

TRUNK ROAD EXTENSION SOUTH

MSB Project No. 35007

Preliminary Reconnaissance Report Final

October 2007

Prepared for:



*Matanuska-Susitna Borough
Public Works Department*

Prepared by:



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NOTICE TO USERS

This report is intended to document the methodologies, findings, and conclusions of a Reconnaissance Report completed for the Matanuska-Susitna Borough. Changes frequently occur during evolution of the planning/design process. Persons who may rely on the information contained in this document should contact the following:

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TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
1.1 PROJECT DESCRIPTION	1
1.2 PURPOSE AND NEED.....	1
2.0 EXISTING CONDITIONS	3
2.1 TRUNK ROAD	3
2.2 NELSON ROAD	3
3.0 PRELIMINARY DESIGN CRITERIA	4
3.1 FUNCTIONAL CLASSIFICATION	4
3.2 DESIGN TRAFFIC VOLUMES.....	4
3.3 DESIGN SPEED	5
3.4 TYPICAL SECTION	5
4.0 PRELIMINARY ALTERNATIVES	6
4.1 NO-BUILD ALTERNATIVE	6
4.2 NELSON ROAD EAST - AT-GRADE CROSSING (ALTERNATIVE 1).....	6
4.3 NELSON ROAD EAST - GRADE SEPARATED CROSSING (ALTERNATIVE 2)	7
4.4 NELSON ROAD WEST - GRADE SEPARATED CROSSING (ALTERNATIVE 3)	7
4.5 ABBY BLVD EXTENSION (ALTERNATIVE 4)	8
4.6 TRUNK ROAD 4-WAY INTERSECTION (ALTERNATIVE 5)	8
4.7 TRUNK ROAD ROUNDABOUT INTERSECTION (ALTERNATIVE 6).....	8
5.0 MAJOR DESIGN ELEMENTS	9
5.1 SOILS	9
5.2 DRAINAGE	9
5.3 RIGHT-OF-WAY	9
5.4 PEDESTRIAN AND BICYCLE FACILITIES	10
5.5 UTILITIES.....	10
6.0 SAFETY IMPROVEMENTS	11
6.1 SIGNALIZATION AND SIGNAGE.....	11
6.2 RAILROAD-HIGHWAY GRADE CROSSINGS	11
6.3 ILLUMINATION	11
7.0 RIGHT-OF-WAY REQUIREMENTS.....	12
7.1 ESTIMATED ROW IMPACTS.....	12
7.1.1 <i>Alternative 1 (Nelson Road East, at-grade)</i>	12
7.1.2 <i>Alternative 2 (Nelson Road East, Grade Separated)</i>	12
7.1.3 <i>Alternative 3 (Nelson Road West, Grade Separated)</i>	13
7.1.4 <i>Alternative 4 (Abby Road Extension)</i>	13
7.1.5 <i>Alternative 5 (Trunk Road Extension)</i>	13
7.1.6 <i>Alternative 6 (Trunk Road Roundabout)</i>	13
8.0 COST ESTIMATE	14
8.1 ROW ACQUISITION COSTS.....	14
8.2 CONCEPTUAL ROAD CONSTRUCTION COST	14
8.2.1 <i>Nelson Road Alternatives</i>	14

8.2.2 Abby Blvd Extension..... 14
8.2.3 Trunk Road Extension Alternatives..... 14

9.0 ALTERNATIVES COMPARISON 15
9.1 GENERAL COMPARISON..... 15
9.2 COMPATIBILITY WITH EXISTING TRANSPORTATION PLANS 15
9.3 CONCLUSION 15

LIST OF ACRONYMS

ADT	Average Daily Traffic
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
DOT&PF	State of Alaska Department of Transportation and Public Facilities
FC	Functional Classification
FHWA	Federal Highway Association
Hwy.	Highway
Jct.	Junction
LOS	Level of Service
LRTP	Long Range Transportation Plan
MP	Mile Point
MSB	Matanuska-Susitna Borough
PCM	Alaska Preconstruction Manual
ROW	right-of-way
VPD	vehicles per day

1.0 INTRODUCTION

This project is located within the Matanuska-Susitna Borough (MSB) approximately 1 mile northwest of the Parks Highway – Glenn Highway interchange. It proposes to extend Trunk Road south (approximately 500') to the Nelson Road right-of-way (ROW); further to the west Nelson Road will be extended to Fairview Loop Road (Figure 1).

