

**STAFF MEETING MINUTES
LANCASTER COUNTY BOARD OF COMMISSIONERS
THURSDAY, AUGUST 30, 2018
COUNTY-CITY BUILDING
ROOM 113 - BILL LUXFORD STUDIO
8:30 A.M.**

Commissioners Present: Todd Wiltgen, Chair; Jennifer Brinkman, Vice Chair; Deb Schorr, Roma Amundson and Bill Avery

Others Present: Kerry Eagan, Chief Administrative Officer; Ann Ames, Deputy Chief Administrative Officer; Cori Beattie, Deputy County Clerk; and Leslie Brestel, County Clerk's Office

Advance public notice of the Board of Commissioners Staff Meeting was posted on the County-City Building bulletin board and the Lancaster County, Nebraska web site and provided to the media on August 29, 2018.

The Chair noted the location of the Open Meetings Act and opened the meeting at 8:30 a.m.

AGENDA ITEM

1) APPROVAL OF STAFF MEETING MINUTES FOR AUGUST 23, 2018

MOTION: Avery moved and Amundson seconded approval of the August 23, 2018 Staff Meeting minutes. Avery, Amundson, Brinkman, Schorr and Wiltgen voted yes. Motion carried 5-0.

2) APPEAL FROM SPECIAL PERMIT NO. 18025, COMMERCIAL FEEDLOT AT 13350 WEST WITTSTRUCK ROAD – Tom Cajka, Lincoln-Lancaster County Planning, Planner II; and Steve Henrichsen, Lincoln-Lancaster County Planning, Development Review Manager

Tom Cajka, Lincoln-Lancaster County Planning Department, Planner II, reviewed the facts of the application for Special Permit No. 18025 for a commercial feedlot at 13350 West Wittstruck Road. The request is for 190,000 chickens and four barns in an area of 20 acres inside of a 75-acre lot. The following agencies have reviewed the application: Lincoln-Lancaster County Health Department, Nebraska Department of Environmental Quality (NDEQ), and the Lancaster County Engineer's Office. NDEQ has inspected and approved the site per zoning regulation conditions.

Steve Henrichsen, Lincoln-Lancaster County Planning Department, Development Review Manager, indicated staff from the Nebraska Department of Agriculture, NDEQ, Lincoln-Lancaster County Planning and Health Departments, and County Attorney's Office will be present at the County Board's public hearing on September 11th.

Brinkman questioned the process for the hearing, more specifically, if the applicant is still the same considering an appeal was filed. Henrichsen confirmed the applicant is still Lincoln Premium Poultry and the Board's action will be to approve or deny the Special Permit as recommended by the Planning Commission.

Schorr inquired how additional studies recommended by the Planning Commission would impact the 30-day appeal timeline. Henrichsen said this application would need to go forward under the current zoning regulations. Jenifer Holloway, Lancaster County Deputy Attorney, verified that the County Board must hold the public hearing within thirty days, however, action may be delayed. Henrichsen confirmed that the Planning Commission's recommendation does include additional conditions and the Board could include more.

Henrichsen said the Planning Department's website includes all correspondence received, as well as the additional application materials and handouts. Wiltgen emphasized that all additional correspondence received by the Planning Department and County Board Office should be forwarded to the County Clerk's Office to be included as part of the record. Henrichsen added the Planning Commission meeting videos and minutes are also available online.

Wiltgen asked if conditions were placed on other similar Special Permits in the County. Cajka said he did not recollect any. Henrichsen said some may have included less substantial conditions. Wiltgen asked Planning to research what, if any, conditions were associated with other poultry operations in the County.

In response to Amundson's inquiry about the water level/water table, Henrichsen said the Natural Resources District (NRD) had no objection to the application. It was also noted that the Lincoln-Lancaster County Health Department would also be involved with testing wells.

Holloway suggested that proposed conditions be available in writing at the meeting.

CHIEF ADMINISTRATIVE OFFICER REPORT

B. Prudential Fee Proposal

Kerry Eagan, Chief Administrative Officer, reported that Prudential is proposing to reduce the pension plan fee (Exhibit E).

MOTION: Schorr moved and Amundson seconded to direct Eagan to oversee setting up a review of the Prudential fee structure with the assistance of the Pension Review Committee and Segal/Marco Advisors.

The Chair questioned the amount. Eagan said Prudential wants to reduce their fee requirements from 10 to 7.5 basis points. Fee-leveling may also be considered. A recommendation will be made to the Board after all research is completed.

ROLL CALL: Avery, Amundson, Brinkman, Schorr and Wiltgen voted yes. Motion carried 5-0.

C. 2018 Legislative Retreat Agenda

Eagan reviewed the draft agenda (see agenda packet item). He stated he will email all proposals to the Commissioners on Tuesday.

3) 68th STREET AND 148th STREET SAFETY STUDY RESULTS – Pam Dingman, Lancaster County Engineer; Larry Legg, Lancaster County Engineer; and Felsburg Holt & Ullevig (FHU)

Note: Copies of the 148th Street and 68th Street Safety Study (Exhibits A and B, respectively) were provided to the County Board prior to the meeting.

Adam Denney, Traffic Engineer, Felsburg Holt & Ullevig (FHU), reviewed the 148th Street Safety Study (Exhibit C).

Denney noted the following about the study: the traffic counts were completed in May while school was in session; vehicle average speed is 65 miles per hour with most speeding vehicles being northbound; crash data after February 2018 is not included in the study; and annual growth is at 4.5%. Current Average Daily Traffic (ADT) is 6,000 vehicles per day. At a yearly 4.5% growth, by 2040 the ADT is estimated at 15,000 per day.

