6)
<i>State Street and Capital Plaza Drive A</i>	
Left turn from State Street	A(1.0)
Capital Plaza Dr. A	C(16.6)
<i>State Street and Elm Street</i>	
Left turn from State Street EB	A(3.6)
Left turn from State Street WB	A(0.4)
60 State Street Parking NB	D(28.2)
Elm Street SB	D(29.7)
<i>Main Street and North Branch Drive/Pitkin Court</i>	
North Branch Parking Lot Drive. EB	F(52.2)
Pitkin Court WB	F(83.6)
Left turn from Main Street NB	A(9.6)
Left turn from Main Street SB	A(0.3)
<i>Main Street and Barre St./Parking Access</i>	
Parking Access EB	F(56.3)
Barre Street WB	F(303.6)
Left turn from Main Street NB	A(8.4)
Left turn from Main Street SB	A(9.9)

Note: Delay measured in seconds per vehicle is shown in the parenthesis.
 ** indicates high delay.

3.4.2 Impacts of the No-Build Alternative and the Proposed Action on Vehicular Circulation

Future 2010 No Build PM Peak Hour Volumes

The existing projected 2005 PM peak hour traffic volumes were further projected using a one percent per year growth factor to develop future 2010 No Build Peak Hour Volumes. **Figure 3C** shows the future 2010 No Build PM peak hour traffic volumes in the study area. The design year of 2010 was used selected because it was the year in which it is expected that the Transit Center will be fully operational.

Signalized Intersection Performance

Table 3.4.5 presents overall intersection levels of service and delay for all signalized intersections during the PM peak hour under existing 2005 conditions and the No-Build Alternative 2010 conditions respectively.

Table 3.4.5
Signalized Intersection Performance Measures,
Existing 2005 and Future No-Build 2010 PM Conditions

	2005	2010
	Existing Traffic	No-Build
<i>Memorial Drive and Taylor Street</i>		
Intersection LOS	C(24.1)	C(25.3)
<i>Memorial Drive and Main Street</i>		
Intersection LOS	F(84.0)	F(91.3)
<i>State Street and Main Street</i>		
Intersection LOS	F(94.1)	F(106.9)

Note: Delay measured in seconds per vehicle is shown in the parenthesis.

Source: Wilbur Smith Associates

Un-signalized Intersection Performance

Table 3.4.6 presents the results of the levels of service analysis for un-signalized intersections in the immediate vicinity of the immediate Study Area for existing and the No-Build Alternative for the year 2010.

Table 3.4.6
Un-signalized Intersection Performance Measures
Existing 2005 and Future No Build 2010 Conditions

Intersection	2005	2010
	Existing	No-Build
<i>State Street and Gov. Davis Avenue/Taylor Ave.</i>		
Left turn from State Street EB	A(4.4)	A(4.6)
Left turn from State Street WB	A(4.6)	A(4.8)
Taylor Ave. NB	F(**)	F(**)
Gov. Davis Avenue SB	F(196.0)	F(455.0)
<i>Taylor Ave. and Carr Lot B</i>		
Carr Lot B WB	B(14.0)	B(14.5)
Left turn from Taylor Street SB	A(0.0)	A(0.0)
<i>Taylor Ave. and Carr Lot A</i>		
Carr Lot A WB	B(12.8)	B(13.2)
Left turn from Taylor Ave. SB	A(0.1)	A(0.1)
<i>Taylor Ave. and Capital Plaza Drive B</i>		
Capital Plaza Dr. B WB	B(14.3)	B(14.9)
Left turn from Taylor Ave. SB	A(0.6)	A(0.7)
<i>State Street and Capital Plaza Drive A</i>		
Left turn from State Street	A(1.0)	A(1.2)
Capital Plaza Dr. A	C(16.6)	C(21.8)
<i>State Street and Elm Street</i>		
Left turn from State Street EB	A(3.6)	A(3.7)
Left turn from State Street WB	A(0.4)	A(0.4)

Intersection	2005	2010
	Existing	No-Build
60 State Street Parking NB	D(28.2)	D(32.7)
Elm Street SB	D(29.7)	E(37.8)
Main Street and North Branch Drive/Pitkin Court		
North Branch Parking Lot Drive. EB	F(52.2)	F(52.8)
Pitkin Court WB	F(83.6)	F(108.8)
Left turn from Main Street NB	A(9.6)	A(9.8)
Left turn from Main Street SB	A(0.3)	A(0.2)
Main Street and Barre St./Parking Access		
Parking Access EB	F(56.3)	F(95.0)
Barre Street WB	F(303.6)	F(440.8)
Left turn from Main Street NB	A(8.4)	A(8.5)
Left turn from Main Street SB	A(9.9)	B(10.2)

Note: Delay measured in seconds per vehicle is shown in the parenthesis.

** indicates high delay.

The Proposed Action - Future 2010 Build PM Peak Hour Volumes

Future Traffic Generation

Future 2010 Build PM peak hour traffic volumes were projected from existing (2003) volumes based on the following conditions:

- Reorganization of the Carr Lot's driveways on Taylor Street to create a one-way in lane close to the Taylor Street Bridge and a one-way out lane half way between the bridge and the railroad track serving 30 parking spaces and 8 buses during the peak PM Hour.
- Current users of the parking spaces on the Carr Lot will be relocated to the Capitol Plaza parking lot. (NOTE: There is a separate federal project with FHWA that has its own independent need and utility, a parking structure with its own Environmental Assessment.)
- Traffic generated by approximately 10,000 SF of office space and 5 residential units in the upper floors of the Transit Center will be generated at the Capitol Plaza parking lot.

Figure 3D shows the future 2010 Build PM peak hour traffic volumes.

Signalized Intersection Performance

Table 3.4.7 presents overall intersection levels of service and delay for signalized intersections during the PM peak hour under existing 2005 conditions and the future 2010 conditions respectively.

Table 3.4.7
Signalized Intersection Performance Measures,
Existing 2005 and Future 2010 PM Conditions

	2005 Existing Traffic	2010	
		No-Build	Build
<i>Memorial Drive and Taylor Street</i>			
Intersection LOS	C(24.1)	C(25.3)	C(25.9)
<i>Memorial Drive and Main Street</i>			
Intersection LOS	F(84.0)	F(91.3)	F(90.7)
<i>State Street and Main Street</i>			
Intersection LOS	F(94.1)	F(106.9)	F(110.7)

Note: Delay measured in seconds per vehicle is shown in the parenthesis.

Source: Wilbur Smith Associates

Un-signalized Intersection Performance

Table 3.4.8 presents the results of the levels of service analysis for all un-signalized intersections in the immediate vicinity of the immediate Study Area.

Table 3.4.8
Un-signalized Intersection Performance Measures
Existing 2005 and Future 2010 Conditions

	2005	2010
--	------	------

Intersection	Existing	No-Build	Build
<i>State Street and Gov. Davis Avenue/Taylor Ave.</i>			
Left turn from State Street EB	A(4.4)	A(4.6)	A(4.3)
Left turn from State Street WB	A(4.6)	A(4.8)	A(5.4)
Taylor Ave. NB	F(**)	F(**)	F(**)
Gov. Davis Avenue SB	F(196.0)	F(455.0)	F(348.3)
<i>Taylor Ave. and Carr Lot B</i>			
Carr Lot B WB	B(14.0)	B(14.5)	-
Left turn from Taylor Street SB	A(0.0)	A(0.0)	A(0.5)
<i>Taylor Ave. and Carr Lot A</i>			
Carr Lot A WB	B(12.8)	B(13.2)	B(12.3)
Left turn from Taylor Ave. SB	A(0.1)	A(0.1)	-
<i>Taylor Ave. and Capital Plaza Drive B</i>			
Capital Plaza Dr. B WB	B(14.3)	B(14.9)	C(17.2)
Left turn from Taylor Ave. SB	A(0.6)	A(0.7)	A(0.8)
<i>State Street and Capital Plaza Drive A</i>			
Left turn from State Street	A(1.0)	A(1.2)	A(1.1)
Capital Plaza Dr. A	C(16.6)	C(21.8)	C(23.7)
<i>State Street and Elm Street</i>			
Left turn from State Street EB	A(3.6)	A(3.7)	A(3.8)
Left turn from State Street WB	A(0.4)	A(0.4)	A(0.4)
60 State Street Parking NB	D(28.2)	D(32.7)	D(34.3)
Elm Street SB	D(29.7)	E(37.8)	E(39.9)
<i>Main Street and North Branch Drive/Pitkin Court</i>			
North Branch Parking Lot Drive. EB	F(52.2)	F(52.8)	F(52.8)
Pitkin Court WB	F(83.6)	F(108.8)	F(107.8)
Left turn from Main Street NB	A(9.6)	A(9.8)	A(9.8)
Left turn from Main Street SB	A(0.3)	A(0.2)	A(0.2)
<i>Main Street and Barre St./Parking Access</i>			
Parking Access EB	F(56.3)	F(95.0)	F(95.0)

Intersection	2005	2010	
	Existing	No-Build	Build
Barre Street WB	F(303.6)	F(440.8)	F(440.8)
Left turn from Main Street NB	A(8.4)	A(8.5)	A(8.5)
Left turn from Main Street SB	A(9.9)	B(10.2)	B(10.2)

Note: Delay measured in seconds per vehicle is shown in the parenthesis. ** indicates high delay.