1.1 PROJECT DESCRIPTION

The area south of the Parks Highway, west of Glenn Highway and east of Fairview Loop Road is poised for development and lacks a sufficient roadway network to accommodate the anticipated traffic demand. Proposed development includes The Ranch (a 1,750-acre subdivision), a small business park and an elementary school (scheduled to open in 2009). Once fully-developed, The Ranch will provide a total of some 800 residences. In addition, there are over 400 acres of adjacent lands that provide an opportunity for additional residential and commercial development.

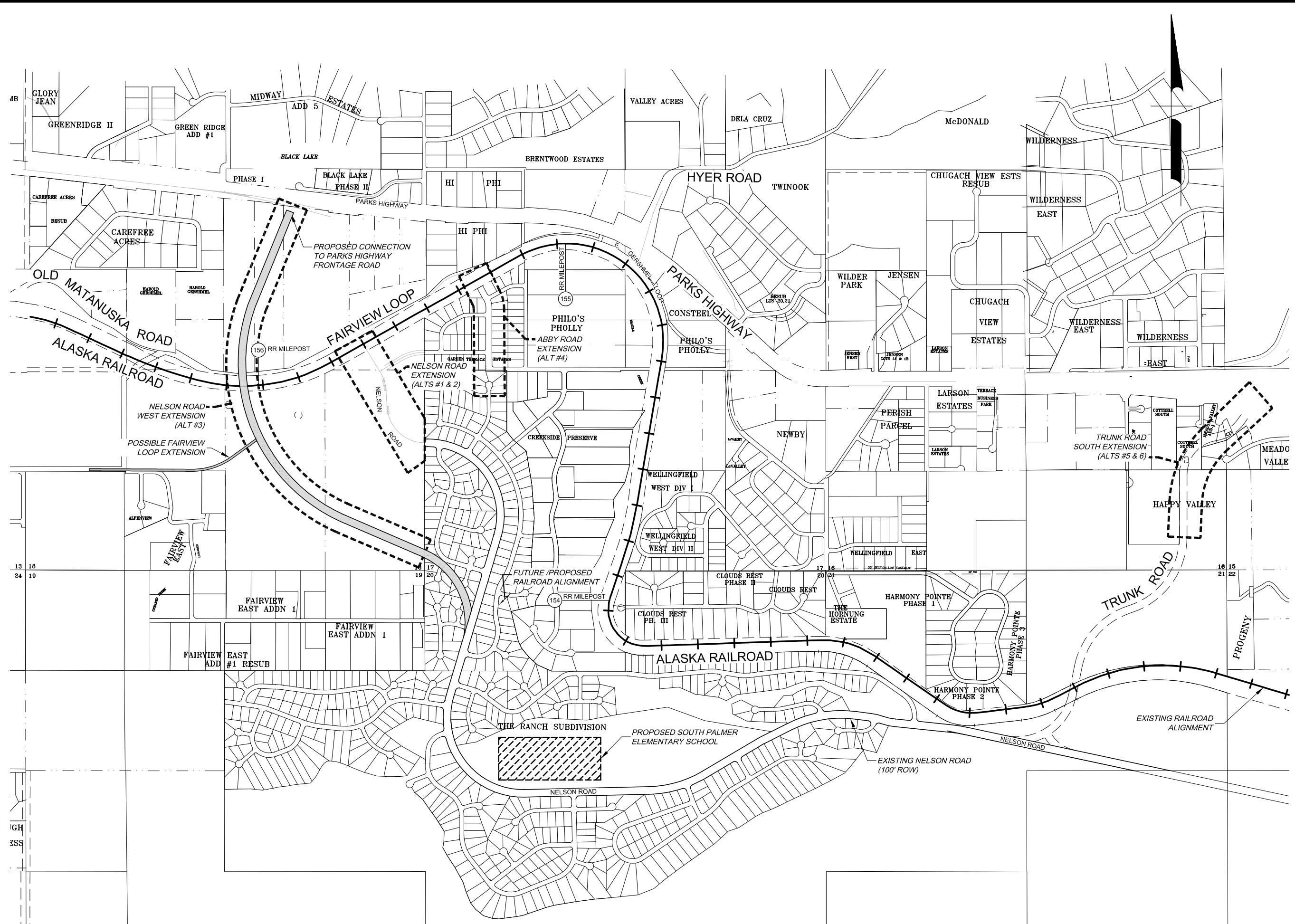
The Matanuska-Susitna Borough seeks to work with local landowners, developers and resource agencies to plan and construct a collector road system for this area. To that end, this project will focus on the endpoints of the Trunk Road / Nelson Road alignment since the Borough and Developer's have ongoing negotiations regarding design and construction of that segment of Nelson Road between Parks Highway and Fairview Loop.

