

**REVISED ENVIRONMENTAL ASSESSMENT
& DRAFT SECTION 4(f) EVALUATION**

**JANUARY 2006
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and
DRAFT SECTION 4(f) EVALUATION**

**North Broadway
4th Avenue NW to 21st Avenue NW
City of Minot, Ward County
PCN 15182**

Project No. CMU-4-083(060)200



Prepared by

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
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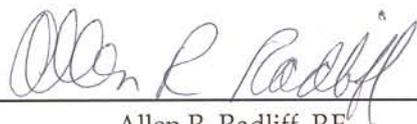
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*Submitted Pursuant to 42 U.S.C. 4332 (2)(c)
and 49 U.S.C. 303*

1/9/06
Date


Allen R. Radliff, P.E.

Division Administrator
Federal Highway Administration

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Appendix H Public Input Meeting #3—Public Update Notification Package

Appendix I Public Input Meeting #3—Public Update Meeting

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Appendix K Public Hearing Notification Package

Appendix L Transcript of Public Hearing

Appendix M Public Hearing Materials

Appendix N Public Hearing – Public Comments and Responses

Draft Section 4(f) Evaluation

- NDSHPO to NDDOT October 4, 2001 1
- NDSHPO to NDDOT October 1, 2003 2
- NDDOT to NDSHPO September 16, 2003 3–4
- NDSHPO to NDDOT April 12, 2004 5
- NDSHPO to NDDOT February 2, 2005 6
- NDSHPO to NDDOT March 23, 2005 7
- NDSHPO to NDDOT July 28, 2005 8

Chapter 1 Purpose of and Need for Action

1.1 Introduction

This EA (Environmental Assessment) was prepared in accordance with 23 CFR 771, which prescribes the policies and procedures of the FHWA (Federal Highway Administration) for implementing the National Environmental Policy Act of 1969, as amended, and the regulations of the CEQ (Council on Environmental Quality), 40 CFR parts 1500 through 1508. An EA is an informational document intended for use by both decision-makers and the public. As such, it represents a disclosure of relevant environmental information concerning the proposed action.

The March 2005 EA and Nationwide Programmatic Section 4(f) Evaluation identified the preferred alternative, Alternative D 4-foot sidewalks only in the location of the Mackley Apartments, which received a *No Adverse Effect* determination. The Mackley Apartments is eligible for listing on the NRHP (National Register of Historic Places).

Since the April 2005 Public Hearing, a combination of two alternatives has been identified as the preferred alternatives for Segment 1. Because the Mackley Apartments is eligible for listing on the NRHP, Alternative D, two 12-foot lanes and three outside lanes with 4-foot sidewalks, have been identified as the preferred alternative only in the location of the Mackley Apartments (425 North Broadway). From the intersection of 4th Avenue NW and North Broadway (beginning project terminus) to before the Mackley Apartments (425 North Broadway), Alternative C, five 12-foot lanes with 4-foot to 8-foot sidewalks, has been identified as the preferred alternative. After the Mackley Apartments (425 North Broadway) to the end of Segment 1 (11th Avenue NW), the preferred alternative is Alternative C, 4-foot to 8-foot sidewalks. Alternative C also includes locations for certain sidewalk widths in order to reduce the amount of relocations and right-of-way. These two specific locations include: Broadway Exchange and Pawn (501 North Broadway) and Subway/AIG American General (721 North Broadway). In all other locations in Segment 1, *with the exception of the Mackley Apartments—425 North Broadway and the above two locations*, 8-foot sidewalks are recommended as the preferred alternative.

This document identifies all the preferred alternatives and options for Segment 1 and 2.

A Nationwide Programmatic Section 4(f) Evaluation was also submitted with the March 2005 EA. The January 2006 Revised EA includes a Draft Section 4(f) Evaluation.

1.2 Description of the Proposed Action

The NDDOT, in cooperation with the city of Minot, proposes to reconstruct 1.3 miles of US Highway 83, also known as North Broadway. The project begins at 4th Avenue NW in the city of Minot and continues north to 21st Avenue NW. ***Please refer to Figure 1-1, General Location Map and Figure 1-2, Study Area Map.***

The proposed reconstruction of US Highway 83 is being administered by the NDDOT under a project designated as North Broadway (Project Number CMU-4-083(060)200).

1.3 Need for the Proposed Action

The need for the proposed reconstruction of North Broadway is driven by a number of deficiencies along the project corridor. These include deteriorated pavement, inadequate roadway capacity, inadequate lane widths, safety, and inadequate pedestrian facilities.

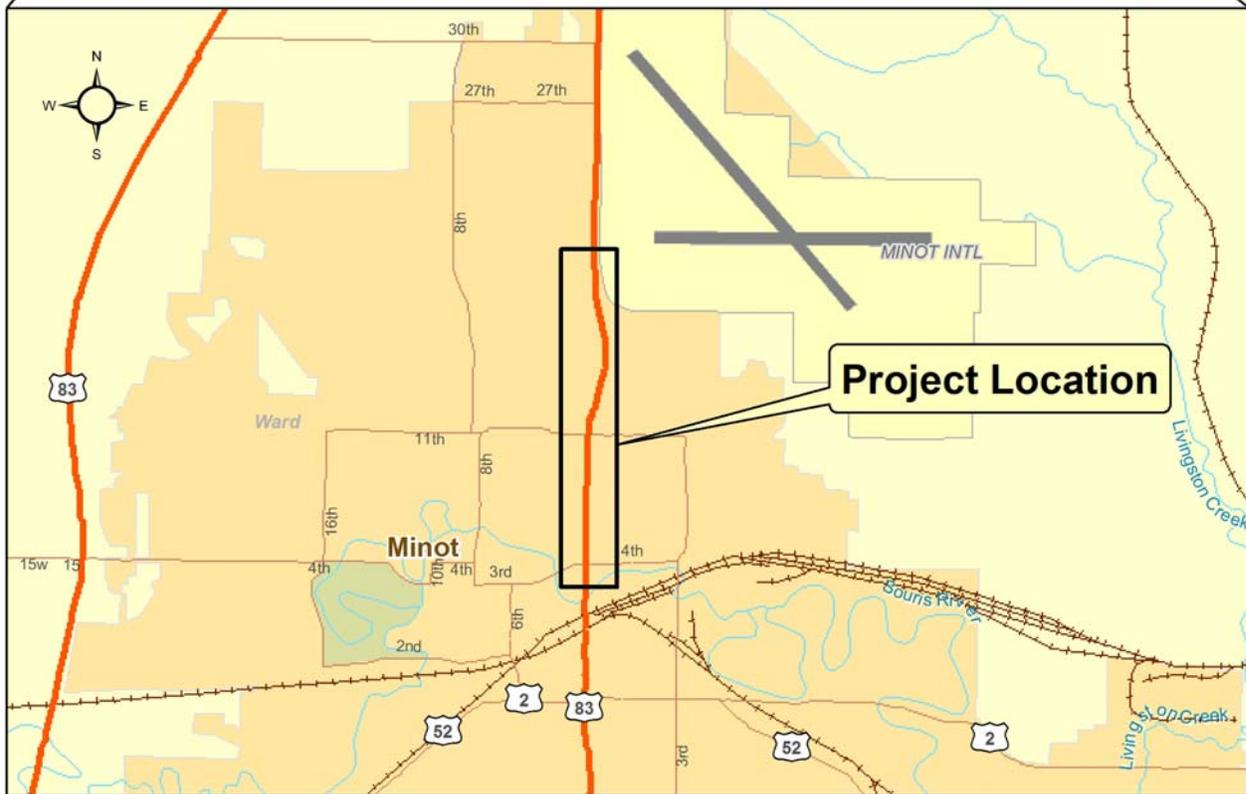
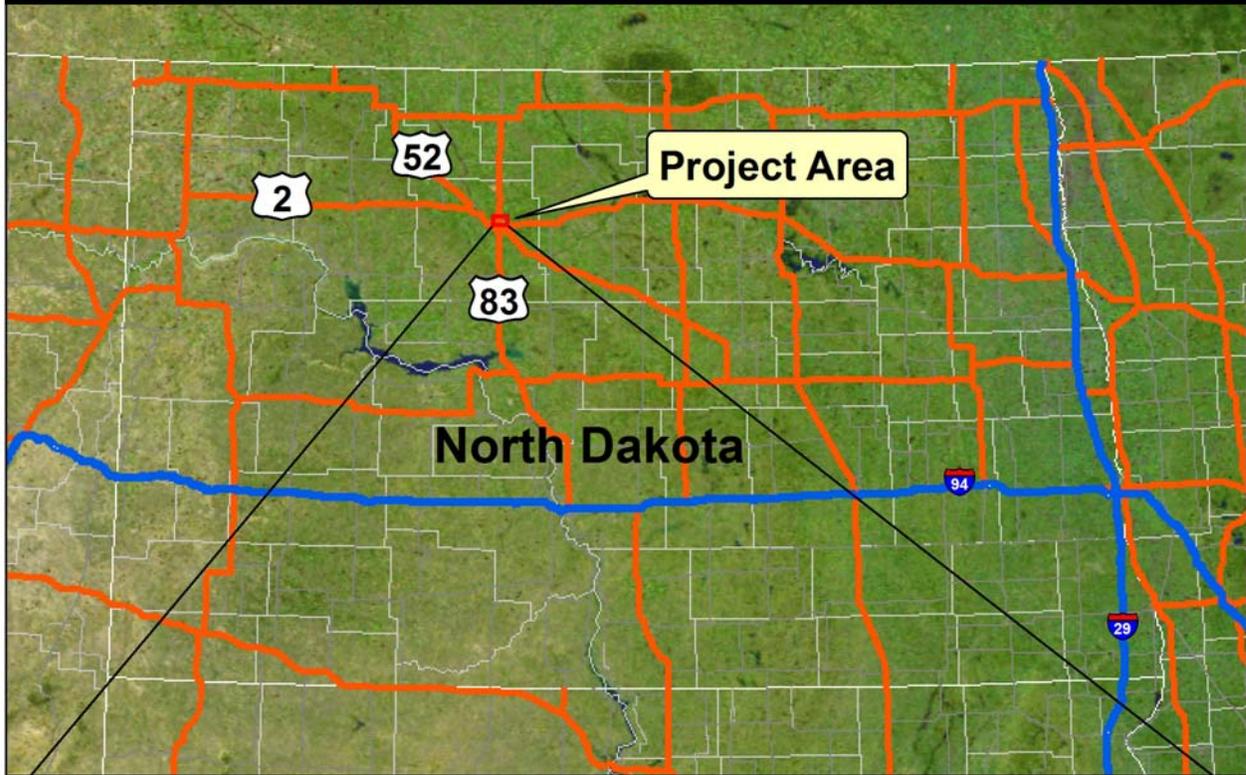
1.3.1 Pavement

North Broadway was reconstructed in 1961 as part of a larger project that four-laned US Highway 83 from the city of Minot north to the Minot Air Force Base. The concrete pavement on US Highway 83 has exceeded its design life. The existing concrete pavement has severe cracking and joint separation due to the age of the pavement wear and sub-base failure. Concrete pavement is typically designed for a 30-year design life. The existing pavement on North Broadway is over 44 years old.

1.3.2 Capacity

The ability of a facility to operate safely and efficiently is a function of the projected travel demand and the available roadway capacity. LOS (Level of Service) is a concept in which a letter grade (A, B, C, D, E, or F) is assigned to a roadway facility as a gauge of the vehicular delay and ability to travel unimpeded. LOS A represents optimum free-flow traffic conditions, while LOS F represents traffic gridlock conditions that exceed the carrying capacity of the facility. According to the *NDDOT Design Manual, Section 1-06*, the minimum design parameter is LOS C, which represents stable operations; however, the ability to maneuver within the traffic stream is clearly affected by other vehicles.

**Figure 1-1
General Location Map**



**Figure 1-2
Study Area Map**



The project corridor had an AADT (Average Annual Daily Traffic) count of 25,950 vehicles on the project area in 2002. By design year 2022, the traffic volumes are projected to be 31,660.

According to the *NDDOT Traffic Operations Study North Broadway-US 83 4th Avenue NW to 21st Avenue NW, Minot, CMU-4-083(060)200* dated March 2003, the existing number of approach lanes at all intersections are adequate to provide LOS C with forecast traffic for year 2022. However, the lengths of the existing turn lanes are deficient and would require lengthening to accommodate the forecast traffic in order to meet LOS C¹.

1.3.3 Lane Widths

The existing North Broadway does not meet the National Highway System (NHS) criteria of 23 CFR 658.9(b), lists routes designated as National Network based on their general adherence to criteria of items (1) through (6). The criteria (5) states, "The route consists of lanes designed to be a width of 12 feet or more or is otherwise consistent with highway safety." From 4th Avenue NW to University Avenue NW, the existing roadway has five 10.5-foot lanes; and from University Avenue NW to 11th Avenue NW, the existing roadway has four 11-foot lanes and one 10.5-foot TWLTL (Two-Way Left Turn Lane). Based on the criteria, North Broadway must have at least one 12-foot lane in each direction.

1.3.4 Safety

The Traffic Operations Division of NDDOT performed a crash analysis for this project for the dates January 1, 2000 through December 31, 2002. Information and analysis are as reported in memorandums on February 20, 2004, March 29, 2004, July 2, 2004, and September 22, 2004. **Please refer to Table 1-1.**

¹ Inadequate or eliminated turn lanes could negatively impact the roadway capacity.

**Table 1-1
Intersection Collision Summary
US Highway 83**

Intersection	Total
North Broadway and 4 th Avenue NW	37 ¹
North Broadway and 6 th Avenue NW	18
North Broadway and University Avenue NW	30
North Broadway and 11 th Avenue NW	10
North Broadway and 20 th Avenue/Airport Road	14
¹ The intersection of North Broadway and 4 th Avenue NW has been identified as a high crash location, of the 37 collisions; the majority (18) was rear-end collisions crashes.	

The Traffic Operations Study reported that in the study area on North Broadway there were 151 crashes at the intersections, including: left-turn, angle, rear-end, head-on, sideswipe, and non-collision crashes. The majority of the crashes (109) occurred at the five signalized intersections.

A total of 29 link collisions occurred during this analysis period, including: left-turn, rear-end, head-on, sideswipe, and non-collision. Seventeen of the 29 link collisions were rear-end collisions. Any proposed roadway improvements should not increase the potential for collisions.

1.3.5 Pedestrian Facilities

Sidewalks are located on both sides of North Broadway from 4th Avenue NW to 11th Avenue NW (Segment 1). The sidewalk widths vary from 3.5 to 5 feet. In some locations, the minimum sidewalk width is compromised by roadway hardware (i.e. signs, lights, or signal standards), and does not meet current minimum widths with regard to ADA (*Americans with Disabilities Act of 1990*). Additionally, the cross slope of sidewalks exceeds ADA guidelines at driveway crossings. Also, curb ramps are inconsistent with ADA guidelines.

There are no sidewalks or multi-use trails located from 11th Avenue NW to 21st Avenue NW (Segment 2). This entire corridor has many points of community interest that tend to be pedestrian generators. These facilities include churches, schools, a cemetery, a park, Minot State University, Minot International Airport, hotels, residences, and the North Hill recreation/softball complex, all located along a commercial business district.



The above pictures depict roadway hardware in the sidewalk, pedestrians creating a path in the First Lutheran Cemetery to shy away from the narrow sidewalk and roadway, and pedestrians walking single-file through the project area.

1.4 Purpose of the Proposed Action

The purpose of the North Broadway project is to improve roadway deficiencies to meet NDDOT guidelines/standards. This would include replacing the pavement, providing roadway capacity to a minimum of LOS C based on future traffic demands, meeting NHS criteria 23 CFR 658.9(b), not having a reduction in safety, and accommodating pedestrian/bicyclist users, while meeting ADA guidelines/standards.

Chapter 2 Alternatives

2.1 Introduction

This chapter provides information on the development and evaluation of project alternatives. The development of project alternatives is directly tied to the purpose and need for the project. Included in this evaluation is an analysis of the no-build alternative, four build alternatives in Segment 1, and two build alternatives in Segment 2.

2.2 History and Development Process of Alternatives

Following the identification of the problems associated with the Minot Broadway corridor (need for the project) and the specific objectives of this project (purpose), several improvement alternatives and options were evaluated. These alternatives and options were developed to improve the roadway deficiencies to meet current NDDOT and AASHTO design standards/guidelines for the facility type, and to improve the safety and operational characteristics of the roadway.

The project corridor has been divided into two segments (Segment 1 and Segment 2) by location, functionality, and corresponding roadway typical sections. Segment 1 extends from 4th Avenue NW to 11th Avenue NW. Segment 2 continues from 11th Avenue NW to 21st Avenue NW.

Segment 1 Alternatives were developed to widen to the west side of North Broadway, because of the location of the First Lutheran Church. The First Lutheran Church and its properties take up one city block; it is also eligible for listing on the National Register of Historic Places. All attempts to avoid impacts to the First Lutheran Church were made, resulting in west side widening of North Broadway.

2.3 Description of the Proposed Alternatives

Analysis of the Minot Broadway corridor resulted in the development of a no-build alternative (Alternative A), four build alternatives in Segment 1: Alternative B (rebuild with existing geometry); Alternative C (five 12-foot lanes, with 4-foot to 8-foot wide sidewalks); Alternative D (two 12-foot outside lanes and three inside 11-foot lanes, with 4-foot to 8-foot wide sidewalks); and Alternative E (four driving lanes with a continuous raised median and sidewalks); and two build alternatives in Segment 2: Alternative F (five lane roadway with TWLTL (Two-Way Left Turn Lane)); Alternative G (four lane roadway with raised median). Additional design options were developed for various locations to enhance the operation of the facility. ***Please refer to Table 2-1, Minot Broadway Alternatives Summary.***

2.3.1 Alternative A: No-Build Alternative

The no-build alternative (Alternative A) would leave the existing roadway in place as it exists today, with a continuation of current maintenance practices. This alternative would not address the deteriorating pavement, inadequate roadway capacity, or inadequate pedestrian facilities.

**Table 2-1
Minot Broadway Alternatives Summary**

Alternative	Description
Alternative A	No Build
Segment 1 Alternatives – 4th Avenue NW to 11th Avenue NW	
Alternative B	Rebuild with Existing Geometry
Alternative C	Five 12-foot Lanes w/ 4-foot to 8-foot Sidewalks
Alternative D	Two 12-foot Outside & Three 11-foot Inside Lanes w/ 4-foot to 8-foot Sidewalks
Alternative E	Four Driving Lanes w/ Continuous Raised Median & Sidewalks
<i>Option 1</i>	Left turn lane at 4 th Avenue NW - Northbound
<i>Option 2</i>	5 th Avenue NW to 6 th Avenue NW transition
Segment 2 Alternatives – 11th Avenue NW to 21st Avenue NW	
Alternative F	Five 12-foot lanes with flush median
Alternative G	Four 12-foot lanes with raised median
<i>Option 3.1</i>	Pedestrian Overhead Grade Separation near 20 th Avenue NW
<i>Option 3.2</i>	Pedestrian Underpass Grade Separation near 20 th Avenue NW
<i>Option 3.3</i>	Pedestrian At-Grade Crossing at the intersection of 20 th Avenue NW
<i>Option 4</i>	Right turn lanes

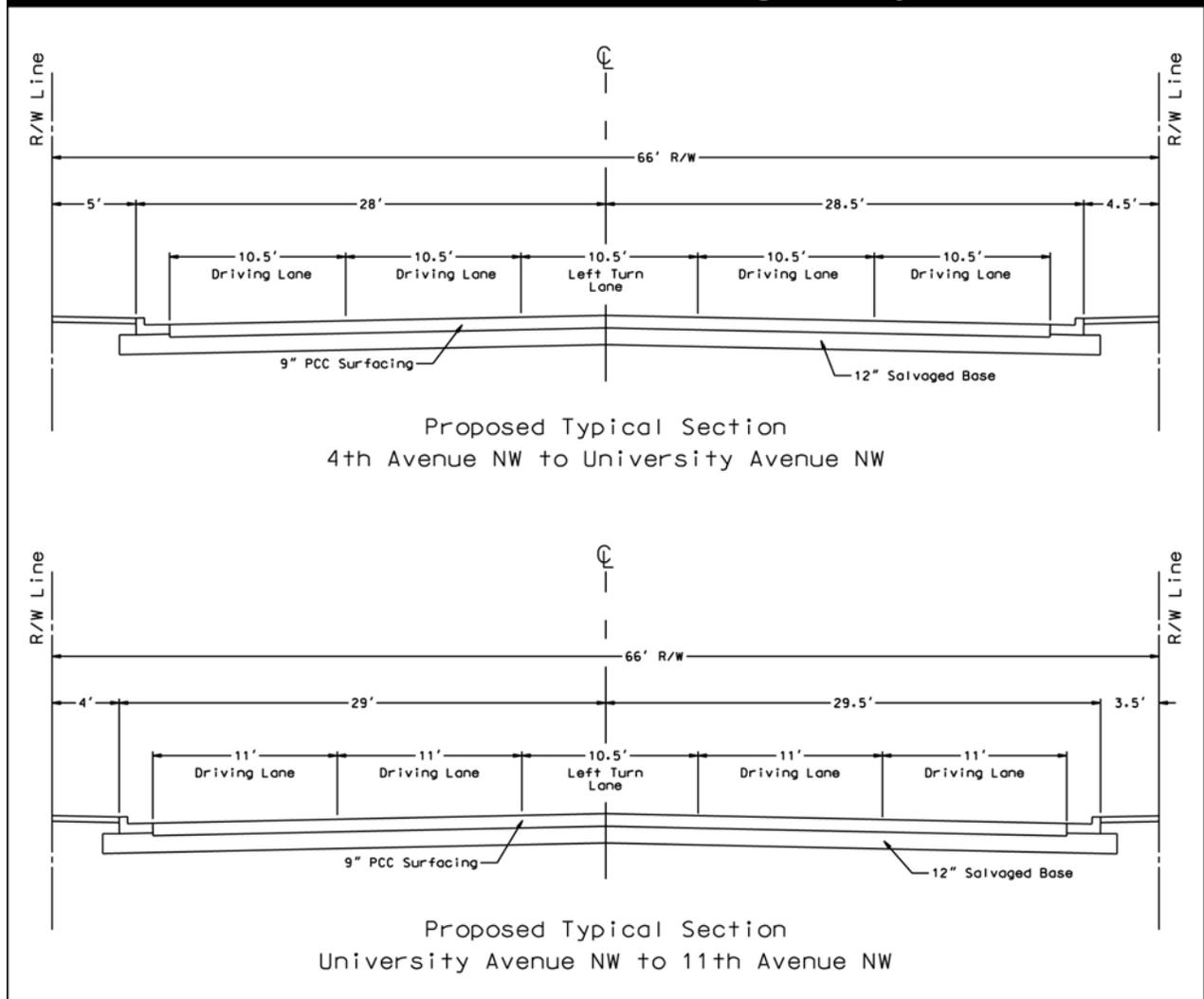
SEGMENT 1 ALTERNATIVES

Segment 1 extends from the north edge of the existing structure south of 4th Avenue NW to 11th Avenue NW.

2.3.2 Alternative B: Rebuild with Existing Geometry

Alternative B would replace the deteriorated pavement with new pavement with no street widening and associated right-of-way acquisition. The existing roadway geometry would remain unchanged. From 4th Avenue NW to University Avenue NW, the roadway would be reconstructed with five 10.5-foot lanes, a 4.5-foot sidewalk on the east, and a 5-foot sidewalk on the west. From University Avenue NW to 11th Avenue NW, the roadway would be reconstructed with four 11-foot lanes, a 10.5-foot TWLTL, a 3.5-foot sidewalk on the east, and a 4-foot sidewalk on the west. The estimated construction cost of this alternative is approximately \$6.2 million. ***Please refer to Figure 2-1, Alternative B.***

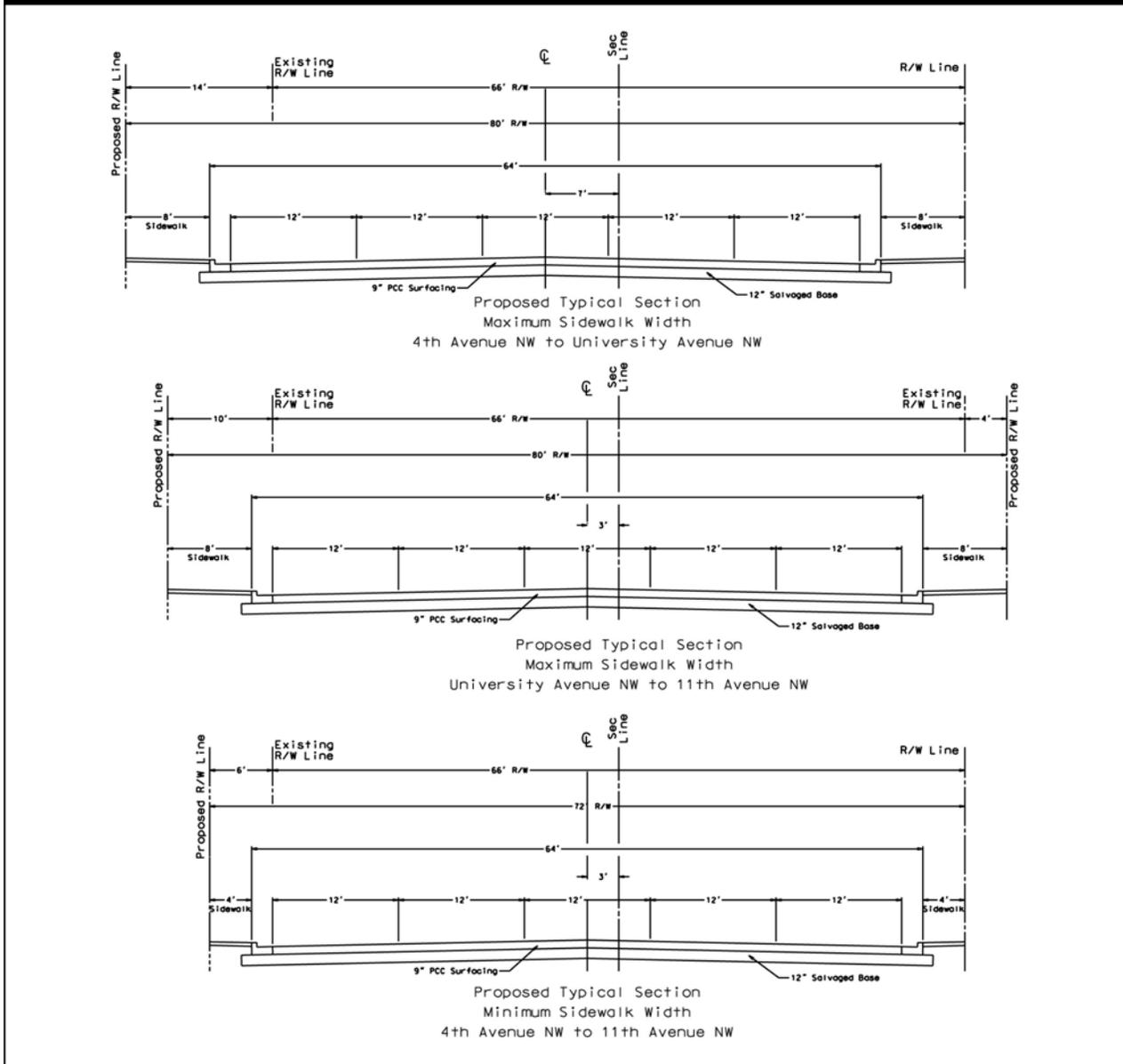
Figure 2-1
Alternative B: Rebuild with Existing Geometry