3.4.3 Mitigation

The City is considering improvement to address the expected decline in traffic circulation projected for the future No-Build condition. Because impacts associated with the development of the Transit Center are not substantially different than the future conditions without the development, the proposed improvement should also be sufficient to address the traffic impacts from the Proposed Action.

No mitigation is required.

3.5 Water Quality Impacts

3.5.1 Existing Water Quality

At its confluence with the North Branch River, the Winooski River drains approximately 390 square miles. The North Branch has a watershed area of approximately 90 square miles at the same location. The rivers and their shorelines provide valuable resources for wildlife and waterfowl, recreational and agricultural activities, and fisheries, forestry and plant habitats. The State of Vermont has classified both the Winooski and the North Branch River as Class B waters, which means that they are suitable for aquatic biota, fish and wildlife. The Class B designation also indicates that the rivers are suitable for irrigation, industrial uses, and recreation activities that do not pose the probability of ingesting the water.

The Winooski River upstream of the Montpelier Waste Water Treatment Facility discharge and the lowest one mile of the North Branch are each classified by the US EPA under Section 303(d) of the Clean Water Act as "impaired" water due to pathogen concentrations, specifically *e coli*. No Total Maximum Daily Loads (TMDLs) have been established for either river.

The Winooski River and the North Branch River represent important water resources for fisheries, wildlife habitat, and recreational activities. These rivers flow through and adjacent

to the Downtown area and are also important cultural resources and defining landscape features.

3.5.2 Impacts of the No-Build Alternative and the Proposed Action on Water Quality

The No-Build Alternative

There will be no change to current water quality or the factors affecting it from the Carr Lot with the No-Build Alternative.

The Proposed Action

This project is not anticipated to result in a permanent impact on water quality, as construction of the various project features does not require work within or below the tops of the streambanks of the Winooski or North Branch Rivers.

Stormwater discharge from the project area, which includes approximately 0.4 acres of redeveloped area, will be discharged into the Winooski and North Branch Rivers. The amount of redeveloped impervious area includes approximately 5,000 square feet for the transit center and 15,000 square feet of associated bus and car parking areas. The project limits of the Proposed Action are located within areas that are currently developed with impervious surfaces, as defined by ANR for stormwater runoff calculation purposes. The Proposed Action also includes converting the eastern half of the Carr lot from its current use as a gravel parking area to greenspace (a pervious surface). It also includes the construction of a shared use path and pedestrian bridge over the North Branch River. The shared use path will be built on land that is already impervious, but the pedestrian bridge and approaches will add approximately 2,000 SF of impervious surface to the area. Overall, implementation of the Proposed Action will actually result in a net decrease in impervious surface area, as defined for stormwater runoff purposes.

A stormwater discharge permit from the Vermont Agency of Natural Resources (VANR) will not be required for this project, as the amount of impervious area falls below the threshold requiring a permit. Because the impaired nature of the Winooski and North Branch Rivers relates to *e coli* and not pollutants carried by stormwater, and because the Transit Center will be served by the City's sewer system and not have an on-site septic system, no special permitting is required due to the impaired nature of the water. However, if ANR issues the NPDES Phase II permit program by the time the Transit Center is going to construction, a permit under this program, which covers projects that involve 1-5 acres of earth disturbance, may be required.

Project water quality impacts are generally associated with construction related activities. During construction, stormwater from the project areas could potentially discharge transported sediment from the work areas into the receiving waters. However, this impact on water quality is likely to be minimal due to plans to include a comprehensive erosion control plan in place during the limited time frame for construction of the structure.

The water quality of the long term stormwater runoff after construction is complete will be addressed through a series of on-site natural treatment systems. Stormwater will be passed in sheetflow over vegetation or flow through grassed swales or infiltration trenches prior to being discharged to the Rivers. Stormwater will be dispersed prior to passing over the river bank or will be conveyed in a well defined, lined channel to the water to eliminate the erosion of the bank.

3.5.3 Mitigation

No mitigation is required.

3.6 Floodplains

3.6.1 Existing Floodplain Areas and Historic Flood Events

With the Winooski River and North Branch River running adjacent to and through Montpelier, a majority of the downtown area is located within the 100-year floodplain of these rivers. There are a series of dams along the Winooski and North Branch Rivers that provide water level control, which help minimize the potential for flood impacts within and around the project area. Even so, here have been three sizeable floods that have occurred in Montpelier within the last century, the most recent being in 1992 after a rapid spring thaw caused ice jams.

In 1998 the City adopted the Montpelier Flood Hazard Mitigation Plan, which was developed in coordination with the Federal Emergency Management Agency (FEMA). The mitigation plans sets forth recommendations for minimizing and avoiding impacts associated with potential future flood events. The City has also implemented a zoning overlay district, the Flood Plain District.

The entire Carr Lot property falls within the identified 100-year floodplain. The elevation of the floodplain in the project area is approximately 526 feet above mean sea level. **Figure 3E** shows the extent of the floodplain in the vicinity of the Carr Lot.

3.6.2 Impacts of the No-Build Alternative and the Proposed Action on Floodplain

The No-Build Alternative

The No-Build Alternative will have no impact on the current flood conditions in Montpelier.

The Proposed Action

Floodplain Impacts

The Proposed Action, which is being sponsored by the City, is consistent with the existing uses in the project area and conforms to the identified development areas shown in the City's Master Plan. Even though this is a City project, the Proposed Action, including the construction of the pedestrian bridge over the North Branch River, will still require a local permit for development in the Flood Plain District. The footprint of the enclosed transit and welcome center will result in a 5,000 SF impact on the floodplain. It is anticipated that the proposed bike path bridge will be designed to pass a 100- year storm, but the final design of the bridge will be coordinated with the ANR Floodplain section.

Implementation of the Proposed Action and the resulting minimal loss of flood storage are not expected to create an increased flooding risk or detrimentally effect the existing floodplain area.

Floodway Impacts

The proposed bike path bridge will span the North Branch River adjacent to the existing rail bridge. Design of the proposed bridge specifies that the bridge abutments will be located above the top of the stream bank, and that the lowest elevation of the new bridge will be at or above the elevation of the adjacent rail bridge. As such, the proposed bike path bridge is not anticipated to have an impact on the floodway of the North Branch.

Floodplain Coordination

The proposed action will result in a very minimal reduction in the amount of floodplain storage and is being coordinated with the ANR Floodplain section.

3.6.3 Mitigation

No mitigation is required.

3.7 Aesthetics and Visual Resources

3.7.1 Existing Aesthetics and Views

The Carr Lot is most visible from Memorial Drive, west of Taylor Street. Motorists, bicyclist and pedestrians have a view of the site across the Winooski River. The views begin as viewers pass the Credit Union Building on the north side of Memorial Drive and last until just west of the Taylor Street intersection. The view becomes increasingly filtered through the Taylor Street Bridge closer to the intersection. The views of the Carr Lot are part of a larger panorama of the rear of the buildings along State Street. Most of the buildings are constructed of red or terracotta colored brick and most have white or grey trim work. The buildings are backed by Hubbard Park Hill and the hills northeast of the downtown. **Figure 3F** shows a representative view from Memorial Drive.

Past Taylor Street, motorists' views of the Carr Lot are intermittent traveling in either direction. Glimpses of the site are possible between the three buildings and the vegetation growing along the southern bank of the Winooski River.

Bicyclists and pedestrians that are using the Winooski West Shared Use Path heading east look more directly at the site, across Taylor Street. In each view, viewers currently see either the trailer on the site, serving at the Vermont Transit Lines bus center, or the automobiles that may be parked on the site. **Figure 3Fa** also shows a representative view of the Carr Lot from the north side of the Winooski West Shared Use path bridge over the Winooski River. Because the site is open, viewers mostly look over the site to the buildings beyond it to the north, which mostly include the back side of the Capitol Plaza and Christ Church and its surrounding vegetation.

3.7.2 Impacts of the No-Build Alternative and the Proposed Action on Aesthetics and Views

The No Build Alternative

There will be no changes to the existing views with the No Action Alternative.

The Proposed Action

Motorists will see the Transit Center in front of the Capitol Plaza building and behind the trusses of the Taylor Street Bridge as they travel east on Memorial Drive. **Figure 3F** shows a simulated view of a four story structure in the location of the proposed Transit Center as seen from Memorial Drive. The structure will be at or near the tops of the hills surrounding

the downtown. If the building is constructed of red or terracotta colored brick, it should blend well with the other buildings and add to the overall dynamics of the urban view. Motorists coming north on Taylor Street across the Taylor Street Bridge will see more of the building as they approach State Street. The structure will block views of the lower, western portions of the Capitol Plaza. It will also continue and strengthen the street edge created by the two story Capitol Plaza structure.

Development of the park is expected to have a positive impacts on current views of the site from adjacent properties, because it will be replacing a view of gravel surface and/or automobiles with a view of greenery and, possibly, a few well designed park structures. Since the structure in the park will not exceed 15 feet in height, they should not interrupt views across this portion of the site.

While the shared use path will not negatively impact the views of the site, the new pedestrian/bicycle bridge over the North Branch River will modify the current views of and from the site. The bridge is anticipated to be a prefabricated bridge similar in appearance to the pedestrian/bicycle bridge over the Winooski River to the south of the Taylor Street Bridge. As such, it will be in harmony with the existing structures in the vicinity. Because it will be some form of truss bridge, is will also be in harmony with the adjacent, historic railroad bridge.

3.7.3 Mitigation

No mitigation is required.