This reconnaissance report intends to describe the problems to be solved, identify and analyze alternative solutions, and provide comparison of the intersection alternatives. Included in this process is the identification of existing conditions, development of project design criteria, and collection of existing data. Sources of base information for this Reconnaissance Report include MSB's geographical information system (GIS) map database, MSB's tax mapping, Matanuska Valley Area Soil Survey, available record drawings, and preliminary field reconnaissance. Upon selection of a preferred alternative, additional study and field investigation may be necessary.

1.2 PURPOSE AND NEED

The MSB has identified a need to provide additional access to the area south of Parks Highway, west of Glenn Highway and east of Fairview Loop. The Borough's Long Range Transportation Plan (LRTP) recognizes the Trunk Road South Extension as an essential improvement to the area road network. The purpose is to serve community traffic in the area efficiently and safely, now and in the future.

LOUNSBURY & ASSOCIATES, INC.
 DESIGNED BY: [Name]
 CHECKED BY: [Name]
 DRAFTED BY: [Name]
 10/24/2007 11:40
 2/2/2007 07:01E Trunk Road South Eng Plot Figures (Figure-07-016.dwg)
 Tom Adams



SHEET NO.	TOTAL SHEETS	
STATE	YEAR	
ALASKA	2007	
PROJECT DESIGNATION		
35007		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

LOUNSBURY & ASSOCIATES, INC.
 STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 TRUNK ROAD EXTENSION SOUTH
 PROJECT LOCATION AND VICINITY

FIGURE 1

2.0 EXISTING CONDITIONS

2.1 TRUNK ROAD

Trunk Road links the Parks Highway to Palmer-Wasilla Highway, Bogard Road and Palmer-Fishhook Road. The right-of-way is owned and maintained by the Alaska Department of Transportation and Public Facilities' (DOT&PF). Based on DOT&PF's Traffic Volume Report, Trunk Road is a major collector. The Trunk Road / Parks Highway intersection is served by an interchange. As a component of their Trunk Road Realignment project, DOT&PF is acquiring ROW from Parks Highway to Palmer-Fishhook Road.

2.2 NELSON ROAD

Nelson Road is a gravel road that extends from the Glenn Highway westward to The Ranch Subdivision. For many years it has provided access for gravel extraction operations from the area. The eastern segment of this alignment (~4,200 feet) is within a 100' right-of-way (ROW) authorized by the Alaska Division of Lands (ROW Permit No. 62486). The remaining segment is within a dedicated 100' ROW (The Ranch Subdivision, Phase 4, MSB Plat No. 2006-49).

Currently, Nelson Road is discontinuous and does not extend to Fairview Loop Road. However, a preliminary plat (Sweeping Vista Subdivision, Case #2007-064) submitted by the current landowners proposes a phased development, including right-of-way dedication to extend Nelson Road westward from its platted terminus at The Ranch Subdivision. The proposed segment will extend Nelson Road to Fairview Loop Road, a minor collector according to DOT&PF's Traffic Volume Report.

3.0 PRELIMINARY DESIGN CRITERIA

Road design criteria for the Trunk Road South Extension project were developed from the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets (2004), as supplemented by DOT&PF's current edition of the Alaska Preconstruction Manual (PCM). Table 1 summarizes the criteria; the Design Criteria data sheet found in Appendix A has a comprehensive outline of design recommendations used for this project.