2.3.3 Alternative C: Five 12-foot Lanes with 4-foot to 8-foot Sidewalks

Alternative C would reconstruct the roadway with five 12-foot lanes with the center lane functioning as a TWLTL. The options for sidewalk width vary from a minimum width of 4 feet to a maximum width of 8 feet. The corresponding right-of-way width will vary from a minimum of 72 feet to a maximum of 80 feet. The additional right-of-way needed will vary from 6 to 14 feet depending upon which sidewalk width is chosen. From 4th Avenue NW to University Avenue NW, the right-of-way would be acquired from the west side of the roadway. North of University Avenue NW, the road would transition to the east to minimize impacts to the First Lutheran Cemetery. From University Avenue NW to 11th Avenue NW, 10 feet of right-of-way would be acquired from the west side of the roadway and a maximum of four feet would be acquired on the east side to accommodate 8-foot sidewalks. If 4-foot or 5-foot sidewalk widths are selected, small parcels of right-of-way will be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway. The estimated construction cost for this alternative is approximately \$6.5 million. The estimated right-of-way cost is approximately \$3.3 to \$4.4 million. **Please refer to Figure 2-2, Alternative C.**

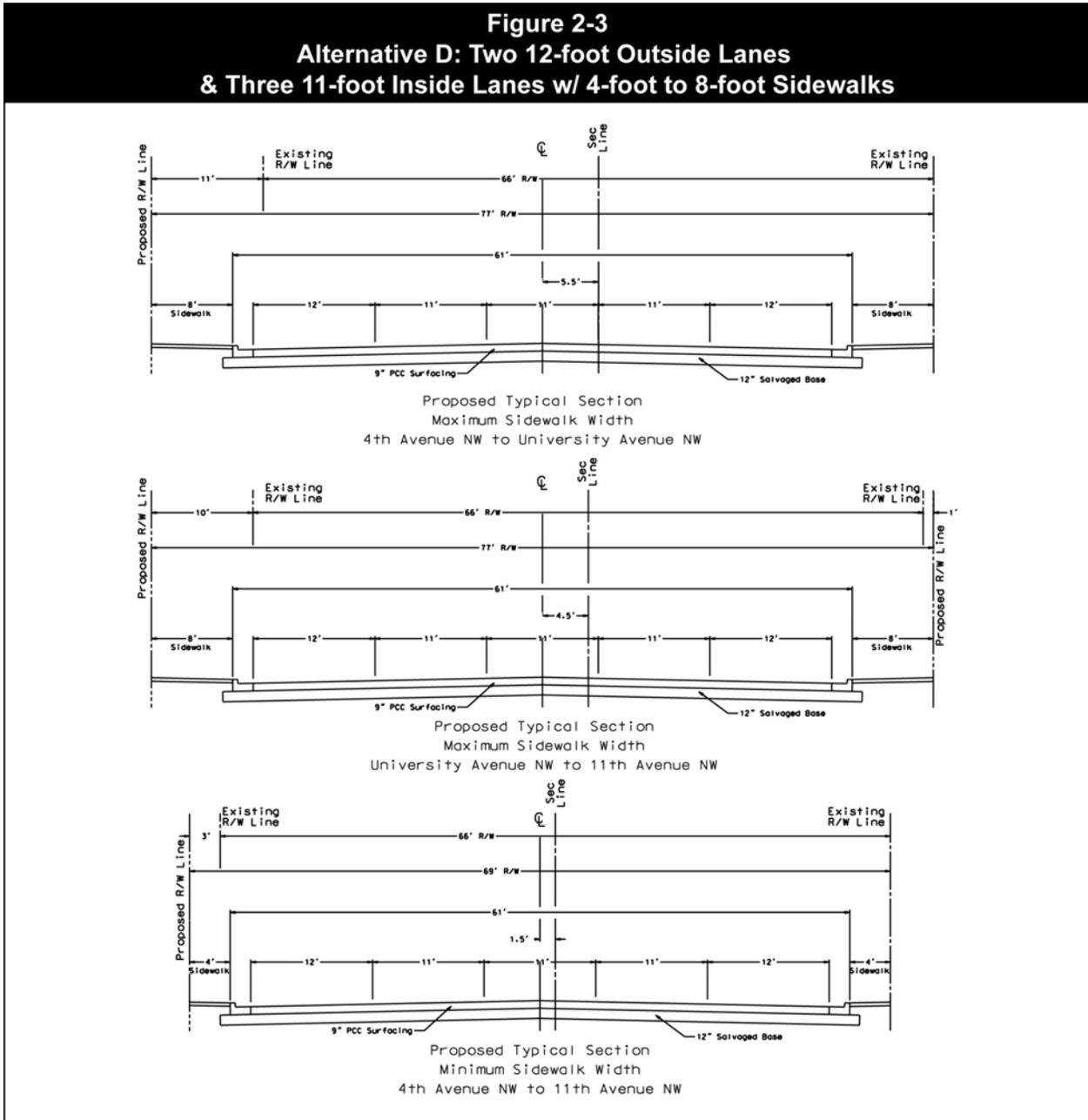
Figure 2-2
Alternative C: Five 12-foot Lanes with 4-foot to 8-foot Sidewalks



2.3.4 Alternative D: Two 12-foot Outside Lanes and Three 11-foot Inside Lanes with 4-foot to 8-foot Sidewalks

Alternative D would reconstruct the roadway with two 12-foot outside lanes and three 11-foot inside lanes with the center lane functioning as a TWLTL. The options for sidewalk width vary from a minimum width of 4 feet to a maximum width of 8 feet. The corresponding right-of-way width will vary from a minimum width of 69 feet to a maximum width of 77 feet. The additional right-of-way will be acquired from the properties along the west side of North Broadway. The additional right-of-way requirement will vary from 3 to 11 feet depending upon which sidewalk width is chosen. If 4-foot or 5-foot sidewalk widths are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway. The estimated construction

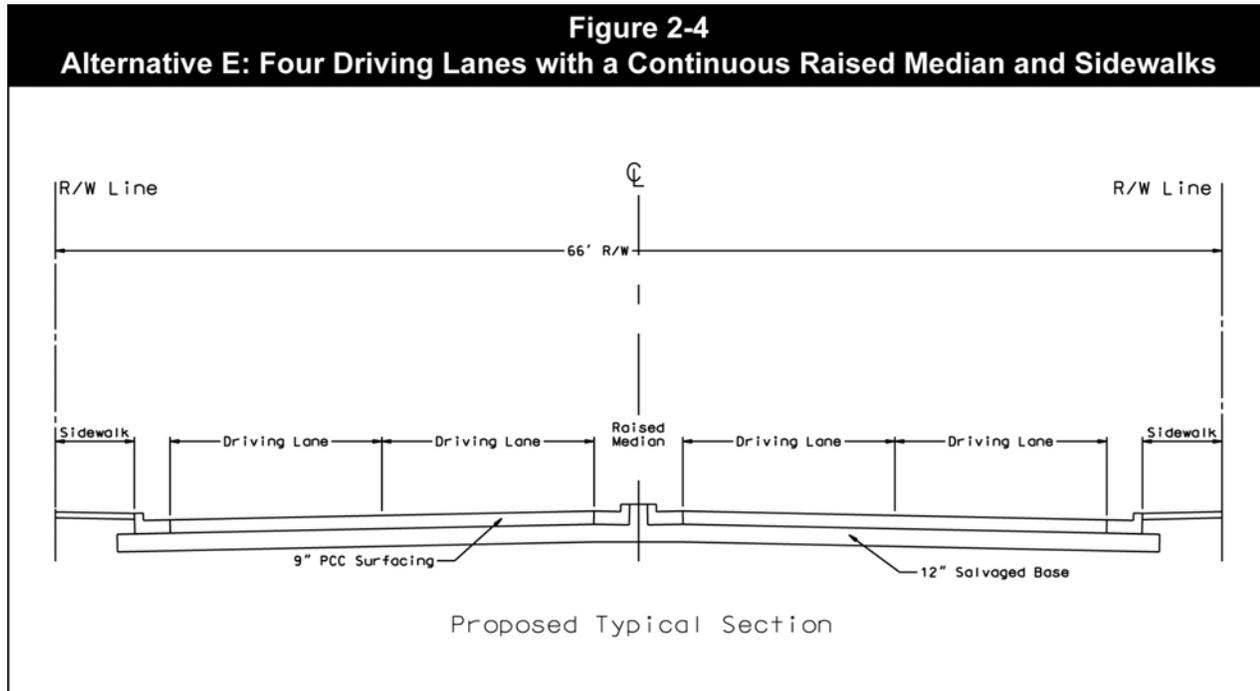
cost for this alternative is approximately \$6.4 million. The estimated right-of-way cost is approximately \$2.4 to \$3.1 million. **Please refer to Figure 2-3, Alternative D.**



2.3.5 Alternative E: Four Driving Lanes with a Continuous Raised Median and Sidewalks

Alternative E would reconstruct the roadway with four driving lanes and a continuous raised center median from 4th Avenue NW to University Avenue NW within the existing right-of-way. The existing lane assignments at 4th Avenue NW and University Avenue NW would remain unchanged. The raised center median will be continuous with no left turns allowed between 4th Avenue NW and University Avenue NW. The sidewalk width for this alternative would vary

depending upon the width of the center median. This alternative will not require acquisition of any additional right-of-way from 4th Avenue NW to University Avenue NW except at the location of the left turn lanes at 4th Avenue NW and University Avenue NW. This Alternative would impact the Mackley Apartments (eligible for listing on the National Register of Historic Places) due to the transition and widening required to accommodate the southbound left turn lane at 4th Avenue NW. The estimated construction cost for this alternative is approximately \$6.2 million, and the estimated right-of-way cost is approximately \$1.4 million. **Please refer to Figure 2-4, Alternative E.**



The *Addendum to the Traffic Operations Study* dated September 2004 concludes North Broadway would appear to operate with satisfactory LOS (Level of Service) under the four-lane section with a continuous raised median. However, vehicle access to businesses along North Broadway will be more difficult with no left turn lanes from 4th Avenue NW to University Avenue NW.

2.3.6 Other Improvement Options—Segment 1

Option 1: Left Turn Lane at 4th Avenue NW

Option 1 would include the reconfiguration of the northbound left turn lane at 4th Avenue NW. This work will not directly affect the viaduct structure, but may require reconstruction of the approach slab. The *Traffic Operations Study* dated March 14, 2003 recommended the desirable length (250 feet) be provided. The minimum length (190 feet) is being proposed because major reconstruction to the viaduct structure would be needed to provide the desirable length. The estimated construction cost for this option is included in the mainline estimates.

Option 2: 5th Avenue NW to 6th Avenue NW Transition

Option 2 would include the construction of a transition on the west side of North Broadway to connect 5th Avenue NW to 6th Avenue NW near the present location of the Barley Pop bar. The realignment eliminates three “T” intersections within 300 feet by creating a new four-legged intersection 300 feet from an adjacent “T” intersection. The sight distance restrictions for east-

bound 5th Avenue NW are also eliminated. The estimated construction cost for this option is approximately \$150,000 and the estimated right-of-way cost is approximately \$270,000.

A school crossing and traffic signal are also located at 6th Avenue NW, which serves two schools. There is an elementary school two blocks east of North Broadway and a Junior High two blocks west. At the present time students cross North Broadway from directly in front of the Barley Pop bar door. The proposed reconfiguration of 5th Avenue NW to the west of North Broadway connects the school crossing with the school route along 5th Avenue NW. Available counts show about 35–40 students cross North Broadway per day at 6th Avenue NW. Option 2 does not apply to Alternative E due to the raised median.

SEGMENT 2 ALTERNATIVES

Segment 2 extends from the north side of 11th Avenue NW to 21st Avenue NW.

2.3.7 Alternative F: Five 12-foot Lanes with Flush Median

Alternative F would reconstruct the roadway with five 12-foot lanes with the center lane functioning as a TWLTL. The 63-foot curb-to-curb width roadway would also include a 6-foot sidewalk along the east side and a 10-foot multi-use trail along the west side of the roadway. No additional right-of-way is required for this alternative. The estimated construction cost for this alternative is approximately \$4.3 million. *Please refer to Figure 2-5, Alternative F.*

2.3.8 Alternative G: Four 12-foot Lanes with Raised Median

Alternative G would reconstruct the roadway with four 12-foot lanes with a raised median, approximately 20 feet in width. This section would have a TWLTL for the first 1,000 feet north of 11th Avenue NW tapering into a curbed/raised median north to 21st Avenue NW. A 6-foot sidewalk would be installed on the east side of the roadway with a 10-foot multi-use trail along the west side of the roadway. No additional right-of-way is required for this alternative. The estimated construction cost for this alternative is approximately \$4.2 million. *Please refer to Figure 2-6, Alternative G.*

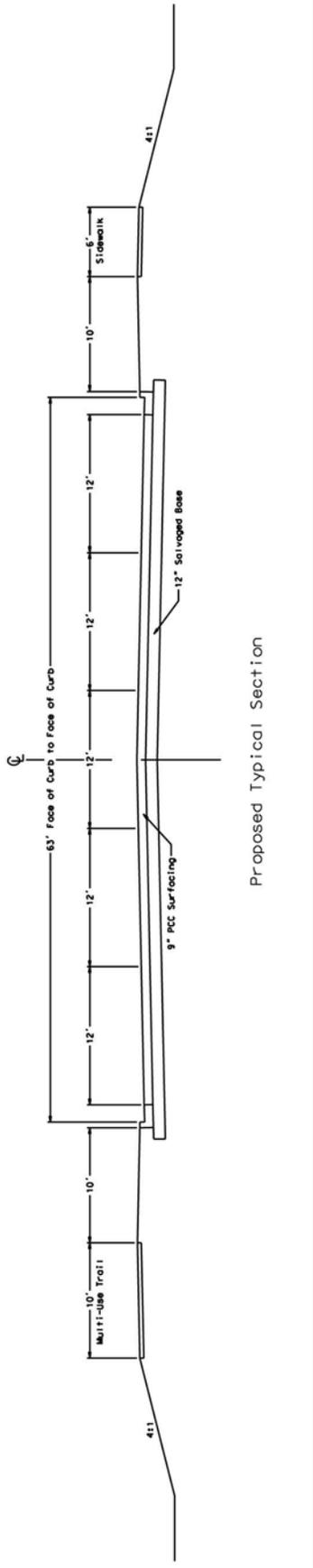
2.3.9 Other Improvement Options—Segment 2

Three options for pedestrian crossings near 20th Avenue NW were developed to connect a proposed multi-use trail to the large recreation complex as identified in the City's Trail Master Plan.

Option 3.1: Pedestrian Overhead Grade Separation Near 20th Avenue NW

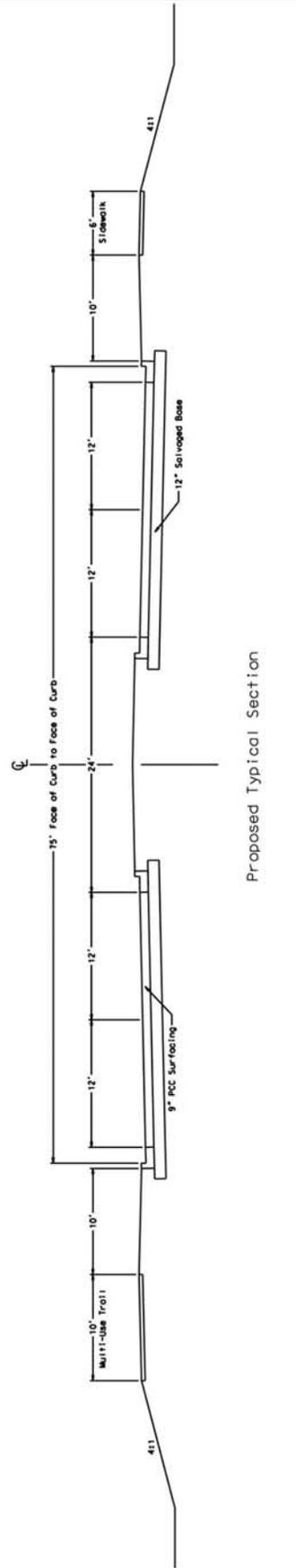
A grade-separated pedestrian crossing would be constructed in the area near the top of the hill. The terrain is conducive to meeting ADA grades with an overpass. The overpass would be located south of 20th Avenue NW and the adjacent hilltops where the overhead structure would not impact airspace of the Minot International Airport. The estimated construction cost for this option is approximately \$385,000.

Figure 2-5
Alternative F: Five 12-foot Lanes with Flush Median



Proposed Typical Section

Figure 2-6
Alternative G: Four 12-foot Lanes with Raised Median



Proposed Typical Section

Option 3.2: Pedestrian Underpass Grade Separation Near 20th Avenue NW

A grade-separated pedestrian crossing underpass would be constructed between 19th Avenue NW and 20th Avenue NW. The terrain is conducive to meeting ADA grades. The disadvantage of the pedestrian underpass includes the inability to police the underpass due to backslopes on both sides of the roadway. The underpass would also blow full of snow easily, leading to maintenance concerns of the city. The estimated construction cost for this option is approximately \$144,600.

Option 3.3: Pedestrian at-grade crossing at the Intersection of 20th Avenue NW

An at-grade pedestrian crossing at the intersection of 20th Avenue NW would be constructed. The signals would need to have pedestrian signal heads and pushbuttons added to accommodate a pedestrian crossing at this intersection. A center median would be required for pedestrian refuge when crossing the wide roadway section. The estimated construction cost for this option is below \$10,000 and is included in the construction costs for the signal at 20th Avenue NW.

Option 4: Right Turn Lanes

Install right turn lanes at locations selected by city of Minot in Segment 2 for Alternatives F and G. Locations addressed are the northbound turns at the east service road north of 11th Avenue NW, at 19th Avenue NW and 20th Avenue (Airport Road); and the southbound turn at the west service road north of 11th Avenue NW. The estimated cost for construction of this option is approximately \$13,500 per right turn lane.

Frontage Roads:

The frontage roads in Segment 2 were evaluated for reconstruction. Through the evaluation process, it was determined that one section of frontage roads would be repaved.

The frontage road that would be reconstructed parallels North Broadway on the west side from 19th Avenue North to 21st Avenue NW. The roadway is approximately 24 feet wide with curb and gutter on the west side. The frontage road is located entirely within NDDOT right-of-way and is maintained by the city of Minot. The proposed stacking room for each intersection is sufficient to allow for a semi-trailer. Any modifications to these intersections to increase the stacking room, such as a bulb-out, would require the acquisition of additional right-of-way. For a more detailed frontage road analysis, please refer to the North Broadway Final Engineering Report. The estimated construction cost to repave the frontage roads from the property line 1300 feet south of 19th Avenue NW to 21st Avenue NW is \$127,000.

2.4 Alternatives Discarded from Further Analysis

The National Highway System (NHS), based on the criteria of 23 CFR 658.9(b), lists routes designated as National Network based on their general adherence to the criteria of items (1) through (6). The criteria (5) states "The route consists of lanes designed to be a width of 12 feet or more or is otherwise consistent with highway safety." Based on this criteria, all of the alternatives carried forward must have at least one 12-foot lane in each direction.

Alternative B (Rebuild with Existing Geometry) was discarded from further analysis because it did not meet the purpose of the project: to improve roadway capacity to a minimum LOS C based on future traffic demands and to accommodate pedestrian/bicyclists users while meeting ADA guidelines/standards. Further, it would not have at least one 12-foot lane in each direction.

2.5 Alternatives and Options Eliminated from Detailed Study

A preliminary analysis was conducted on additional build alternatives and options, which were then eliminated from detailed study. Following is a brief description of each of those alternatives and options, including the reason(s) for their dismissal.

2.5.1 Five 11-foot Lanes

An alternative to construct five 11-foot lanes was considered in Segment 1. Based on the criteria of 23 CFR 658.9(b), the NHS (National Highway System) lists routes designated as National Network based on their general adherence to the criteria of items (1) through (6). Criteria (5) states "The route consists of lanes designed to be a width of 12 feet or more or is otherwise consistent with highway safety." Five 11-foot lanes does not meet the criteria of 23 CFR 658.9(b) and was eliminated from detailed study.

2.5.2 Two 11.5-foot Outside Lanes and Three 12-foot Inside Lanes

An alternative to construct two 11.5-foot outside lanes and three 12-foot inside lanes was considered in Segment 1. This alternative is similar to Alternative C; however, it was eliminated from detailed study since it did not provide a reduction of right-of-way impacts.

2.5.3 Four 12-foot Lanes

An alternative similar to Alternative E was considered which would reconstruct North Broadway from 4th Avenue NW to University Avenue NW with four 12-foot lanes. The *Addendum to the Traffic Operations Study* dated July 2004 indicated that left turn crashes, rear end crashes, and side swipe type crashes on North Broadway would likely increase with the four lane section. Because of the likely increase in crashes, this alternative was eliminated from detailed study.

2.5.4 One-Way Pair

A one-way pair was considered utilizing North Broadway as either the north or south bound roadway. Due to the Minot State University campus, the nearest corridor to the west is 8th Street NW, which is located six blocks west of North Broadway. The nearest viable corridor to the east is 3rd Street NE, which is four blocks away. The resulting distance between a one-way pair would create excessive indirection. Closer through routes to the east do exist, but have narrow residential streets. Furthermore, the area northeast of North Broadway and 4th Avenue NW is within an eligible historic district, with the First Lutheran Church on North Broadway being the west edge. Therefore, this alternative was eliminated from detailed study.

2.5.5 Three Lane Section

A three lane section was analyzed to determine if the section would be adequate to handle both existing and future peak hour volumes of traffic. The *Addendum to the Traffic Operations Study* dated March 2004 concluded the three lane section does not improve roadway capacity. The three lane section southbound analysis indicated a LOS D for existing traffic and a LOS F for future traffic. Therefore, this alternative was eliminated from detailed study.

2.5.6 Route West Sidewalk Behind Buildings

An option to route the west sidewalks to the alley behind the buildings was considered to lessen the impacts to buildings along North Broadway. The city alley only extends north of 4th Avenue

NW one or two blocks. Direct access of businesses and residents to the sidewalks would be eliminated. Also, routing sidewalks behind buildings may cause a concern for safety. Therefore, this option was eliminated from detailed study.

2.5.7 Alignment Modifications to Avoid Historic Properties

The NDSHPO (North Dakota State Historic Preservation Officer) has concurred that the Mackley Apartments and the First Lutheran Church and all of its associated properties are eligible for listing on the NRHP (National Register of Historic Places). The Mackley Apartments, located on the west side at 425 North Broadway, and the First Lutheran Church, located on the east side between 5th Avenue NW and 6th Avenue NW are separated by a longitudinal distance of 140 feet. The avoidance of these buildings was analyzed by shifting the alignment using deflections in the roadway for five 12-foot lanes and 8-foot sidewalks (Alternative C). Since these deflections would occur simultaneously in a short distance, driver expectancy would be violated making it difficult for drivers to keep within their own lane. This situation would be magnified during poor weather conditions, such as heavy rainfall or snow cover. Therefore, this alternative was eliminated from detailed study.

2.5.8 Right Turn Lanes in Segment 1

This option included installing right turn lanes at locations suggested by the city of Minot in Segment 1. Locations addressed are 5th, 6th, 8th, University, 10th, and 11th Avenues northbound and 5th Avenue southbound. The right turn lanes are not required to meet LOS C at the intersections. Additional right-of-way will be required to accommodate the right turn lanes. The *Addendum to the Traffic Operations Study* dated February 2004 stated there is not a need for the addition of right turn lanes along North Broadway between 4th Avenue NW and 11th Avenue NW because of the low right turn volumes and the lack of crashes caused by right turning vehicles. Therefore, this option was eliminated from detailed study.

2.5.9 Minot State University Access

Minot State University requested an access point along the south edge of the First Lutheran Cemetery. The *Addendum to the Traffic Operations Study* dated February 2004 recommended not installing this access. It would not line up directly with 10th Avenue NW and may cause operational problems. The required 100-foot northbound and southbound left turn lanes interfere with the required southbound left turn lane at University Avenue SW and the required northbound left turn lane at 11th Avenue NW. This option was eliminated from detailed study.

2.5.10 Modify Bishop Ryan High School Entrance

The existing driveway entrance to Bishop Ryan High School is located within the functional area of the North Broadway and 11th Avenue NW intersection. This option would have modified the entrance by moving it slightly west. The *Addendum to the Traffic Operations Study* dated February 2004 did recommend this modification to allow left turning traffic from the frontage road to have better access to 11th Avenue NW. Bishop Ryan High School was not in favor of any changes to their entrance since the terrain would require large scale reconstruction of their entrance, parking lot and green space; therefore the option was eliminated from detailed study.

2.5.11 Realign 20th Avenue NW and 21st Avenue NW

Three intersection options were presented at the city of Minot's request to realign the intersections of 20th Avenue NW and 21st Avenue NW. The intersection realignments were

intended to improve east-west traffic flow in north Minot. However, the options were eliminated from detailed study due to local right-of-way costs and issues with the airport's safety areas.

2.6 Preferred Alternatives and Options

The following are the preferred alternatives and options for Segment 1 and Segment 2. These recommended alternatives and options were identified after the April 2005 Public Hearing when comments from the public, city, and agencies were received.

2.6.1 Preferred Alternatives in Segment 1

The preferred alternatives in Segment 1 are a combination of two alternatives that have been identified for Segment 1. Because the Mackley Apartments is eligible for listing on the NRHP, Alternative D, two 12-foot outside lanes and three 11-foot inside lanes with 4-foot sidewalks, has been identified as the preferred alternative only in the location of the Mackley Apartments (425 North Broadway). From the intersection of 4th Avenue NW and North Broadway (beginning project terminus) to before the Mackley Apartments (425 North Broadway), Alternative C, five 12-foot lanes with 4-foot to 8-foot sidewalks, has been identified as the preferred alternative. After the Mackley Apartments (425 North Broadway) to the end of Segment 1 (11th Avenue NW), the preferred alternative is Alternative C, 4-foot to 8-foot sidewalks. Alternative C also includes locations for certain sidewalk widths in order to reduce the amount of relocations and right-of-way. These two specific locations include: Broadway Exchange and Pawn (501 North Broadway) and Subway/AIG American General (721 North Broadway). In all other locations in Segment 1, *with the exception of the Mackley Apartments—425 North Broadway and the above two locations*, 8-foot sidewalks are recommended as the preferred alternative. ***Please refer to Figure 2-7, Alternatives C and D.***

2.6.2 Preferred Options in Segment 1

The preferred options in Segment 1 are Option 1 (left turn lane at 4th Avenue NW—northbound) and Option 2 (5th Avenue NW to 6th Avenue NW transition). Option 2 would incorporate adjusted geometry in order to not encroach upon the New Hope Christian Center's (Church—220 5th Avenue NW) property.