3.8 Cultural Resources

3.8.1 Overview

The proposed project is an undertaking by the Federal Transit Administration. Section 106 of the National Historic Preservation Act (1966) requires that Federal agencies take into account the effects of their undertakings on historic properties. Procedures for complying with Section 106 are set forth in the Advisory Council on Historic Preservation's (ACHP) regulations "Protection of Historic Properties" [36 CFR Part 800, 2004]. The regulations require that the federal agency identify historic properties in consultation with the ACHP and the State Historic Preservation Officer (SHPO). Historic properties are defined as cultural resources that are on or eligible for listing in the National Register of Historic Places. To comply with Section 106, the potential effects of the project on these resources must be evaluated. If adverse effects are identified, the federal agency must further consult with the ACHP and the SHPO to explore alternatives to avoid, minimize, or mitigate the adverse effect.

Section 4(f) of the Department of Transportation Act of 1966 as amended [23 CFR Part 771.135] sets forth that USDOT agencies may not approve the use of land from any significant historic site, as well as public recreational areas, or wildlife refuges unless there is no feasible and prudent alternative and the action includes planning to minimize all harm to the resource(s). **Section 4.0, Sections 4(f) and 6(f) Evaluations** provides a discussion of Section 4(f) impacts and **Appendix E** contains a comprehensive back-up report evaluating Sections 106 and 4(f).

Under Section 106, the area(s) of potential effect (APE) on historic properties is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties.” [36 CFR Part 800.16 (d)]. It is within the APE of a particular undertaking that an agency is responsible for identifying historic properties under Section 106 [36 CFR Part 800.4(a)(1)]. **Figure 3G** outlines the APE for this project.

3.8.2 Existing Historic and Archeological Resources

The National Register of Historic Places (NHRP) was established in 1966 as a way to document America’s significant historic resources. Eligibility for listing is determined by criteria including architectural or engineering merit; association with important historic events, trends or patterns; the association with significant persons or groups in the historic past, and the potential to yield important information about history or pre-history. The level of a property’s significance can be national, State or local.

In order to identify cultural resources in the project area, buildings and structures above ground as well as archeological potential below ground were considered. Research was conducted at the Vermont Division for Historic Preservation (VDHP) including:

- Examination of the Vermont Archeological Inventory (VAI) for sites located in or adjacent to the project area;
- Examination of the City files;
- Examination of the NRHP for historic properties or districts located in or adjacent to the project area that are listed on, or proposed for listing on, the National Register; and
- Examination of the Vermont Historic Structure Survey (VHSS) for historic structures listed by the State in or adjacent to the project area, and reference to *Burial Grounds of Vermont* for the existence of any cemeteries in or adjacent to the project area.

VDHP’s “Environmental Predictive Model for Locating Archeological Sites” was completed for the project area and is included in **Appendix E**. Finally, field visits were conducted by both an archeologist and architectural historian to inventory, describe, and evaluate the resources.

Documentary research shows that a variety of structures and businesses have been located in or adjacent to the project area since the early history of the City. They included residences in the early 19th century and increasingly more commercial and institutional businesses as the area grew more urban in the later 19th and early 20th centuries. The main streets contained hotels, stores, a church, the town hall, post office and a courthouse while the rear lots had a great deal of livery – both horse-based and later automotive, storage, and a large variety of light manufacturing facilities. The historic streetscapes of State and Main Streets evolved over time from a mix of detached buildings to a much denser urban area of mostly attached commercial blocks. These were in place by 1915 with a few exceptions. By the 1940s, automobile related uses slowly phased out railroad and other functions in the rear areas and a few of these structures remain. The banks of the Winooski River were heavily developed with 19th-century industrial uses stemming originally from a dam at Main Street. The south bank was lined with machine and woodworking shops and other industrial uses throughout the late 19th and early 20th centuries. Most of these buildings survived the 1927 flood but all have been removed more recently. **Table 3.8.1** outlines the features identified on the maps and photographs that are discussed in more detail in **Appendix E**.

Table 3.8.1
Historic Map/Photo Documented Structures on Carr Lot

Map/Photo	Use of Carr Lot
1821 Image of Montpelier	Structures
1824 Whitelaw engraving	?
1853 Presdee & Edwards	E. P. Jewett
1858 Walling	E. P. Jewett
1860 photos	Riprap bank, preparation for building? Filling ongoing?
Late 1860s photo	Large gabled building
1873-1875 photo	Not shown
1873 Beers	A. C. Dewey & Co., E. P. J., blacksmith, RR alignment
c. 1874 photos	A. C. Dewey (?), black smith shop, RR alignment
c. 1880 photo	Marble yard, grain warehouse, riprap, RR alignment, low area to east
1884 Birdseye	Appears same as Beers
1884 Sanborn	Marble yard, grain, flour, salt, lime warehouse, RR car house, RR alignment
1889 Sanborn	Marble yard, agricultural implements, RR car house, RR alignment
1890 photo	A. C. Dewey structure, RR alignment
1894 Sanborn	Marble shop, agricultural implements, RR alignment
1899 Sanborn	Marble shop, agricultural implements, RR car house, RR alignment, water line
1905 Sanborn	Stone cutting, grain store house, RR car house, RR alignment, water line

Map/Photo	Use of Carr Lot
c. 1909 photos	Stone cutting, grain store house, RR car house, RR alignment, filling to level
1909 Sanborn	D. K. Lilley Stone Cutting, grain store house, RR car house, RR alignment, water line
1915 Sanborn	Granite works, store house, Montpelier & Wells River RR Car House, RR alignment, water line
1923 photo	Not shown
Post-1925 photo	Not shown
1925 Sanborn	Star Granite Co., store house, storage, RR alignment, water line
1927 photos (flood)	Granite Co., RR car shed (storage?), RR alignment, remains of auto garage
c. 1929 photo	Granite Co., store houses, RR alignment, stone bridge abutments
1940 aerial photo	Granite Co., small structures along river, RR alignment
1945 Sanborn	Junk storage, scrap metal, RR alignment, unident. shed
1968 aerial photo	Small gabled building, RR alignment

Source: Hartgen Archeological Associates, Inc. 2005 based on cited maps and photographs.

Currently, the Carr Lot is a gravel parking lot with a small office trailer for a bus station. The Carr Lot is defined by the River, the railroad tracks, Taylor Street, and the North Branch; is fairly level; and used for parking and the bus station. There is a stone retaining wall and riprap along the river bank. There is a 19th-century stone railroad bridge abutment at the east end of the Carr Lot. There are no historic features visible on the surface of the Carr Lot site. The extensive use and periodic filling of the property during the 19th and 20th centuries has buried historic deposits and features under the parking lot and removed all of the structures that once stood on the property with the exception of the stone bridge abutment at the eastern end of the parcel and the railroad tracks and bridge on the adjacent alignment to the north. Soil cores were not possible during the site visit due to the gravel fill used across the property.

As **Figure 3G** shows, the entire APE for this project is bounded by State Street to the north, Main Street to the east, Memorial Drive to the south, and just west of Taylor Street to the west. The APE is entirely within the boundaries of the Montpelier Historic District which was listed on the National Register of Historic Places on November 3, 1978 (Dumville 1978) and amended on April 19, 1989. The APE for archeological resources is limited to the area where ground disturbance may occur. In this case, it is the Carr lot on Taylor Street including its banks along the Winooski and North Branch rivers.

For the purposes of the Section 106 process which must evaluate visual effects of new construction on the historic character of the surrounding historic district, the APE for historic resources includes those buildings from which the proposed new structure can be seen. **Figure 3G** shows buildings within the historic district, and **Table 3.7.2** is an inventory of the properties within the district, including both contributing and noncontributing structures. In all, 50 properties are within the APE. **Appendix E** contains additional detail.

The proposed new transit center will be in the foreground of a very common view. **Figure 3F** shows the approximate size, shape, height, and location of the structure to give viewers a sense in **Section 3.7, Aesthetics and Visual Resources**, shows a very preliminary concept to give viewers a sense of the general size of the building (brown box) as seen relative to other landmarks. The specific architectural style of the facility will be determined in later stages of design, based on the parameters discussed in **Section 3.7, Aesthetics and Visual Resources**. The design of the structure will also be reviewed by the City's Design Review Board.

The primary entrance to the City is by Memorial Drive and across the several bridges over the Winooski. The views of the historic district from here vary as one travels along but primarily include the backs of larger, taller structures that face State Street such as the Motor Vehicle Department Building at 120 State Street, the former insurance company buildings (110 & 116 State Street), the Episcopal Church, and Capitol Plaza Hotel and Conference Center as well as the fronts of the taller structures on the north side of State Street such as the State House, Pavilion Building, and the Washington County Courthouse tower. All of these have a backdrop of other structures on the hill rising to the north. Looking toward Main Street, from the Carr Lot the view includes the backs of the four story commercial blocks lining the west side of Main as well as the tall clock tower of the Montpelier City Hall.