Table 1. Preliminary Design Criteria

Item	Criterion
Functional Classification	Rural Minor Collector
Design Vehicle	Single-Unit, 30-ft single-axle truck or school bus
Design Speed	45 mph
Minimum curve radius	660 feet
Lanes	2, each 12-ft wide
Surface	Paved
Minimum Cross-section	28-ft wide, rural ditches (40-ft preferred)

3.1 FUNCTIONAL CLASSIFICATION

The development or improvement of streets should be based on a functional street classification established as part of a comprehensive community development plan. The MSB LRTP defines a minor collector as a roadway where the primary purpose is to collect traffic from local roads and bring all developed areas within reasonable distances of collector roads. Minor collectors may provide access to adjacent properties but mobility is a more important function. This functional classification sets the design standards to be used for the Trunk Road South Extension project.

3.2 DESIGN TRAFFIC VOLUMES

Per AASHTO, collector highways should be designed for specific traffic volumes and acceptable levels of service. Usually, the design year is 20 years from the date of construction completion but may be any number of years within a range from the present (for restoration projects on existing roads) to 20 years in the future (for new construction projects). For this new

construction project, road improvements should be completed by 2010; therefore, the design year has been identified as 2030.

The average daily traffic (ADT) volume for the design year should serve as the basis for the project design. Based upon the Traffic Analysis prepared for this project, design year traffic volumes are as follows:

Table 2. Traffic Volume Projection Summary

Road Segment	Average Annual Daily Traffic
Trunk Road South	4,800
Nelson Road	3,200
Fairview Loop	7,800

3.3 DESIGN SPEED

Design speed is a selected speed used to determine the various geometric design features of the roadway. The assumed design speed should be a logical one with the respect to topography, anticipated operating speed, the adjacent land use, and the functional classification of highway. Except for local streets where speed controls are frequently included intentionally, every effort should be made to use as high a design speed as practical to attain a desire degree of safety.

MSB LRTP indicates a speed of 40 mile per hour (mph) for the proposed South Trunk Road / Nelson Road alignment. Since it is desirable that the running speed of a large proportion of drivers be lower than the design speed, this reconnaissance report recommends a minimum design speed of 45 mph.

3.4 TYPICAL SECTION

The minimum typical section meeting minor collector standards consist of two 12 foot paved lanes and 2 foot shoulders; however, AASHTO recommends 8 foot shoulders. From the edge of shoulder, a 4:1 traversable and recoverable slope will be implemented throughout the clear zone with a 2:1 back slope.

Appendix B provides details of each of the proposed Typical Sections.

4.0 PRELIMINARY ALTERNATIVES

In addition to considering a “No-Build Alternative”, several intersection alternatives were identified for each of the project termini (see Appendix C). On the west end, the Nelson Road extension to Fairview Loop Road will require a new intersection. Three potential intersections were identified:

1. At-grade intersection in the vicinity of the existing Valley Block & Concrete driveway
2. Separated grade-crossing in the vicinity of the Valley Block & Concrete driveway
3. Separated grade-crossing along the western boundary of the preliminary plat for the proposed Sweeping Vista Subdivision

On the east end, Trunk Road must extend from the existing interchange southward towards Nelson Road; the two alternatives being considered are:

1. Tie into the existing intersection of Trunk Road and the south frontage roads – adding another leg to the stop-controlled intersection, and
2. Evaluate a roundabout to replace the existing stop-controlled intersection.

In addition to the new intersections, this study considered improving Abby Boulevard to provide a cost-effective access to meet near-term needs of the South Palmer Elementary School.

4.1 NO-BUILD ALTERNATIVE

The no-build alternative would not construct any improvements and would be contrary to the Borough’s intent to serve the project’s purpose and need.

4.2 NELSON ROAD EAST - AT-GRADE CROSSING (ALTERNATIVE 1)

This alternative proposes an improved at-grade railroad crossing near the intersection of Nelson Road with Fairview Loop (near the existing Valley Block & Concrete driveway); Exhibit 1 depicts the proposed crossing. The existing railroad alignment parallels Fairview Loop near the proposed intersection. Fairview Loop will need to be relocated northward away from the railroad tracks to provide an adequate queuing distance for vehicles turning from Nelson Road. Fairview Loop is currently located at the base of a slope which may create grade and erosion control challenges with the realignment. Additional ROW may be necessary from property north of Fairview Loop Road. This alternative will likely require some utility relocations and improvements along Fairview Loop Road. This alternative would include approximately 3,700 feet of roadway improvements.