2.6.3 Preferred Alternative in Segment 2

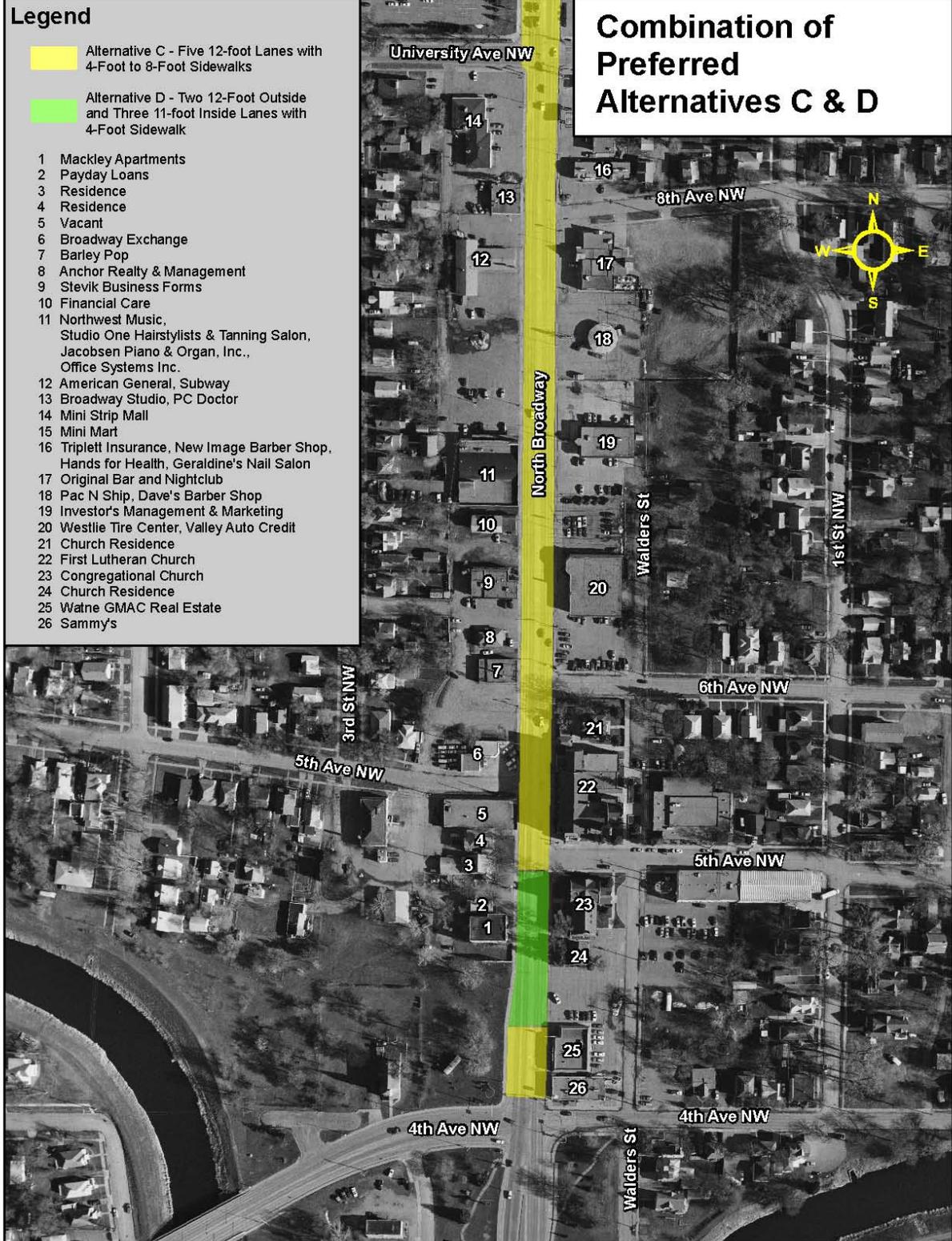
The preferred alternative in Segment 2 is Alternative G (four 12-foot lanes with raised median).

2.6.4 Preferred Options in Segment 2

The preferred options in Segment 2 are Option 3.1 (pedestrian overhead grade separation near 20th Avenue NW) and Option 4 (right turn lanes). Option 4 would install right turn lanes at locations selected by the city of Minot in Segment 2 for Alternative G. Locations addressed are the northbound turn lanes at the east service road north of 11th Avenue NW, at 19th Avenue NW and 20th Avenue NW (Airport Road); and the southbound turn a the west service road north of 11th Avenue NW. This is a city funded option.

It was also recommended that the frontage road that parallels North Broadway on the west side from 19th Avenue NW to 21st Avenue NW should be repaved. The funding is 80% Regional Federal funds and a 20% match paid by the city of Minot, since it is a city collector roadway.

**Figure 2-7
Alternatives C and D**



Chapter 3 Environmental Impacts

3.1 Introduction

This chapter addresses the positive and negative environmental impacts of the alternatives presented in Chapter 2. The inventory and evaluation of the existing environment provides the necessary baseline from which to determine the impacts of the proposed project alternatives. The potential effects of the North Broadway project to the human environment, physical environment, and natural environment are discussed, as well as potential mitigation measures for any adverse impacts. For each of the following categories only the alternatives which have an affect are discussed in the *Impacts/Mitigation Section*. **For further information on individual alternatives and options, please refer to Chapter 2 of this document.**

3.2 Land Use Impacts

North Broadway is a part of the North Dakota Regional Secondary Highway system, is classified as a principal arterial highway and is part of the NHS (National Highway System) on US Highway 83 from the US/Canadian international border to the South Dakota border. The NHS is defined as consisting of interconnected urban and rural principal arterials and highway, including toll facilities, which serve major population centers, international border crossings, ports, airports, public transportation facilities and other major travel destinations; meet national defense requirements and serve interstate and inter-regional travel.

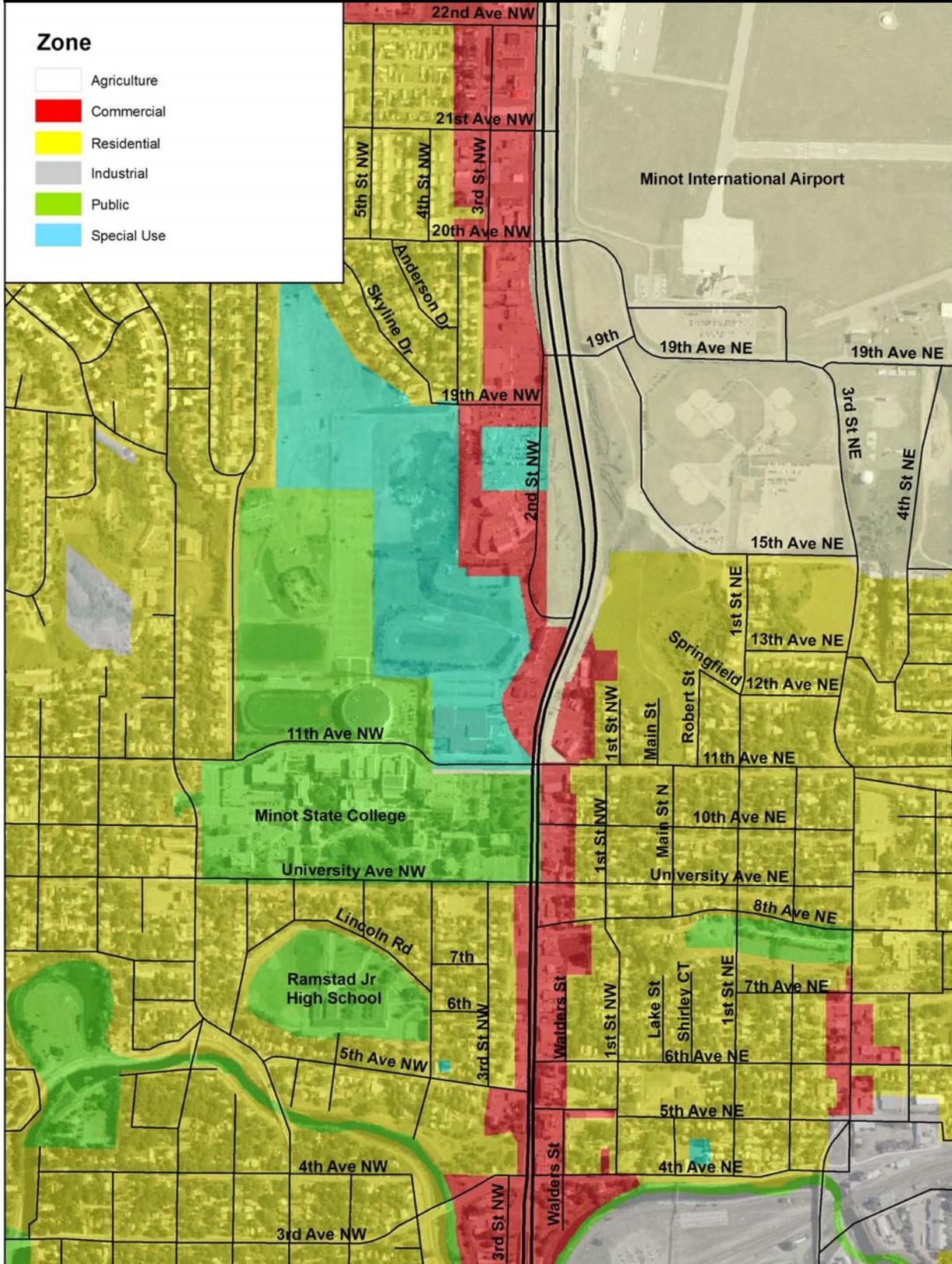
The NHS designation is an important economic infrastructure feature of the area. US Highway 83 and North Broadway serve as a vital link to the air, rail, and public transportation systems serving the state.

Currently, North Broadway is mainly zoned C-2, General Commercial District, which is a heavy commercial district located in close proximity to major thoroughfares or highways are designed to furnish a wide range of retail services and goods. The North Broadway corridor is an established commercial district, with small-scale residential use mixed into the commercial area on the south end of the study area.

In the corridor, certain areas are zoned as public, including Minot State University, the area near the Sertoma Sports Complex, and the Minot International Airport. The Public Zone District is designed to retain and provide land areas owned by the local, state, or federal government for public use. At 11th Avenue NW, the Bishop Ryan High School area is designated as AG, Agricultural District, the principal use of the land shall be used for farming, ranching, and related uses, or a public school, or a private school having a curriculum the same as ordinarily given in a public school.

One small area, near the International Inn is zoned as SU, Special Use. Also adjacent to the corridor, are two churches (Congregational Church of Christ and First Lutheran Church) and one cemetery (First Lutheran Cemetery). **Please refer to Figure 3-1, Land Use within the Study Area.**

**Figure 3-1
Land Use**



3.2.1 Land Use Impacts/Mitigation

Alternatives C, D, and E would impact buildings and businesses, Minot State University, and the First Lutheran Cemetery. Since the area is zoned General Commercial District and is along a principal arterial, it is anticipated that any buildings that are removed would be replaced by new commercial buildings.

Alternative C (Segment 1) – Alternative C would result in land use being converted from land zoned General Commercial, mainly businesses on the west side of North Broadway, as well as an apartment building (Mackley Apartments), to a transportation corridor. The additional right-of-way needed for this alternative would be acquired from the properties along the west side of North Broadway from 4th Avenue NW to University Avenue NW. North of University Avenue NW; the road would transition to the east to minimize impacts to the First Lutheran Church Cemetery, but would still need 10 feet of right-of-way from the cemetery. There are no known graves in the proposed right-of-way acquisition from the cemetery. From University Avenue NW to 11th Avenue NW, 10 feet of right-of-way would be acquired from the west side of the roadway and a maximum of 4 feet would be acquired on the east side to accommodate 8-foot sidewalks. If 4-foot or 5-foot sidewalks are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. The parcels would be acquired on both sides of the roadway. Alternative C would also result in land use being converted from land zoned Public (Minot State University) to a transportation corridor.

Acquiring the additional right-of-way would include impacting businesses and an apartment building (Mackley Apartments), in a mainly General Commercial District; this has the potential to change the land use on the Mackley Apartments' property from a residential use to General Commercial. Next to a major thoroughfare, such as North Broadway, it is anticipated that the land use would never change from General Commercial.

Alternative D (Segment 1) – Alternative D would result in land use being converted from land zoned General Commercial, to a transportation corridor. The additional right-of-way needed for this alternative would be acquired from the properties on the west side of North Broadway. The additional right-of-way requirement would vary from 3 feet to 11 feet depending upon which sidewalk width is chosen. If 4-foot or 5-foot sidewalks are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be required along both sides of the roadway.

Acquiring the additional right-of-way would include impacting businesses and an apartment building (Mackley Apartments—only with 8-foot sidewalks), in a mainly General Commercial District; this has the potential to change the land use on the Mackley Apartments' property from a residential use to General Commercial. Although, next to a major thoroughfare, such as North Broadway, it is highly unlikely that the land use would ever change from General Commercial.

Alternative E (Segment 1) – Additional right-of-way required at the location of the left turn lanes at 4th Avenue NW and University Avenue NW. This would result in converting land zoned General Commercial, businesses on the west side of North Broadway, to a transportation corridor.

Option 2 (Segment 1) – In addition to impacts associated with Alternatives C and D, Option 2 would result in land use being converted from land zoned as a General Residential District to a transportation corridor; impacting one residence.

3.3 Social Impacts

Social impacts are those that affect the quality of life for residents living within the study area. Impacts to the social environment may include changes in neighborhoods or community cohesion for various social groups; changes in travel patterns and accessibility; impacts on school districts, recreation areas, churches, businesses, police and fire protection; and/or impacts on highway, traffic, and overall public safety. The following discussion addresses all the above.

3.3.1 Changes in Neighborhoods/Community Cohesion

Community is defined in part by behavior patterns, which individuals or groups of individuals hold in common. These behavior patterns are expressed through daily social interactions, the use of local facilities, participation in local organizations, and involvement in activities that satisfy the population's economic and social needs. A community is also defined by shared perceptions or attitudes, typically expressed through individuals' identification with, commitment to, and attitude towards a particular identifiable area.

North Broadway is the major north-south route through the city of Minot, which is also designated as US Highway 83. North Broadway has evolved from a state highway through town that was originally primarily residential to one that is currently primarily a commercial strip.

Currently, North Broadway (Segment 1), from 4th Avenue NW to 11th Avenue NW, is a General Commercial District intermingled with residences, churches, and schools. This General Commercial District has businesses, schools, and churches lining both the east and west side of the street. The west side of North Broadway is home to the Mackley Apartments, 2 residences, 1 vacant building, First Lutheran Cemetery, Bishop Ryan High School, Minot State University, and approximately 22 businesses. The west side of North Broadway has approximately 14 buildings adjacent to the roadway. The east side of North Broadway (Segment 1) is home to Congregational Church, First Lutheran Church, and approximately 20 businesses. The east side of the roadway has approximately 17 buildings adjacent to the roadway.

3.3.1.1 Neighborhoods/Community Cohesion Impacts/Mitigation

Alternative C (Segment 1) – Alternative C with 4-foot sidewalks would result in impacting the Mackley Apartments, and 10 businesses (approximately 7 buildings). This results in approximately 45 percent of the businesses on the west side of North Broadway being impacted; and approximately 50 percent of the buildings would be impacted.

Alternative C with 6-foot sidewalks would result in impacting the Mackley Apartments, and 12 businesses (approximately 8 buildings). This results in approximately 55 percent of the businesses on the west side of North Broadway being impacted; and approximately 57 percent of the buildings would be impacted.

Alternative C with 8-foot sidewalks would result in impacting the Mackley Apartments, and 13 businesses (approximately 9 buildings). This results in approximately 59 percent of the businesses on the west side of North Broadway being impacted; and approximately 64 percent of the buildings would be impacted.

Alternative C would result in impacting 45–59 percent of businesses and 50–64 percent of the buildings. The changes along the west side of North Broadway would be visible and a change in the commercial neighborhood. The relocation of businesses and buildings may not affect the land use but may affect the neighborhood as it currently exists. The surrounding neighborhoods

would be inconvenienced by the removal/relocations of businesses from the immediate area. Pedestrian traffic may also change with the removal or start-up of businesses near the schools.

Alternative D (Segment 1) – Alternative D with 4-foot sidewalks would result in impacting 9 businesses (approximately 5 buildings). This results in approximately 41 percent of the businesses on the west side of North Broadway being impacted; and approximately 36 percent of the buildings would be impacted.

Alternative D with 6-foot sidewalks would result in impacting the Mackley Apartments, and 10 businesses (approximately 7 buildings). This results in approximately 45 percent of the businesses on the west side of North Broadway being impacted; and approximately 50 percent of the buildings would be impacted.

Alternative D with 8-foot sidewalks would result in impacting the Mackley Apartments, and 12 businesses (approximately 8 buildings). This results in approximately 55 percent of the businesses on the west side of North Broadway being impacted; and approximately 57 percent of the buildings would be impacted.

Alternative D would result in impacting 41–64 percent of businesses and 36–57 percent of the buildings. The changes along the west side of North Broadway would be visible and a change in the commercial neighborhood. The relocation of businesses and buildings may not affect the land use but may affect the neighborhood as it currently exists. The surrounding neighborhoods would be inconvenienced by the removal/relocations of businesses from the immediate area. Pedestrian traffic may also change with the removal or start-up of businesses near the schools.

Alternative E (Segment 1) – Alternative E would result in impacting the Mackley Apartments, and 3 businesses (approximately 3 buildings). This results in approximately 14 percent of the businesses on the west side of North Broadway being impacted; and approximately 21 percent of the buildings would be impacted.

Alternative E would result in changes along the west side of North Broadway, but also changes to the roadway with a continuous raised median and no left-hand turn lanes. The changes along the west side would be visible on the commercial aspect and of the roadway section. Impacts to the neighborhood and community may stem from the raised median and no left-hand turn lanes.

The general motoring public, delivery services and truck traffic, and pedestrian/bicycle traffic may be impacted by disrupting the driver expectancy and turning movements. Driver expectancy may be disrupted because south of the viaducts are five 12-foot lanes—the motoring public would drive from the viaducts to a new section of roadway for about 8 blocks, up until 11th Avenue NW and then transition once again to another section of roadway. Turning movements would be expected to increase, traffic volumes on residential side streets would increase, and only a standard passenger vehicle would be able to make the U-turn at 4th Avenue NW and University Avenue NW.

Option 2 (Segment 1) – In addition to impacts associated with Alternatives C and D, Option 2 would result in relocating one residence. This Option may have an impact to the residence, by relocating them from their existing neighborhood.

3.3.2 Travel Patterns/Accessibility

North Broadway was reconstructed in 1961 as part of a larger project that four-laned US Highway 83 from the city of Minot north to the Minot Air Force Base. The population of Minot at the time of the construction of the initial roadway was 30,604. The 2000 census reveals that the population has grown to 35,567¹. Traffic volumes have increased dramatically in recent years on North Broadway in the study area. AADT (Average Annual Daily Traffic) north of the Souris River has increased from 10,000 in 1960 when the original roadway was designed, to 25,950 in 2002. Traffic volumes are expected to be nearly 31,660 AADT by 2022. Commercial and residential growth north and west of the study area also contributes to the increased traffic, with high potential for considerable industrial/commercial development north of the study area.

Alternative A – Congestion, delays, and crashes would continue to increase with the perpetuation of substandard lane widths, turn lane lengths, and curb radii.

3.3.2.1 Travel Patterns/Accessibility Impacts/Mitigation

Alternative E (Segment 1) – Alternative E would include a continuous raised median with no left-turn lanes allowed between 4th Avenue NW to University Avenue NW. It is recommended that this alternative accommodate pedestrians/bicyclists at 6th Avenue NW. According to the *Addendum to the Traffic Operations Study* dated September 2004, the recommendation is to provide a pedestrian actuated mid block traffic signal system installed between 5th Avenue NW and 6th Avenue NW. The traffic signals should not be installed at 6th Avenue NW because the signals would be pedestrian actuated and the signals would not operate correctly for westbound 6th Avenue NW vehicles. Also, with this Alternative, the realignment of 5th Avenue NW to 6th Avenue NW would not be necessary. If the recommendation to provide a pedestrian crossing is not carried forward, then pedestrians/bicyclists would have to walk/ride to University Avenue NW in order to cross the street to the east side of North Broadway. This would add time and length to get to school, to businesses, or to the churches. Also, pedestrians/bicyclists would be crossing at University Avenue NW, at the same place vehicles would be completing U-turns. It is anticipated that this Alternative would increase turning movements in this intersection, leading to a potential increase of vehicular/pedestrian/bicyclist conflicts.

Alternative E would make U-turns at 4th Avenue NW and University Avenue NW difficult. A passenger vehicle would have to travel approximately 45 feet into the intersection to complete the minimum radius required. A passenger vehicle is the only standard vehicle that would be able to make a U-turn. Due to this, traffic volumes on city streets within the vicinity of North Broadway between 4th Avenue NW and University Avenue NW would be expected to increase with this alternative. **Please refer to Figures 3-2 and 3-3.**

¹ US Census Bureau 2000, Demographic Profiles

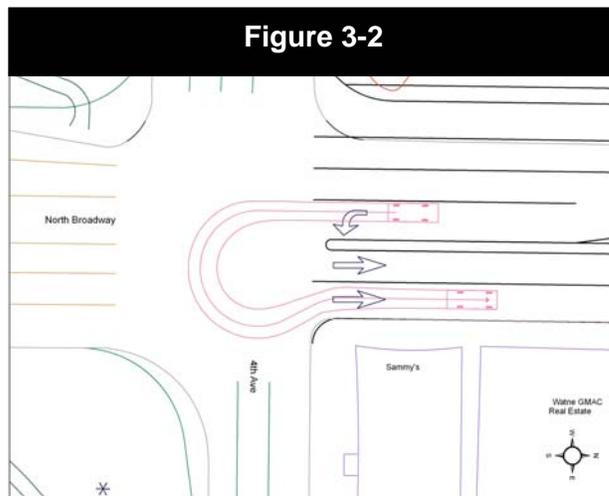


Figure 3-2 Illustrates the maneuver required to complete the U-turn. This requires traveling 45 feet into the intersection before beginning the maneuver.

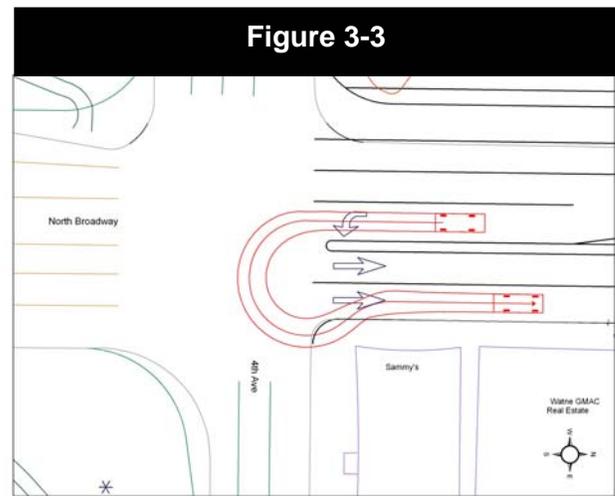


Figure 3-3 Illustrates the maneuver without traveling into the intersection.

Travel patterns may change with this alternative, leading to additional commercial traffic on residential side streets because anything bigger than a passenger vehicle is not able to make a U-turn at 4th Avenue NW and University Avenue NW. Since traffic volumes on residential city streets may increase with Alternative E, it is also anticipated that maintenance costs of the streets would also increase. The residential streets have parking on both sides of the street. The area on the east side of North Broadway is also an eligible historic district; **please refer to Section 3.8 Cultural Resources.**

Commercial vehicles may need to access businesses on the west side of North Broadway, but are not able to make the U-turn at University Avenue NW. A route to access these businesses, if traveling northbound may be to turn onto 4th Avenue NW, then onto 1st Street NW, then on University Avenue NW, finally turning southbound on North Broadway. Since it is anticipated that commercial vehicles would use the residential city streets, preliminary turning radiuses were analyzed for making left-hand/right-hand maneuvers at the intersections of 4th Avenue NW and 1st Street NW; and University Avenue NW and 1st Street NW, **please refer to Figures 3-4 and 3-5.**

Figure 3-4
4th Avenue Intersection Turning Radiuses



**Figure 3-5
University Avenue Intersection Turning Radiuses**



Intersection of 4th Avenue NE and 1st Street NW

- An AASHTO (American Association of State Highway and Transportation Officials) 2001 (US) WB-50 (semi-trailer, 53 feet total length) could make a left-hand maneuver from 4th Avenue NE onto 1st Street NW, but would encroach on the opposing lane of traffic on 1st Street NW for 100 feet north of the intersection.
- An AASHTO 2001 (US) WB-40 (semi-trailer, 43.5 feet total length) could make a right-hand maneuver from 1st Street NW onto 4th Avenue NE, but would begin the turn in the center of 1st Street NW and encroach on the opposing lane of traffic on 4th Avenue NE for 115 feet west of the intersection.

Intersection of University Avenue NE and 1st Street NW

- An AASHTO 2001 (US) WB-50 (semi-trailer, 53 feet total length) could make a left-hand maneuver from 1st Street NW onto University Avenue NE, but would encroach on the opposing lane of traffic on University Avenue NE for 65 feet west of the intersection.
- An AASHTO 2001 (US) WB-40 (semi-trailer, 43.5 feet total length) could make a right-hand maneuver from University Avenue NE onto 1st Street NW, but would begin the turn in the center of University Avenue NE and encroach on the opposing lane of traffic on 1st Street NW for 100 feet south of the intersection.

The *Traffic Operations Analysis* dated September 2004 assumed volumes of the rerouted traffic at both intersections of 4th Avenue NE and University Avenue NW for both present day and 20-year forecast traffic. The rerouted traffic from the analysis is as follows:

Based on 2004 traffic data, an additional 675 AADT from northbound traffic would turn right (east) onto 4th Avenue NE and then filter through adjacent streets to reach their destination. This volume was projected to be 820 AADT in year 2024. Approximately 1.5% of this traffic is assumed to be trucks based on existing traffic counts.

Based on 2004 traffic data, an additional 235 AADT from southbound traffic would turn left (east) onto University Avenue NW and then filter through adjacent streets to reach their destination. This volume was projected to be 290 AADT in year 2024. Approximately 2% of this traffic is assumed to be trucks based on existing traffic counts.

In addition, vehicle access to businesses along North Broadway would be more difficult with no left-turn lanes. The indirect impacts of no left-turn lanes, is access to the businesses from the motoring public, but also to commercial vehicles delivering merchandise or goods to the businesses.

3.3.3 School Districts, Churches, Residences, Businesses, and Fire, Police, and Emergency Protection

3.3.3.1 School Districts

MSU (Minot State University) and Bishop Ryan High School are situated adjacent to North Broadway; two blocks east of North Broadway is an elementary school (McKinley Elementary School) and two blocks west of North Broadway is a junior high school (Erik Ramstad Middle School).

There are existing sidewalks located on both sides of North Broadway from 4th Avenue NW to 11th Avenue NW (Segment 1). The sidewalk widths vary from 3.5 to 5 feet. In some locations, the minimum sidewalk width is compromised by roadway hardware (i.e. signs, lights, or signal standards), and does not meet current minimum widths with regard to ADA (*Americans with Disabilities Act of 1990*). Additionally, the cross slope of sidewalks exceeds ADA guidelines at driveway crossings. Also, curb ramps are inconsistent with ADA guidelines.

At the present time, students cross North Broadway at 6th Avenue NE, which is directly in front of the Barley Pop (511 North Broadway). MSU had 8,942 students enrolled in 2004². Erik Ramstad Middle School has approximately 95 students who live east of North Broadway. The school surveyed the students and approximately 80-90 students either ride their bicycle or walk to school at least a few times a week, weather permitting. McKinley Elementary School reported that they have about 50 students crossing North Broadway, with the majority of the elementary students crossing at 6th Avenue NE (Barley Pop).

There are no sidewalks or multi-use trails located from 11th Avenue NW to 21st Avenue NW (Segment 2). This entire corridor has many points of community interest that tend to be pedestrian generators. These facilities include Minot International Airport, hotels, residences, and the North Hill recreation/softball complex, all located along a commercial business district. According to the city of Minot, 1700 adults use the North Hill Complex, and 1500 youth use the Complex during the summer months.

3.3.3.1.1 School Districts Impacts/Mitigation

Alternative C (Segment 1) – Alternative C would require 6 to 14 feet of right-of-way from Minot State University. Most of the buildings are further back from the roadway and the right-of-way that would need to be acquired is currently empty space or “green space.” The acquisition of “green space” would mean that the roadway would encroach closer to this property; therefore, resulting in a minor impact.

Alternative D (Segment 1) – Alternative D would require 3 to 8 feet of right-of-way from Minot State University. Most of the buildings are further back from the roadway and the right-of-way that would need to be acquired is currently empty space or “green space.” The acquisition of “green space” would mean that the roadway would encroach closer to this property; therefore, resulting in a minor impact.

Alternative E (Segment 1) – Alternative E would also require right-of-way from Minot State University. Most of the buildings are further back from the roadway and the right-of-way that would need to be acquired is currently empty space or “green space.”

Alternatives C, D, E, F, and G, and Options 2, 3.1, 3.2, and 3.3 would accommodate pedestrian/bicyclist users, while meeting ADA guidelines/standards; and provide pedestrian/bicyclist facilities where none exist currently (Segment 2). Option 2 would provide the reconfiguration of 5th Avenue NW to the west of North Broadway and would connect the school crossing with the school route along 5th Avenue NW.

Alternative A (entire project) – Alternatives A would not accommodate all pedestrian users as the sidewalks do not meet ADA guidelines/standards.