Rick Haden, Associate with Felsburg Holt & Ullevig (FHU), stated it looks as if 148th Street is being used as a bypass on the east side of Lincoln.

Wiltgen requested information for traffic volume on Lancaster County two-lane roads compared to other counties.

Amundson exited the meeting at 9:21 a.m.

Denney described a rule-intersection conflict system sign and noted it would be a new technology to the State.

Wiltgen asked for data on traffic volume that enters the 148th Street corridor from Highway 2 to Highway 6. Denney stated a study can be done on traffic entering and exiting the network.

When asked for an estimated cost for the East Beltway, Pam Dingman, Lancaster County Engineer, said it would be at least \$400,000,000.

Denney and Haden reviewed Drive Smart, an educational outreach program with schools on distracted driving, impaired driving and seatbelt safety.

There was discussion on what preliminary improvements may entail. Dingman stated these improvements are not included in the current budget or the 1 and 6 Road and Bridge Program. The Infrastructure Taskforce will review a draft report at their September 18th meeting and a final report will be brought to the Board.

Mayor Mike Warner of Waverly thanked the Board for the study and requested a full copy of the report. He noted Waverly would like to work with the County on implementing consistent safety measures. It was noted parents are concerned about pedestrian traffic on Amberly Road and on 148th Street.

Brinkman exited the meeting at 9:41 a.m.

Denney reviewed the 68th Street Safety Study (Exhibit D).

Brinkman entered the meeting at 9:44 a.m.

Denney noted the following: the highest areas of speeding are around the high school; there is a 2.5% average growth per year; ADT is 6,600 vehicles and projected at 11,360 vehicles by 2040; and improvements at Olive Creek Road are recommended.

Wiltgen said these reports should be presented at the Legislative Retreat.

Denney defined the differences of safety, operational and systemic improvement. Haden stated for planning purposes it is best to look at systemic improvements to guide decisions.

When asked about County owned stoplights, Dingman said the County has flashing red or yellow lights, but there is not a system like the City's. She also stated there are no County roundabouts.

Silas Clark, Hickman City Administrator, echoed Mayor Werner's statements.

Dingman thanked the Board for funding the studies as this was not part of the original budget.

Sheriff Terry Wagner said this information will also be used to develop an enforcement strategy.

4) LINCOLN-LANCASTER COUNTY HEALTH DEPARTMENT– Shavonna Lausterer, Lincoln-Lancaster County Health Department Director; and Scott Holmes, Environmental Public Health Division Manager

A. FEE RESOLUTION

Item moved to later in the agenda.

B. FY2018 – 2019 BUDGET OVERVIEW

Shavonna Lausterer, Lincoln-Lancaster County Health Department Director, reviewed the budget (see agenda packet).

The following items were discussed: fees; dental services including clinic expansion, Medicaid expansion; staffing; and the increase in bat calls.

Brinkman exited the meeting at 10:37 a.m.

A. FEE RESOLUTION

Scott Holmes, Environmental Public Health Division Manager, reviewed the fee resolutions (see agenda packet). A public hearing on the resolutions will held scheduled at the September 18, 2018 County Board of Commissioners meeting.

OTHER BUSINESS

Eagan said Dave Derbin, Deputy County Attorney, would like a staff meeting regarding the Tax Equalization Review Commission (TERC) Expert contract. The consensus of the Board was to meet on September 4, 2018 at 9:30 a.m., or immediately following the Board of Equalization meeting.

5) GRANICUS SOFTWARE DISCUSSION – Dan Nolte, Lancaster County Clerk; and Cori Beattie, Chief Deputy County Clerk

Cori Beattie, Chief Deputy County Clerk, reported on the history and status of the Granicus software for agenda management. The purpose of the system was to provide uniformity and workflow efficiency; however, the County Clerk's Office has not been able to deploy the software. Her recommendation is not to renew the contract.

Brinkman returned to the meeting at 10:43 a.m.

Bob Walla, Purchasing Agent, stated he would work with the County Attorney's Office on a potential refund.

6) EXECUTIVE SESSION

A. LEGAL ADVICE – Jenifer Holloway, Lancaster County Deputy Attorney

MOTION: Schorr moved and Avery seconded to enter Executive Session at 10:48 a.m. for the purposes of labor negotiations, to receive legal advice, and to protect public interest.

The Chair said it has been moved and seconded that the Board enter Executive Session.

ROLL CALL: Avery, Wiltgen, Brinkman and Schorr voted yes. Amundson was absent. Motion carried 4-0.

The Chair restated the purpose for the Board entering Executive Session.

Amundson and Avery exited the meeting.

MOTION: Brinkman moved and Schorr seconded to exit Executive Session at 11:32 a.m. Wiltgen, Brinkman and Schorr voted yes. Avery and Amundson were absent. Motion carried 3-0.

B. LABOR NEGOTIATIONS – Doug McDaniel, Human Resources Director, Nicole Gross, Compensation Manager; Amy Sadler, Compensation Technician and Todd Duncan, Chief Deputy Lancaster County Sheriff

See above motion.

7) UNICO RENEWAL (SEE ACTION ITEM) – Sue Eckley, County Risk Management; Jenifer Holloway, Lancaster County Deputy Attorney; and Tom Champoux, UNICO President

Sue Eckley, County Risk Management Director, reviewed the contract with UNICO Group, Inc. Fees will remain the same for three years with a proposed 2% or less increase for the final two years.

Avery entered the meeting at 11:34 a.m.