4.3 NELSON ROAD EAST - GRADE SEPARATED CROSSING (ALTERNATIVE 2)

This alternative proposes a separated grade-crossing at the intersection of Nelson Road with Fairview Loop (near the existing Valley Block & Concrete driveway); Exhibit 2 depicts the proposed crossing. With the grade-separated crossing, Fairview Loop may also have to be realigned. This would depend upon whether Nelson Road was terminated or extended further north to the Parks Highway frontage road. If terminated, Fairview Loop must be realigned to provide access to Nelson Road. This realignment will be challenged to provide the necessary clearances and avoid placing fill within the railroad right-of-way without requiring a retaining structure. Otherwise, if Nelson Road is extended to Parks Highway, Fairview Loop could be left in place. This alternative will likely require some utility relocations and improvements along Fairview Loop Road.

The main advantage of this option is to provide unimpeded access for that area south of Fairview Loop Road by having grade separated crossing with the railroad tracks allowing for continuous vehicle movement above the train at all times. This will increase traffic safety and mobility by separating vehicle traffic and railroad operations.

The disadvantage would be cost of constructing the grade separated crossing and the relocation of Fairview Loop away from the existing railroad tracks to allow for the design of the intersection. The roadway footprint required for the Nelson Road embankment is significant and may require a 300' ROW to extend beyond fill limits. Another consideration is the long-term function of a separated grade crossing at this location once ARRC realigns their track. This alternative would require 4,900 feet of roadway improvements.

4.4 NELSON ROAD WEST - GRADE SEPARATED CROSSING (ALTERNATIVE 3)

This alternative proposes a grade separated crossing over the railroad tracks east of the intersection at Old Matanuska Road and Fairview Loop; Exhibit 3 depicts the proposed crossing. Similar to the Nelson Road East alternative, Fairview Loop may need to be realigned if Nelson Road is not extended to the frontage road. This alternative will likely require some utility relocations and improvements along Fairview Loop Road.

The main advantage of this option is to provide unimpeded access for the proposed development by having a separated grade-crossing with the railroad tracks allowing for continuous vehicle movement above the train at all times. This option could provide an overpass that facilitates the existing railroad alignment and allows future expansion for the proposed track realignment. It may also provide an opportunity to eliminate the Fairview Loop

and Old Matanuska Road intersection and the rail road crossing near that area. Fairview Loop could be extended eastward near its intersection at Linlu Lane to connect to Nelson Road.

A disadvantage would be the cost of constructing the separated grade crossing and connecting to the Parks Highway frontage road. The alignment for Nelson Road is also longer due to the locations of the connection points which will add additional costs. This alternative would include approximately 10,250 linear feet of roadway improvements.

4.5 ABBY BLVD EXTENSION (ALTERNATIVE 4)

This alternative proposes to extend Abby Boulevard southward to Nelson Road. To accommodate this, Abby Boulevard must be reconstructed and ROW must be acquired to connect to Bronco Circle. The existing ROW width along South Bronco Circle is 50 feet and additional ROW may be necessary. The proposed alignment for this option may not meet the 45 mph design speed criteria and the Developer suggests prior platting activity may have restricted Abby Boulevard from being extended to Nelson Road.

This alternative has the lowest construction cost of all considered alternatives and could be completed before the anticipated school opening (fall of 2009). However, without additional road improvements, the road would not be able to maintain an acceptable level of service.

4.6 TRUNK ROAD 4-WAY INTERSECTION (ALTERNATIVE 5)

The design objective for this alternative is to extend access south of Parks Highway while maintaining continuity with the existing Trunk Road corridor. The proposed extension would provide convenient access to Parks Highway, while maintaining traffic movements to and from the interchange. However, extension of Trunk Road South must consider a natural embankment immediately south of the frontage roads and impacts upon existing businesses. Right-of-Way will be required from 5 lots and buildings must be removed from Lot 11, Meadow Valley Addition 1 Subdivision and Lot 8, Meadow Valley Subdivision.