Table 3.8.2
List of Properties in Historic District and Assessment of Effect (Page 1 of 2)

Property #	Address	Historic Name	Date(s)	Orig. Hist Dist. Status	Current Eligibility	Potential Effects?	Could Avoid Adverse Eff.
49	108 State St.	Mobil Gas Station	c.1936 & 1968	NC	NC	NPE	N/A
50	84-100 State St.	Montpelier Tavern Motor Inn & Tavern Towers	1932, c. 1968, c.1972	NC	C	PAE	Yes
51	? (behind 96-100 State St)	Vermont Hall/ Montpelier Tavern Motor Inn garage	c. 1932	NC	C	PAE	Yes
52	1 Taylor St.	Carr's Taylor Street Junkyard <i>Replaced with Bus trailer</i>	c. 1850, c. 2000	NC	D NC	NPE	N/A
53	76 State St.		c. 1970	NC	D/NC	NPE	N/A
54	64 State St.	Christ Episcopal Church	1868, 1938	C	C	PAE	Yes
55	58½ State St.		c.1910	C	C	PAE	Yes
56	54 State St.		c. 1970s	NC	D	NPE	N/A
57	60-62 State St.		c.1870	C	D/NC	N/A	N/A
58	52-56 State St.	Holmes Block	c. 1870	C	C	NAE	Yes
59	50 State St.	Goodrich Block	1930	C	C	NAE	Yes
60	44-48 State St.	Deavitt Block	1930	C	C	NAE	Yes
61	34-42 State St.	Rialto Block	1915	C	C	NAE	Yes
62	20-32 State St.	Union Block	1915	C	C	NAE	Yes
63	16-18 State St.	Heaton Block	1915	C	C	NAE	Yes
64	8-14 State St.	Hubbard Block	1875	C	C	NAE	Yes
65	2-6 State St.		c.1826, 1977	C	C	NAE	Yes
66	72 ½ Main St.		c. 1961	NC	NC	NPE	N/A
67	68-70 Main St.		c.1820?	C	C	NAE	Yes
68	66 Main St.		c. 1840?	C	D/NC	NPE	N/A
69	64 Main St.		1875	C	C	NAE	N/A
70	60 Main St.	Sabins Block	1875	C	C	NAE	N/A
71	52-54 Main St.	Bruce Block	1875	C	C	NAE	N/A
72	32-50 Main St.	French Block	1875	C	C	NAE	N/A
73	28-30 Main St.		c. 1895	C	C	NAE	N/A
74	22-26 Main St.	Bacon Block	c. 1875	C	C	NAE	N/A
75	16-20 Main St.	Tomasi Block	1907	C	D/NC	NPE	n/a

Table 3.8.2
List of Properties in Historic District and Assessment of Effect (Page 2 of 2)

Property #	Address	Historic Name	Date(s)	Orig. Hist Dist. Status	Current Eligibility	Potential Effects?	Could Avoid Adverse Eff.
76	12 Main St.	Gas Station <i>Replaced with M & M Beverage</i>	20 th c., c. 1980	NC n/a	D NC	NPE	n/a
77	12 ½ Main St.		c. 1970s?	NC	D/NC	NPE	n/a
78	10 Main Street	Power Generating Station <i>Replaced with Office Building</i>	20 th c. c. 1990	NC n/a	D NC	NPE	n/a
79	2 (or 4?) Main St.	Grand Union/Shaws	20 th c.	NC	NC	NPE	n/a
195	65 State Street	Washington County Courthouse	1844, 1880	C	C	NAE	n/a
196	87 State Street	Federal Building	1963	NC	NC	NPE	n/a
197	89 State Street	Reed House	c. 1810	C	C	NAE	n/a
459	5 Memorial Dr.	Capital City Exxon	c. 1970	NC	NC	NPE	n/a
460	49 Memorial Dr.	Bond Auto Supply	c. 1970	NC	NC	NPE	n/a
461	Memorial Dr.	Bob's Sunoco	c. 1970	NC	NC	NPE	n/a
465	RR Tracks & Winooski River	Railroad Bridge over Winooski River	c. 1910	C	C	PAE	Yes
466	Taylor St. & Winooski River	Taylor Street Bridge	1929	C	C	PAE	Yes
467	Main St. & Winooski River	Main Street Bridge over Winooski River	1977	NC	NC	NPE	n/a
468	RR tracks & N. Branch	Railroad Bridge over North Branch	1905	C	C	PAE	Yes
482	Across tracks from #483	State Boiler Plant	unknown	NC	NC	NPE	n/a
483	In State Parking Lot behind #s484-487	Storage Building	unknown	NC	NC	NPE	n/a
484	120 State Street	Vermont Department of Motor Vehicles	1949	C	C	PAE	Yes
485	118 State Street	Fifield Carriage House	c. 1860s	C	C	PAE	Yes
486	116 State Street	National Life Insurance Company Office	1891	C	C	PAE	Yes
487	112 State Street	Chittenden Trust Co. Drive-in <i>Replaced with Chittenden Trust Co. Offices</i>	c. 1960s c. 1995	NC NC	D NC	NPE	n/a
488	110 State Street	Vermont Mutual Insurance Co. Office	1870	C	C	PAE	Yes
489	109 State Street	Pavilion Hotel	1970 reconstr.	C	C	PAE	Yes

KEY: C=Contributing, NC=Not Contributing, D=Demolished, NPE=No Potential Effect, NAE=No Adverse Effect, PAE=Potential Adverse Effect

3.8.3 Impacts of the No Build Alternative and the Proposed Action on Cultural Resources

The No Build Alternative

The No Build alternative will create no new impacts to cultural resources.

The Proposed Action

Impacts to cultural resources protected under Section 106 would involve both archeological resources and standing historic structures. On behalf of the federal agencies, the consultants have recommended a determination of no adverse effect. The SHPO has concurred with this determination

The aspects of the proposed action that the SHPO considered that may affect cultural resources include:

- Subsurface excavation for foundations, utility lines, parking lot grading, and other ground disturbance;
- Visual effects to the historic district that change the character of views from and of historic structures;
- The installation of the shared use path bridge; and
- Changes in use of historic structures related to increased traffic flow.

Potential impacts to archeological deposits may include subsurface excavation and disturbance to visible retaining walls and bridge abutments. Some of the historic structures that were once in the project area such as small sheds and stables were likely to lack deep cellars or foundations. Other structures on the property, however, are likely to have had more substantial foundations or other associated features that remain intact under the parking lots. Structures such as the granite shed and railroad car houses may be represented in the ground by substantial foundation or other remains. More ephemeral structures such as early 19th-century wells, privies, and storage sheds may be intact beneath late 19th-century fill. In addition, historic and pre-contact living surfaces, storage pits, and other features may remain intact in the project area. Disturbances to these resources would be limited to the top three to four feet of soil on the site for everywhere on the site except for the actual building site, which will need deeper excavation to be constructed.

In general, the proposed project will not involve the alteration or demolition of historic structures and so will not have direct effects on historic resources. The potential effects

would largely be the indirect visual effects of new construction within a historic district. The site is fairly exposed from more open parts of the district on the south and west which form the gateway to the City despite having a lot of non-contributing properties. Design will be the key to making new construction compatible with the surrounding historic district character. Therefore, the City will ensure that the new construction will meet the Secretary of the Interior's Standards for Historic Preservation Projects. Distance and intervening vegetation will further eliminate adverse effect to properties in the vicinity of the North Branch. See **Appendix E** for more specific details.

The proposed building site is open and undeveloped. However, historically it has been heavily used and developed with many types of utility structures. Many of the City's livery and transportation services were located in this area and clearly the views from Taylor Street and from across the Winooski River were formerly much denser and more urban than they are now as a c. 1880 view in **Appendix E** demonstrates. The industrial and service element of the downtown areas near the rivers and railroad is no longer very present, though as late as 1945, it was still very much in evidence. Introducing new buildings into these areas, designed compatibly and in accordance with the Secretary of the Interior's Standards for Historic Preservation Projects, can restore some of the urban density and revive the tradition of transportation related infrastructure in the heart of Montpelier.

More specifically, the historic structures in the vicinity of the Carr Lot include the two large life insurance company buildings (HD numbers 488 & 486) , 120 State Street (HD number 484), the Montpelier Tavern Hotel (now Capitol Plaza, HD number 50), and the Pavilion Building (HD number 489), all of which are tall, 3, 4, or 5 story buildings. (The Pavilion building was torn down and rebuilt in the 1970s as a complete reproduction of the original hotel.)

The proposed construction of the Montpelier Multi-Modal Transit & Welcome Center in the Carr Lot will be a four story multi-use structure sited in a traditional relationship with the street. The adjacent surface parking will be on the interior of the lot where most of it currently is. Based on the location and height of the Transit Center, the rear of some historic buildings will be screened from some views by the new construction but these are not the views of primary historic facades. If designed appropriately, the construction of a new building on the Carr Lot could be an asset to the historic character of the area by filling in recent open spaces with a new structure recreating some of the lost density. It should be noted that construction on the Carr Lot will have to go through the City's design review process, which includes criteria dealing with historic compatibility.

The previous railroad sheds, large freight and passenger depots, and other storage or light manufacturing facilities on the site have typically been smaller and shorter structures. New construction of the Transit Center will use traditional materials and consider varied massing to avoid the potentially incompatible visual effect of a large monolithic rectangle.

The construction of the shared use path bridge will introduce a new structure adjacent to the existing railroad truss bridge. The new bridge will be similar in nature to another shared use path bridge just to the south of the Carr Lot, also in the Historic District. Because the bridge will be of similar material and structure style as the existing bridge, smaller in size, and similar to another bridge already in use in the Historic District no adverse impacts are anticipated.

There should not be negative effects from traffic pattern changes because of the proposed action. The traffic studies have shown that Taylor Street handles a heavy volume of traffic at present and will continue to have heavy traffic regardless of the construction. The proposed project should not have an appreciable effect on the use of the adjacent historic properties in the district, including the Taylor Street Bridge, due to traffic flow and may improve some of the congested patterns by concentrating transportation services.