Holloway confirmed this contract is considered professional services and does not need to go out for bid.

ACTION ITEM

- A.** Agreement with UNICO Group, Inc. for Professional Insurance Brokerage Services for Up to Five (5) Consecutive Twelve (12) Month Agreements, from September 1, 2018 Through August 31, 2023. Compensation of UNICO Shall Be \$37,781.34 for Each of the First Three (3) Agreements and \$38,914.87 for the Final Two (2) Agreements

Exhibit F was distributed to the Board prior to the meeting.

MOTION: Schorr moved and Brinkman seconded approval of the agreement. Avery, Wiltgen, Brinkman and Schorr voted yes. Amundson was absent. Motion carried 4-0.

8) INSURANCE REQUIREMENTS FOR ANNUAL REPAIR SERVICES FOR CONSTRUCTION AND PURPOSE-BUILT EQUIPMENT – Jenifer Holloway, Lancaster County Deputy Attorney

Holloway reviewed three approved contracts for repair services. The County requires a 30-day written cancellation of insurance notice from the contractor's insurance company which these three do not have. Holloway and Eckley indicated that they do not recommend waiving this requirement as the County could be liable if something happens.

Walla said the bid process is being reviewed, which will require deviations.

Wiltgen instructed Walla and Holloway to research the 30-day written cancellation of insurance notice policy prior to next Tuesday's staff meeting. Walla, Holloway and Eckley will contact the insurance companies and bring a written response regarding the County's insurance requirement. Wiltgen also asked for a determination of the risk.

9) ACTION ITEM

- A.** Agreement with UNICO Group, Inc. for Professional Insurance Brokerage Services for Up to Five (5) Consecutive Twelve (12) Month Agreements, from September 1, 2018 Through August 31, 2023. Compensation of UNICO Shall Be \$37,781.34 for Each of the First Three (3) Agreements and \$38,914.87 for the Final Two (2) Agreements

Item moved forward on the agenda.

10) CHIEF ADMINISTRATIVE OFFICER REPORT

A. Constituent Complaints

The Board discussed constituent complaints. It was noted that ones pertaining to the County Engineer's Office will be forwarded per Pam Dingman's instructions. Schorr felt a reasonable response time for such complaints is 48 hours barring extreme emergencies.

B. Prudential Fee Proposal

Item moved forward on agenda.

C. 2018 Legislative Retreat Agenda

Item moved forward on agenda.

11) DISCUSSION OF BOARD MEMBER MEETINGS ATTENDED

A. Lincoln Partnership for Economic Development – Brinkman

Brinkman reported there were presentations on workforce development and facility expansions at the Southeast Community College campuses.

B. Lancaster County Corrections – Joint Public Agency (JPA) – Brinkman

Brinkman said the Joint Public Agency budget was approved.

C. Lancaster County Board Chair and Vice Chair Meeting with Planning – Brinkman

Brinkman stated they discussed poultry farms.

12) SCHEDULE OF BOARD MEMBER MEETINGS

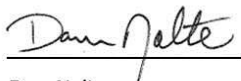
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13) EMERGENCY ITEMS

There were no emergency items.

14) ADJOURNMENT

MOTION: Schorr moved and Brinkman seconded to adjourn the meeting at 12:13 p.m. Avery, Wiltgen, Brinkman and Schorr voted yes. Amundson was absent. Motion carried 4-0.

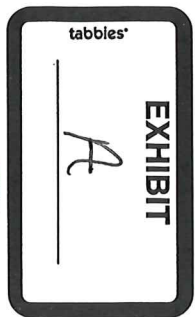


Dan Nolte
Lancaster County Clerk



148th Street Operations and Safety Study

08/30/18



Speed Study

A speed study was completed at three locations and the results are shown in **Table 1**.

Table 1. 85th Percentile & Median Speed

Roadway	Location	85 th Percentile Speed (mph)		Median Speed (mph)	
		NB	SB	NB	SB
148 th Street	North #1	70.82	57.39	55.48	53.69
148 th Street	Central #2	68.81	72.89	59.73	60.26
148 th Street	South #3	61.67	59.04	53.75	56.27
Directional Average		70.35	67.10	63.11	56.32
Overall Roadway Average		65.10		57.14	

The Operations Problem...

Currently, ADT's on 148th Street range from 5,850 in the north to 4,960 in the south. In 2040, it is estimated the ADT's will grow and range from 15,410 in the north to 13,065 in the south. Existing and future ADT volumes for the corridor are shown in **Table 2**. The LOS C threshold, per the Lincoln - Lancaster County Planning Department, for a 2-lane surfaced street without turn lanes is of 6,000 ADT. With turn lanes added the capacity jumps to 14,000 ADT. If the roadway is widened to a 4-lane street with turn lanes included the capacity increases to 24,000

Table 2. Roadway Capacity

Roadway Segment		Facility Type	Threshold ADT (LOS C)	2018 Existing ADT	2040 Future ADT
148 th Street	Amberly Road – O Street	2-lane surfaced street, without turn lanes	6,000	5,850	15,410
		2-lane surfaced street, with turn lanes	14,000	5,850	15,410
		4-lane surfaced street, with turn lanes	24,000	5,850	15,410
	O Street – Old Cheney Road	2-lane surfaced street, without turn lanes	6,000	4,960	13,065
		2-lane surfaced street, with turn lanes	14,000	4,960	13,065

An auxiliary turn lane analysis was completed for the major study area intersections and the results are shown in **Table 3**.