4.7 TRUNK ROAD ROUNDABOUT INTERSECTION (ALTERNATIVE 6)

The design objective for this alternate focuses on mitigating right-of-way impacts upon properties immediately south of Parks Highway. Proposed improvements consist of two roundabouts that would shift the Trunk Road South alignment westward and mitigate right-of-way impacts. DOT&PF is also evaluating roundabouts at the north side of the Trunk Road interchange to Parks Highway which would make this alternative consistent with their proposed improvements. This option may require reconstruction of the on- and off-ramps to Parks Highway, as well as realignment of the frontage roads.

5.0 MAJOR DESIGN ELEMENTS

5.1 SOILS

According to the Matanuska Valley Area Alaska soil survey conducted by the United States Department of Agriculture, the soil characteristic of the Trunk Road / Parks Highway Interchange is KnB. KnB soils are generally silty loam with low shrink swell potential and 1.5 inches per hour permeability capacity. The soil characteristic of the Nelson Road / Fairview Loop is KnC. KnC soils have similar characteristics as the KnB soils described previously.

A geotechnical investigation to confirm actual subsurface conditions should be completed once the preferred alternative has been identified.

5.2 DRAINAGE

Runoff will be generally held in shallow ditches parallel to the roadway. Ditch slopes will have a minimum slope of 0.5% recommended by AASHTO. There may be areas where drainage improvements are necessary. An area of concern will be near the railroad crossing near Fairview Loop Road. A field survey should be conducted to verify drainage conveyances within the project area.

Another area of concern is the extension of Trunk Road where proposed road grades will be approximately 6% and runoff conveyance must be considered to prevent erosion. A field survey should be conducted to verify drainage conveyances within the project area.

5.3 RIGHT-OF-WAY

There isn't available right-of-way to extend Trunk Road south of the existing interchange at Parks Highway and acquisition will be required. The number of affected properties is dependant upon the intersection alternative selected by the Borough. The recommended minimum width of right-of-way is 100' for the proposed road improvements, pedestrian facilities, and potential utility corridor.

The west of end of Nelson Road intersects Fairview Loop, which is within a 200' right-of-way controlled by the Alaska Railroad Corporation (ARRC). Intersection improvements may require that Fairview Loop be realigned and require additional right-of-way from adjacent properties - as well as require approval by ARRC and DOT&PF. Along Nelson Road, the recommended minimum width of right-of-way is 100' for the proposed road improvements; a wider ROW may be necessary if grade separation is the preferred alternative.

5.4 PEDESTRIAN AND BICYCLE FACILITIES

Currently, there are no existing pedestrian or bicycle facilities within the study areas of Nelson Road, Fairview Loop Road or Trunk Road. This project may provide an opportunity to enhance the safety and convenience of pedestrian and bicycle travel in the area. Since the predominant land use along the Trunk Road South corridor is expected to be residential, and a new elementary school is being constructed, an 8' wide paved separated pathway should be considered along one side of the road corridor. Construction of a pathway is not included within this reconnaissance report.

5.5 UTILITIES

It appears that underground utilities within project limits include water mains (existing and proposed), storm drain piping, telephone cables and gas lines. Above ground utilities include fire hydrants, utility poles, overhead electric and telephone lines.

No major utility conflicts are anticipated at the Trunk Road South Extension. However, the Nelson Road extension will likely impact overhead utilities along the north side of Fairview Loop Road. Also, City of Wasilla has plans to extend a water distribution system along Fairview Loop Road to The Ranch Subdivision.

6.0 SAFETY IMPROVEMENTS

6.1 SIGNALIZATION AND SIGNAGE

There are no signalized intersections at the proposed intersections and none are recommended by the Traffic Analysis. Safety improvements to the intersections will include information and warning signs, stop signs, striping and geometric design such as sight triangles and vertical grades.

6.2 RAILROAD-HIGHWAY GRADE CROSSINGS

Alaska Railroad operates an active track within the project limits and plans to realign approximately 4 miles of mainline track (ARRC MP 154 to 158) that extends through the project area. Proposed improvements include construction of underpasses and separated grade crossings to eliminate at-grade crossings. In 2006, the Federal Transit Administration (FTA) issued a finding of no significant impact (FONSI) for the project which authorized ARRC to pursue proposed improvements. ARRC has commenced right-of-way acquisition for Phase 1.