3.8.4 Mitigation Measures for Impacts on Cultural Resources

No mitigation measures to the potential adverse effect of the construction of the Transit Center on above ground historic resources are considered necessary. The use of compatible, traditional materials; varied massing; appropriate fenestration; and designing to meet the Secretary of the Interior's Standards for Rehabilitation are part of the proposed action., Additional, the design will be subject to public review as part of the City's design review process.

The construction of the parking area, park and share use path is only expected to disturb the top three to four feet of the site, almost all of which has been previously disturbed. The construction of the Transit Center building itself could impact underground archeological deposits. in order to mitigate the impact, the City will conduct a site reconnaissance (Phase I) and, if needed, a site evaluation (Phase II) field investigations to determine the presence of National Register eligible (NRE) properties in the project APE. If archeological deposits are identified, mitigation of effects to NRE archeological properties will entail data retrieval excavation (Phase III) in areas of NRE properties disturbed by the undertaking. As described by the VDHP guidelines, the goals of mitigation excavations will be to:

- Recover the maximum significant cultural, environmental, methodological and interpretive information and values from the site before the site is destroyed in whole or in part:
- Meet the objectives of the research design: and
- Provide a high level of public education and outreach to ensure that the proposed destruction of the site provides maximum benefit to a wide audience (VDHP 2002).

These goals will be met through the collaboration between the archeologist, the project sponsor, and the VDHP to determine the scope of work for the data retrieval investigations,

the conduct of the proposed excavations, and reporting of the results. Given the developed nature of the project area, the methodology of investigation will include backhoe trenching to gain access through the dense fill deposits to undisturbed levels below in the areas to be disturbed so deep. If sites are located and it is determined they should be subject to data retrieval, other more detailed methodologies will be employed such as stripping of extensive areas of fill and hand excavation of units in trenches, among other methods.

In those areas of the site where deep excavation is not going to happen as part of the construction process, if resources are located, mitigation below the required excavation levels will consist of leaving the resources in place for future excavation and examination.

The objective of the comment period on this EA, as it relates to the Section 106 review, is to allow the public a chance to comment on the recommended determination of no adverse effect.

3.9 Hazardous Material

3.9.1 Existing Documentation of Hazardous Materials in the Study Area

Review of Databases

Local, State and Federal databases were reviewed to identify the location(s) of known hazardous waste sites in the project vicinity. The following documents the results of this review.

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), the National Priority List (NPL), the Resource Conservation and Recovery Act (RCRA), and the Transportation Storage and Disposal List (TSD) were reviewed. No sites were identified that would likely impact the project.

The Vermont Agency of Natural Resources Waste Management Division (ANR WMD) List of Hazardous Waste sites was reviewed. Twenty eight hazardous wastes sites are located within ½ mile of the Carr Lot, as **Figure 3H** shows. Of these 28 sites, six were identified with the highest potential impact to the proposed project as **Figure 3I** shows. Included in these six is the Carr Lot itself.

Site # 200234024 Carr and Sons (former)

The extent of contamination at the Carr Lot has been documented in the *August 2002 Targeted Brownfields Assessment Report, Carr Lot Property, Montpelier, Vermont*, a *1991 Tank Pull Inspection*, and a *1991 Phase I Environmental Site Assessment*. The site has previously been used as a marble yard/works, a train depot, a car house (for train maintenance), an agriculture warehouse, a stone mason's shop, a scrap metal salvage yard, and most recently a parking lot and bus depot. According to State records, there are currently no underground storage tanks located at the site. At least one 275-gallon above-ground storage tank and one 750-gallon underground storage tank were previously located on the site. Both tanks have since been removed.

According to the *Brownfields Assessment Report*, contaminants identified in site soils in excess of the Region IX Preliminary Remediation Goals (PRGs) include PCBs, petroleum hydrocarbons, PAHs, and metals, specifically arsenic, chromium, iron and lead. Contaminants observed in groundwater at the site above Vermont Groundwater Enforcement standards include volatile organic compounds (VOCs), tetrachloroethene (PCE), trichloroethene (TCE), and metals, specifically iron, manganese, and sodium.

Soil contamination was found site-wide, however the most elevated concentrations were detected in samples from the center portion of the site. Contaminants were observed in all three monitoring wells on-site, however, metal concentrations were elevated more in samples from the eastern edge of the property, while TCE and PCE concentrations were elevated in samples from the western side of the property. It is possible that some of the groundwater contamination is from an off-site source, specifically the Capitol Plaza site. Groundwater flow direction at the Carr Lot site has been observed as flowing to the northwest. However, flow is influenced by precipitation, snow melt, and may be hydraulically connected to the Winooski River.

Site #921239 Capitol Plaza

Capitol Plaza has been operated as a hotel since the late 1800s and is located across the railroad tracks to the north of the Carr Lot site. Hazardous waste issues reported at this site include asbestos-containing materials and petroleum and chlorinated solvents found in soil and groundwater. Several investigations were completed at this site from 1992 through 2001. Initially, lead, petroleum compounds, PCE and TCE were found at levels exceeding the Vermont Groundwater Enforcement Standards (VGES). More recent groundwater sampling revealed the continued presence of chlorinated solvents, although at decreased levels, below the VGES. Currently, groundwater at the site is being monitored every two years, with the next sampling proposed for Summer 2005. General groundwater flow direction has been determined to be towards the west, but locally influenced by the North Branch and Winooski Rivers.

Site # 921277 Capitol Mobil

This gasoline station is located north of the Carr Lot site and east of the Capitol Plaza site. There have reportedly been several petroleum releases to the soil and groundwater from leaking underground storage tanks at this facility. Investigations from 1992 through 1999 determined that petroleum compounds were present in soils and groundwater at the site, in addition free-phase product was observed in several of the groundwater monitoring wells. Petroleum compounds including benzene, ethylbenzene, toluene, xylene (BETX) and methyl-tert-butyl ether (MTBE) have continued to be observed in groundwater at the site, as is separate phase product. Currently, the VT DEC Sites Management Section has approved passive free product recovery and continued monitoring at the site. Groundwater flow direction at this site was determined to be to the southwest and southeast.

Site # 20002761 52 State Street

This spill site was instituted as a result of an underground storage tank removal, completed in 2000, from the parking area behind 52 State Street. Petroleum contaminated soils were found during the tank excavation and removed, clean soil was backfilled into the excavation. The VT DEC Sites Management Section approved a "Sites Management Activity Complete" (SMAC) designation for the site, and no further action is required.

Site # 941629 Senwright Pharmacy

This site was identified as a result of petroleum contamination found in soils during the removal of an underground storage tank in 1994. Contaminated soil was backfilled in the excavation to limit disturbance, due to the proximity of the North Branch River. No additional work has been completed and the Vermont Department of Environmental Conservation (VT DEC) Sites Management Section is pursuing options for investigation and remediation.

Field Inspection

The Carr Lot was inspected for visible indications of contamination, potential risks, and/or dumping. The Carr site is covered with six inches of grinding material and is currently used as a parking lot. Monitoring wells are evident on the site.

3.9.2 Impacts of Contaminated Sites on the Proposed Action

General

The soil and groundwater contamination on the Carr Lot will not preclude the construction of the Transit Center. The construction of the Transit Center, however, will be impacted by the presence of the soil and groundwater contamination. These impacts will vary based on

the work proposed for the specific areas of the site, levels of the contamination at the time of construction, and approval of acceptable remediation levels by VTDEC SMS.

Contamination has been identified in both soil and groundwater at the Carr Lot site. Contaminants in the soil include: PCB's, petroleum hydrocarbons, PAHs, and metals, specifically arsenic, chromium, iron and lead. Contaminants observed in groundwater include: volatile organic compounds (VOCs), tetrachloroethene (PCE), trichloroethene (TCE), and metals, specifically iron, manganese, and sodium.

The level and extent of contaminants in the soil and groundwater is based on investigation and monitoring data completed through 2002. It is likely that there has been natural degradation of some contaminants in the soil and groundwater, and also potentially some migration of the groundwater contaminants. Prior to reaching agreement on the remediation efforts to be conducted before, during or after construction of the Transit Center, existing soil and groundwater contamination levels will need to be determined.

Construction Work Safety

It does not appear that soil contaminant levels at the site justify the need for full site containment during construction. However, construction activity will be managed such that exposure of workers and the public to contaminated soils is negated. Site area specific plans will be developed to limit worker contact with contaminated soils during soil excavation, soil storage, and facility construction. These plans will include designated 'hot spots' where soils have significant contaminant levels, special construction methodologies and procedures for these areas, and a monitoring program during construction to limit exposure to contaminants.

Exposure of soils on-site will be managed to eliminate the spreading of contamination due to weather conditions (for example, very dry weather with wind that would allow for contaminated soil to be moved as dust, or precipitation that would move contaminated soils in stormwater runoff). If soils must be stored on site prior to removal, they will be staged such that the contamination is contained and not allowed to migrate.

Shallow Soil Excavation and Removal

A significant amount of the contamination observed on site is found in the surface soils (from 0-4 feet below ground surface).

In the area of the Transit Center building the shallow soils contain low levels of petroleum hydrocarbons and arsenic as reported in the monitoring data. These soils will be removed for construction of the approximately 5,000 SF footprint facility.