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I 48th Street Operations and Safety Study

08/30/18



Table 3. Auxiliary Turn Lane Analysis Summary

Intersection	Warrant	2018 Existing		2040 Future	
		AM Peak	PM Peak	AM Peak	PM Peak
I48th Street & Old Cheney Road	NB Left-Turn Lane	NO	NO	YES	YES
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	Two Lanes	Two Lanes
	SB Left-Turn Lane	NO	NO	YES	YES
	SB Right-Turn Lane	YES	YES	YES	YES
	WB Approach	One Lane	One Lane	One Lane	One Lane
I48th Street & Adams St	NB Left-Turn Lane	YES	NO	YES	YES
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	One Lane	One Lane
	SB Left-Turn Lane	NO	NO	YES	YES
	SB Right-Turn Lane	YES	YES	YES	YES
	WB Approach	One Lane	One Lane	One Lane	One Lane
I48th Street & Amberly Road / Private Drive	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	Two Lanes	Two Lanes
	SB Left-Turn Lane	NO	NO	NO	NO
	SB Right-Turn Lane	NO	NO	YES	YES
	WB Approach	NO	NO	NO	NO

MUTCD traffic signal warrant analysis was completed for the major study area intersections and the results are shown in **Table 4**.

Table 4. Traffic Control Device Warrant Summary

Intersection	MUTCD Warrant	Is Warrant Met?	
		2018 Existing	2040 Future
I48th & Amberly Road	Warrant 1	NO	NO (0% EB rights)
	Warrant 2	NO	YES (0% EB rights)
I48th & Adams Street	Warrant 1	NO	YES
	Warrant 2	NO	YES
I48th Street & Old Cheney Road	Warrant 1	NO	YES
	Warrant 2	NO	YES

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148th Street Operations and Safety Study

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The Safety Problem...

The crash history for the period of 1/1/2013 to 2/28/2018 was examined between Old Cheney Road and Amberly Road (including intersections) to locate crash patterns and identify crash causality. Over the 5-year 2-month analysis period 50 crashes occurred in segments along with another 35 at the intersections for a total of 85 accidents. **Figure A** and **Figure B** display the crash rates for roadway segments and intersections along 148th Street compared to the Nebraska statewide average crash rates.

Figure A. 148th Street Segment Crash Rate Summary

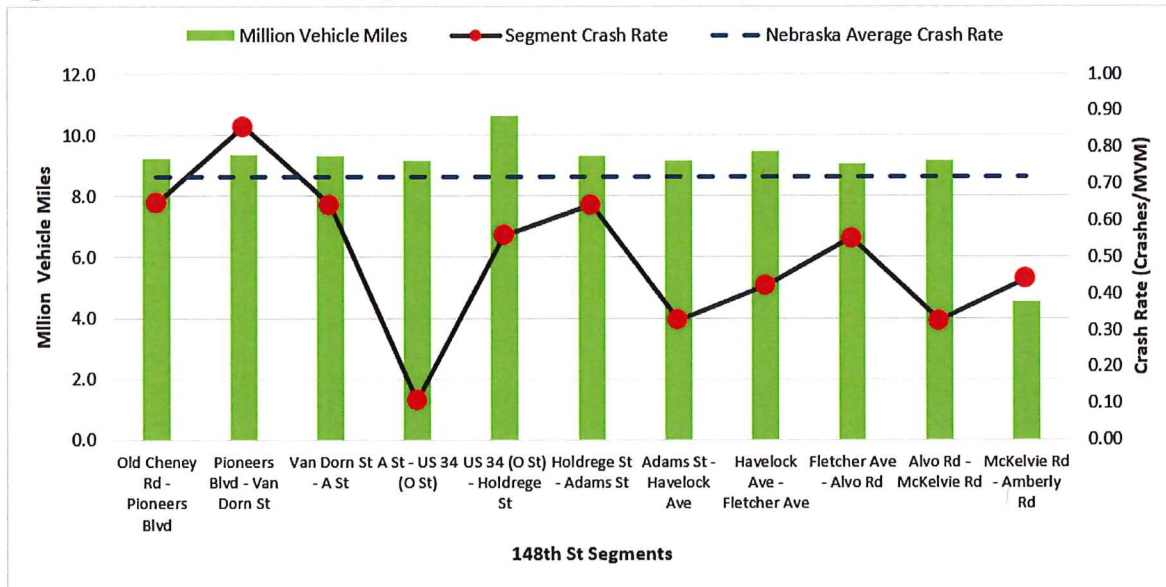
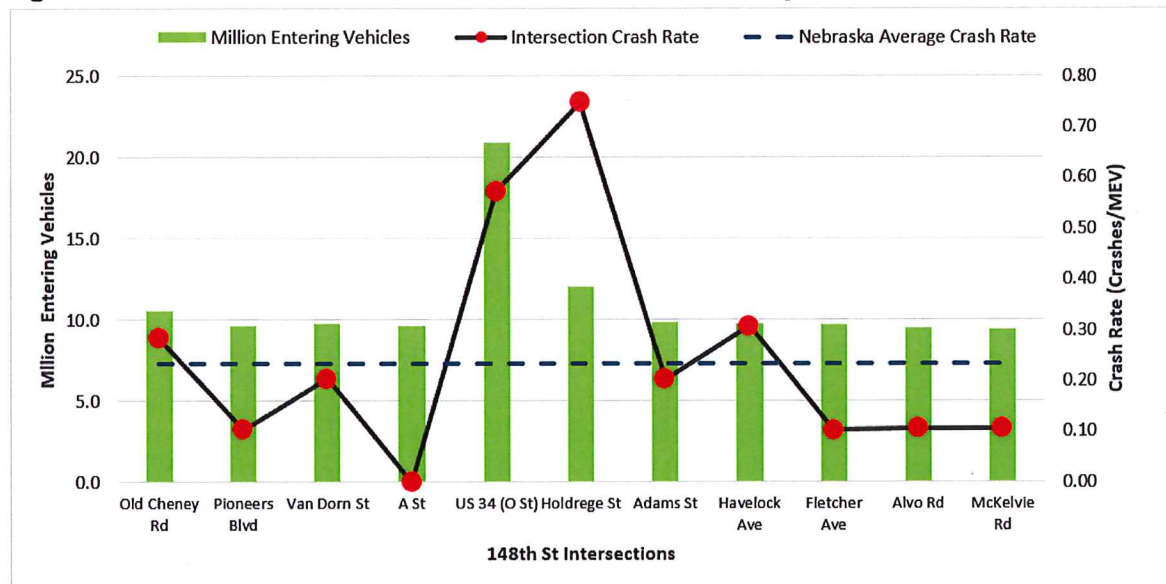