The westward extension of Nelson Road to Fairview Loop Road must consider the existing and proposed railroad alignment. ARRC will require a diagnostic team review and evaluation of all new crossings to ensure the number of railroad crossings is minimized.

6.3 ILLUMINATION

Good visibility under both day and night conditions is fundamental to enabling motorists, pedestrians, and bicyclists to travel on roadways in a safe and coordinated manner. Properly designed and maintained street lighting should provide comfortable and accurate night visibility, which should facilitate vehicular, bicycle, and pedestrian traffic.

This study recommends the roadway be illuminated at the intersection of the Parks Highway and Trunk Road. If the Nelson Road East at-grade crossing is selected, we anticipate illumination at the crossing of the railroad tracks. With the grade-separated options, we do not anticipate illumination will be necessary.

7.0 RIGHT-OF-WAY REQUIREMENTS

ROW impacts were assessed based on the following assumptions:

1. The minimum ROW width for the entire project is 100 feet.
2. Rights-of-way necessary to extend Nelson Road across the proposed Sweeping Vista Subdivision will be dedicated to the Borough (at no cost) as part of the platting process.
3. Where practical, ROW easements will be acceptable rather than acquiring the parcel in whole or replatting narrow strips of property.
4. Alternatives requiring a grade-separated crossing at Fairview Loop Road will significantly impact the proposed Sweeping Vista Subdivision and may require that the Borough purchase right-of-way.

7.1 ESTIMATED ROW IMPACTS

7.1.1 ALTERNATIVE 1 (NELSON ROAD EAST, AT-GRADE)

Alternative 1 proposes to construct a new public approach near the existing commercial (private) driveway to Valley Block & Concrete. Fairview Loop Road will be relocated northward away from the railroad tracks to provide an adequate queuing distance for vehicles turning from Nelson Road. Currently, Fairview Loop is constructed within the Alaska Railroad right-of-way (ARRC Permit No. 6012). The proposed realignment would cross two undeveloped private parcels (A-5 and A-11, Section 18) and a single-family residence (Lot 11, Hi Phi Subdivision). Nelson Road would extend southward across parcel D-2, the Valley Block & Concrete property, for which a preliminary plat (Sweeping Vista Subdivision) has been submitted to the Borough for approval.

7.1.2 ALTERNATIVE 2 (NELSON ROAD EAST, GRADE SEPARATED)

Alternative 2 anticipates extending Nelson Road south from Fairview Loop and constructing a grade-separated crossing between the road and railroad tracks. Fairview Loop would be realigned horizontally and vertically to develop a standard T-intersection with Nelson Road. Similar to Alternative 1, the proposed realignment of Fairview Loop Road would cross three parcels and require partial acquisitions. Due to the grade separation, the embankment for Nelson Road may require a 300' wide right-of-way across Tax Parcel D2 (Section 18) to its connection at The Ranch Subdivision. This alternative anticipates extending Timothy Lane to Nelson Road. For cost estimating purposes, it was assumed the Borough must acquire roughly 16 acres of right-of-way.

7.1.3 ALTERNATIVE 3 (NELSON ROAD WEST, GRADE SEPARATED)

Alternative 3 extends Nelson Road from The Ranch Subdivision, crossing Tax Parcels D2 and D4 in Section 18, and then turns northward towards Parks Highway across parcels A4 and A5. Fairview Loop would be extended along Linlu Lane and parcel C4 to the proposed Nelson Road – eliminating the intersection at Old Matanuska Road. For cost estimating purposes, it was assumed the Borough must acquire all required right-of-way for this alternative.

7.1.4 ALTERNATIVE 4 (ABBY ROAD EXTENSION)

This alternative will widen Abby Road and create a link to Nelson Road via Bronco Circle. The road widening will require easements from fourteen adjacent lots and the purchase of Lots 11 and 12, Block 8, The Ranch Subdivision.

7.1.5 ALTERNATIVE 5 (TRUNK ROAD EXTENSION)

The 4-way intersection anticipated in Alternative 5 would extend Trunk Road from its current terminus at the Parks Highway frontage road southward across three private parcels (Lots 11, 12, and 13A) in Meadow Valley Subdivision. An additional private parcel (Lot 8) will be affected by the proposed road embankment; due to the proximity of the fill limit to the residential structure, it is assumed the entire lot will be acquired.