Surface soils in the area of the approximately 15,500 SF of parking and circulation area are contaminated with PCB's, petroleum hydrocarbons, PAHs, and metals, specifically arsenic, chromium, iron and lead. The upper two foot of these soils will need to be removed for construction of the parking facilities. These soils will need to be handled as contaminated on-site, and if they need to be temporarily staged, stored appropriately prior to disposal. Additional delineation of the current horizontal and vertical limits of the contamination may allow for the lower depths of these surface soils (2-4 feet below ground surface) to be left in place, with the parking lot acting as a cap. A parking lot is a compatible use of these soils.

Soils in the park and landscaped areas will not need to be removed for geotechnical or structural reasons. However, contaminated surface soils in these areas will need to be removed for public safety purposes prior to the addition of topsoil. A grass park is not a compatible use if these soils are left in place.

Updated investigation and delineation of the extent of contamination in these soils may justify leaving deeper soils in place, with or without capping or other remediation. However, given the relatively small area of the site, the effort to segregate and separately treat these soils may not be cost competitive with removal and disposal of the top several feet of soils.

Deep Soil Excavation and Removal

Deep soil excavation should only be necessary for construction of the Transit Center building itself, a 5,000 SF area. Low levels of petroleum hydrocarbons have been observed in soils in this area. Arsenic concentrations were observed in these soils, but in lower concentrations than in surface soils; and at levels that may be reflective of natural soil background levels instead of an introduced contaminant. The most effective remediation for these soils is excavation and disposal. It is unlikely that these soils would be appropriate for re-use onsite.

It is not anticipated that construction depths will exceed 17 feet, however if they do, methods to manage contaminated groundwater during construction will be implemented. If geotechnical needs require excavation significantly deeper than 20 feet, additional sampling and analysis will be completed to determine if contamination is present.

Groundwater

Groundwater is encountered at depths of approximately 17 feet below ground surface at the site. Groundwater flow may or may not be hydraulically connected to the Winooski River. Contaminants observed in groundwater include: volatile organic compounds (VOCs), tetrachloroethene (PCE), trichloroethene (TCE), and metals, specifically iron, manganese, and sodium.

Some of the on-site contamination is linked to previous and existing groundwater contamination at adjoining properties. At the Capitol Plaza site, the VT DEC has approved a two-year groundwater sampling plan to monitor chlorinated solvent contamination. At the Capitol Mobil site, VT DEC has approved a passive free product recovery and groundwater monitoring plan for petroleum contamination.

In coordination with the VT DEC, a groundwater sampling and monitoring plan will be established to confirm current contaminant levels at the Carr Lot site and to help establish site guidelines for remedial goals. It is not anticipated that construction depths will exceed 17 feet, and therefore groundwater will not be encountered during construction. It is possible that protection of human health and the environment may be met by excavating soils in the areas of construction and then establishing a long term groundwater monitoring program. The monitoring plan could utilize existing monitoring wells, if they can be preserved during construction; new wells; and if necessary, vapor monitoring points installed in conjunction with the building construction.

3.9.3 Mitigation

More specific remediation measures will be prepared as the plans for the Transit Center and site improvements are further refined. These measures will be based on supplemental site testing to determine the extent of natural degradation that has occurred since the initial site analysis in 2002.

3.10 Bicycle and Pedestrian Circulation

3.10.1 Existing Bicycle and Pedestrian Facilities

The State Government center and the Downtown area both have strong pedestrian orientations and high levels of pedestrian traffic. Numerous intersection and mid-block crosswalks are frequently used by pedestrians and honored by motorists. Traffic signals at State and Main, Main and Memorial Highway and Bailey and Memorial Highway each have pedestrian phases. The pedestrian system includes circulation to the northeast corner of the Carr Lot, where there is a formal crossing of the railroad tracks between the Carr Lot and the Capitol Plaza parking area. There is also an unauthorized pedestrian passage at this corner of the Carr Lot over the North Branch via the south side of the railroad bridge. **Figure 3L** highlights the pedestrian and bicycle circulation paths around the Carr Lot site.

Bicycle use is also strong in the City. The end of the Winooski West Share Use Path is just to the west of the Carr Lot on the other side of Taylor Street. Bicycle racks are available in the Downtown and the State Government center. The local GMTA buses have bicycle racks on their fronts to facilitate greater use of bicycle for transportation in Montpelier. The

Winooski West Phase II Conceptual Alignment Analysis examined feasible options for connecting this path with another shared use path that enters the downtown from the east side and concluded that an alignment across the Carr Lot was most appropriate if the land could be secured. The Technical Material that serves as a back up to this EA contains relevant portions of the Conceptual Alignment Analysis and is available upon request.

3.10.2 Impacts of the No-Build Alternative and the Proposed Action on Bicycles and Pedestrians

The No Build Alternative

There are no improvements or changes in the pedestrian and bicyclist environment in the near future if the transit center and associated improvements are not pursued. The City will still attempt to obtain funding to construct portions or all of the Winooski West Phase II Shared Use Path.

The Proposed Actions

Pedestrians will be able to access the GMTA, Vermont Transit or tourist buses from a covered shelter, or wait inside the transit center itself until their bus is available. There will also be easy pedestrian access directly from the street or the shared use path to the bus boarding areas. Interaction between buses for pedestrians will also be easier, either between the GMTA buses along the street under the shelter, or between the GMTA and the Vermont Transit Line buses.

One of the broader goals of the proposed Multi-modal Transit and Welcome Center is the overall improvement of pedestrian connectivity in Montpelier. Efforts to meet this goal include the extension of the shared use path across the Carr Lot, the installation of a pedestrian bridge over the North Branch adjacent to the existing railroad bridge, and the connection to existing paved areas on the east side of the North Branch River. These measures will not only create easy pedestrian and bicycle links to the Transit and Welcome Center, but will also increase the ease with which pedestrian and bicyclist can move through Montpelier's Downtown area. Each end of the shared use path extension links with existing heavily used pedestrian and bicycling areas. **Figure 3N** diagrams the eastern end of the shared use path and the links to the City's existing circulation easements.

The inclusion of offices, residential units and parkland in the overall plan will also increase the amount of pedestrian and bicyclist activity on the Carr Lot in addition to the pedestrian and bicyclist traffic generated by the Transit Center itself.

Overall, pedestrian and bicyclist circulation are expected to improve as a result of the proposed action. No negative impacts or decreases in the ability of bicyclists and

pedestrians to move to or across the site or the surrounding area are anticipated as a result of the proposed action.

3.10.3 Mitigation

No mitigation is required.

3.11 Inter-modal Transportation

3.11.1 Existing Service

Overview

A number of transit providers currently provide service within and to Montpelier, Vermont. These include the Green Mountain Transit Agency, Vermont Transit Lines, and Amtrak. These services are described below. In addition, downtown Montpelier attracts a number of private tour buses and a number of taxi services are available in Montpelier with arrangements for pick-up made by telephone.

Green Mountain Transit Agency

The Green Mountain Transit Agency (GMTA) provides transit service in Washington County and portions of Orange County, Vermont. The Agency provides fixed route bus service, deviated fixed route bus service, demand response bus service, commuter bus service, ridematch, shopping shuttles, Medicaid transportation, transportation services for the elderly and the disabled and a ridesharing program.

GMTA operates six fixed routes in Montpelier, including the Capitol Shuttle, City Route, Montpelier Hospital Hill, Montpelier Link Express, Snow Cap Special and Waterbury Commuter. **Figure 3M** shows the current fixed route services in and near the Study Area. These routes are discussed in detail below.

- Capitol Shuttle – The Capitol Shuttle service runs from National Life on National Life Drive to the Department of Employment and Training (DET). This route runs along Bailey Avenue, Baldwin Street, State Street, Main Street and Memorial Street. Stops along this route include National Life, State House, Chittenden Bank and Shaw’s Supermarket. This bus service runs every 15 minutes from 7:24 AM till 5:39 PM.

- City Route –The City Route runs between downtown Montpelier, VT and Town of Berlin, VT. Major stops along this route include Montpelier High School, Shaw’s Supermarket, Intersection of Berlin Street/River Street, Twin City Plaza, Bob’s Store and Brooks. This bus service operates every 30 minutes running from 5:25 AM till 7:29 PM on weekdays and 7:25 AM till 7:30 PM on Saturdays.
- Montpelier Hospital Hill – This route also runs between the City of Montpelier and Town of Berlin, connecting Pioneer Apartments in Montpelier to Berlin Shaw’s Staples Plaza in Berlin. This bus service runs primarily along Main Street, Berlin Street and Pain Turnpike. Major stops along this route are Shaws, intersection of Berlin Street/River Street, Central Vermont Medical Center and Wal-mart Berlin Mall. The Montpelier Hospital Hill bus service runs on an hourly basis both on weekdays and Saturdays. The bus service operates from 7:16 AM till 6:21 PM on weekdays and 8:16 AM till 6:21 PM on weekends.
- Montpelier Link Express – The Montpelier Link Express connects Montpelier, VT to Burlington, VT. This bus service operates Monday through Friday, with two bus services in the morning and evening in each direction. The two morning bus services from Montpelier start at 6:27 AM and 7:22 AM while the evening bus services start at 5:02 PM and 6:27 PM. The two morning bus services from Burlington begin at 6:15 AM and 7:45 AM, while the evening bus services start at 5:15 PM and 6:15 PM. The Montpelier Link Express runs primarily along I-89. Major stops along this route include Statehouse, Downtown Montpelier, DET Parking Lot, National Life, Waterbury Park & Ride, Richmond Park & Ride, Fletcher Allen MCHV, General Dynamics and Church Street Market Place.
- Snow Cap Special – This bus service runs between Montpelier and the Mad River Valley on weekends and holidays. This service operates between 8:15 AM till 10:14 AM in the mornings and 3:15 PM till 5:15 PM. Major stops along this route include Montpelier High School, Montpelier Park & Ride, Middlesex Park & Ride, Middlesex Country Store, Moretown Grocery, Mad River Glen, Mount Ellen and Lincoln Peak.
- Waterbury Commuter - The Waterbury Commuter bus service connects Montpelier, VT to Waterbury, VT. This service runs hourly predominantly along Route 4, from 6:50 AM till 9:28 AM in the morning and 3:00 PM till 5:48 PM in the afternoon.