Figure B. 148th Street Intersection Crash Rate Summary



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Safety Countermeasures

Countermeasure 1: Pioneers Boulevard to Van Dorn Street (Construct 6' Paved Shoulders & Roadside Rumble Strips)

The cost for Countermeasure 1 was estimated at \$1,223,530 in 2018 dollars with a projected life of 20 years. **Table 5** summarizes the B/C calculations for the Countermeasure 1, resulting in a B/C of **2.36**.

Table 5. Countermeasure 1: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 140,505
Value of Avoided Crashes, BENEFIT	\$ 3,360,140
Value of Associated Cost, COST	\$ 1,423,530
Crash Type Benefit/Cost Ratio	2.36

Countermeasure 2: Holdrege Street Intersection Warning System

The cost for Countermeasure 2 was estimated at \$100,000 in 2018 dollars with a projected life of 10 years. **Table 6** summarizes the B/C calculations for the Countermeasure 2, resulting in a B/C of **4.59**.

Table 6. Countermeasure 2: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 238,400
Value of Avoided Crashes, BENEFIT	\$ 504,521
Value of Associated Cost, COST	\$ 110,000
Crash Type Benefit/Cost Ratio	4.59

Systemic Improvements

According to the Federal Highway Administration (FHWA), systemic improvements focus on high-risk roadway features rather than specific locations. This leads to widespread implementation of projects to reduce the potential for severe crashes. Due to the significant number of run off the road crashes and high truck percentages, it is recommended that 148th Street in the study area be widened to a 28' top with earth shoulders should the road ever need to be repaved due to pavement conditions.

It is also recommended that educational programs like Drive Smart Nebraska be implemented at area high schools. These types of programs are committed to eliminating injuries and deaths on Nebraska roads.

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148th Street Operations and Safety Study

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The Cost...

Cost estimates were prepared for the operational, safety, and systemic improvements. Summaries are provided below for each improvement. All cost estimates were completed using 2018 unit costs.

Safety Improvements

Improvement	2018 Cost
148th St and Holdrege St – Intersection Warning System	\$ 99,500.00
148th St – Van Dorn Rd to Pioneers Blvd – Shoulders	\$ 1,223,530.00