² Minot State University Recorder's Office, January 25, 2005

Alternative E (Segment 1) – Alternative E would need to provide a pedestrian actuated mid block traffic signal system installed between 5th Avenue NW and 6th Avenue NW. If this recommendation is not carried forward, then pedestrians would have to walk to University Avenue NW in order to cross the street to the east side of North Broadway. This would add time and length to get to school. Also, pedestrians would be crossing at University Avenue NW at the same place vehicles would be completing U-turns. It is anticipated that this Alternative would increase turning movements in this intersection, leading to a potential increase of vehicular/pedestrian conflicts.

3.3.3.2 Churches

Located adjacent to the east side of North Broadway are two churches: First Lutheran Church and the Congregational United Church of Christ.

The Congregational United Church of Christ includes a separate parsonage adjacent to North Broadway. The Congregation United Church of Christ was established on May 20, 1906 because there were no English speaking houses of worship on the north side of the city of Minot. Erik Ramstad donated a valuable lot east of the North Side School House, and on December 17, 1906 the first service was conducted in the church building. After the congregation grew, a new site was selected for a brand new church on North Broadway. The first service was held on December 11, 1921 and the formal dedication was on March 19, 1922³. The Congregational United Church of Christ was evaluated and determined not eligible for listing on the National Register of Historic Places.

The First Lutheran Church Complex and the First Lutheran Cemetery (located on the west side of North Broadway), is eligible for listing on the National Register of Historic Places under Criterion C, as a site, with the Church as the main resource nominated and the remaining elements—parsonage, garage, and cemetery as contributing elements to the site's significance.

The First Lutheran Church as it presently stands is the result of a variety of expansions and alternations to a building constructed in 1907 and formally dedicated on May 5, 1908. A parsonage constructed in 1914, stands today just north of the Church and approximately on the same site of the congregation's first church, which was superseded by the 1907 building. Ultimately, the city of Minot has grown around the Church and so has North Broadway. Currently, the Church is situated in close proximity to the roadway, with a 4.5-foot sidewalk buffer between the building and roadway.

The New Hope Christian Center, 220 5th Avenue NW, is located in a residential district adjacent to North Broadway.

3.3.3.2.1 Churches Impacts/Mitigation

Alternatives C and D (Segment 1) – Alternatives C, 4-foot sidewalks would decrease the distance between the churches and the roadway. Alternatives C and D, 6-foot to 8-foot sidewalks, would provide increased sidewalk widths, which provide a greater buffer distance from the church structures and the roadway.

³ Congregational United Church of Christ, Minot, North Dakota history, *The First Seventy-Five Years: 1906-1981*, by Paul W. Morrison.

At the same time, these two Alternatives would acquire property from the First Lutheran Cemetery (west side of North Broadway). This acquisition of property may cause disruption to the atmosphere of visiting peoples to gravesites. These two Alternatives would also relocate two pillars from the main entrance off of North Broadway further back in the property. Familial and cultural descendants of the interred often view graves and cemeteries with a sense of reverence and devout sentiment that can sometimes overshadow objective evaluation of changing the visiting atmosphere and appearance. The Cemetery has not changed dramatically since the early 1900s; if these two Alternatives are chosen, social impacts may occur.

Alternative E (Segment 1) – Alternative E would provide adequate sidewalk widths that would provide a greater buffer distance from the church structures and the roadway. The recommendation of the pedestrian actuated mid block traffic signal system installed between 5th Avenue NW and 6th Avenue NW would need to be constructed so churchgoers may cross North Broadway. In addition, southbound churchgoers would have to filter to residential city streets in order to reach the two churches.

This Alternative would acquire property from the First Lutheran Cemetery. This acquisition of property may cause the disruption to the atmosphere of people visiting gravesites. The Alternative would also relocate two pillars from the main entrance off of North Broadway further back in the property. Familial and cultural descendants of the interred often view graves and cemeteries with a sense of reverence and devout sentiment that can sometimes overshadow objective evaluation of changing the visiting atmosphere and appearance. The Cemetery has not changed dramatically since the early 1900s; if this Alternative is chosen, social impacts may occur.

3.3.3.3 Residences

The Mackley Apartments is a two-story apartment building on the west side of North Broadway. The Mackley Apartments is eligible for listing on the National Register of Historic Places. It has ten one-bedroom apartments and one sleeping room, with approximately 17 residents. The monthly rent of the Mackley Apartments is \$150 for the sleeping room and \$300 for the one-bedroom apartments. According to the US Census, there are 90 structures in the city of Minot with 10–19 units; there are 240 vacant one-bedroom apartments. Currently, there are approximately 450 apartments within the monthly rent range of \$300–\$359.

The residence, 208 5th Avenue NW, has three residents. The tax-assessed value for the house is within the \$40,000–\$49,999 value range.

In the city of Minot, there are 166 vacant housing units for sale, 383 for rent, and 166 for rent or sale. The median value of houses in Minot is \$80,400. There are 508 houses in the city of Minot for the \$40,000–\$49,999 value range.

3.3.3.3.1 Residences Impacts/Mitigation

Alternatives C, D, and E (Segment 1) – Alternative C, 6-foot and 8-foot sidewalks; Alternative D, 8-foot sidewalks; and Alternative E would impact the Mackley Apartments. According to the US Census data, there are approximately 240 vacant one-bedroom apartments. The US Census data does not show how many of the vacant one-bedroom apartments is within the same range of the \$300 for rent. The area of North Broadway does not have another apartment building that is similar to the Mackley Apartments. There is a high possibility the residents of the Mackley Apartments would be relocated to a different area in the city of Minot. Moving out of this area

may be an indirect social impact to the residents. They may be living in this area for location, such as within close proximity to Minot State University or their employment.

Option 2 (Segment 1) – Option 2 would impact the residence located at 208 5th Avenue NW. This area may have some vacant houses for sale, since it is mostly residential. However, the median value of homes has increased to \$80,400.

3.3.3.4 Businesses

North Broadway is a commercial district, lining both the west and east sides of the roadway. Businesses vary from office supply stores, musical instrument stores, and gas stations to insurance companies, beauty salons, and video stores. North Broadway is classified as a principal arterial and is one of Minot's major north-south routes. Principal arterials carry much of the traveling public, thus spurring commerce development. ***Please refer to Table 3-1, Summary Comparison of Business Relocations for Segment 1.***

3.3.3.4.1 Businesses Impacts/Mitigation

Alternative C and Alternative D (Segment 1) – Alternative C and Alternative D, 4-foot to 8-foot sidewalks, would impact two stationery and office supply stores: Stevick Business Forms and Office Supply Inc. The city of Minot has a total of four stationery and office supply stores; therefore, 50% of these stores would be impacted with relocations. Both of the stationery and office supply stores are in the employment-size class (1–4).

Alternative C and D, 4–8-foot sidewalks, would also impact two retail musical instrument stores: Northwest Music, Inc. and Jacobsen Piano & Organ. The city of Minot has a total of three retail musical instrument stores; two out of the three stores would be impacted. The biggest retail musical instrument store, Northwest Music Inc. would be impacted, as well as the more specialty musical instrument retail store, Jacobsen Piano & Organ. Relocating two of the three music stores may have an indirect impact to the city of Minot. Indirect social impacts (if the businesses chose not to relocate in a different area in Minot) would be to the local schools' music department and to the residents of Minot and the surrounding areas.

3.3.3.5 Fire, Police, and Emergency Protection

Alternative E (Segment 1) – Alternative E would construct a continuous raised median from 4th Avenue NW to University Avenue NW, with no left-hand turn lanes. The Minot Police Department views this Alternative as a “hazard to the response of ***all*** emergency services.” The police department believes that not having left-hand turn lanes would:

- Make it difficult to respond to an emergency
- Make it difficult to stop a traffic violator or to respond to an emergency if traveling in the wrong direction when a call is given
- Slow down response time and/or make it difficult to ticket a violator as it would block at least one lane until they can get the offender off of North Broadway

Placeholder for 11x17-size Table 3-1; filename "relocations126.doc"

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The Minot Fire Department views this Alternative as “completely unacceptable.” For any residential or commercial fire, the Department has to dispatch all three fire stations to have enough firefighters on scene to commence fire operations. With this alternative, the fire response time would more than double because there would be no way to access the west side of North Broadway when responding from the south. This adds an increased risk to the businesses and to residents.

3.3.4 Mobility/Safety

Safety issues include inadequate pedestrian/bicyclist facilities, sight distance restrictions, and crash history. Sight distance restrictions on the roadway occur from adjacent buildings restricting the sight of vehicles trying to enter the roadway.

There are existing sidewalks located on both sides of North Broadway from 4th Avenue NW to 11th Avenue NW (Segment 1). The sidewalk widths vary from 3.5 to 5 feet. In some locations, the minimum sidewalk width is compromised by roadway hardware (i.e. signs, lights, or signal standards), and does not meet current minimum widths of 4 feet with regard to ADA (*Americans with Disabilities Act of 1990*). During the public involvement process, the following concerns regarding safety of the sidewalks were expressed: too narrow and not enough buffer from the roadway, which cause splashing onto buildings. The other concern is the sidewalks are used for snow storage in the winter and because of the narrow sidewalk widths; there often is not enough room for pedestrians/bicyclists to utilize the sidewalks.

There are no sidewalks or multi-use trails located from 11th Avenue NW to 21st Avenue NW (Segment 2).

Since the time North Broadway was constructed the area has developed into a commercial business district with buildings lining the east and west sides of the roadway. Guidelines for measuring height of eye, sight distance, and stopping sight



Existing 4.5-foot sidewalks being used for snow storage



Existing 4.5-foot sidewalks being used for snow storage

distance have changed since 1961. The majority of the buildings along the west side of North Broadway from 4th Avenue NW to 11th Avenue NW (Segment 1) restrict sight distances. This restriction does not provide sufficient sight distance for a stopped driver on an approach to enter and/or cross the roadway.

A total of 180 crashes occurred in the study area from January 1, 2000 to December 31, 2002. The majority of these crashes (151) occurred at intersections; of this 109 crashes occurred at the signalized intersections. Sixty-three of these crashes were rear-end crashes. Rear-end collisions are typical of signalized intersections and may be due to several factors: poor visibility of signal heads; driver inattention or distractions; and traffic congestion. Forty-three of these crashes were angle collisions and may be due to several factors: north and south bound vehicles running red lights; drivers turning too wide; and failing to yield due to vertical curve sight distance problems.

A total of 29 link crashes were reported during this analysis period. The majority of these crashes (17) were rear-end crashes.

3.3.4.1 Mobility/Safety Impacts/Mitigation

Alternatives C, D, E, F, and G (Segments 1 and 2) – The alternatives would accommodate pedestrian/bicyclist users while meeting ADA guidelines/standards.

Options 3.1, 3.2, and 3.3 (Segment 2) – These Options may decrease and/or eliminate pedestrian/vehicle conflicts.

Alternatives C and D (Segment 1) – Alternatives C and D, 8-foot sidewalks, potentially may provide sufficient sight distance for a stopped driver on an approach to enter and/or cross the roadway. Sight distance would be improved by relocating buildings that restrict sight distance.

3.4 Relocations

The “Uniform Act,” or Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and amendments, provide important protections and assistance for people affected by federally funded projects which, although designed to benefit the public as a whole, may result in acquisition of private property and displacement of people from their homes, businesses, or farms.

Alternatives A, F, and G (Segment 2) and Option 1 (Segment 1), and Options 3.1, 3.2, 3.3 (Segment 2), and Option 4 (Segment 2) would not require any relocations.

The maximum amount of relocations for the reconstruction of North Broadway would include nine building relocations. The nine building relocations are on the west side of North Broadway. Relocations would follow the NDDOT’s Relocation Policy and the Relocation Assistance Program.

The North Broadway area of the city of Minot historically was mostly residential districts. As the city grew, and when US Highway 83 was constructed the adjacent area of North Broadway turned mostly into an exclusively commercial district. Not only is North Broadway a major thoroughfare, the major north-south route in the city, it hosts business generators such as Minot State University and all the other businesses.

Currently, there are only a few vacant buildings along this corridor. The existing businesses and/or buildings that would be impacted would potentially have a hard time finding comparable buildings to relocate near or in the vicinity of North Broadway because there are only a few vacant buildings along the corridor. Relocation in this area is unlikely also due to: (1) other affected businesses trying to relocate in this same area—competition for vacant buildings or lots, and (2) the surrounding area is residential.

Relocating along North Broadway may only be likely if the building owners or business owners were able to negotiate during the right-of-way process. Possible negotiations may include: (1) that the property itself (land/lots) is not purchased by the North Dakota Department of Transportation, and the buildings could be demolished and then rebuilt with setbacks from the right-of-way line per city code, (2) buildings moved further back in their existing location, (3) remodel existing buildings to meet the potential new right-of-way requirements, and (4) relocate to a new area, on a similar property, in the city of Minot.

Mackley Apartments—425 North Broadway

The Mackley Apartments is a two-story apartment building on the west side of North Broadway. The Mackley Apartments is eligible for listing on the National Register of Historic Places. It has ten one-bedroom apartments and one sleeping room, with approximately 17 residents. The rent of the Mackley Apartments is \$150 for the sleeping room and \$300 for the one-bedroom apart-

ments. The building was evaluated for the possibility of relocating the structure. The evaluation concluded that the building lacks structural integrity to facilitate relocating the structure.

According to the US Census, there are 90 structures in the city of Minot with 10–19 units; there are 241 vacant one-bedroom apartments. Currently, there are approximately 450 apartments within the range of \$300–\$359. The approximate tax-assessed value of the building is \$128,200 and the tax-assessed value of the land is \$25,800.



Broadway Exchange and Pawn—501 North Broadway

Broadway Exchange and Pawn has been in operation since 1995, and has approximately two employees. The approximate tax-assessed value of the building is \$43,000.

In the city of Minot, there are approximately three other “used merchandise stores”, excluding Broadway Exchange and Pawn. Of these three other used merchandise stores, none have the same employment-size class (1–4). In addition, one used merchandise store is in the (5–6)



employment-size class; one in the (10–19) employment-size class; and one in the (20–49) employment-size class⁴.

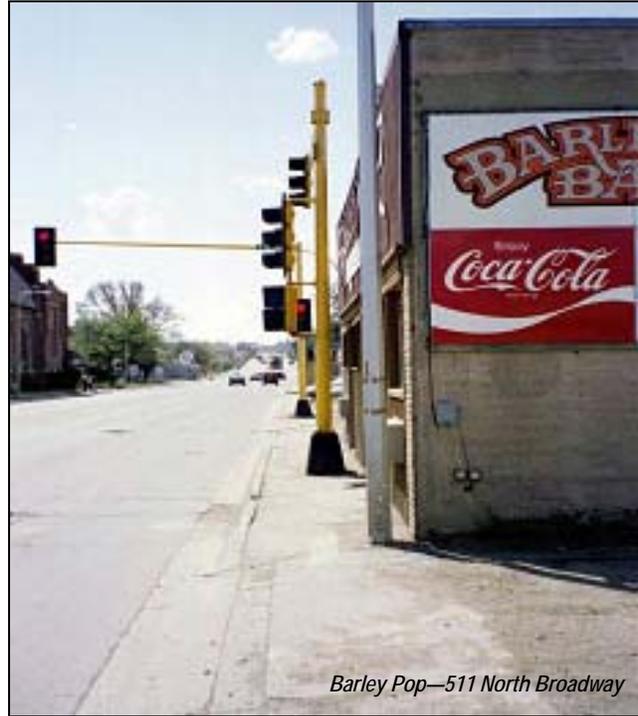
The potential impacts of relocating the Broadway Exchange and Pawn is the potential loss of employment for two employees (one owner, one employee).

Barley Pop—511 North Broadway

The Barley Pop is a local bar or tavern, which has been in operation since 1976. The business owner leases and/or rents the building from the property owner. The Barley Pop has approximately six employees. The approximate tax-assessed value of the building is \$61,600.

In the city of Minot, there are approximately 13 other bar/taverns, excluding the Barley Pop. Of these 13 bar/taverns, 3 others have the same employment-size class (5–9). In addition, 6 bar/taverns are in the (1–4) employment-size class; 3 in the (10–19) employment-size class; and 1 in the (20–49) employment-size class.

The potential impacts of relocating the Barley Pop are: potential loss of employment for six employees; and loss of income (rent) for the property owner.



Barley Pop—511 North Broadway

Vacant Building—437 North Broadway

The city of Minot currently owns this building.



Vacant Building—437 North Broadway

⁴ According to the US Census Data (2002)

Stevick Business Forms—609 North Broadway

Since 1985, Stevick Business Forms has been in operation. Stevick Business Forms is a stationery and office supply store, with four employees. The business owner of Stevick Business Forms also owns the building and the building has two other businesses inside: Hair It Is and a vacant spot (previously Rick's Jewelry). The approximate tax-assessed value of the building is \$95,200.

In the city of Minot, there are approximately three other stationery and office supply stores, excluding the Stevick Business Forms. Of these three stores, one other has the same employment-size class (1–4). In addition, one in the (10–19) employment-size class; and one in the (20–49) employment-size class.

The potential impacts of relocating the Stevick Business Forms: potential loss of employment for four employees; and loss of income (rent) for the property owner.



609 North Broadway—building contains Stevick Business Forms and Hair It Is

Hair It Is—609 North Broadway

Hair It Is, a beauty shop, has been in operation since 1990, and has three employees. The business owner leases and/or rents the building from the property owner (Stevick Business Forms).

In the city of Minot, there are approximately 17 other beauty shops, excluding Hair It Is. Of these 17 stores, 5 others have the same employment-size class (1–4). In addition, 8 shops are in the (5–9) employment-size class; 3 in the (10–19) employment-size class; and 1 in the (20–49) employment-size class.

The potential impacts of relocating the Hair It Is: potential loss of employment for three employees; and loss of income (rent) for the property owner.

Financial Care—617 North Broadway

Financial Care has two employees, including the business owner. The type of business classification is unknown: data unavailable.

The potential impacts of relocating Financial Care: potential loss of employment for two employees; and loss of income (rent) for the property owner.

***Northwest Music Inc.—623 North Broadway***

Northwest Music Inc. is a retail musical instrument store and has been in operation since 1969. Northwest Music Inc. has 11 employees. The company owner owns this building, which has three other businesses in it: Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, and Office System Inc. The approximate tax-assessed value of the building is \$267,400.

In the city of Minot, there are two other retail musical instrument stores, one of them Jacobsen Piano & Organ, which is located in the same building. Of the two stores, no others have the same employment-size class (10–19). In addition, one store is in the (1–4) employment-size class; and one in the (5–9) employment-size class.

The potential impacts of relocating Northwest Music Inc.: potential loss of employment for 11 employees; and loss of income (rent) for the property owner.



623 North Broadway—building contains Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobson Piano & Organ and Office System Inc.

Studio One Hairstylists & Tanning Salon—623 North Broadway

Studio One Hairstylists & Tanning Salon has been in operation since 1986, with 10 employees. Studio One Hairstylists & Tanning Salon is a beauty and tanning salon. The business owner leases and/or rents the building from the property owner (Northwest Music Inc.).

In the city of Minot, there are approximately 17 other beauty shops, excluding Studio One Hairstylists & Tanning Salon. Of these 17 stores, 2 others have the same employment-size class (10–19). In addition, 6 shops are in the (1–4) employment-size class; 8 in the (5–9) employment-size class; and 1 in the (20–49) employment-size class.

The potential impacts of relocating the Studio One Hairstylists & Tanning Salon: potential loss of employment for 10 employees; and loss of income (rent) for the property owner.

Jacobsen Piano & Organ—623 North Broadway

Jacobsen Piano & Organ is a retail musical instrument store and has been in operation since 1978, with two employees. The business owner leases and/or rents the building from the property owner (Northwest Music Inc.).

In the city of Minot, there are two other retail musical instrument stores; one of them is Northwest Music Inc. which is located in the same building. Of the two stores, no others have the same employment-size class (1–4). In addition, one store is in the (5–9) employment-size class; and one in the (10–19) employment-size class.

The potential impacts of relocating Jacobsen Piano & Organ: potential loss of employment for two employees; and loss of income (rent) for the property owner.

The city of Minot has three retail musical instrument stores; two out of the three stores would be impacted. The biggest retail musical instrument store, Northwest Music Inc. would be impacted, as well as the more specialty musical instrument retail store, Jacobsen Piano & Organ.

Office System Inc.—623 North Broadway

Office System Inc. is a stationery and office supply store which has been in operation since 1986, with four employees. The business owner leases and/or rents the building from the property owner (Northwest Music Inc.).

In the city of Minot, there are approximately three other stationery and office supply stores, excluding Office System Inc. Of these three stores, one other has the same employment-size class (1–4). In addition, no stores are in the (5–6) employment-size class; one in the (10–19) employment-size class; and one in the (20–49) employment-size class.

The potential impacts of relocating the Office System Inc.: potential loss of employment for four employees; and loss of income (rent) for the property owner.

The city of Minot has four stationery and office supply stores; therefore, 50% of these stores would be impacted with relocations (Stevik Business Forms and Office System Inc.). Both of the stationery and office supply stores are in the employment-size class (1–4).

AIG American General—721 North Broadway

AIG American General is an insurance company and has five employees. This business is located in the same building as Subway. The approximate tax-assessed value of the building is \$173,200.

In the city of Minot, there are approximately 33 other insurance companies, excluding AIG American General. Of these 31 insurance companies, one other has the same employment-size class (5–9). In addition, 31 companies are in the (5–9) employment-size class; 1 in the (10–19) employment-size class.

The potential impacts of relocating AIG American General: potential loss of employment for five employees; and loss of income (rent) for the property owner.

Subway—721 North Broadway

Subway is a limited-service restaurant specializing in subway sandwiches, more of a “fast-food” venue. At this location, Subway has been in operation since 1997, with nine employees.

In the city of Minot, there are approximately 31 other limited service restaurants, excluding Subway. Of these 31 other restaurants, 2 others have the same employment-size class (5–9). In addition, 4 restaurants are in the (1–



721 North Broadway—building contains AIG American General and Subway

4) employment-size class; 9 in the (10–19) employment-size class; 14 in the (20–49) employment-size class; and 2 in the (50–99) employment-size class.

The potential impacts of relocating the Subway: potential loss of employment for nine employees; and loss of income (rent) for the property owner.

PC Doctor—729 North Broadway

PC Doctor is a computer maintenance and repair store. The PC Doctor has been in operation since 2000, with one employee. The business owner leases and/or rents the building from the property owner. The approximate tax-assessed value of the building is \$267,400.

In the city of Minot, there are approximately three other computer maintenance and repair stores.

The potential impacts of relocating PC Doctor: potential loss of employment of one employee; and loss of income (rent) for the property owner.



729 North Broadway—building contains PC Doctor and Broadway Studio

Broadway Studio—733 North Broadway

Broadway Studio is beauty salon and has been in operation since 1986, with three employees. Broadway Studio is located in the same building as PC Doctor. The business owner leases and/or rents the building from the property owner. The approximate tax-assessed value of the building is \$267,400.

In the city of Minot, there are approximately 17 other beauty shops, excluding Broadway Studio. Of these 17 stores, 6 other shops have the same employment-class size (1–4). In addition, 2 others are in the (10–19) employment-size class; 8 in the (5–9) employment-size class; and 1 in the (20–49) employment-size class.

The potential impacts of relocating Broadway Studio: potential loss of employment for ten employees; and loss of income (rent) for the property owner.

Residence—208 5th Avenue NW

The residence, 208 5th Avenue NW, has three residents. The tax-assessed value for the house is within the \$40,000–\$49,999 value range.

In the city of Minot, there are 166 vacant housing units for sale, 383 for rent, and 166 for rent or sale. The median value of houses in Minot is \$80,400. There are 508 houses in the city of Minot in the \$40,000–\$49,999 value range.

**3.4.1 Relocation Impacts/Mitigation**

Alternative C (Segment 1) – Alternative C would require between 6 to 9 building relocations (including 1 apartment building) and 10 to 13 business relocations, dependent on which sidewalk width is chosen.

For 4-foot sidewalks, 6 buildings, 1 apartment building (Mackley Apartments), and 10 businesses (*Barley Pop, Stevick Business Forms, Hair It Is, Financial Care, Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, Office Systems Inc., PC Doctor, and Broadway Studio*) would require relocations. **Please refer to Figure 3-6, Alternative C—4-foot Sidewalk Relocation Impacts.**

For 6-foot sidewalks, 7 buildings, 1 apartment building (Mackley Apartments), and 12 (*Broadway Exchange and Pawn, Barley Pop, Stevick Business Forms, Hair It Is, Financial Care, Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, Office Systems Inc., AIG American General, Subway, PC Doctor, and Broadway Studio*) businesses would require relocations. **Please refer to Figure 3-7, Alternative C—6-foot Sidewalk Relocation Impacts.**

Eight-foot sidewalks would require relocating 8 buildings, 1 apartment building (Mackley Apartments), and 13 businesses (*Barley Pop, Stevick Business Forms, Hair It Is, Financial Care, Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, Office Systems Inc., AIG American General, Subway, PC Doctor, and Broadway Studio*). **Please refer to Figure 3-8, Alternative C—8-foot Sidewalk Relocation Impacts.**

Alternative C would also require construction easements for the majority of the project length to accommodate matching roadway, driveway, and parking lot grades. A maximum of four feet would be acquired on the east side of the roadway from University Avenue NW to 11th Avenue NW, to accommodate eight-foot sidewalks. If four or five-foot sidewalks are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway.

Alternative D (Segment 1) – Alternative D would require between 5 to 8 building relocations (including 1 apartment building) and 9 to 12 business relocations, dependent on which sidewalk width is chosen.

For 4-foot sidewalks, 5 buildings and 9 businesses (*Barely Pop, Stevick Business Forms, Hair It Is, Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, Office Systems Inc., PC Doctor, and Broadway Studio*) would require relocations. **Please refer to Figure 3-9, Alternative D—4-foot Sidewalk Relocation Impacts.**

For 6-foot sidewalks, 6 buildings, 1 apartment building (Mackley Apartments), and 10 businesses (*Barely Pop, Stevick Business Forms, Hair It Is, Financial Care, Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, Office Systems Inc., PC Doctor, and Broadway Studio*) would require relocations. **Please refer to Figure 3-10, Alternative D—6-foot Sidewalk Relocation Impacts.**

Eight-foot sidewalks would require 7 buildings, 1 apartment building (Mackley Apartments), and 12 businesses (*Barely Pop, Stevick Business Forms, Hair It Is, Financial Care, Northwest Music Inc., Studio One Hairstylists & Tanning Salon, Jacobsen Piano & Organ, Office Systems Inc., AIG American General, Subway, PC Doctor, and Broadway Studio*) relocations. **Please refer to Figure 3-11, Alternative D—8-foot Sidewalk Relocation Impacts.**

**Figure 3-6
Alternative C—4-foot Sidewalk Relocation Impacts**



**Figure 3-7
Alternative C—6-foot Sidewalk Relocation Impacts**



**Figure 3-8
Alternative C—8-foot Sidewalk Relocation Impacts**



**Figure 3-9
Alternative D—4-foot Sidewalk Relocation Impacts**



**Figure 3-10
Alternative D—6-foot Sidewalk Relocation Impacts**



Figure 3-11
Alternative D—8-foot Sidewalk Relocation Impacts



Additional right-of-way required would vary from 3 to 11 feet dependent on which sidewalk width is chosen. If 4-foot or 5-foot sidewalks are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway.

Alternatives E (Segment 1) – Alternative E would require one apartment building (*Mackley Apartments*), and two buildings, which include the relocation of three businesses (*Barley Pop and PC Doctor and Broadway Studio*). Alternative E would not require any additional right-of-way from 4th Avenue NW to University Avenue NW, except at the location of the left turn lanes at 4th Avenue NW and University Avenue NW. ***Please refer to Figure 3-12, Alternative E—Relocation Impacts.***

Option 2 (Segment 1) – Including the impacts associated with Alternatives C and D, Option 2 would require the relocation of one residence (208 5th Avenue NW).

3.4.1.1 Parking

Parking is analyzed during proposed roadway reconstruction projects to determine if a loss of parking would lead to a loss of business to the business owner.