Table 3.11.1 summarizes the six fixed bus routes in Montpelier and also provides information on service hours, peak headway and ridership.

**Table 3.11.1
Fixed Route Operational Characteristics**

Bus Route	Peak Headway	Weekday Service Hours	Weekend Service	Avg. Weekday Ridership	Avg. Weekend Day Ridership
Capitol Shuttle ⁽¹⁾	15 mins	7:25 AM-5:40 PM	N/A	65	N/A
City Route	30 mins	5:25 AM-7:29 PM	Saturday	209	120
Montpelier Hospital Hill	60 mins	7:16 AM- 6:21 PM	Saturday	69	53
Montpelier Link Express	2 AM & 2 PM Buses	6:27 AM – 8:55 AM 5:00 PM – 7:30 PM	N/A	39	N/A
Snow Cap Special ⁽²⁾	N/A	N/A	Sat / Sun / Holidays Only	N/A	6
Waterbury Commuter	60 mins	6:50 AM-9:28 AM 3:00 PM – 5:48 PM	N/A	20	N/A

⁽¹⁾ Service from January - May

⁽²⁾ Service during winter months (December – April)

Fares for the City and Montpelier Hospital Hill routes are \$1.00 one-way, \$8.25 for a ten-ride and \$33.00 for a 31-day pass. These routes offer discounted fares for children, seniors, and disabled patrons at approximately half the price of regular fares. Fares for the Waterbury Commuter route are \$2.00 one-way, \$16.00 for a ten-ride and \$67.00 for a 31-day pass. A discounted one-way fare of \$1.00 is offered. Fares for the Link Express are \$4.00 one-way, \$40.00 for a ten-ride and \$125.00 for a 31-day pass. Tickets and passes can currently be purchased at regional GMTA offices or on certain buses.

In addition, GMTA operates deviated fixed route and demand responsive service in Montpelier as well. Deviated service is available on the Montpelier Hospital Hill route, which will travel up to $\frac{3}{4}$ mile from the fixed route on request. Requests must be called in 24 hours in advance, only two requests are allowed per hour and riders are charged an extra \$1.00.

Vermont Transit Lines

Vermont Transit Lines operates intercity/interstate bus service linking Montpelier with Boston and Montreal. The route stopping in Montpelier travels from Montreal to Boston four times daily and from Boston to Montreal four times daily. Buses leave Montpelier for Boston at 8:50 AM, 11:30 AM, 3:25 PM, and 7:00 PM with a travel time of approximately four hours. Buses leave Montpelier for Montreal at 4:45 AM, 2:10 PM, 6:05 PM, and 9:35 PM with a travel time that ranges from three to four hours depending on the number of

intermediate stops the bus makes. In addition to this regular route, charter services are available. The Vermont Transit Terminal is currently located at 1 Taylor Street, on the site of the proposed transit center.

Vermont Transit Lines estimate that their ridership to and from the Montpelier stop is approximately 15 passengers per day. They also operate express package service, which amounts to about 8 item drop-offs per day at their site in Montpelier.

Amtrak

Amtrak, the national intercity passenger rail service, operates two trains daily through Montpelier. Their service, the Vermonter, runs daily between Washington, DC and St. Albans, in Northern Vermont, running through New York City, Connecticut and Massachusetts. The southbound train leaves St. Albans at 6:35 AM daily, stopping in Montpelier at 7:47 AM and arriving in Washington DC at 8:00 PM weekdays and 8:25 PM weekends. The northbound train leaves Washington DC at 7:05 AM weekdays and 7:30 AM weekends, stopping in Montpelier at 6:47 PM weekdays and 7:22 PM weekends, and arriving in St. Albans at 8:10 PM weekdays and 8:45 PM weekends.

Ridership on the Vermonter line was 252,238 trips for fiscal year October 2003 to September 2004, with 4818 trips from the Montpelier Station. The Amtrak Station is located outside of City at Junction Road and Short Road, approximately 1.75 miles from the center of Montpelier. The station is open from 6:45 to 8:45 AM and from 5:30 to 7:30 PM daily. The station is an enclosed waiting area, but no ticket office or QuikTrak ticket machine are available.

There is currently no connection between the Amtrak service and either the local or regional transit service.

3.11.2 Impacts of the No Build Alternative and the Proposed Action on Inter-modal Transportation

No-build Impact

The impact of the no-build alternative on transit service is that the service would continue to be uncoordinated, with transfer and stop points occurring throughout the City.

The Proposed Action Impact

The impact of the proposed action would be to provide coordinated public transportation of local bus service, intercity/interstate bus service, and Capitol Shuttle vans in one location,

easily accessible to all points in the downtown. The proposed action would also provide the termini for a potential commuter rail link between Montpelier and Burlington.

The local bus route stops, intercity/interstate bus service stop and private tour bus drop-offs are currently located at various points throughout the City. By bringing these stops to one location, transfers and amenities can be provided in an efficient manner. However, the additional time for adding stops to each route will have to be taken into account in the schedules.

Five of the six fixed bus routes currently stop at Shaws on Main Street; the Snow Cap Special does not. In addition to this stop, the Capitol Shuttle stops at Chittenden Bank and the State House and the Montpelier Link Express stops at the State House. The closest stop to downtown Montpelier for the Snow Cap Special is at Montpelier High School. **Figure 3M** shows the location of these stops. The Vermont Transit terminal is currently located on the site of the proposed transit center.

To add the multimodal center to the route, Montpelier Hospital Hill would have to be rerouted along State Street and Taylor Street to pass the new site. Snow Cap Special would have to be extended to the new site. Capital Shuttle, City Route, and Waterbury Commuter routes would detour into the site. The additional time for each of these routes would have to be taken into account in the schedules. Although these travel times are minimal, the impact to a tight schedule may decrease headways or result in the need for additional buses. GMTA believes that the increased ease of inter-connections and the passenger facilities to be located at the new Transit Center warrant any potential changes to their routes that may be necessary.

See **Section 3.10, Bicycle and Pedestrian Circulation**, for more detailed information on the benefits specifically to bicyclist and pedestrians of the proposed action.

The New Transit Center will not change the Amtrak route through the region. It will increase the potential for creating a viable transit link to the Amtrak station from the Transit Center due to the convergence of numerous different transit routes at the new Center. The new Transit Center will also facilitate easy transfer between any future rail commuter service that might be initiated between Burlington and Montpelier and the existing transit services using the Center.

3.11.3 Mitigation

No mitigation is required.

3.12 Air Quality

3.12.1 Existing Conditions

The entire state of Vermont is currently classified as an “attainment area” under the Clean Air Act and its amendments, and the last time the National Ambient Air Quality Standards (NAAQS) has been exceeded was in the early 1980s. Nonetheless, regional air quality standards violations continue in most of the northeastern states (only Vermont has no current standards violations). For this reason, Vermont is required by the federal Clean Air Act to have a State Implementation Plan (SIP) to map out official policies that will enable the region to ultimately be in attainment for regional ozone air quality. Much of the ozone plaguing New England is believed to come from long distance transport of pollutants from older Midwestern and Canadian power plants. The Department of Environmental Conservation continually monitors air quality around the State to confirm that there are no exceedances of the NAAQS. The closest monitoring stations to Montpelier are in Burlington and Underhill.

3.12.2 Impacts of the No-Build Alternative and the Proposed Action on Air Quality

The No-Build Alternative

The No-Build Alternative would not change the impacts the current uses of the Carr Lot are having on local and regional air quality. A number of short-term and long-term improvements have been suggested for Downtown Montpelier in the *Downtown Montpelier Traffic Circulation and Parking Micro-Simulation Study*. These improvements would be expected to improve LOS throughout downtown Montpelier and consequently also improve air quality.

The Proposed Action

Regional Air Quality Impacts

The proposed action is not anticipated to adversely impact on regional air quality or cause an exceedance of NAAQS standards, particularly in regard to ozone. By encouraging greater use of public transit instead of automobiles (particularly single occupancy vehicles), the proposed action is expected to reduce the number of vehicle miles traveled regionally and therefore have a beneficial effect on regional air quality.

Local Air Quality Impacts

At a local (city block) level, CO and particulates pose a greater concern to human health than ozone. Carbon monoxide (CO) is a byproduct of incomplete combustion of fuel in vehicle engines, and is detrimental to human health by bonding to red blood cells in place of oxygen. CO is generated in the highest concentrations in vehicles experiencing delay and slow operating speeds. Diesel engines produce lower concentrations of CO than a comparable gasoline engine operating at the same speed and load. By encouraging motorists to take transit as an alternative and increasing the efficiency of bus travel routes, the project could have a minimal but beneficial effect on CO levels in the downtown area.