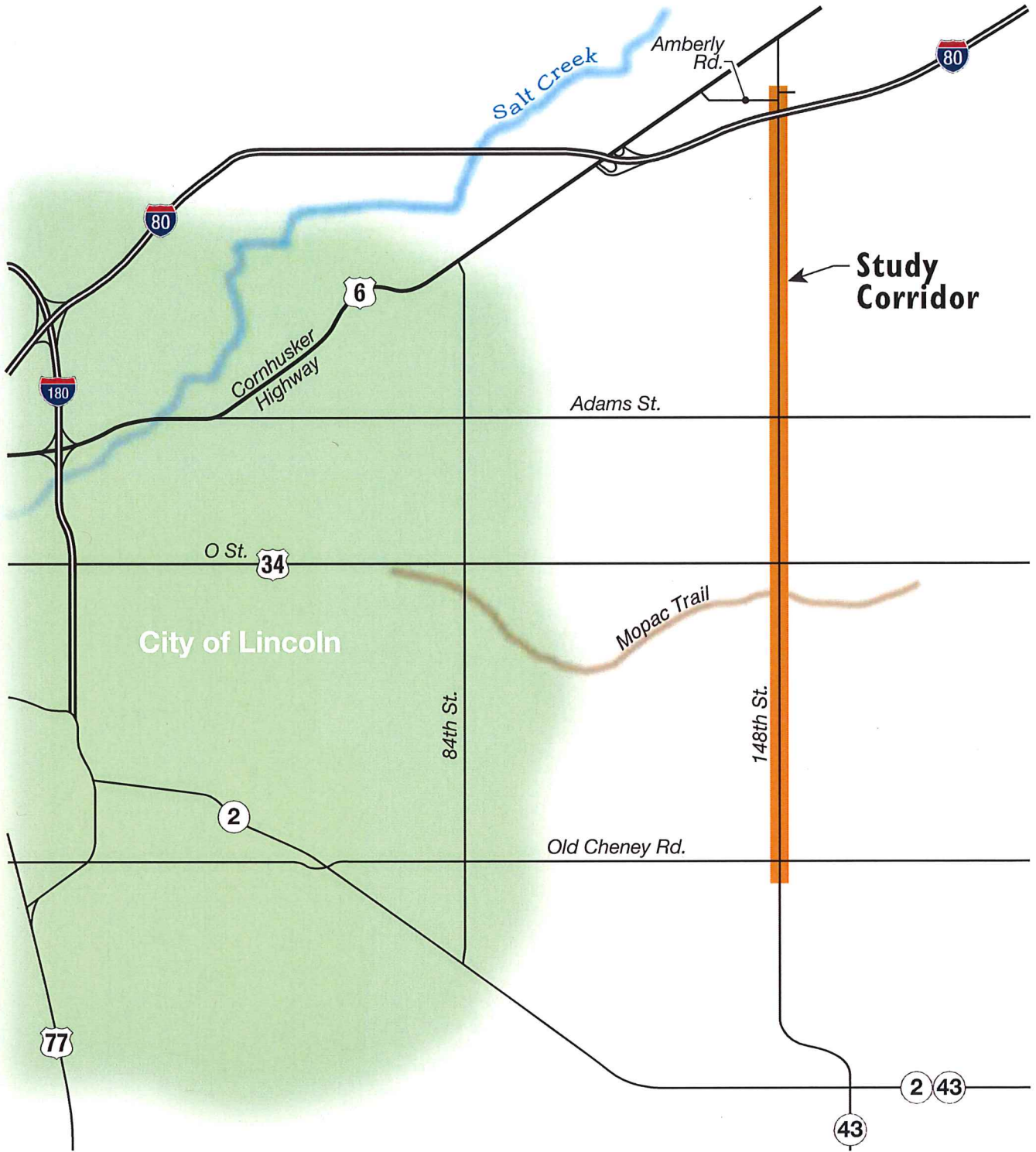
Operational Improvements

Improvement	2018 Cost
148th St - O St. to Amberly Rd Widening to 4 Lanes	\$ 28,939,380.00
O St - 98th St to 148th St Widening to 4 Lanes	\$ 14,619,390.00
148th St and Amberly Rd – SB Right Turn Lane	\$ 126,070.00
148th St and Amberly Rd – Eastbound 2-Lane Approach	\$ 313,710.00
148th St and Amberly Rd – Traffic Signal	\$ 176,500.00
148th St and Amberly Rd – Roundabout	\$ 791,350.00
148th St and Adams St – Roundabout	\$ 764,470.00
148th St and O St – SB Right Turn Lane	\$ 141,450.00
148th St and Old Cheney Rd – Roundabout	\$ 825,490.00