The analysis for North Broadway (Segment 1) off-street parking was conducted by:

1. Determining the current use of parking and then comparing this number to the different Alternatives (C, D, and E).
2. Determining the parking spaces required by the city of Minot Code of Ordinances, dated May 12, 2004, then comparing this number to the different Alternatives (C, D, and E). The “after” parking layout was optimized using typical parking stall geometry, which in some cases actually increased the number of spaces over the current parking layout.

Please refer to Table 3-2, North Broadway Off-Street Parking Summary from Proposed Alternatives.

3.4.1.1.1 Parking Impacts/Mitigation

Alternative C (Segment 1) – Alternative C would result in a loss of parking for Broadway Exchange, AIG American General and Subway, and the Strip Mall (includes Connecting Point Computer Center, Cell Solutions, Zimmerman Agency, Edward Jones, Paul’s Model Trains, Bellissimo’s, and Americash).

Broadway Exchange and Pawn’s current parking layout includes 8 parking spaces. Per the city code they would need 7 parking spaces, and with Alternative C they would have 4. This is a net loss of 4 parking spaces, leaving the building out of conformance with city codes.

AIG American General and Subway’s current parking layout includes 34 parking spaces. Per the city code they would need 44 parking spaces and with Alternative C they would have 31. This is a net loss of 3 parking spaces, leaving the building out of conformance with city codes.

Placeholder for 11x17-size Table 3-2; Off-Street Parking Summary

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The Strip Mall's current parking layout includes 35 parking spaces (includes Connecting Point Computer Center, Cell Solutions, Zimmerman Agency, Edward Jones, Paul's Model Trains, Bellissimo's, and Americash). Per the city code they would need 33 parking spaces and with Alternative C they would have 27. This is a net loss of 8 parking spaces, leaving the building out of conformance with city codes.

Alternative D (Segment 1) – Alternative D would result in the loss of parking for Broadway Exchange, AIG American General and Subway, and the Strip Mall (includes Connecting Point Computer Center, Cell Solutions, Zimmerman Agency, Edward Jones, Paul's Model Trains, Bellissimo's, and Americash).

Broadway Exchange's current parking layout includes 8 parking spaces. Per the city code they would need 7 parking spaces and with Alternative D they would have 5. This is a net loss of 3 parking spaces, leaving the building out of conformance with city codes.

AIG American General and Subway's current parking layout includes 34 parking spaces. Per the city code they would need 44 parking spaces and with Alternative D they would have 36. This is a gain of 2 parking spaces.

The Strip Mall's current parking layout includes 35 parking spaces (includes Connecting Point Computer Center, Cell Solutions, Zimmerman Agency, Edward Jones, Paul's Model Trains, Bellissimo's, and Americash). Per the city code they would need 33 parking spaces and with Alternative D they would have 29. This is a net loss of 6 parking spaces, leaving the building out of conformance with city codes.

Alternative E (Segment 1) – Alternative E would result in the loss of parking for AIG American General and Subway, and the Strip Mall (includes Connecting Point Computer Center, Cell Solutions, Zimmerman Agency, Edward Jones, Paul's Model Trains, Bellissimo's, and Americash).

AIG American General and Subway's current parking layout includes 34 parking spaces. Per the city code they would need 44 parking spaces and with Alternative E they would have 36. This is a gain of 2 parking spaces.

The Strip Mall's current parking layout includes 35 parking spaces (includes Connecting Point Computer Center, Cell Solutions, Zimmerman Agency, Edward Jones, Paul's Model Trains, Bellissimo's, and Americash). Per the city code they would need 33 parking spaces and with Alternative E they would have 27. This is a net loss of 8 parking spaces.

3.5 Economic Impacts

North Broadway is an established business district. North Broadway is classified as a principal arterial and is one of the city of Minot's main north-south routes and major route to the Minot Air Force Base. Principal and minor arterials carry much of the traveling public, thus spurring commercial growth. In this particular case, most of North Broadway has been fully developed with major economy drivers to the city of Minot adjacent to the roadway, Minot State University and Minot International Airport. The northern portions of North Broadway (21st Avenue NW) have not been fully developed and are growing with both commercial and residential development. An upgraded roadway may increase development and economic growth. In addition, South Broadway has recently been updated with five 12-foot lanes and 8-foot sidewalks. The South Broadway area is also an established business district.

The 2000 census reveals that the population has grown to 35,567⁵. Traffic volumes have increased dramatically in recent years on North Broadway in the study area. AADT (Average Annual Daily Traffic) north of the Souris River has increased from 10,000 in 1960 when the original roadway was designed, to 25,950 in 2002. Traffic volumes are expected to be nearly 31,660 AADT by 2022. Commercial and residential growth north and west of the study area also contributes to the increased traffic, with high potential for considerable industrial/commercial development north of the study area.

3.5.1 Economic Impacts/Mitigation

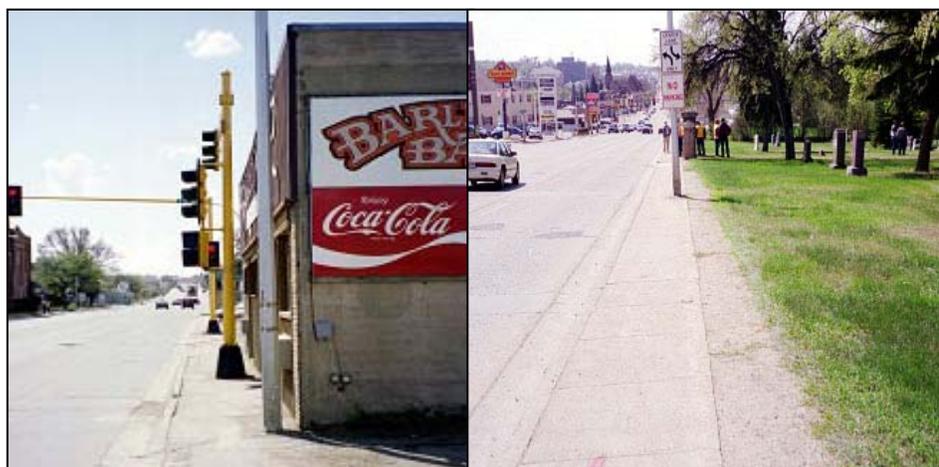
Alternatives C and D (Segment 1) – Alternatives C and D would provide an adequate roadway for the projected increase of future traffic and would accommodate pedestrians/bicyclists. In this aspect, this would provide a positive impact for the economic vitality of the City by connecting people to places. However, these two Alternatives would also impact the most buildings and businesses. The impact to the business district and more importantly to the local economy could potentially see a negative impact from the relocation of businesses. Relocation assistance of impacted businesses would mitigate the economic impacts of right-of-way acquisition. The location of North Broadway, being a major north-south route and a US Highway suggests that it would stay a business district either by new businesses moving in or the existing businesses reopening in their lots after the reconstruction.

Alternative E (Segment 1) – Alternative E would change the existing roadway to four-lanes with a continuous raised median, with no left-hand turns. By not having easy access to businesses, the median may lead to drivers becoming discouraged and driving to a more accessible business. This Alternative potentially may impact the economic vitality of the business district.

3.6 Impacts to Pedestrians and Bicyclists

The Bicycle Transportation and Pedestrian Walkways Provisions of Section 217 of Title 23 U.S.C., was amended by the 1998 TEA-21.⁶ Section 1202(a), states that bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted; and that transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians.

The city of Minot has identified their trail systems in the *Minot Trail System*. The *Minot Trail System*



⁵ US Census Bureau 2000, Demographic Profiles

⁶ TEA-21 expired on September 30, 2003. After 12 extensions were signed into law, on August 10, 2005, President Bush signed SAFETEA-LU.

shows approximately seven trail systems in the city. The *Minot Trail System* recommends a multi-use trail be constructed on the west side of Segment 2 from 11th Avenue NW to 21st Avenue NW. A six-foot sidewalk would also be constructed on the east side of Segment 2 with a connection to the multi-use trail on the west side.

The *2003–2008 State Comprehensive Outdoor Recreation Plan* identified in Region 2, which includes Ward County, that the second recreational priority is trails; the first being pools and beaches.

There are sidewalks located on both sides of North Broadway in Segment 1. The widths of the sidewalks range from 3.5 to 5 feet. In various locations the sidewalk width is only a couple feet due to signs, lights, or signal standards located within the sidewalks.

There are no sidewalks or multi-use trails located in Segment 2⁷. This corridor has many points of community interest that tend to be pedestrian generators. These facilities include churches, schools, a cemetery, Minot State University, Minot International Airport, and the north hill recreation/softball complex. According to the city of Minot, 1700 adults use the North Hill Complex, and 1500 youth use the Complex during the summer months.

A letter was sent to the schools along the corridor to get information on the location and number of pedestrians using sidewalks along North Broadway since there are so many pedestrian generators in the area. Erik Ramstad Middle School has approximately 95 students who live east of North Broadway. The school surveyed their students and approximately 80–90 students ride their bike or walk to school at least a few times a week, weather permitting. McKinley Elementary School reported that they have about 50 students crossing North Broadway, with the majority of the elementary students crossing at the signal at 6th Avenue NW.

3.6.1 Pedestrian/Bicyclists Impacts/Mitigation

Alternative A (No-Build) – If no action is taken, there would be no improvement or addition of pedestrian/bicycle facilities in the project area.

Alternatives C (Segment 1) – Alternatives C would construct 4-8-foot sidewalk along the east and west side of the roadway from 4th Avenue NW to 11th Avenue NW. A maximum of four feet would be acquired on the east side of North Broadway to accommodate eight-foot sidewalks. If four or five-foot sidewalks are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway. Driveways are also impacted when the sidewalk widths are narrow. It becomes more difficult to meet the minimum driveway and ADA cross-slopes requirements. Additional right-of-way would be required at each driveway location if narrow sidewalks are incorporated into the design.

Alternative D (Segment 1) – Alternative D would construct 4-8-foot sidewalk along the east and west side of the roadway from 4th Avenue NW to 11th Avenue NW. If four or five-foot sidewalks are selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both

⁷ Minot Fitness Trail Committee received a grant for a trail from 11th Street NW to North Broadway on 21st Avenue, which will be completed in 2006 because of the North Broadway project. Finally, the North Hill area will be joined with the northwest section of Minot. With this new trail the Soccer Complex and the Softball Complex will be connected on North Hill.

sides of the roadway. Driveways are also impacted when the sidewalk widths are narrow. It becomes more difficult to meet the minimum driveway and ADA cross-slopes requirements. Additional right-of-way would be required at each driveway location if narrow sidewalks are incorporated into the design.

Alternative E (Segment 1) – Alternative E would construct 4-8-foot sidewalk along the east and west side of the roadway from 4th Avenue NW to 11th Avenue NW. However, there is a need to provide a pedestrian actuated mid block traffic signal system installed between 5th Avenue NW and 6th Avenue NW. If this recommendation is not carried forth, then pedestrians/bicyclists would have to walk/ride to University Avenue NW in order to cross the street to the east side of North Broadway. This would add time and length to get to school, church, home or any other location on North Broadway. Also, pedestrians/bicyclists would be crossing at University Avenue NW at the same place vehicles would be completing U-turns. It is anticipated that this Alternative would increase turning movements in this intersection, leading to a potential increase of vehicular/pedestrian/bicyclist conflicts.

Alternatives F and G (Segment 2) – Alternatives F and G would construct a 6-foot sidewalk along the east side and a 10-foot multi-use trail along the west side of the roadway.

Options 3.1, 3.2, and 3.3 (Segment 2) – Options 3.1, 3.2, and 3.3 provide a pedestrian/bicyclist crossing to accommodate these users.

3.7 Noise Impacts

In response to problems associated with traffic noise, the United States Code of Federal Regulations Part 772 (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise, establishes standards for mitigating highway traffic noise. The NDDOT has issued the *Traffic Noise Analysis and Abatement Guidelines* as a supplement to 23 CFR 772. FHWA provides policies and guidance for analysis and abatement of traffic noise in the *Highway Traffic Noise Analysis and Abatement Policy and Guidance*.

Table 5 of the FHWA *Highway Traffic Noise Analysis and Abatement Policy and Guidance* lists the NAC (Noise Abatement Criteria) thresholds in dB (decibels). These sound levels provide the absolute levels where abatement must be considered. A traffic noise impact occurs when the predicted levels approach or exceed the NAC, or when predicted traffic noise levels substantially exceed the existing noise levels, even when the predicted levels may not exceed the NAC. In other words, traffic noise impacts can occur under either of two separate conditions: (1) when noise levels are unacceptably high (absolute level); or (2) when a proposed project would substantially increase the existing noise environment. For this project, a traffic noise impact would occur if traffic generated noise levels were within 2 dB of the NAC or would increase more than 10 dB as a result of the proposed project. NAC levels vary with land use. In the project area the Cemetery falls into Category B (NAC 67dB); residential and schools fall into Category B (NAC is 67 dB); and commercial falls into Category C (NAC is 72 dB).

Sound levels were calculated for the project area using the following criteria: both current (year) and projected (year) traffic volume for automobiles and trucks, average automobile speed, terrain surface, and distance from the roadway centerline to the right-of-way line. **Please refer to Table 3-3, Existing and Projected Noise Decibel Use.**

**Table 3-3
Existing and Projected Noise Decibel Use**

Station and Land Use	Criterion (dB)	Existing (dB)	Projected (dB)
Congregational Church	67	65	65
First Lutheran Church	67	67	67
IMM Building, 700 North Broadway	72	64	65
First Lutheran Cemetery	67	67	69
Minot State University	67	58	60

3.7.1 Noise Impacts/Mitigation

Alternatives C, D, and E (Segment 1)—Alternatives C, D, and E would not have an increase or decrease for the Congregational Church and First Lutheran Church. The alternatives would have a noise increase of 1 dB for the IMM Building (Commercial), but still be 7dB under the Criterion; and have a noise increase of 2 dB for Minot State University, but still be 7 dB under the Criterion. The First Lutheran Cemetery would have an increase of 2dB, which is 2 dB over the Criterion.

The First Lutheran Cemetery has an existing level of 67 dB and with the proposed project an increase to 69 dB. As a result, the Cemetery would only have a small increase in noise, increasing two decibels past the Criterion. In regards to the *FHWA Highway Traffic Noise Analysis and Abatement Policy and Guidance*, a 10 dB increase is considered a minor to moderate increase.

3.8 Impacts to Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended, requires that federally funded projects be evaluated for the effects on historic and cultural properties included in, or eligible for listing on, the National Register of Historic Places. The Archaeological and Historic Preservation Act of 1974 provides for the survey, recovery, and preservation of significant scientific, prehistoric, archaeological, or paleontological data when such data may be destroyed or irreparably lost due to a federal, federally licensed, or federally funded project.

Metcalf Archaeological Consultants, Inc. (MAC) completed a Class III Cultural Resource Inventory within the area of potential effect, as defined through consultation with the NDDOT (North Dakota Department of Transportation) and the SHPO (State Historic Preservation Officer). Louis N. Hafermehl, architectural historian, surveyed buildings located wholly within the area of potential effect. Sites inventoried include the Mackley Apartments, Young America Building, Barley Pop, Stevick Business Forms, 617 North Broadway, Northwest Music, Subway, Goldilocks, and First Lutheran Church Complex. The Mackley Apartments and the First Lutheran Church Complex (Church) were recommended as *eligible* for listing on the National Register of Historic Places. The Church is the main resource nominated and the remaining elements—parsonage, garage, and cemetery are contributing elements to the site's significance. This is described further in the Draft Section 4(f) Evaluation document.

3.8.1 Residential Historic District

The following information is summarized from the report entitled, *North Broadway: An Archaeological and Architectural Inventory in Minot, Ward County, North Dakota, March 2004*.

In this report, architectural historian, Lou Hafermahl reassessed the eligible historic district east of North Broadway in regards to the buildings fronting the east side of North Broadway. The eligible Historic District is bounded by North Broadway on the west, the Mouse River on the south, 11th Street NE on the east, and 11th Avenue NE on the north.

In late 1985, RTI (Renewable Technologies, Inc.) conducted a reconnaissance survey under contract with State Historical Society of North Dakota. RTI opined that a sizeable area north of the Mouse River and east of North Broadway was worthy of intensive survey to determine its National Register eligibility as an historical district. RTI characterized the area as a “mixed district” that “contains a small commercial zone, a few industrial sites and numerous residences dating from the turn of the century to the mid-1930s” and that the vast majority of residences within the area “reflect the working class nature of this neighborhood... [which is] an important and characteristic element in the built environment of early 20th century Minot...”

The reevaluation of this district in March 2004 by Lou Hafermehl, architectural historian, concluded that part or all of the area identified by RTI constitutes an eligible National Register Historic District. However, it is suspected that the buildings in the area retain less integrity today than they did at the time of the 1985 survey. Integrity loss appears fairly substantial based on the extent to which houses in the area have been resided with modern vinyl and metal siding products. The integrity loss may diminish the area’s eligibility as a National Register Historic District. However, as of this time it is unknown if the integrity has suffered enough loss to exclude it from eligibility.

The Class III Inventory report, *North Broadway: An Archaeological and Architectural Inventory in Minot, Ward County, North Dakota*, recommended that most of the buildings fronting North Broadway be excluded from any predominantly residential district to its east that might be considered for National Register of Historic Places designation. On February 5, 2005, NDDOT and ND SHPO conducted an on-site review and determined that the eligible residential historic district does not extend to the buildings facing North Broadway. The buildings facing North Broadway are mainly commercial in nature, and are not eligible as components of the residential district.

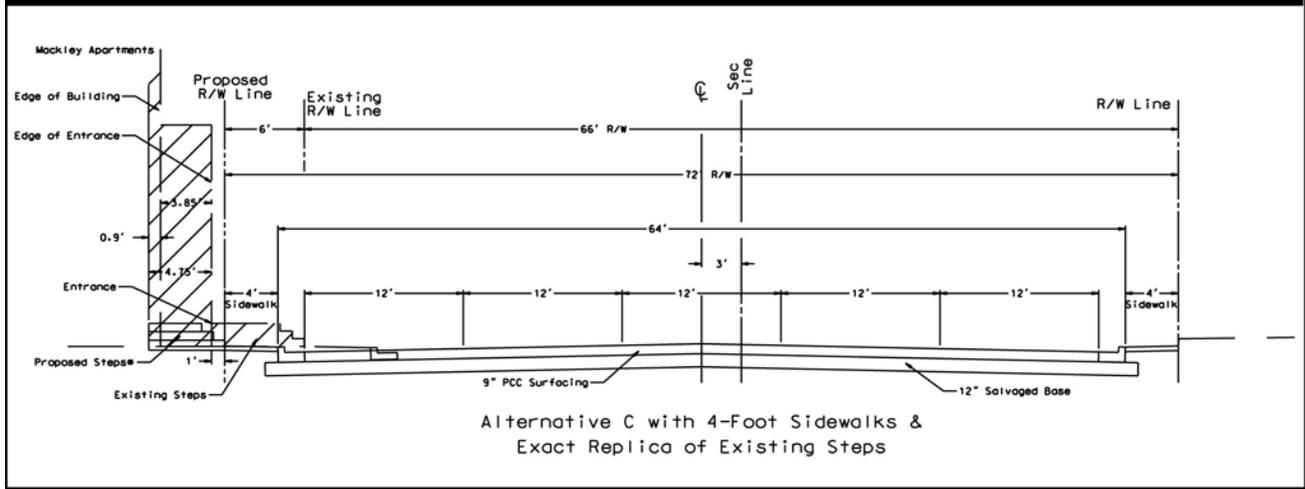
3.8.2 Cultural Resources Impacts/Mitigation

Alternative C (Segment 1) – Alternative C, 4-foot, 6-foot, and 8-foot sidewalks would impact the Mackley Apartments and the First Lutheran Church Complex (Cemetery).

Alternative C, 4-foot sidewalks would result in impacts to the front entrance of the Mackley Apartments. The impact would be the removal of the front entrance caused by relocating the front steps (exact replica) closer to the building. The ND SHPO has determined that this would have an *Adverse Effect*.

The impact of Alternative C, 6-foot and 8-foot sidewalks to the Mackley Apartments would be the removal of the building. The ND SHPO has determined that would have an *Adverse Effect* to the Mackley Apartments. ***Please refer to Figure 3-13.***

**Figure 3-13
Mackley Apartments Cross Sections—Alternative C**



Alternatives C, D, and E (Segment 1)—Alternatives C, D, and E impact the First Lutheran Church Complex (Cemetery). The impact to the First Lutheran Cemetery would be the acquisition of ten feet of right-of-way and the relocation of gate posts located at the center of the east boundary line and the corner post located at the Cemetery's southeast corner. However, the ND SHPO has determined that Alternatives C, D, and E would have *No Adverse Effect* to the First Lutheran Cemetery.

The recommendation to mitigate the *No Adverse Effect* to the First Lutheran Cemetery is move the gate posts and corner posts to the west, or if they cannot be saved, then new gate posts would be constructed that exactly replicate the existing gate posts in dimension, design, and materials.

Because of the sensitive nature of the proposed construction in the First Lutheran Cemetery, the following would also be added and discussed in the construction plans:

- No underground utilities are to be proposed within the aisle.
- Excavation of topsoil and unclassified excavation are to be limited to that needed to allow placement of minimum thickness of base material underneath the sidewalk and curb and gutter.
- No sub-grade preparation is to be performed in this area.
- Construction operations done in this area should be under constant observation by the contractor's supervisory personnel and construction engineering personnel.
- All work should be completed during daylight hours to minimize the potential for damage outside the right-of-way and to unknown graves, if exposed within the project limits.
- When the contractor is operating, they would be operating under the Standards Specifications For Road And Bridge Construction of the NDDOT, Section 107.04 Historic Preservation Responsibilities.

- The contractor shall also follow a plan for contacting local authorities should an existing grave site be disturbed or exposed. The cemetery representative of First Lutheran Church and local health officials are to be identified and listed as contacts on the plans and specifications.

Another addition to the construction plan notes is that a structural engineer would inspect the First Lutheran Church Complex inside and out and photograph the Church and any other Church buildings near North Broadway, before construction and after construction in order to document any impacts made.

Alternative D (Segment 1) – Alternative D, 4-foot, 6-foot, and 8-foot sidewalks would impact the Mackley Apartments and the First Lutheran Church Complex (Cemetery).

Alternative D (Segment 1) – Alternative D, 4-foot sidewalks would result in impacts to the Mackley Apartments. The impact would be the modification of the front steps. Currently, the existing steps are half-moon shaped. Modification to the proposed steps would meet minimum step requirements per city of Minot Building Code. The ND SHPO has determined that this would have *No Adverse Effect* to the Mackley Apartments. **Please refer to Figure 3-14 and 3-15.**

Alternative D, 6-foot sidewalks would result in impacting the front entrance of the Mackley Apartments, which the ND SHPO has determined is an *Adverse Effect*.

The impact of Alternative D, 8-foot sidewalks, to the Mackley Apartments would be the removal of the building. The ND SHPO has determined that this would have an *Adverse Effect* to the Mackley Apartments.

Alternative E (Segment 1) – Alternative E would impact the Mackley Apartments. This would require the removal of the Mackley Apartments. ND SHPO has determined that this would result in an *Adverse Effect* on the Mackley Apartments.

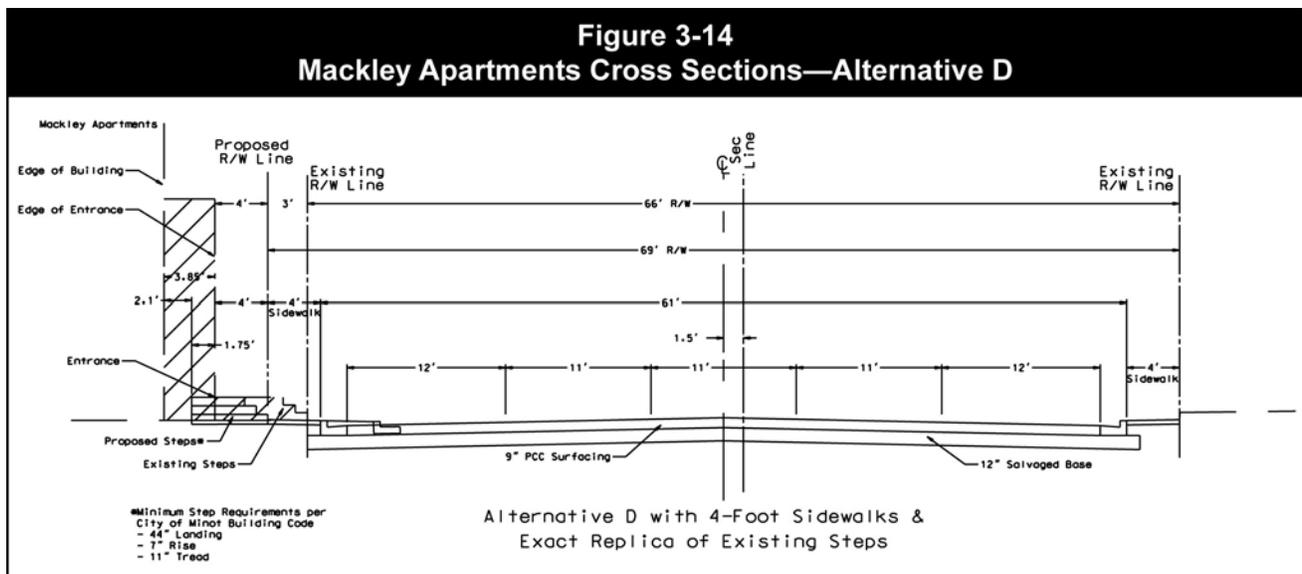
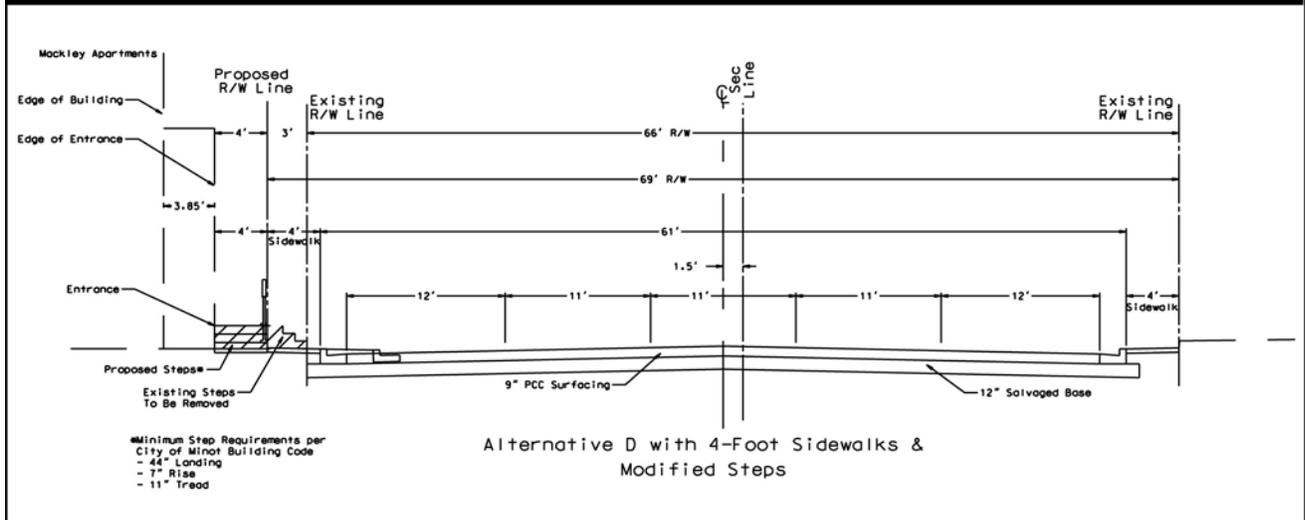


Figure 3-15
Mackley Apartments Cross Sections—Alternative D



Alternative E may increase the amount of traffic in the eligible historic district on north-south city streets east of North Broadway and within the eligible residential historic district. ND SHPO has determined that Alternative E would have *No Adverse Effect* to the eligible residential historic district. However, it is important to note that this determination was made because it is predicted that traffic would find an alternative route other than the residential side streets.