The minor increase in vehicular traffic anticipated with the Transit Center is not expected to have a noticeable affect on existing CO levels at intersections. Basic screening for air quality impacts also indicates that individual microanalysis of intersections for CO impacts is not required.

Diesel engines do produce higher concentrations of particulate matter than a comparable gasoline engine would. Particulates are microscopic particles of solid or liquid that are suspended in air. Soot is the most obvious and visible form of particulate matter. Particulates that are breathed into the lungs can exacerbate asthma and other respiratory ailments, and may be carcinogenic. The proposed project may increase the efficiency of transit operations and therefore could have a favorable effect on particulates overall, though concentrating buses in a compact area may have a localized impact on air quality within the transit center itself, particularly if they are idling for lengthy periods of time. The impacts of particulates and other pollution created by diesel bus engines within the transit center will be limited by establishing policies limiting bus idling times within the facility, and enforcing them through signage and fines.

As **Table 3.4.7, Signalized Intersection Performance Measures** shows, traffic operations at the signalized intersections nearest the Transit Center site deteriorate almost imperceptively compared to a No-Build scenario. None of the Levels of Service (LOS) would differ between a 2010 No-Build and each option:

- The signalized intersection at Memorial Drive and Taylor Street would operate at LOS C both under 2010 No-Build and the 2010 Proposed Action, with an increased delay of less than two seconds.
- The signalized intersection at Memorial Drive and Main Street would operate at LOS F both under the 2010 No-Build and under the 2010 Proposed Action with an increased delay of approximately seven seconds.

- The signalized intersection at State Street and Main Street would operate at LOS F both under the 2010 No-Build and under the 2010 Proposed Action, with an increase in delay of about 17 seconds.

Table 3.4.8, Unsignalized Intersection Performance Measures shows that some unsignalized intersection movements will decline in LOS. These are intersections with lower volumes than signalized intersections.

The main conclusion that could be drawn from these tables is that certain locations are already impacted by poor traffic operations, and the proposed transit center will have a minimal direct adverse effect on traffic movement. and mitigate the incremental effect of the proposed project and other projects on downtown air quality.

No real impacts to air quality are expected as a result of the construction of the Park or the shared use path.

3.12.3 Mitigation

No mitigation is required.

3.13 Indirect and Cumulative Impacts

3.13.1 Indirect Impacts

Indirect impacts are reasonably foreseeable effects caused by the Proposed Action or alternatives, but occur later in time or are further removed from the project site than direct effects. The City does not have identified indirect impacts associated with the construction and operation of the Transit Center.

3.13.2 Cumulative Impacts of the No-Build Alternative and the Proposed Action

Overview

Cumulative impacts result from the Proposed Action's incremental impacts when these impacts are added to the impacts of other past, present, and reasonably foreseeable future actions.

There is at least one other construction project being contemplated within the vicinity of the project site – the proposed development of the 60 State Street public parking lot by the

owners. Other development can be reasonably expected within the foreseeable future in the Downtown, given the existence of at least one developable site recently cleared after a fire.

Additionally, the City is considering two future projects which could result in the potential for cumulative impacts. The first is the construction of a parking structure in the Downtown as part of a separate federal project with FHWA that has its own independent need and utility. The City is currently conducting a separate environmental assessment of the proposed parking structure. The second is the potential extension of Barre Street from Main Street to Taylor Street, which the City has included in its long range plan. There is currently no time table for either the planning or construction of this project.

The No Build Alternative

The No-Build Alternative would maintain the existing availability of the City's lease of the Carr Lot, which currently provides approximately 95 spaces available to the public for at least the next 90 days and foreseeable until August of 2006. These spaces may not be available in the future, depending on the ability of the City to continue the current leasing arrangement. Additionally, if the 60 State Street lot closes as expected, 61 fewer public parking spaces will be available in the Downtown Area. No cumulative impacts are anticipated.

The Proposed Action

Parking

The upper floors of the Transit Center will generate the need for an estimated 39 new parking spaces that will need to be accommodated offsite. The zoning regulations of the Central Business District I, within which the Transit Center site is located, allow the Development Review Board to waive the need to construct required parking on site. The waiver is meant to encourage the development of multi-story, dense development that is in keeping with the nature of the existing development in the Downtown.

Even if the waiver is granted, the generation of additional parking needs by the upper floors of the Transit Center will add to the overall demand for parking in the Downtown.

To replace parking spaces anticipated to be lost at the 60 State Street Lot, as well as those to be generated by the Transit Center and projected to be needed by 2006, the City is currently pursuing a related federal project with FHWA to build a parking structure. The parking structure project has its own independent need and utility for which the City is preparing a separate Environmental Assessment.

Because it is part of a larger issue that is already being addressed by the City, no additional mitigation measures are considered necessary at this time.

Vehicular Traffic

The vehicular traffic that might be generated by the 60 State Street development has already been included in the traffic analysis presented in **Section 3.4, Vehicular Circulation**.

A parking structure by itself does not generate new vehicular trips (Drivers don't come to the City to go to the Parking structure; they just USE the parking structure when they drive to go to some other location.) None the less, the fact that additional parking spaces are available in the Downtown could generate a small number of additional vehicular trips. When combined with those to be generated from the Transit Center and other know projects, no real changes to the vehicular traffic generation rates greater than changes already considered as part of normal, yearly growth are expected.

The extension of Barre Street to Taylor Street is expected to improve vehicular traffic congestion at the Main Street/State Street exit, as well as other the Taylor Street/State Street intersection.

3.14 Construction Impacts

3.14.1 Noise and Vibration

The construction of the Transit Center and the parking structure will result in noise and vibrations. Construction noise will be limited by maintaining construction hours of 7:00 AM to 7:00 PM.

Vibration can be caused by the passage of large vehicles or blasting, if it should be necessary. Vibration of large vehicles should be within the ability of the surrounding structures to withstand. The vibrations should not be strong enough to cause disruption to the individuals in the nearby structures. Blasting, although not anticipated, can be very closely monitored and controlled and should not create adverse impacts on the surrounding structures. As a precaution, however, the blasting contractor will prepare an existing conditions report for the adjacent structures prior to blasting.

3.14.2 Erosion/Sedimentation

Erosion from the site during construction could flow directly into the North Branch or Winooski Rivers. Such flows could potentially affect either the riverine floodplain habitat areas near the confluence, or the freshwater pearl mussel habitat in the Winooski River. To prevent erosion, construction of both the transit center as well as the adjacent park area will be preceded by the installation of erosion control measures. These measures will be meant

to prevent erosion from beginning, instead of stopping sedimentation in inappropriate locations after erosion has occurred.

Erosion control measures will include:

- Silt fencing,
- Stormwater inlet protection,
- Soil Stabilization, and
- Silt ponds.

No impacts due to off-site sedimentation should occur as a result of the construction of this project.

3.14.3 Traffic Flow and Property Access

Construction access to the Carr Lot will occur across either the Bailey Street, Main Street or Taylor Street bridges. General Construction access will be across the Taylor Street. Those larger vehicles that may not be able to traverse the Taylor Street Bridge will need to access the site by the Bailey Street Bridge and then turn east on State Street, after which they will turn south again on Taylor Street and travel to the site.

Construction traffic is not anticipated to be large enough in number to affect traffic on the surrounding roadways.

3.14.4 Bicycles and Pedestrians

The Construction of the Transit Center will disrupt the use of the Carr Lot as a link between the existing end of the Winooski West Shared Use Path and the pedestrian passage across the railroad bridge. To make sure that a pedestrian passage will continually be available, the construction of the new pedestrian bridge will be timed so that it is in place and usable prior to the closing of the unauthorized paths across the Carr Lot. Pedestrians will need to use Taylor Street and the Capitol Plaza parking lot to reach the new bridge until the link is completed between the new pedestrian bridge and the existing end of the Winooski West Shared Use Path at Taylor Street.

3.14.5 Utilities

Construction of the Transit Center and adjacent park will require the relocation of several overhead power lines. Most of these lines are providing power to specific light structures and will not be required after the parking lot is closed to public use. Accessibility to the supply lines, the disruption it may cause if they need to be repaired or replaced, and the overall ability of the lines to withstand construction pressures will be the primary determining factors in deciding when/if the lines will be relocated.

Disruption to utilities users should be minimal, because the replacement utilities can be installed and ready for hook-up before the facilities to be removed are taken off line. The switch over can be timed to occur at when it will cause the least disruption to affected users. Additionally, affected users can be warned in advance about the time and expected duration of the disruption to service.

3.14.6 Emergency Services

No disruptions to emergency services are anticipated due to construction of the Transit Center.

3.14.7 Disposal of Excess Material

Construction debris and non-contaminated excess material from projects in Montpelier are currently taken to the Palisades, a landfill in Moretown, the adjacent town to the west. The specific landfill(s) to be used for the disposal of normal construction debris and/or hazardous material from this project will be determined by a competitive process. If the Palisades landfill is used, trucks will use Route 2 between the Project Site and the Landfill.

3.14.8 Temporary Relocation

The existing trailer used as a bus terminal on the site will need to be relocated to the State of Vermont Department of Education and Training parking lot temporarily during construction. This will require a rerouting of the current bus route while construction of the Transit Center is completed. This impact can not be avoided if construction is to occur on the proposed site.

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