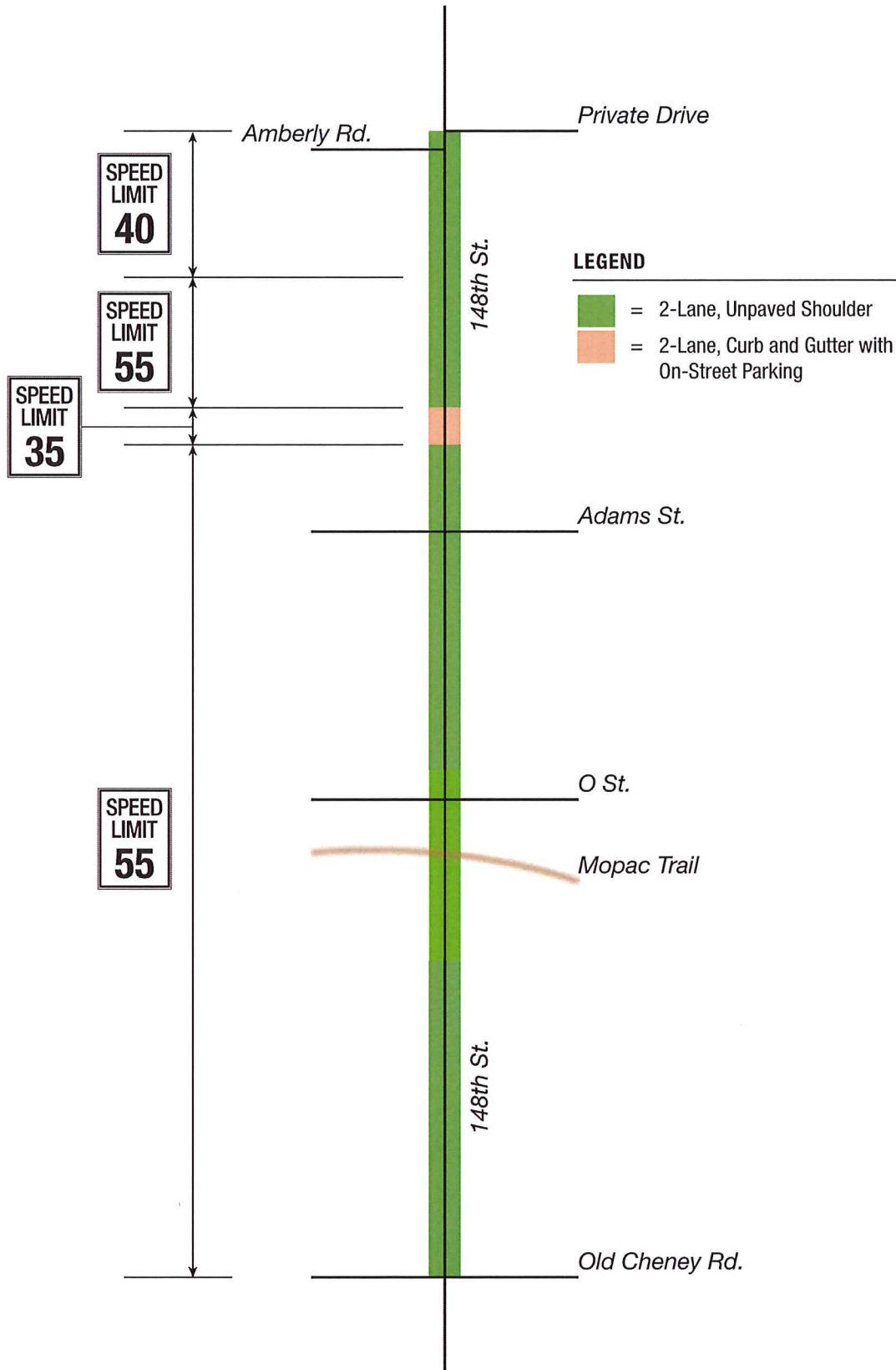
Systemic Improvements

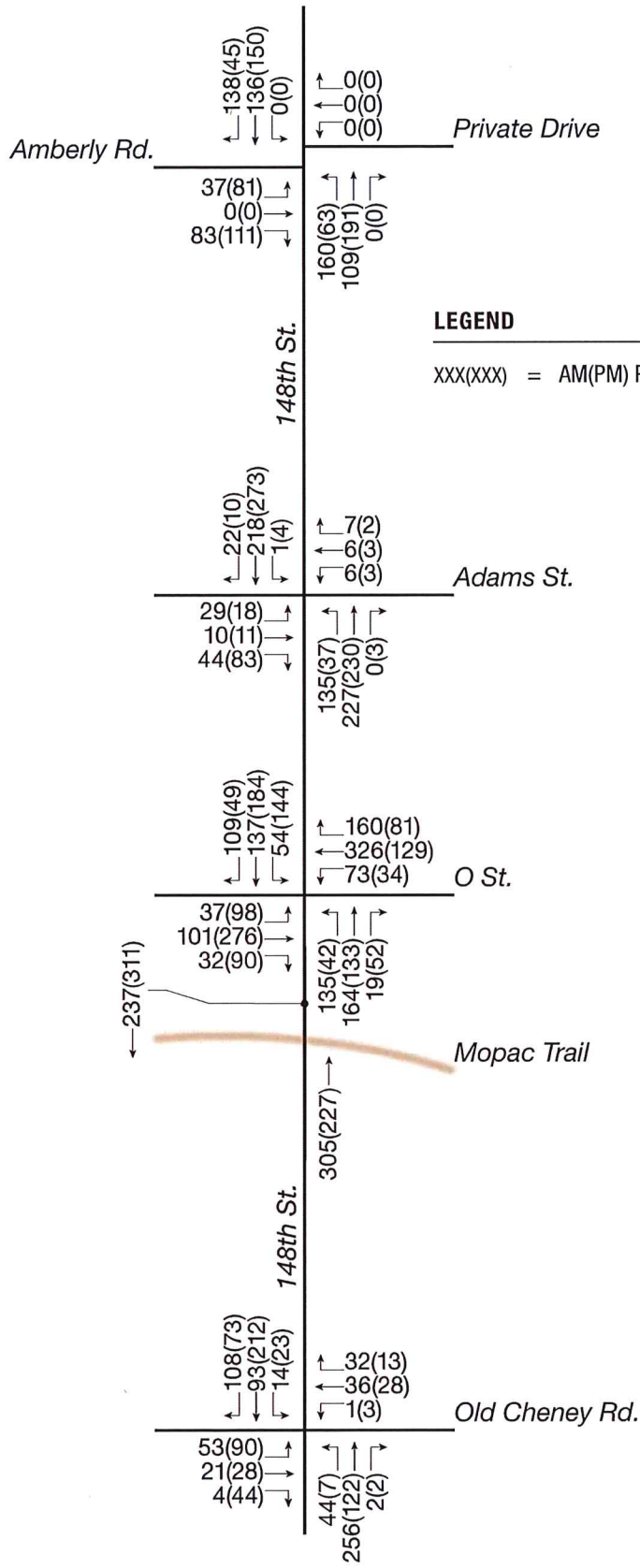
Improvement	2018 Cost
148th St – 28' top with earth shoulders and rumble strips	\$ 9,545,200.00