3.9 Aesthetic/Visual Impacts

The local landscape in and around the study area is mainly commercial, with outlying residential, and two churches, the First Lutheran Cemetery, and Minot State University within the commercial district.

Visual impacts involve the viewer's response to a resource change and the degree of change or influence an action or modification has on a view, scenic resource, or man-made feature. The extent of potential visual contrast/compatibility effects with adjacent landforms and land uses are addressed from two vantage points; the roadway user traversing the system and those looking to the roadway from outside the system.

3.9.1 Aesthetic/Visual Impacts/Mitigation

Alternatives C and D (Segment 1) – Alternatives C and D would involve minor aesthetic impacts, due to roadway widening. Both of these alternatives would address the concerns of the public, by providing drivers with a wider roadway; wider sidewalks; and improved access to businesses. A minor temporary visual impact would occur if the majority of business and buildings were relocated before construction of new buildings would occur on the west side of the roadway.

One other visual impact is to the First Lutheran Cemetery, the gate posts would have to be moved and the Cemetery would be closer to the roadway. Drivers and viewers looking from outside the system may be concerned with changing the appearance of a Cemetery that virtually has not changed since the 1900s. Along with this, family and descendents may personally view the Cemetery as reverent and may not want the Cemetery altered visually.

Alternative E (Segment 1) – Alternative E would construct a median in the roadway. This would result in a very minor visual impact due to the different roadway segment from the current segment. One other visual impact is to the First Lutheran Cemetery, the gate posts would have to be moved and the Cemetery would be closer to the roadway. Drivers and viewers looking from outside the system may be concerned with changing the appearance of a Cemetery that virtually has not changed since the 1900s. Along with this, family and descendents may personally view the Cemetery as reverent and may not want the Cemetery altered visually.

Option 2 (Segment 1) – Option 2 would construct the transition on the west side of North Broadway to connect 5th Avenue NW to 6th Avenue. This would result in a very minor visual impact due to the rerouting the current “T” intersection.

Alternatives F and G (Segment 2) – Alternatives F and G when reconstructed would replace the depressed median ditch with either a center lane functioning as a TWLTL (Two-Way Left Turn Lane) or a TWLTL transitioning into a curb/raised median. This would result in minor visual impacts due to adding a TWLTL or curb/raised median.

3.10 Hazardous Waste Impacts

The RCRA (*Resource Conservation and Recovery Act*) and CERCLA (*Comprehensive Environmental Response, Compensation, and Liability Act*) regulate hazardous materials, hazardous wastes or environmentally contaminated sites.

There are approximately 11 potentially contaminated sites along this corridor:

- Broadway Exchange and Pawn, 501 North Broadway
- Westlie Tire, 600 North Broadway
- Holiday Station Store, 700 North Broadway
- Mini Mart No. 673, 810 North Broadway
- Campus Texaco, 815 North Broadway
- Cenex C-Store, 1000 North Broadway
- AJ Automotive, 1100 North Broadway
- KWIK Stop North, 1205 North Broadway
- Superpumper No. 21, 2005 North Broadway
- Amoco SS 2055, 2325 North Broadway
- Minot International Airport, 2400 North Broadway

These sites all have a history of underground petroleum storage tanks. In some of these sites, tanks have been removed and soil contamination has been removed. Contaminated soils would need to be mitigated if encountered during construction. If the soil has a hydrocarbon level of 100 ppm and over, the soil has to be removed and sent to an approved landfill for land farming. If the level falls under 100 ppm, then the soil is removed and sent to a landfill for daily cover. If any free-phase petroleum is encountered during construction, then the NDDH (North Dakota Department of Health) would be contacted immediately.

3.10.1 Hazardous Waste Impacts/Mitigation

Alternatives C, D, and E (Segment 1) – Alternatives C, D, and E may involve the use of potentially contaminated soils.

Alternatives F and G (Segment 2) – Alternatives F and G may involve the use of potentially contaminated soils.

3.11 Impacts to Utilities

Numerous utilities have been identified within the project area. Minot Public Works has underground facilities (water, sanitary, and storm sewer) running north-south along the project, in the area from 4th Avenue NW to 11th Avenue NW (Segment 1). In addition, some City utilities are located north of 11th Avenue NW, for a distance of approximately 600 feet, to serve commercial properties in that area.

At several locations along the project, utility companies have facilities that may be affected by construction. Consultation with utilities would be coordinated during the design phase. The companies and facilities are identified as:

Utility Company	Facility
Midcontinent Cable	Buried communications cable
Souris River Telephone	Buried telephone cable
Montana-Dakota Utilities Co.	Natural gas distribution
Excel Energy	Electrical
City of Minot	Lighting

3.12 Temporary Construction Impacts

3.12.1 Fire, Police, and Emergency Protection

Alternatives C, D, and E (Segment 1) – Alternatives C, D, and E would not detour traffic. The construction could take place on half the road while the other half continues to allow two-way traffic. For most of the length of the project the new roadway centerline would be shifted somewhat from the existing centerline. This would lend itself to a two-phase construction sequence as follows: Phase 1—The west half of the roadway would contain the new underground sewer/water mains and be graded and paved while two-way traffic is maintained on the existing roadway. Temporary traffic signal displays would be required for north-south traffic at five locations during construction. Phase 2—Traffic would be re-routed to the new west lanes, and removal of the existing pavement and grading and paving on the east side of the roadway can proceed.

The impacts to emergency services would be temporary during construction, the possibility of increase response time may occur. However, traffic would be maintained.

3.13 Secondary Impacts

Secondary, or indirect, effects are those “caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable” (40 CFR 1508.8). Generally, these impacts are induced by the initial action and may include impacts such as: changes in land use, water quality, economic vitality, and population density.

Land use may be impacted from the loss of the TWLTL (Two-Way Left Turn Lane) that currently exist on the roadway. Along the east and west sides of North Broadway, the area is zoned General Commercial, but the next blocks over in each direction are zoned Single Family Residence District, Two Family Residence District, and Multiple Family Residence Districts. U-turns at 4th Avenue NW to University Avenue NW would be very difficult. A passenger vehicle would have to travel approximately 45 feet into the intersection to complete the minimum radius required. A passenger vehicle is the only standard vehicle that would be able to make this U-turn. Therefore, traffic volumes on city streets with the vicinity of North Broadway, may be expected to increase with Alternative E.

The city of Minot has a total of three retail musical instrument stores; two out of the three stores would be impacted with Alternatives C and D, 4–8-foot sidewalks. The biggest retail musical instrument store, Northwest Music Inc. would be impacted, as well as the more specialty musical instrument retail store, Jacobsen Piano & Organ. Relocating two of the three music stores may have an indirect impact to the city of Minot. Indirect social impacts (if the businesses chose not to relocate in a different area in Minot) would be to the local schools' music department and to the residents of Minot and the surrounding areas.

NDDOT's Relocation Policy and Relocation Assistance Program entitles home owners, tenants or renters, mobile home residents, business, farm operators, and nonprofit organizations to certain benefits. Homeowners are entitled to reasonable payment of moving expenses if they must move because of a federal aid project. Homeowners, if eligible, may be eligible for replacement housing payments and/or incidental payments.

Tenants or Renters are entitled to reasonable payment of moving expenses if they must move because of a federal aid project. Tenants or Renters, if eligible, may be eligible for replacement housing payments.

Business owners are entitled to reasonable payment of moving expenses if they must move because of a federal aid project. Businesses may be paid the actual direct loss of tangible personal property and also reimbursed for time and reasonable expenses in searching for a replacement business site. In lieu of all other moving costs, a business may chose to receive a payment equal to the average annual net earnings of the business. The payment may not be less than \$1,000 or greater than \$40,000 and the following requirements must be met:

- The state determines that the business cannot relocate without a substantial loss of its existing patronage.
- The business is no part of a commercial enterprise that has at least three other outlets not being acquired by the state.

A small business, farm, or nonprofit organization may be eligible to receive a payment for expenses actually incurred in relocating and reestablishing at a replacement site. However, these payments would be subject to certain criteria established by the NDDOT.

The NDDOT is required to furnish replacement housing that is decent, safe, sanitary, and meets the minimum requirements as set forth in their Relocation Assistance Program.

In summation, the NDDOT first and foremost tries to relocate and reestablish businesses and residents. The secondary impact would be if a business owner qualified for "in-lieu" payment and decided to take the "in-lieu" payment. The impact would be loss of revenue of the business for the business owner for perpetuation. The project would directly impact the business owner's

livelihood. Another indirect impact would be to the city of Minot, if a business chose the “in-lieu” payment the City may lose one of a “same type” business.

3.14 Cumulative Impacts

Cumulative effects result from the incremental consequences of an action “when added to other past, present, and reasonably foreseeable actions regardless of that agency or person undertakes such other actions” (40 CFR 1508.7). Effects of an action may be insignificant when evaluated in an individual context, but these effects can add to other disturbances and cumulatively may lead to a measurable environmental change. By evaluating the impacts of the proposed action with the effects of other actions, the relative contribution of the proposed action to a projected cumulative impact can be estimated.

Minot International Airport— Minot International Airport is located on the north end of the project area, adjacent to the east side of the roadway. Projects scheduled for 2005 include installation of a fuel farm, land acquisition on runway 26 end, reconstruction of west terminal apron, and acquisition of easements for runway 13-31 RPZ (Runway Protection Zone). Projects scheduled for 2006 include RPZ changes to runway 8 end and rubber crack fill airside pavements. Projects scheduled for 2007 include construction of parallel taxiway D and a GA storage building, and rubber crack fill airside pavements. NEPA documentation would be provided to the FAA (Federal Aviation Administration) for approval. Cumulative effects are not anticipated.

Project impacts to the natural environment have been identified throughout this chapter. These impacts have been determined to be minor and would be fully mitigated. Therefore, impacts are anticipated for alternatives, and Alternatives A, B, C, D, E, F, and G would not have any cumulative impacts.

3.15 Relationship Between Short-Term Impacts and Long-Term Benefits

The local, short-term impacts and use of resources inherent in the build alternatives would be consistent with the maintenance and long-term functionality of North Broadway. Short-term impacts include delays during construction and impacts from the relocation process. Long-term benefits of the build alternatives would include a safe and reliable transportation corridor, and accessibility and connectivity for residential and commercial travelers.

3.16 Irreversible and Irretrievable Commitment to Resource Use

As with any construction project, certain irreversible and irretrievable commitments of natural resources, manpower, materials, and fiscal resources are required. Lands within the right-of-way would be converted from their present use to transportation use. Use of these lands is considered an irreversible commitment during the time period that the land is used for a transportation facility. However, if a greater need arises for use of the land, or if the transportation facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway materials such as steel, cement, aggregate, and bituminous material would be expended to complete the project. Additionally, large amounts of labor and natural resources would be used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect on the availability of these resources. Any construction would require a substantial one-time expenditure of local, state, and

federal funds, which are not retrievable. However, the anticipated beneficial effects would balance the irretrievable commitment of resources caused by the build alternative.

3.17 Section 4(f) Properties

Section 4(f) of the US Department of Transportation Act of 1966, as codified in the 49 U.S.C. § 303, specifies that the Secretary shall not approve any program or project that requires the use of publicly owned land from a public park, recreation area, wildlife or waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance, as determined by the officials having jurisdiction thereof, unless (1) there is no feasible or prudent alternative to the use of such land, and (2) such program or project includes all possible planning to minimize harm resulting from the use.

Properties protected by Section 4(f) and located within the project area include the historic First Lutheran Church Complex and the First Lutheran Cemetery, the historic Mackley Apartments, and an eligible residential historic district.

Minot State University was founded in 1913 and part of the North Dakota University System. Since the project would not impact the recreation areas of the University, it was not discussed in the Section 4(f) Evaluation.

All of the Section 4(f) Properties (First Lutheran Church Complex, the Mackley Apartments, and the eligible Residential Historic District) are in Segment 1 (4th Avenue NW to 11th Avenue NW); therefore, Segment 2 (11th Avenue NW to 21st Avenue NW) Alternatives and Options are not discussed in this Section.

3.17.1 Use of Section 4(f) Properties

Table 3-4, Use of Section 4(f) Properties, identifies the use of each Section 4(f) Property by alternative. A more detailed description of the use of Section 4(f) properties is included in the attached Draft Section 4(f) Evaluation.

**Table 3-4
Use of Section 4(f) Properties**

Alternatives	Description	Meet Purpose and Need	First Lutheran Cemetery	Mackley Apartments	Residential Historic District
			<i>Use of Resource</i>	<i>Use of Resource</i>	<i>Use of Resource</i>
Alternative A	No Build	No	No Use Would Occur *	No Use Would Occur *	No Use Would Occur
Alternative B	Rebuild Segment 1 with Existing Geometry	No	No Use Would Occur *	No Use Would Occur *	No Use Would Occur
Alternative C, 4-foot	Five 12-foot lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of front entrance caused by relocating steps (exact replica) closer to the building ***	No Use Would Occur
Alternative C, 6-foot	Five 12-foot lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur
Alternative C, 8-foot Preferred	Five 12-foot lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur
Alternative D, 4-foot Preferred only in Mackley Apt. Location	Two 12-foot Outside & Three 11-foot Inside Lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Modification of the front steps to meet city of Minot building code **	No Use Would Occur
Alternative D, 6-foot	Two 12-foot Outside & Three 11-foot Inside Lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of front entrance caused by relocating steps (modified) closer to the building ***	No Use Would Occur
Alternative D, 8-foot	Two 12-foot Outside & Three 11-foot Inside Lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur
Alternative E	Four Driving Lanes w/ Continuous Raised Median & Sidewalks	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur **
Option 1 Preferred	Left Turn Lane at 4 th Avenue NW—Northbound	—	No Use Would Occur *	No Use Would Occur	No Use Would Occur *
Option 2 Preferred	5 th Avenue NW to 6 th Avenue NW Transition	—	No Use Would Occur *	No Use Would Occur	No Use Would Occur *

* No Historic Properties Affected—ND SHPO Finding

** No Adverse Effect—ND SHPO Finding

*** Adverse Effect—ND SHPO Finding

3.18 Environmental Considerations Not Relevant to the Project

The following environmental considerations were reviewed and found to be not relevant to the proposed project: have been found to be not relevant to the proposed project:

Prime and Unique Farmland—Consultation with the USDA, Natural Resources Conservation Service determined that the project would have no effect on prime farmlands.

Air Quality—The proposed project is consistent with the North Dakota State Implementation Plan for Air Quality. Best Management Practices would be implemented into the design of the selected alternative to minimize fugitive dust and wind erosion.

Water Quality—The proposed project would incorporate measures to control water quality impacts. Best Management Practices would be implemented into the design for erosion and sedimentation.

Wetlands—The project does not contain wetlands. Further, consultation with the US Army Corps of Engineers determined that the project would not impact jurisdictional wetlands.

Floodplain— Consultation with the ND State Water Commission determined that the project is not in an identified floodplain.

Wild and Scenic Rivers—There are no Wild and Scenic Rivers located in the study area.

Coastal Barriers/Coastal Zone Impacts—The project is not located in a coastal barrier or coastal zone area.

Threatened and Endangered Species—Consultation with the USFWS did not indicate the presence of any federally listed threatened or endangered species in the study area.

Energy—The proposed project would require the consumption of energy and resources that would not be used if North Broadway were left alone to become more deficient. This is necessary in order to maintain a safe and efficient transportation corridor in the area. If the proposed project were not completed, energy and fuel consumption would be increased due to detours for the traveling public. The benefits of the project to the traveling public would compensate for the energy lost during construction by improving the efficiency of travel along North Broadway.

Environmental Justice Impacts—This project does not result in adverse effects on minority and low-income populations. The Mackley Apartments does not meet HQS (Housing Quality Standards); therefore, residents would not be eligible for housing assistance. According to the Mackley Apartments' landlord, the Mackley Apartments does not have any residents on any other form of assistance.

Section 6(f) Properties—This project does not impact properties purchased with Land and Water Conservation Act Funds.

3.19 Required Permits and Actions

North Dakota Department of Health—NDPES (National Pollutant Discharge Elimination System) Permit

Federal Aviation Administration—FAA Form 7460-1

3.20 Environmental Commitments and Considerations

ND State Historic Preservation Office—The NDDOT and FHWA to satisfy the requirements of Section 106 of the National Historic Preservation Act and of Section 4(f) of the Department of Transportation Act and would coordinate with the ND State Historic Preservation Office to satisfy the requirements.

Cultural Resources—Because of the sensitive nature of the proposed construction in the First Lutheran Cemetery, the following would also be added and discussed in the construction plans:

- No underground utilities are to be proposed within the aisle.
- Excavation of topsoil and unclassified excavation are to be limited to that needed to allow placement of minimum thickness of base material underneath the sidewalk and curb and gutter.
- No sub-grade preparation is to be performed in this area.
- Construction operations done in this area should be under constant observation by the contractor's supervisory personnel and construction engineering personnel.
- All work should be completed during daylight hours to minimize the potential for damage outside the right-of-way and to unknown graves, if exposed within the project limits.
- When the contractor is operating, they would be operating under the Standards Specifications For Road And Bridge Construction of the NDDOT, Section 107.04 Historic Preservation Responsibilities.
- The contractor shall also follow a plan for contacting local authorities should an existing grave site be disturbed or exposed. The cemetery representative of First Lutheran Church and local health officials are to be identified and listed as contacts on the plans and specifications.

Another addition to the construction plan notes is that a structural engineer would inspect the First Lutheran Church Complex inside and out and photograph the Church and any other Church buildings near North Broadway, before construction and after construction in order to document any impacts made.

Minot International Airport—Portions of the proposed action are within the airport runway approach, departure, object free area extensions, and runway extension zones. The primary purpose of the runway extension zones is the protection of people and property on the ground. It is necessary to work with the management of the Minot International Airport to ensure that the design of the project traffic lights and parking do not create areas of congregation as defined in the FAA Advisory Circular (AC) 150/5300-13, "Airport Design" criteria. NDDOT shall coordinate with the management of the Airport to ensure there are no negative impacts to the Airport Wildlife Management Hazard Plan.

Due to the close proximity of the project to the existing airport runways, it is required by the FAA that design/landscaping of the project be designed that does not create a wildlife attractant.

Air Quality—The NDDOT would incorporate measures into the design to control wind erosion of the exposed areas and material stockpiles. These measures would be incorporated into the final engineering design and would detail Best Management Practices for erosion. The contractor would be required to conduct construction activities in such a manner as to comply with the Air Pollution Control Regulations of the State of North Dakota. The Contractor would be required to take the measures necessary to minimize dust emissions and to apply water or other methods to the problem areas.

If dust from construction operations becomes a hazard to traffic or a nuisance to the public, a vacuum or pickup sweeper shall be available for controlling dust. If the dust control provided by the vacuum or pickup sweeper is not adequate, water shall be used in conjunction with the sweeper to control fugitive dust. Washing material into storm or sanitary drainage systems shall not be permitted. Any roadway open to traffic shall be maintained to provide a safe, clean driving surface.

Water Quality—The NDDOT would incorporate measures into the design to control water quality impacts. These measures would be incorporated into the final engineering design and would detail Best Management Practices for erosion and sedimentation. The Contractor would be required to conduct his activities in such a manner as to comply with the Standards of Surface Water Quality for the State of North Dakota, as issued by the North Dakota Department of Health. The Contractor would be required to submit a Storm Water Pollution Prevention Plan with the Department of Health.

3.21 Summary of the Process

The NDDOT, in cooperation with the city of Minot, proposes to reconstruct 1.3 miles of US Highway 83, also known as North Broadway. The purpose of the proposed action is to improve roadway deficiencies to meet NDDOT guidelines/standards. This would include replacing the pavement, providing roadway capacity to a minimum of LOS C based on future traffic demands, meeting NHS criteria 23 CFR 658.9(b), not having a reduction in safety, and accommodating pedestrian/bicyclist users, while meeting ADA guidelines/standards.

The alternatives that were evaluated in this EA include a no-build alternative (Alternative A), four build alternatives in Segment 1: Alternative B (rebuild with existing geometry); Alternative C (five 12-foot lanes, with 4-foot to 8-foot wide sidewalks); Alternative D (two 12-foot outside lanes and three inside 11-foot lanes, with 4-foot to 8-foot wide sidewalks); and Alternative E (four driving lanes with a continuous raised median and sidewalks); and two build alternatives in Segment 2: Alternative F (five lane roadway with TWLTL (Two-Way Left Turn Lane)); Alternative G (four lane roadway with raised median). Additional design options were developed for various locations to enhance the operation of the facility. This EA evaluates the potential social, economic, and environmental impacts for each alternative. ***Please refer to Table 3-5, Summary Comparison of Project Alternatives.***

[Placeholder for multi-page 11x17 table: Table 3-5]

Chapter 4 Preparers and Coordinating Parties

4.1 Introduction

The names and qualifications of the principal person contributing information to the EA are identified in this chapter. In accordance with Part 1502.6 of the CEQ (Council on Environmental Quality) regulations for implementing the National Environmental Policy Act, the efforts of an interdisciplinary team comprising technicians and experts in various fields were required to accomplish this study.

4.2 Preparers

This Environmental Assessment was prepared by Kadmas, Lee & Jackson, Inc. under a contractual agreement between the North Dakota Department of Transportation and Kadmas, Lee & Jackson, Inc.

4.3 Qualifications

Listed below are those individuals with primary responsibility for preparation of this Environmental Assessment.

Sheri Lares	Senior Environmental Planner	Project Development, Senior Review
Jennifer Hafner	Environmental Scientist	Public Involvement, Impact Analysis
Barry Schuchard	Principal	Project Development, Senior Review
Bob Shannon	Senior Engineer	Preliminary Engineering, Senior Review
Greg Oase	Senior Engineer	Preliminary Engineering, Senior Review
Larry Dennis	Senior Engineer	Alternatives Development
Troy Ripplinger	Engineer	Preliminary Engineering
Scott Schneider	Engineer	Data Collection, Preliminary Engineering
Donovan Slag	GIS Analyst, Engineer	Exhibit Creation
Chowdhury Haider	Engineer	Noise Analysis
Shane Karhoff	Engineer	Right-of-Way Plats
Craig Ruhland	Landscape Architect	Rendering Creation
Stacie Taylor	Desktop Publisher	Document Production

4.4 Coordination with Agencies, Organizations, and Parties

To initiate early communication and coordination, an early notification package to federal, state, and local agencies and other interested parties was distributed on May 7, 2003. This Solicitation of Views package included information on the project and an invitation to the first public input meeting. Pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, a solicitation of views was requested to ensure that social, economic, and environmental effects were considered in the development of the Environmental Assessment for the North Broadway project. ***Please refer to Appendix A, which contains the notification package and a list of agencies and interested parties that received the package.***

At the conclusion of the 30-day comment period, 19 solicitation of views responses were received. These comments provide valuable insight into the evaluation of potential environmental impacts. The comments were referenced and incorporated where appropriate within the environmental impact categories in Chapter 3, Environmental Consequences. ***Please refer to***

Appendix B, which contains a list of agencies and interested parties who commented and copies of each letter received.

The following agencies and interested parties were contacted regarding this project:

Federal Agencies	State Agencies
US Department of Agriculture	ND Aeronautics Commission
US Department of Agriculture—Forest Service (3)	ND Association of Counties
US Department of Commerce—Economic Development Administration	ND Council on the Arts
US Department of Defense—Army Corps of Engineers(5)	ND Department of Health
US Department of Defense—Minot Air Force Base	ND Department of Transportation (4)
US Department of Defense—Missile Cable Affairs Office, Minot Air Force Base	ND Division of Community Services
US Department of Energy—Western Area Power Administration (2)	ND Forest Service
US Department of Health and Human Services—Center for Environmental Health & Injury Control	ND Game and Fish Department
US Department of Homeland Security—Federal Emergency Management Agency	ND Geological Survey
US Department of Housing and Urban Development	ND Indian Affairs Commission
US Department of the Interior—Bureau of Indian Affairs	ND Land Department
US Department of Interior—Bureau of Reclamation	ND League of Cities
US Department of the Interior—Fish and Wildlife Service	ND National Guard
US Department of Interior—Geological Survey	ND Parks and Recreation
US Department of the Interior—National Park Service	ND State Water Commission
US Department of the Interior—National Park Service, Theodore Roosevelt National Park	ND Tourism Division
US Department of Transportation—Federal Aviation Administration	People with Disabilities
US Department of Transportation—Federal Highway Administration	Public Service Commission
US Department of Transportation—Federal Railroad Administration	Soil Conservation Committee
US Environmental Protection Agency (2)	

Elected-Federal	Utilities
US Representative	Basin Electric Power, Inc.
US Senator (2)	Mid-continent Cable Company (2)
Elected—State	Montana Dakota Utilities (3)
Representative (8)	ND Telephone Company
Senator (4)	Northern Plains Natural Gas
Regional Agencies	Northern States Power Company
Garrison Diversion Conservancy District	Northwest Communications Co-op
Lewis & Clark Regional Development Council	Qwest
Roosevelt-Custer Regional Council for Development	Sprint World Headquarters
Souris Basin Planning Council	SRT Communications, Inc.
Spirit Lake Sioux Tribe (3)	Verendrye Electric Co-op Inc.
Standing Rock Sioux Tribe (2)	WBI Pipeline
Three Affiliated Tribes (4)	Xcel Energy
Trenton Tribal	Organizations/Interested Parties
Turtle Mountain Chippewa (3)	Minot International Airport
Local Agencies	Minot State University
City of Minot Auditor	ND Wildlife Federation, Inc.
City of Minot Chamber of Commerce	Sierra Club
City of Minot City Council	Theodore Roosevelt Medora Foundation
City of Minot Engineer	
City of Minot Finance Director	
City of Minot Fire Departments (2)	
City of Minot Manager	
City of Minot Park District	
City of Minot Planning	
City of Minot Police Chief	
City of Minot Public Transit	
City of Minot Public Works	
City of Minot Sewage and Water Works	
Trinity Hospital	
Ward County Auditor	
Ward County Commission	
Ward County Historical Society	
Ward County Superintendent of Schools	
Ward County Water Resource District	

4.5 Public Involvement

4.5.1 Public Input Meeting #1—Kickoff Meeting

A Kickoff Meeting was held on Wednesday May 21, 2003 from 5:30 pm to 7:30 pm at Minot State University in Minot. The intent of the meeting was to inform elected officials and federal, state, regional, and local agencies, as well as the general public, of the project and obtain local knowledge of concerns related to the proposed study. This meeting also served as an early notification of the preparation of project development and environment study, otherwise known as the Project Concept Report.

In order to involve the general public in the project, three techniques were used to notify the public of the Kickoff Meeting. Prior to the public meeting, a public service announcement was circulated to local television, newspapers, and radio stations. Second, a legal display advertisement was published in the Minot Daily News two weeks prior to the meeting. Third, an invitation to the meeting was included in a letter sent to over 210 adjacent business owners, landowners, property owners, lessees, and tenants adjacent to the study area. ***Please refer to Appendix C, which contains the ad, public service announcement, letter, and a list of landowners who received the package.***

A presentation was given at the beginning of the meeting, with an open house format following. Comments from the audience included: concerns about safety; improved access to businesses; specific right-of-way questions; concerns about the existing drainage and stormwater runoff; pedestrian accommodations; and consensus to improve the roadway, especially improving it with 12-foot lanes. A total of 47 people attended the public meeting. A representative from the Minot Daily News attended the public input meeting and provided subsequent news coverage. At the conclusion of the 15-day comment period 12 written comments were received. ***Please refer to Appendix D, which contains the sign-in sheet, handout, and a list of citizens that commented and the comment cards.***

4.5.2 One-on-One Meetings

Due to the sensitive nature of proposed roadway widening on North Broadway, public involvement with local businesses, tenants, lessees; church boards and members; schools; and homeowners were conducted on a one-on-one basis. The meetings were pre-arranged and their location was generally at the particular business, church, or home. These one-on-one meetings prepared the public for the different alternatives, along with recording and answering their specific comments and concerns. The majority of these meetings were positive and the results were seen at the public input meetings. A total of 47 different one-on-one meetings were held. In some cases, certain businesses, schools, and churches were met with more than once. Comments and concerns from these meetings included:

- Sight distances concerns
- Parking concerns
- Right-of-way and relocation concerns
- Pedestrian/bicycle accommodations are needed; existing sidewalks are too narrow
- Aesthetic concerns
- Improved access to businesses and maintaining access during construction

- Utilities maintained during construction
- Drainage and stormwater concerns

Please refer to the Appendix E, which contains the record of conversations from each of these one-on-one meetings.