7.1.6 ALTERNATIVE 6 (TRUNK ROAD ROUNDABOUT)

Similar to Alternative 5, this concept seeks to extend Trunk Road south of the existing interchange at Parks Highway. However, instead of a 4-way intersection, a set of roundabouts would replace the existing intersection between frontage roads, highway access ramps, and Trunk Road. The proposed dual roundabout alternative would mitigate impacts to private properties in the Meadow Valley Subdivision; Lot 13A would be acquired for the realignment. An additional residential parcel (Lot 6) will be affected by the proposed road embankment; due to the proximity of the fill limit to the residential structure, it is assumed the entire lot will be acquired.

8.0 COST ESTIMATE

A cost estimate for each of the conceptual alignments is summarized below and detailed in Appendix D. The costs shown do not recognize agreements (if any) between the Borough and developers of The Ranch Subdivision and/or Sweeping Vista and only represent MSB costs.

8.1 ROW ACQUISITION COSTS

Right-of-way acquisition is necessary for several of the alignments; cost information is based upon available MSB tax assessment records. The following table summarizes estimated ROW costs. As the design advances and ROW impacts are refined, appraisal, acquisition and relocation analysis will be conducted. These costs are included within the conceptual road construction costs shown below.

Table 3. Right-of-Way Acquisition Costs

Alignment Alternative	Estimated ROW Cost
1	\$214,300
2	\$1,335,200
3	\$2,600,000
4	\$120,000
5	\$530,700
6	\$262,500

8.2 CONCEPTUAL ROAD CONSTRUCTION COST

8.2.1 NELSON ROAD ALTERNATIVES

Nelson Road East At-Grade Crossing (Alternative 1)	\$2.1 million
Nelson Road East Grade Separated Crossing (Alternative 2)	\$13.6 million
Nelson Road West Grade Separated Crossing (Alternative 3)	\$27.9 million

8.2.2 ABBY BLVD EXTENSION

Abby Blvd Extension (Alternative 4)	\$0.9 million
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8.2.3 TRUNK ROAD EXTENSION ALTERNATIVES

Trunk Road 4-Way Intersection (Alternative 5)	\$1.8 million
Trunk Road Roundabout Intersection (Alternative 6)	\$1.6 million

9.0 ALTERNATIVES COMPARISON

9.1 GENERAL COMPARISON

With the exception of the No-Build Alternative, each would be able to meet the project's purpose and need, with some differences. However, the desire to provide improved access to the South Palmer Elementary School (site preparation is underway) should be considered when selecting the preferred alternative. From that perspective, project cost and schedule may eliminate Alternatives 2 and 3 from consideration since project funding, design and construction requirements make it unlikely these could be completed prior to the anticipated Fall 2009 school opening. A public involvement plan has not yet been implement, but it is expected the public may not favor Alternative 4 due to the increased traffic that would be expected within the existing subdivision (Garden Terrace Estates). Alternatives 1, 5 and 6 are capable of satisfying the school's scheduled opening assuming timely selection of the preferred alternative and obtaining approval from ARRC and DOT&PF.

9.2 COMPATIBILITY WITH EXISTING TRANSPORTATION PLANS

The LRTP indicates a need to extend Trunk Road south of the Parks Highway and west to Fairview Loop by 2025. On the west end, Alternative 3 appears consistent with the improvements anticipated in the LRTP because it provides connectivity with Fairview Loop Road. On the east end, Alternatives 5 & 6 would both satisfy the needed improvements proposed within the long range plan.

9.3 CONCLUSION

Based on the reconnaissance-level engineering and preliminary examination of issues presented in this document, Alternatives 1, 5 & 6 should be developed and evaluated further. Alternatives 2 and 3, both of which include a grade separated crossing, are more expensive and will take longer to design and construct; further investigations for the Trunk Road Extension South project will not consider these alternatives. However, these alternatives should be considered as a future project to improve access within the project area. Alternative 4 should also be evaluated further as an improvement to the road network; however, this concept should be reviewed with residents of Garden Terrace subdivision.