4.5.3 Public Input Meeting #2—Alternatives Public Workshop

The Alternatives Public Workshop was held on Wednesday July 16, 2003 from 4:00 to 7:00 pm at the International Inn in Minot. The intent of the meeting was to inform the general public of the development and evaluation of alternatives for the project. Gaining public support for the proposed project is of primary importance in the development of the alternatives for the project.

In order to involve the general public in the project, three techniques were used to notify the public of the Alternatives Public Workshop. Prior to the public meeting, a public service announcement was circulated to local television, newspapers, and radio stations. Second, a legal display advertisement was published in the Minot Daily News two weeks prior to the meeting. Third, a copy of the meeting handout, which served as an invitation to the meeting as well as meeting handout, was distributed to those individuals on the adjacent landowners list. Any additional individuals who registered at the first public input meeting on May 21, 2003 who were not on the previous mailing list were included. ***Please refer to Appendix F, which contains the ad, public service announcement, newsletter, and a list of landowners and interested parties who received the package.***

The Alternatives Public Workshop Open House began at 4:00 pm and concluded with a formal presentation at 5:00 pm. Over 52 people attended the Alternatives Public Workshop. At the conclusion of the presentation, the floor was open to public comment. At the conclusion of the 15-day comment period, 13 written comments were received. ***Please refer to Appendix G, which contains the sign-in sheet, handout, and a list of citizens that commented and the comment cards.***

4.5.3.1 Public Input Meeting #3—Public Update

This meeting was held November 17, 2004 from 5:00 pm to 7:00 pm at Minot State University in Minot. The intent of this meeting was to update and inform the general public on the progress of the project, to receive input on different improvement options, and to document any concerns on these options. The main objective of updating the public involved explanations of the North Broadway project moving from a Categorical Exclusion into an Environmental Assessment.

In order to involve the general public in the project, three techniques were used to notify the public of the Alternatives Public Workshop. Prior to the public meeting, a public service announcement was circulated to local television, newspapers, and radio stations. Second, a legal display advertisement was published in the Minot Daily News two weeks prior to the meeting. Third, a newsletter, which served as an invitation to the meeting, was distributed to those individuals on the adjacent landowners list. Any additional individuals who registered at the first and second public input meetings on May 21 and July 16, 2003 who were not on the previous mailing list were included. ***Please refer to Appendix H, which contains the ad, public service announcement, newsletter/meeting handout, and a list of landowners and interested parties who received the newsletter.***

The Public Update Meeting Open House began at 4:00 pm, with a formal presentation at 5:00 pm. Over 66 people attended the Public Update Meeting. At the conclusion of the presentation, the floor was open to public comment. At the conclusion of the 15-day comment period, 17 written comments were received. ***Please refer to Appendix I, which contains the sign-in sheet, handout, presentation, and a list of citizens that commented and the comment cards.***

4.5.4 Public Hearing

The March 2005 EA was made available for public viewing at seven locations on April 13, 2005. The NDDOT distributed the Environmental Assessment to a number of federal, state, and local agencies on April 13, 2005. One agency responded with written comments. ***Responses have been provided for technical comments and are located in Appendix J.***

The Public Hearing was held on Thursday, April 28, 2005 from 5:00 pm to 7:00 pm at the International Inn in Minot, North Dakota. The intent of the meeting was to receive formal comments from the public about the proposed alternatives and options evaluated in the March 2005 EA.

In order to involve the general public in the project, three techniques were used to notify the public of the Public Hearing. Prior to the Public Hearing, a public service announcement was circulated to local television, newspapers, and radio stations. Second, a legal display advertisement was published in the Minot Daily News two weeks prior to the meeting. Third, an invitation to the hearing was included in a newsletter sent to the project mail list. Any additional individuals who registered at the first and second public input meetings on May 21 and July 16, 2003 who were not on the previous mailing list were included. ***Please refer to the public service announcement, ad, newsletter, and mailing list located in Appendix K.***

The Public Hearing began with an open house and a formal presentation, followed by a period of public comment. A Registered Merit Reporter recorded the presentation and comment session. Comment cards were available for written comments. ***Please refer to the Public Hearing Transcript, located in Appendix L.***

Nearly 50 people attended the Public Hearing. A total of 12 written comments were received following the hearing. ***Please refer to Appendix M, which contains the sign-in sheet, handout, and presentation. Appendix N contains a list of citizens that commented and the comment cards and responses (responses were not prepared for statements of preference).***

4.5.5 Comment and Response Methodology

The methodology for responding to comments received on the March 2005 Environmental Assessment is based upon the general guidelines developed as part of NEPA (National Environmental Policy Act of 1969). The comments received from the agencies and the public are provided in the Appendices.

Responses have been provided for technical corrections, unclear information, or content requirements, following each comment letter in the Appendices. Responses were not drafted for statements of preference; however, they were considered in the selection of the preferred alternatives and options.

**JANUARY 2006
DRAFT SECTION 4(f) EVALUATION**

**North Broadway
4th Avenue NW to 21st Avenue NW
City of Minot, Ward County
PCN 15182**

Project No. CMU-4-083(060)200



Prepared by

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
BISMARCK, NORTH DAKOTA**

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DRAFT SECTION 4(f) EVALUATION

A. Proposed Action

The proposed action is the reconstruction of 1.3 miles of US Highway 83, also known as North Broadway. The project begins at 4th Avenue NW in the city of Minot and continues north to 21st Avenue NW. Included in this Draft Section 4(f) Evaluation is an analysis of the project alternatives.

A.1. Purpose of the Proposed Action

The purpose of the North Broadway project is to improve roadway deficiencies to meet NDDOT guidelines/standards. This would include replacing the pavement, providing roadway capacity to a minimum of LOS C based on future traffic demands, meeting NHS criteria 23 CFR 658.9(b), not having a reduction in safety, and accommodating pedestrian/bicyclist users, while meeting ADA guidelines/standards.

A.2. Need for the Proposed Action

The need for the proposed reconstruction of North Broadway is driven by a number of deficiencies along the project corridor. These include deteriorated pavement, inadequate roadway capacity, inadequate lane widths, safety, and inadequate pedestrian facilities, as described in Chapter 1 of the attached EA.

B. Section 4(f) Properties

Section 4(f) of the US Department of Transportation Act of 1966, as codified in the 49 U.S.C. § 303, specifies that the Secretary shall not approve any program or project that requires the use of publicly owned land from a public park, recreation area, wildlife or waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance, as determined by the officials having jurisdiction thereof, unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program or project includes all possible planning to minimize harm resulting from the use.

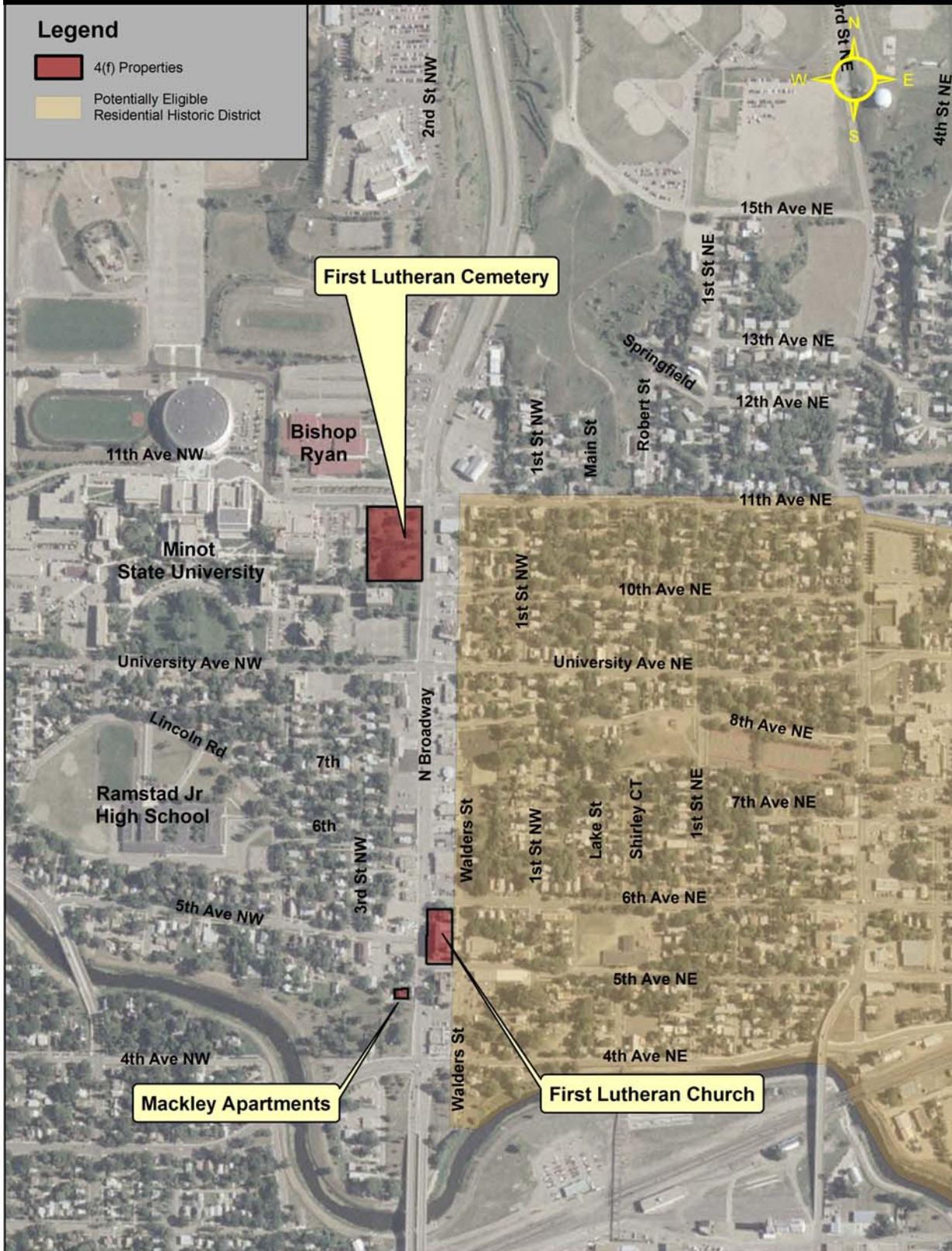
Properties protected by Section 4(f) and located within the project area include: the historic First Lutheran Church Complex, the historic Mackley Apartments, and a residential historic district. ***Please refer to Figure 1, Section 4(f) Properties.***

B.1. First Lutheran Church Complex

The First Lutheran Church Complex, 32WD1622, is eligible for listing on the National Register of Historic Places under Criterion C, as one site. The Church is the main resource nominated and the remaining elements—parsonage, garage, and cemetery are contributing elements to the site's significance.

Criterion C states that the “property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values or represents a significant and distinguishable entity whose components lack individual distinction.” The First Lutheran Church and all of its properties are listed as eligible under this criterion because of the architectural or artistic distinction.

Figure 1
Section 4(f) Properties



The First Lutheran Church is the result of a variety of expansions and alterations to a building constructed in 1907, and formally dedicated on May 5, 1908. Where the parsonage is located currently, just north of the Church, was approximately the same site of the congregation's first church, which was superseded by the 1907 building. The present-day Church building is the result of a circa 1927 expansion design by Minot architect, George H. Bugenhagen, although several additions and alterations have been made to the Church since his original design.

George H. Bugenhagen began practicing in Minot in early 1915. At the time of this remodeling/expansion design, he partnered with S.W. Molander and the firm operated until at least 1931. Bugenhagen's experience prior to the architectural practice in Minot was structural steel drafting, engineering, and supervision. This even included a year of employment as a bridge designer for the State of New York and another year as a bridge designer for the Northern Pacific Railway, working in the St. Paul and Minneapolis offices. Among the firm's Minot designs were the Union National Bank and Annex, Trinity Hospital, Northwest Clinic, Minot Junior High School, St. Joseph's Hospital, and the Gram Business Block. They also designed hospitals in the communities of Williston and Bottineau and schools in Rugby, Sheyenne, Stanley, Wheelock, Streeter, and Selz.

The First Lutheran Church building has been expanded since Bugenhagen's design was executed in the late 1920s (that expansion has occurred along the building's east wall—the wall least visible from view by travelers along North Broadway). His remodeling design also included a large addition to the building, which is represented by the nave and chancel portions of the existing building. Bugenhagen's design incorporates many of the distinctive characteristics of the Tudor Revival style, including a steeply pitched roof, patterned brickwork, parapeted gables, Tudor arch doorways, and heavy board doors with elaborately scrolled strap hinges. While the building has suffered some loss of design as a result of the additions to its east wall, it does retain integrity of locations and general integrity of materials, workmanship, feeling, and associa-



First Lutheran Church

tion. The building has also suffered some loss of setting as a result of the on-going transition of North Broadway. North Broadway was primarily a residential street in the late 1920s, when Bugenhagen's remodeling occurred. Presently, North Broadway has an almost exclusive commercial function.

B.1.1. Parsonage

The parsonage is a two-story, buff-colored, brick dwelling of the American Foursquare design, with a combination of stylized classical and craftsman detailing constructed in 1914. It is an excellent and little-altered example of style. It retains integrity of location, materials, design, workmanship, feeling, and association. It has lost some integrity of setting as a result of the on-going transition of North Broadway. This transition has led to an almost exclusive commercial function of North Broadway.



B.1.2. Garage

A hipped-roof, brick-walled, single-stall garage sits on a poured concrete foundation southwest of the parsonage. This garage sits between the parsonage and the Church. The garage was constructed sometime between 1945 and 1952. A tall, wood fence begins at the northwest corner of the Church and extends around the garage and parsonage to the northeast corner of the Church. The circa 1950 garage retains integrity of location, materials, workmanship, feeling, and association. It has lost some degree of design integrity, as a result of the addition of a wood frame, shed roof extension centered on its north wall. It has also lost some integrity of setting for the same reasons as the Church and parsonage.

B.1.3. Parking Lot and Administration Building

To the east of the parsonage is an asphalt-surfaced Church parking lot and to its south and east is a Church administration building. The Church administration building is of irregular plan: a one-story, flat-roofed, brick-walled structure above a raised basement.

B.1.4. Cemetery

The First Lutheran Cemetery was platted in 1908. The Cemetery design is one of superficial symmetry—a rectangular plot, measuring approximately 350 feet north-south and 250 feet east-west. The Cemetery is laid out in quadrants of equal size divided by a 25-foot wide drive running north-south and an 18-foot drive running east-west through the Cemetery's center, with a

roundel approximately 50 feet in diameter, where the two drives intersect. The Cemetery contains four gate posts at the east entrance, as well as a corner post on the southeast property line. Each quadrant contains nine “blocks” of gravesites arranged in columns on a north-south axis of three rows each. There the symmetry ends. Gravesites and the north-south pathways between them differ between the quadrants to east and west of the Cemetery center line. These differences include:



First Lutheran Cemetery

- The center column of the quadrants east of center contain three columns of grave plots; whereas, the center columns west of the Cemetery’s center contain two columns of grave plots.
- All grave plots west of the Cemetery center are 10 feet long; whereas, those in the westernmost column of the quadrants east of the center are 12 feet long.
- The north-south pathways, moving from east to west, between the blocks of grave plots to the east of the center are 10 feet, 16 feet, and 12 feet; whereas, those in the west of the center are 16 feet, 16 feet, and 20 feet respectively.
- The number of grave plots in each quadrant differs: in the northeast quadrant there are 273 plots, southeast 224 plots, southwest 192 plots, and the northwest 234 plots.



First Lutheran Cemetery

The Cemetery retains integrity of location, materials, workmanship, feeling, and association. It has apparently lost some degree of design and setting integrity as the result of widening 11th Avenue NW. The widening has encroached on the Cemetery, resulting in the removal of the shrubbery that screened the Cemetery from 11th Avenue NW along the east side of the Cemetery's northern boundary. It has also lost integrity of setting as a result of successive widening of North Broadway, first in 1928 and then around 1961. Aerial photography of the city of Minot, taken in 1953, shows a row of trees or shrubs running north to south along the Cemetery's east boundary. The Cemetery has also lost integrity due to the transition of North Broadway from a primarily residential street to an almost exclusively commercial street and from the establishment and growth of Minot State University (borders on the south and west) and Bishop Ryan High School (borders on the north and west).

B.2. Mackley Apartments

The Mackley Apartments, 32WD1608, is eligible for listing on the National Register of Historic Places under Criterion C.

Criterion C states that the "property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values or represents a significant and distinguishable entity whose components lack individual distinction." The Mackley Apartments is eligible for listing under Criterion C, due to its embodiment of the distinctive characteristics of the Tudor Revival Style. These characteristics include:



- Brick and stucco wall clad with decorative half-timbering
- Round, arched doorway with a heavy, wooden door in a projecting entry with a steeply pitched roof
- Grouped windows in a semi-hexagonal, two-story window bays
- Patterned brickwork and stonework

The Mackley Apartments is an L-plan, two-story building over a raised basement level, apartment dwelling. The building's frame is of post and beam construction, with wood floor joists, lath and plaster walls and ceilings, and carpeted floors. It contains 10 apartments—4 on each floor, and 2 in the basement. The city of Minot building permit records, which appear not to pre-date 1950, indicate that few alterations have been made to the building.

The building's exterior architectural interest lies in its elaborate and distinctive Tudor Revival style, which was commonly employed in single-family dwellings of the same construction period (mid-1920s), but is only rarely found in North Dakota in commercial buildings or multiple-family

dwellings. The façade is a symmetrical three-bay composition. The center bay is composed of a one-story, cat-slide, gable-roofed projecting entryway, flanked by flat-roofed, two-story cant bay windows.



The building retains integrity of location, materials, design, workmanship, feeling, and association. It has lost some integrity of setting since its mid-1920s construction as a result of the evolution of the immediately surrounding area from residential to commercial use. Also, it has lost integrity from channelization of the Mouse River, following the devastating flood of Minot in 1969 that moved the river literally from the building's backyard to a point several hundred feet southwest. No visually obvious evidence of the earlier channel remains immediately adjacent to the Mackley Apartments.

B.3. Residential Historic District

The residential historic district is eligible for listing on the National Register of Historic Places. The eligible Historic District is bounded by North Broadway on the west, the Mouse River on the south, 11th Street NE on the east, and 11th Avenue NE on the north.

In late 1985, RTI (Renewable Technologies, Inc.) conducted a reconnaissance survey under contract with the State Historical Society of North Dakota. RTI opined that a sizeable area north of the Mouse River and east of North Broadway was worthy of intensive survey to determine its National Register eligibility as an historical district. RTI characterized the area as a "mixed district" that "contains a small commercial zone, a few industrial sites and numerous residences dating from the turn of the century to the mid-1930s" and that the vast majority of residences within the area "reflect the working-class nature of this neighborhood... [which is] an important and characteristic element in the built environment of early 20th century Minot..."

The reevaluation of this district in March 2004 by Lou Hafermehl, architectural historian, concluded part or all of the area identified by RTI constitutes an eligible National Register Historic District. However, it is suspected that the buildings in the area retain less integrity today than at the time of the 1985 survey. Integrity loss appears fairly substantial based on the extent to

which houses in the area have been resided with modern vinyl and metal siding products. The integrity loss may diminish the area's eligibility as a National Register Historic District.

The Class III Inventory report, *North Broadway: An Archaeological and Architectural Inventory in Minot, Ward County, North Dakota*, recommended that most of the buildings fronting North Broadway be excluded from any predominantly residential district to its east that might be considered for National Register of Historic Places designation. On February 5, 2005, NDDOT and ND SHPO conducted an on-site review and determined that the eligible residential historic district does not extend to the buildings facing North Broadway. The buildings facing North Broadway are mainly commercial in nature and are not eligible as components of the residential district.

C. Alternatives

Alternatives and Options were developed to improve roadway deficiencies to meet current NDDOT and AASHTO design standards/guidelines for the facility type, and to improve the safety and operational characteristics of the roadway. All of the Section 4(f) Properties (First Lutheran Church Complex, the Mackley Apartments, and the eligible Residential Historic District) are in Segment 1 (4th Avenue NW to 11th Avenue NW); therefore, Segment 2 (11th Avenue NW to 21st Avenue NW) Alternatives and Options are not discussed in this Section. **Please refer to Table A, North Broadway Alternatives Summary.**

Segment 1 Alternatives were developed to widen to the west side of North Broadway, because of the location of the First Lutheran Church. The First Lutheran Church and its properties take up one city block; it is also eligible for listing on the NRHP (National Register of Historic Places). All attempts to avoid impacts to the First Lutheran Church were made, resulting in west side widening of North Broadway.

Table A North Broadway Alternatives Summary	
Alternative	Description
Alternative A	No Build
Segment 1 Alternatives – 4th Avenue NW to 11th Avenue NW	
Alternative B	Rebuild with Existing Geometry
Alternative C— Preferred	Five 12-foot Lanes w/ 4-foot to 8-foot Sidewalks
Alternative D— Preferred*	Two 12-foot Outside & Three 11-foot Inside Lanes w/ 4-foot to 8-foot Sidewalks
Alternative E	Four Driving Lanes w/ Continuous Raised Median & Sidewalks
<i>Option 1— Preferred</i>	Left turn lane at 4 th Avenue NW - Northbound
<i>Option 2— Preferred</i>	5 th Avenue NW to 6 th Avenue NW transition
Segment 2 Alternatives – 11th Avenue NW to 21st Avenue NW	
Alternative F	Five 12-foot lanes with flush median
Alternative G	Four 12-foot lanes with raised median
<i>Option 3.1</i>	Pedestrian Overhead Grade Separation near 20 th Avenue NW
<i>Option 3.2</i>	Pedestrian Underpass Grade Separation near 20 th Avenue NW
<i>Option 3.3</i>	Pedestrian At-Grade Crossing at the intersection of 20 th Avenue NW
<i>Option 4</i>	Right turn lanes

*Only in Mackley Apartments (425 North Broadway) location

The following is a brief description of each project alternative and its associated impacts to Section 4(f) properties. For more detailed descriptions of the alternatives, please refer to Chapter 2 of the attached EA. ***Please refer to Table B, Use of Section 4(f) Properties.***

C.1. Preferred Alternatives in Segment 1

The preferred alternatives in Segment 1 are a combination of two alternatives that have been identified for Segment 1. Because the Mackley Apartments is eligible for listing on the NRHP, Alternative D, two 12-foot outside lanes and three 11-foot inside lanes with 4-foot sidewalks, has been identified as the preferred alternative only in the location of the Mackley Apartments (425 North Broadway). From the intersection of 4th Avenue NW and North Broadway (beginning project terminus) to before the Mackley Apartments (425 North Broadway), Alternative C, five 12-foot lanes with 4-foot to 8-foot sidewalks, has been identified as the preferred alternative. After the Mackley Apartments (425 North Broadway) to the end of Segment 1 (11th Avenue NW), the preferred alternative is Alternative C, 4-foot to 8-foot sidewalks. Alternative C also includes locations for certain sidewalk widths in order to reduce the amount of relocations and right-of-way. These two specific locations include: Broadway Exchange and Pawn (501 North Broadway) and Subway/AIG American General (721 North Broadway). In all other locations in Segment 1, *with the exception of the Mackley Apartments—425 North Broadway and the above two locations*, 8-foot sidewalks are recommended as the preferred alternative. ***Please refer to Figure 2, Alternatives C and D.***

C.1.1. Preferred Options in Segment 1

The preferred options in Segment 1 are Option 1 (left turn lane at 4th Avenue NW—northbound) and Option 2 (5th Avenue NW to 6th Avenue NW transition). Option 2 would incorporate adjusted geometry in order to not encroach upon the New Hope Christian Center's (Church—220 5th Avenue NW) property.

C.2. Alternative A

The no-build alternative (Alternative A) would leave the existing roadway in place as it exists today, with a continuation of current maintenance practices. This alternative would not meet the project's purpose and need. The no-build would not address the deteriorating pavement, inadequate roadway capacity, inadequate lane widths, safety, or inadequate pedestrian/bicycle facilities. Therefore, it is considered not feasible and prudent.

C.2.1. Use of Section 4(f) Properties—Alternative A

The no-build alternative would not result in the use of the First Lutheran Church Complex, the Mackley Apartments, or to the Residential Historic District.

**Table B
Use of Section 4(f) Properties**

Alternatives	Description	Meet Purpose and Need	First Lutheran Cemetery	Mackley Apartments	Residential Historic District
			<i>Use of Resource</i>	<i>Use of Resource</i>	<i>Use of Resource</i>
Alternative A	No Build	No	No Use Would Occur *	No Use Would Occur *	No Use Would Occur
Alternative B	Rebuild Segment 1 with Existing Geometry	No	No Use Would Occur *	No Use Would Occur *	No Use Would Occur
Alternative C, 4-foot	Five 12-foot lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of front entrance caused by relocating steps (exact replica) closer to the building ***	No Use Would Occur
Alternative C, 6-foot	Five 12-foot lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur
Alternative C, 8-foot <i>Preferred</i>	Five 12-foot lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur
Alternative D, 4-foot <i>Preferred only in Mackley Apt. Location</i>	Two 12-foot Outside & Three 11-foot Inside Lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Modification of the front steps to meet city of Minot building code **	No Use Would Occur
Alternative D, 6-foot	Two 12-foot Outside & Three 11-foot Inside Lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of front entrance caused by relocating steps (modified) closer to the building ***	No Use Would Occur
Alternative D, 8-foot	Two 12-foot Outside & Three 11-foot Inside Lanes	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur
Alternative E	Four Driving Lanes w/ Continuous Raised Median & Sidewalks	Yes	10 feet of ROW from the Section 4(f) property would be permanently incorporated into the transportation facility **	Removal of building ***	No Use Would Occur **
Option 1 <i>Preferred</i>	Left Turn Lane at 4 th Avenue NW—Northbound	—	No Use Would Occur *	No Use Would Occur	No Use Would Occur *
Option 2 <i>Preferred</i>	5 th Avenue NW to 6 th Avenue NW Transition	—	No Use Would Occur *	No Use Would Occur	No Use Would Occur *

* No Historic Properties Affected—ND SHPO Finding

** No Adverse Effect—ND SHPO Finding

*** Adverse Effect—ND SHPO Finding

**Figure 2
Alternatives C and D**



C.3. Alternative B

Alternative B would replace the deteriorated pavement with new pavement with no street widening and associated right-of-way acquisition. The existing roadway geometry would remain unchanged. From 4th Avenue NW to University Avenue NW, the roadway would be reconstructed with five 10.5-foot lanes, a 4.5-foot sidewalk on the east, and a 5-foot sidewalk on the west. From University Avenue NW to 11th Avenue NW, the roadway would be reconstructed with four 11-foot lanes, a 10.5-foot TWLTL (Two-Way Left Turn Lane), a 3.5-foot sidewalk on the east, and a 4-foot sidewalk on the west.

The National Highway System (NHS), based on the criteria of 23 CFR 658.9(b), lists routes designated as National Network based on their general adherence to the criteria of items (1) through (6). The criteria (5) states “The route consists of lanes designed to be a width of 12 feet or more or is otherwise consistent with highway safety.” Based on these criteria, all of the alternatives carried forward must have at least one 12-foot lane in each direction.

Alternative B was discarded from further analysis because it did not meet the purpose of the project: to improve roadway capacity to a minimum LOS C based on future traffic demands and to accommodate pedestrian/bicyclists users while meeting ADA guidelines/standards. Further, it would not have at least one 12-foot lane in each direction. Therefore, it is considered not feasible and prudent.

C.3.1. Use of Section 4(f) Properties—Alternative B

Alternative B would not result in the use of the First Lutheran Church and Complex, the Mackley Apartments, or to the Residential Historic District. Again, Alternative B was discarded from further analysis because it did not meet the purpose of the project. Therefore, it is considered not feasible and prudent.

C.4. Alternative C

Alternative C, one of the preferred alternatives¹, would reconstruct the roadway with five 12-foot lanes with the center lane functioning as a TWLTL. The options for sidewalk width vary from a minimum width of 4 feet to a maximum width of 8 feet. The corresponding right-of-way width would vary from a minimum of 72 feet to a maximum of 80 feet. The additional right-of-way needed would vary from 6 to 14 feet depending upon which sidewalk width was chosen. From 4th Avenue NW to University Avenue NW, the right-of-way would be acquired from the west side of the roadway. North of University Avenue NW, the road would transition to the east to minimize impacts to the First Lutheran Cemetery. From University Avenue NW to 11th Avenue NW, 10 feet of right-of-way would be acquired from the west side of the roadway and a maximum of four feet would be acquired on the east side to accommodate 8-foot sidewalks. If 4-foot or 5-foot sidewalk widths were selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway.

C.4.1. Use of Section 4(f) Properties—Alternative C

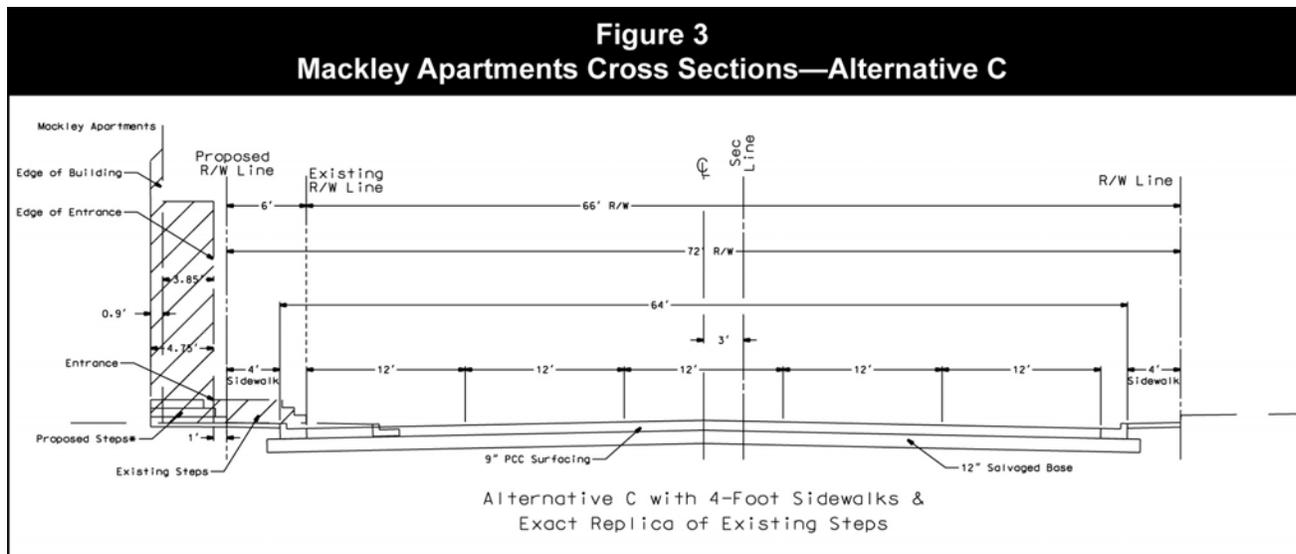
Alternative C, 4-foot, 6-foot, and 8-foot sidewalks would result in the use of the First Lutheran Cemetery and the Mackley Apartments. Although the residential historic district is eligible for listing on the NRHP, this alternative is outside the area of potential effect to the district.

¹Please refer to Section C.1. Preferred Alternatives in Segment 1 for additional information pertaining to the preferred alternatives.

The use of the First Lutheran Cemetery would be the acquisition of 10 feet of right-of-way and the relocation of gate posts and a corner post². The gate posts are located at the center of the east boundary line and the corner post is located at the Cemetery's southeast corner.

The Mackley Apartments is eligible for listing under Criterion C, due to its embodiment of the distinctive characteristics of the Tudor Revival Style. The main component for eligibility on the NRHP is the building's façade. The façade is a symmetrical three-bay composition. The center bay is composed of a one-story, cat-slide, gable-roofed projecting entryway, flanked by flat-roofed, two-story cant bay windows. It is important to note that the Mackley Apartment's front entrance steps are not considered part of the façade, it was determined that the steps were constructed at a later time and were an add-on after the façade was built. Alternative C, 4-foot sidewalks would result in the use of the front entrance of the Mackley Apartments³. The use would be the removal of the front entrance caused by relocating the front steps (exact replica) closer to the building. Therefore, when the use results in the removal of the façade, it removes the contributing element for eligibility for listing on the NRHP. **Please refer to Figure 3, Mackley Apartments Cross Sections, Alternative C.**

Under Alternative C, 6-foot and 8-foot sidewalks, the use to the Mackley Apartments would be the removal of the building⁴.



C.5. Alternative D

Alternative D, one of the preferred alternatives⁵, would reconstruct the roadway with two 12-foot outside lanes and three 11-foot inside lanes, with the center lane functioning as a TWLTL. The options for sidewalk width vary from a minimum width of 4 feet to a maximum width of 8 feet. The corresponding right-of-way width would vary from a minimum width of 69 feet to a maxi-

²ND SHPO has determined that Alternative C would have *No Adverse Effect* to the First Lutheran Cemetery.

³ND SHPO has determined that Alternative C, 4-foot sidewalks would have an *Adverse Effect* to the Mackley Apartments.

⁴ND SHPO has determined that Alternative C, 6-foot and 8-foot sidewalks would have an *Adverse Effect* to the Mackley Apartments.

⁵Please refer to Section C.1. Preferred Alternatives in Segment 1 for additional information pertaining to the preferred alternatives.

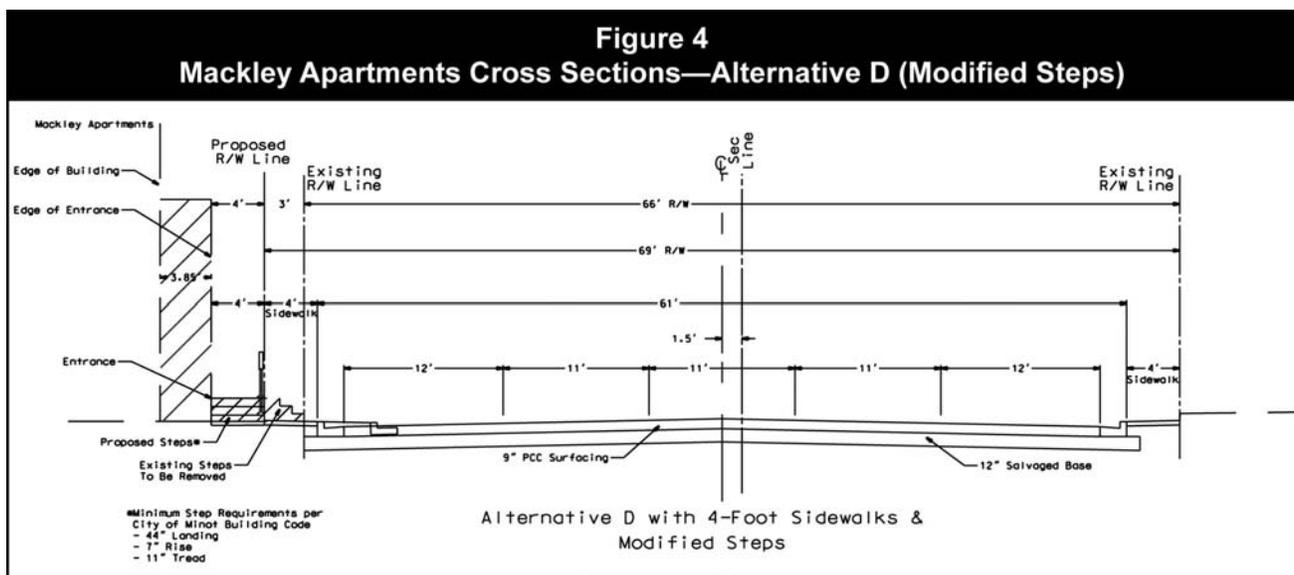
imum width of 77 feet. The additional right-of-way would be acquired from the properties along the west side of North Broadway. The additional right-of-way requirement would vary from 3 to 11 feet, depending upon which sidewalk width was chosen. If 4-foot or 5-foot sidewalk widths were selected, small parcels of right-of-way would be required behind the sidewalk for the placement of lights, signal standards, and signs. These parcels would be acquired along both sides of the roadway.

C.5.1. Use of Section 4(f) Properties—Alternative D

Alternative D, 4-foot, 6-foot, and 8-foot sidewalks would result in the use of the First Lutheran Cemetery and the Mackley Apartments. Although the residential historic district is eligible for listing on the NRHP, this alternative is outside the area of potential effect to the district.

The use of the First Lutheran Cemetery would be the acquisition of 10 feet of right-of-way and the relocation of gate posts and a corner post⁶. The gate posts are located at the center of the east boundary line and the corner post is located at the Cemetery's southeast corner.

Alternative D, 4-foot sidewalks would result in the use of the Mackley Apartments. The use would be the modification of the front steps. The existing steps are half-moon shaped. Modification to the proposed steps would meet minimum step requirements per city of Minot Building Code⁷. It is important to note that the Mackley Apartment's front entrance steps are not considered part of the façade, the main contributing element for eligibility for listing on the NRHP. It was determined that the steps were constructed at a later time and were an add-on after the façade was built. Although the steps which would be modified with this alternative are not considered part of the contributing element, it is considered a use since the steps are a component of the overall historic structure. **Please refer to Figure 4, Mackley Apartments Cross Sections—Alternative D (Modified Steps).**



The Mackley Apartments is eligible for listing under Criterion C, due to its embodiment of the distinctive characteristics of the Tudor Revival Style. The main component for eligibility on the

⁶ND SHPO has determined that Alternative D would have *No Adverse Effect* to the First Lutheran Cemetery.

⁷ND SHPO has determined that Alternative D, 4-foot sidewalks would have *No Adverse Effect* to the Mackley Apartments.

NRHP is the building's façade. The façade is a symmetrical three-bay composition. The center bay is composed of a one-story, cat-slide, gable-roofed projecting entryway, flanked by flat-roofed, two-story cant bay windows. It is important to note that the Mackley Apartment's front entrance steps are not considered part of the façade, it was determined that the steps were constructed at a later time and were an add-on after the façade was built. Alternative D, 6-foot sidewalks would result in the use of the Mackley Apartments by the removal of the front entrance⁸. Therefore, when the use results in the removal of the façade, it removes the contributing element for eligibility for listing on the NRHP.

Under Alternative D, 8-foot sidewalks, the use to the Mackley Apartments would be the removal of the building⁹.

C.5.2. Alternative D with 4-foot Sidewalks Public Concerns/Issues

Currently, the front steps of the Mackley Apartments are approximately 7 feet wide and the sidewalk is 5 feet wide; therefore, the building is approximately 12 feet from the roadway. The installation of new lane widths and the corresponding sidewalk would bring the roadway four feet closer to the building. With this alternative, the sidewalks would be four feet and the steps would be approximately four feet, for a total of eight feet from the roadway. Many public comments received have discussed the existing narrow sidewalk widths in the project area. The owner of the Mackley Apartments has expressed concern over the closeness of the roadway to the building, for tenants walking in and out, and especially when moving furniture.



Five-foot sidewalk in front of the Mackley Apartment building being used as snow storage, which causes pedestrians to walk very close to the roadway

⁸ND SHPO has determined that Alternative D, 6-foot sidewalks would have an *Adverse Effect* to the Mackley Apartments.

⁹ND SHPO has determined that Alternative D, 8-foot would have an *Adverse Effect* to the Mackley Apartments.

The Mackley Apartments building has three floors accessible by an interior stairwell located at the front of the building. There are three ways to access the apartments:

- 1) Use the front entrance (take the stairs to each floor).
- 2) Use the back entrance, walk to the front of the building, then use the front entrance's stairs.
- 3) Use the fire escape at the back of the building that has access to the top two floors.

Due to the owner's concern, an evaluation report was conducted that included two different options that would provide additional access to the building. This may be used as mitigation for locating the roadway closer to the building, while saving the structure.

The architectural firm of Anderson, Wade, Whitty & Larson, P.C. conducted an evaluation report to determine if access in the back of the building could be modified to provide additional access for moving in and out of the building. **Please refer to Figure 5, Existing Rear of the Mackley Apartments Building.**

Two options were considered in order to provide access. **Please refer to Table C, Options to Provide Access in the Rear of the Mackley Apartments Building.** Option 1 is the construction of a new enclosed stair tower at the rear of the Mackley Apartments. **Please refer to Figure 6, Option 1, Enclosed Stair Tower.** Option 2 consists of constructing a new stair tower and elevator. **Please refer to Figure 7, Option 2, Stair Tower and Elevator.**



The front entrance of the Mackley Apartments building

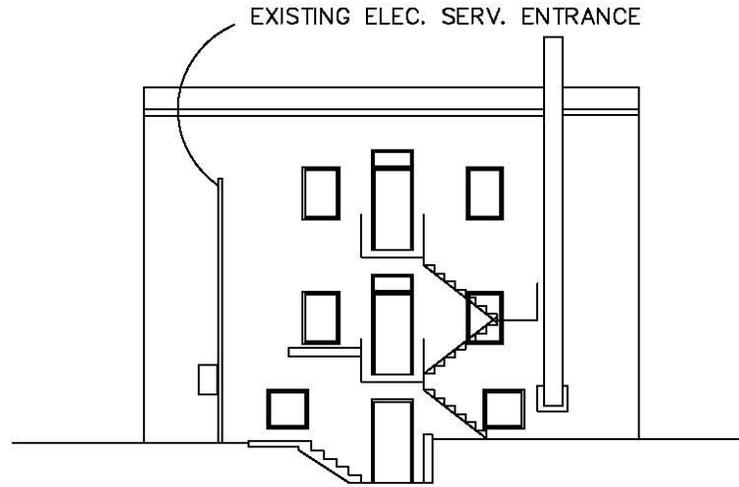


The back entrance of the Mackley Apartments building

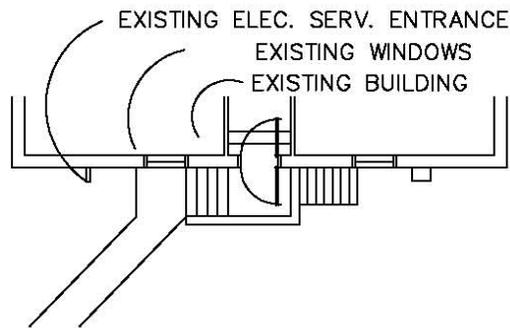


The fire escape at the rear of the Mackley Apartments building

Figure 5
Existing Rear of the Mackley Apartments Building



EXISTING ELEVATION



EXISTING MAIN LEVEL PLAN

MACKLEY APARTMENTS
MINOT, NORTH DAKOTA

Option	Description	Cost Estimate
Option 1	Construction of a new enclosed stair tower	\$77,000
Option 2	New stair tower and elevator (5-foot wide stair treads wherever possible)	\$147,000

Both of these options would require the relocation of the existing electric service entrance and the removal of windows. The six windows that would need to be removed to accommodate the new construction are windows in the kitchen/kitchen nook area. The city of Minot's Building Codes do not require having a window in the kitchen.

Neither option would provide ADA (Americans with Disabilities Act of 1990) accessibility to the lower level apartments. New entry doors should be installed with accessible thresholds. The existing doors would need to be replaced and installed level with the floor elevations.

The construction would consist of concrete foundation system, wood or metal framing, and brick veneer. Matching the brick of the Mackley Apartments would be difficult. It is important to note the existing structure is in poor condition and the upper parapet walls are currently held together with tie rods attached to the exterior brick¹⁰.

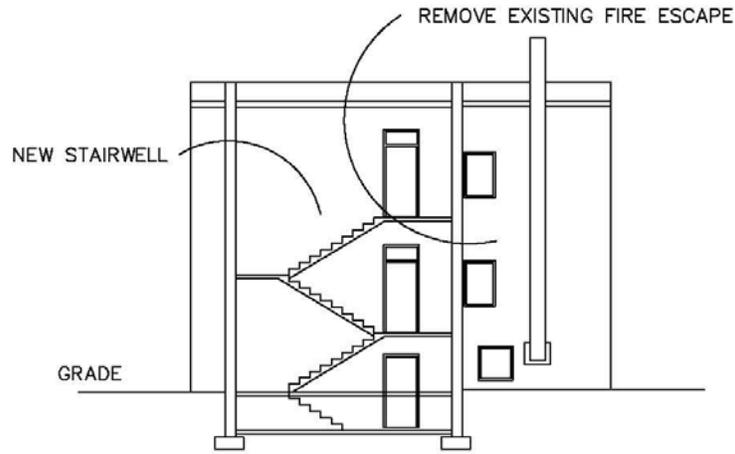
Accommodating the back entrance to allow for additional access was reviewed by the ND SHPO. The ND SHPO has determined that the addition of an enclosed stair tower and/or elevator would result in *No Adverse Effect* to the Mackley Apartments.

The Mackley Apartments is owned and operated by private individuals; any modifications to the back of the Mackley Apartments building must have their consent.

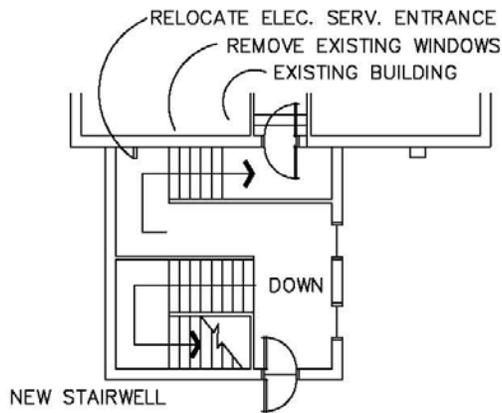
In order to accommodate the tenants of the building, an alternative was considered to reroute the sidewalks on the west side of North Broadway to the alley behind the buildings. This alternative was eliminated from further study due to safety concerns for pedestrians/bicyclists. It was also eliminated due to the impact of removing the direct access of businesses and residents to the sidewalks. The Mackley Apartments was also evaluated for the possibility of relocating the structure. The evaluation concluded that the building lacks structural integrity to facilitate relocating the structure.

¹⁰Anderson, Wade, Whitty & Larson, P.C., *Evaluation Report*

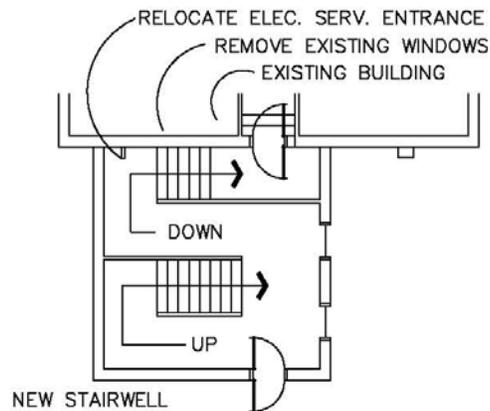
Figure 6
Option 1, Enclosed Stair Tower



SECTION – OPTION 1
WEST STAIRWELL

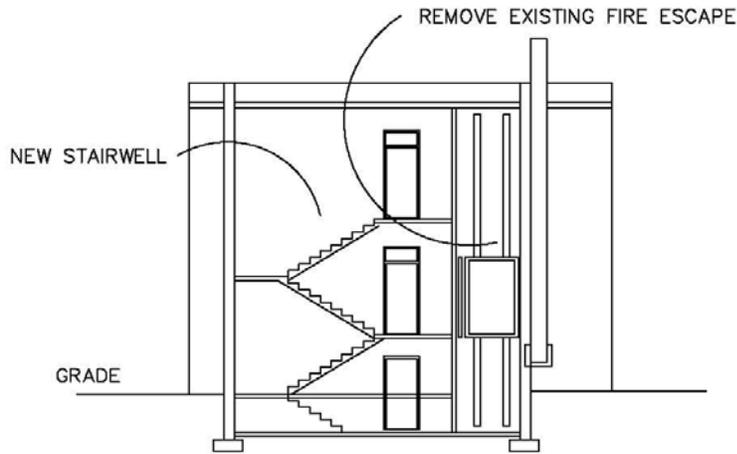


UPPER LEVEL PLAN – OPTION 1
WEST STAIRWELL

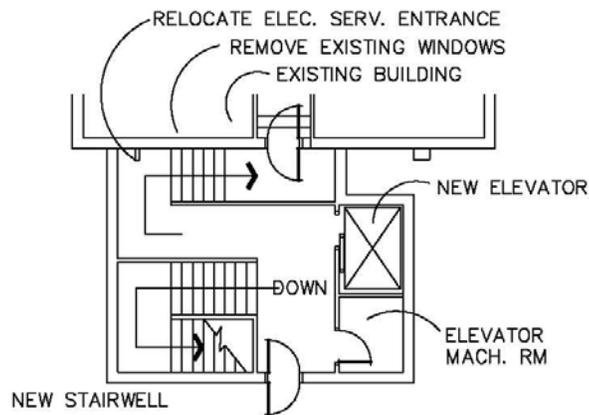


MAIN LEVEL PLAN – OPTION 1
WEST STAIRWELL

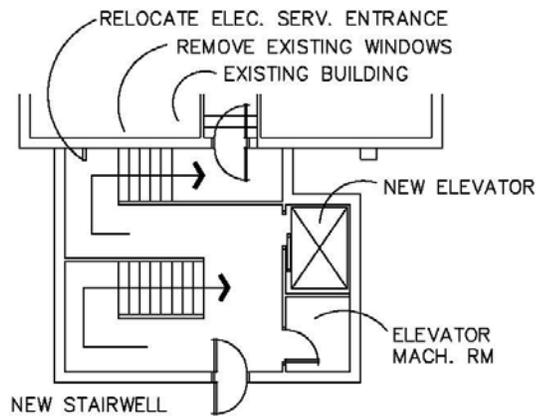
Figure 7
Option 2, Stair Tower and Elevator



SECTION – OPTION 2
WEST STAIRWELL AND ELEVATOR



UPPER LEVEL PLAN – OPTION 2
WEST STAIRWELL AND ELEVATOR



MAIN LEVEL PLAN – OPTION 2
WEST STAIRWELL AND ELEVATOR

C.6. Alternative E

Alternative E would reconstruct the roadway with four driving lanes and a continuous raised center median from 4th Avenue NW to University Avenue NW within the existing right-of-way. The existing lane assignments at 4th Avenue NW and University Avenue NW would remain unchanged. The raised center median would be continuous with no left turns allowed between 4th Avenue NW and University Avenue NW. The sidewalk width for this alternative would vary depending upon the width of the center median. This alternative would not require acquisition of any additional right-of-way from 4th Avenue NW to University Avenue NW except at the location of the left turn lanes at 4th Avenue NW and University Avenue NW.

C.6.1. Use of Section 4(f) Properties—Alternative E

Alternative E would result in the use of the First Lutheran Cemetery, the Mackley Apartments, and the Residential Historic District.

The use of the First Lutheran Cemetery would be the acquisition of 10 feet of right-of-way and the relocation of gate posts and a corner post¹¹. The gate posts are located at the center of the east boundary line and the corner post is located at the Cemetery's southeast corner.

The use of the Mackley Apartments would be the removal of the building due to the transition and widening required to accommodate the southbound left turn lane at 4th Avenue NW¹².

The use that would result from Alternative E may increase the amount of traffic in the eligible historic district on north-south city streets east of North Broadway and within the eligible residential historic district¹³.

C.7. Option 1

Option 1 would include the reconfiguration of the northbound left turn lane at 4th Avenue NW. This work would not directly affect the viaduct structure, but may require reconstruction of the approach slab. The *Traffic Operations Study* dated March 14, 2003 recommended the desirable length (250 feet) be provided. The minimum length (190 feet) is being proposed because major reconstruction to the viaduct structure would be needed to provide the desirable length. Option 1 could be selected with any of the Alternatives. The estimated construction cost for this option is included in the mainline estimates.

C.7.1. Use of Section 4(f) Properties—Option 1

Option 1 would not result the use of the First Lutheran Church Complex, the Mackley Apartments, or the Residential Historic District.

¹¹ND SHPO has determined that Alternative E would have *No Adverse Effect* to the First Lutheran Cemetery.

¹²The ND SHPO has determined that Alternative E would have *an Adverse Effect* to the Mackley Apartments.

¹³ND SHPO has determined that Alternative E would have *No Adverse Effect* to the eligible residential historic district. However, it is important to note that this determination was made because it is predicted that traffic would find an alternate route other than the residential side streets.

C.8. Option 2

Option 2 would include the construction of a transition on the west side of North Broadway to connect 5th Avenue NW to 6th Avenue NW near the present location of the Barley Pop bar (511 North Broadway). The realignment would eliminate three “T” intersections within 300 feet by creating a new four-legged intersection 300 feet from an adjacent “T” intersection. The sight distance restrictions for eastbound 5th Avenue NW would also be eliminated. Option 2 is not recommended with Alternative E, only with Alternatives C and D.

C.8.1. Use of Section 4(f) Properties—Option 2

Option 2 would not result in the use of the First Lutheran Church Complex, the Mackley Apartments, or the Residential Historic District.

D. Avoidance Alternatives

D.1. Alternative A

The no-build alternative would not result in the use of the First Lutheran Church Complex, the Mackley Apartments, or to the Residential Historic District. However, Alternative A would not meet the purpose and need for the project. Therefore, this alternative is not considered to be feasible and prudent.

D.2. Alternative B

Alternative B would not result in the use of the First Lutheran Church and Complex, the Mackley Apartments, or to the Residential Historic District. However, it was discarded from further analysis because it did not meet the purpose of the project: to improve roadway capacity to a minimum LOS C based on future traffic demands and to accommodate pedestrian/bicyclists users while meeting ADA guidelines/standards. Further, it would not have at least one 12-foot lane in each direction. Therefore, this alternative is not considered to be feasible and prudent.

D.3. Options 1 and 2

The construction of Option 1 and 2 would not result in the use of the First Lutheran Church Complex, the Mackley Apartments, or the Residential Historic District. However, Options 1 and 2 could be constructed with Alternatives C and D.

Option 1 could be constructed with Alternative E, but Option 2 would not be constructed with Alternative E because the median would eliminate any benefit of constructing Option 2.

E. Measures to Minimize Harm

Segment 1 Alternatives were developed to widen to the west side of North Broadway, because of the location of the First Lutheran Church. The First Lutheran Church and its properties take up one city block. All attempts to avoid impacts to the First Lutheran Church were made, resulting in west side widening of North Broadway.

Alternatives C, D, and E were also developed to minimize harm to the First Lutheran Cemetery. Under these Alternatives, the gate posts and corner post would be moved to the west, or if they cannot be saved, then new gate posts would be constructed to replicate, in dimension, design, and materials, the existing gate posts¹⁴.

¹⁴This would constitute a *No Adverse Effect* determination from ND SHPO.

Alternative D, 4-foot sidewalks would minimize harm to the Mackley Apartments through reconfiguring the steps or designing new steps using the same materials that were used in the existing steps¹⁵.

Providing additional access to the rear of the Mackley Apartments building could be obtained by constructing an enclosed stair tower and/or elevator.

F. Coordination

The Section 4(f) Evaluation has been prepared in coordination with the Federal Highway Administration, North Dakota Department of Transportation, North Dakota State Historic Preservation Office, and the city of Minot. Consultation is on-going and a MOA (Memorandum of Agreement) is currently being prepared that would describe mitigation requirements. The proposed MOA will be developed and signed for inclusion with the Final Section 4(f) Evaluation.

In accordance with 23 CFR § 771.135(i), the Section 4(f) Evaluation has been provided for coordination and comment to the Department of Interior.

¹⁵This would constitute a *No Adverse Effect* determination from ND SHPO.