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Study Area | **FIGURE 1**





LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes




2018 Existing Traffic Volumes

FIGURE 3

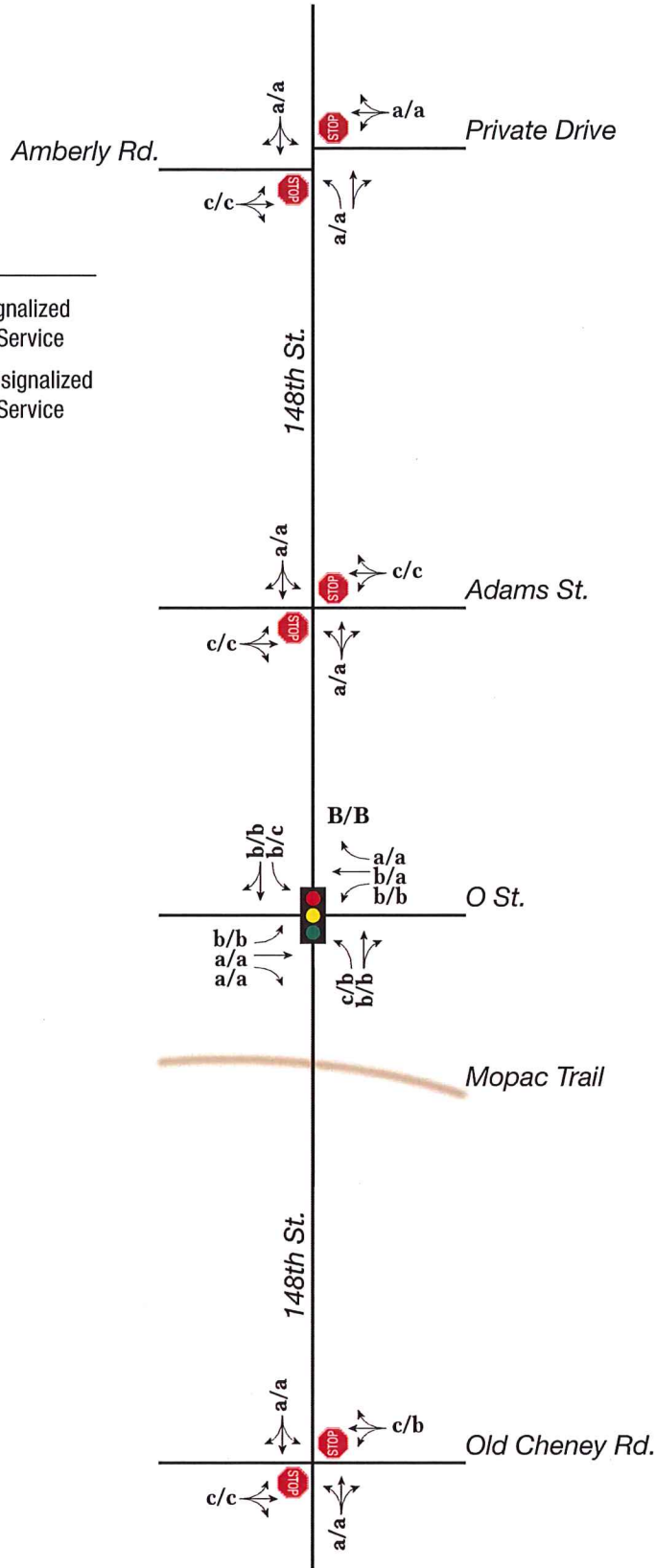
LEGEND

X/X = AM/PM Peak Hour Signalized Intersection Level of Service

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

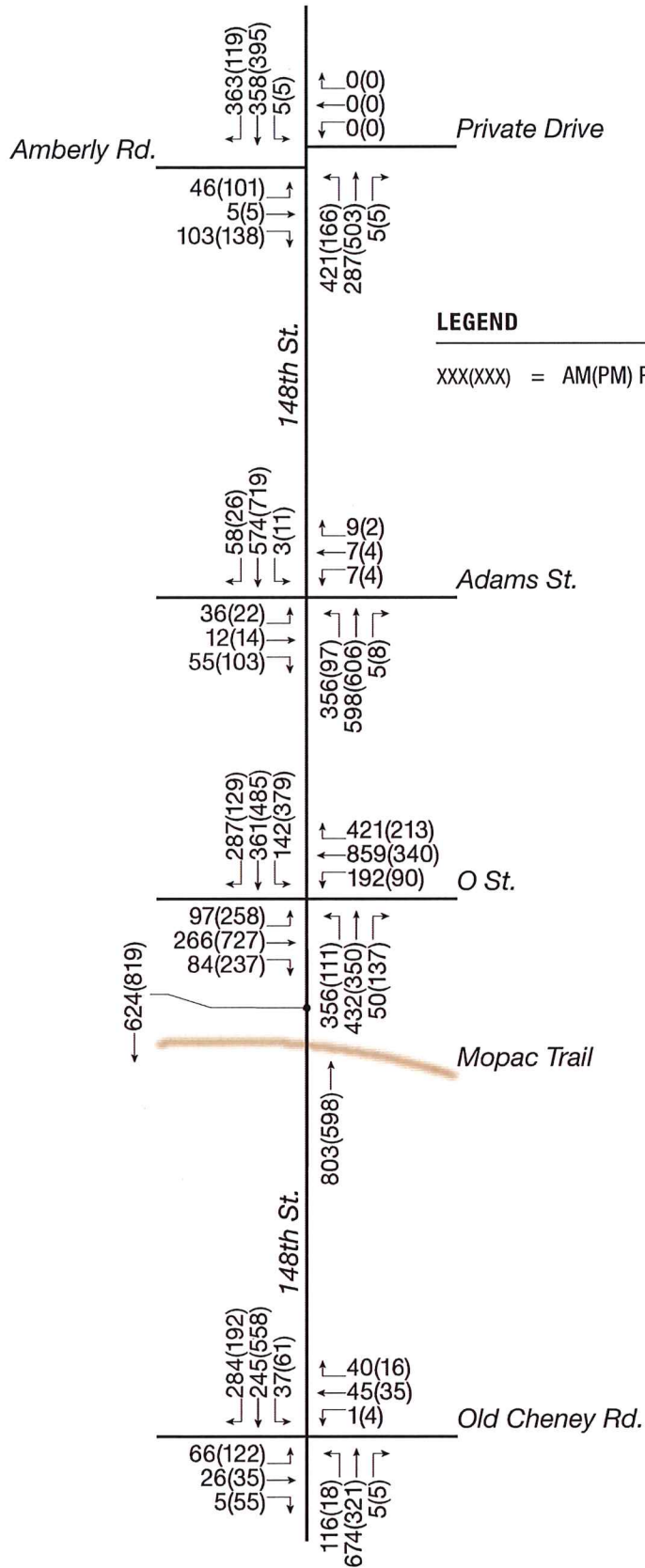
 = Stop Sign

 = Traffic Signal



2018 Existing Operations

FIGURE 4



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

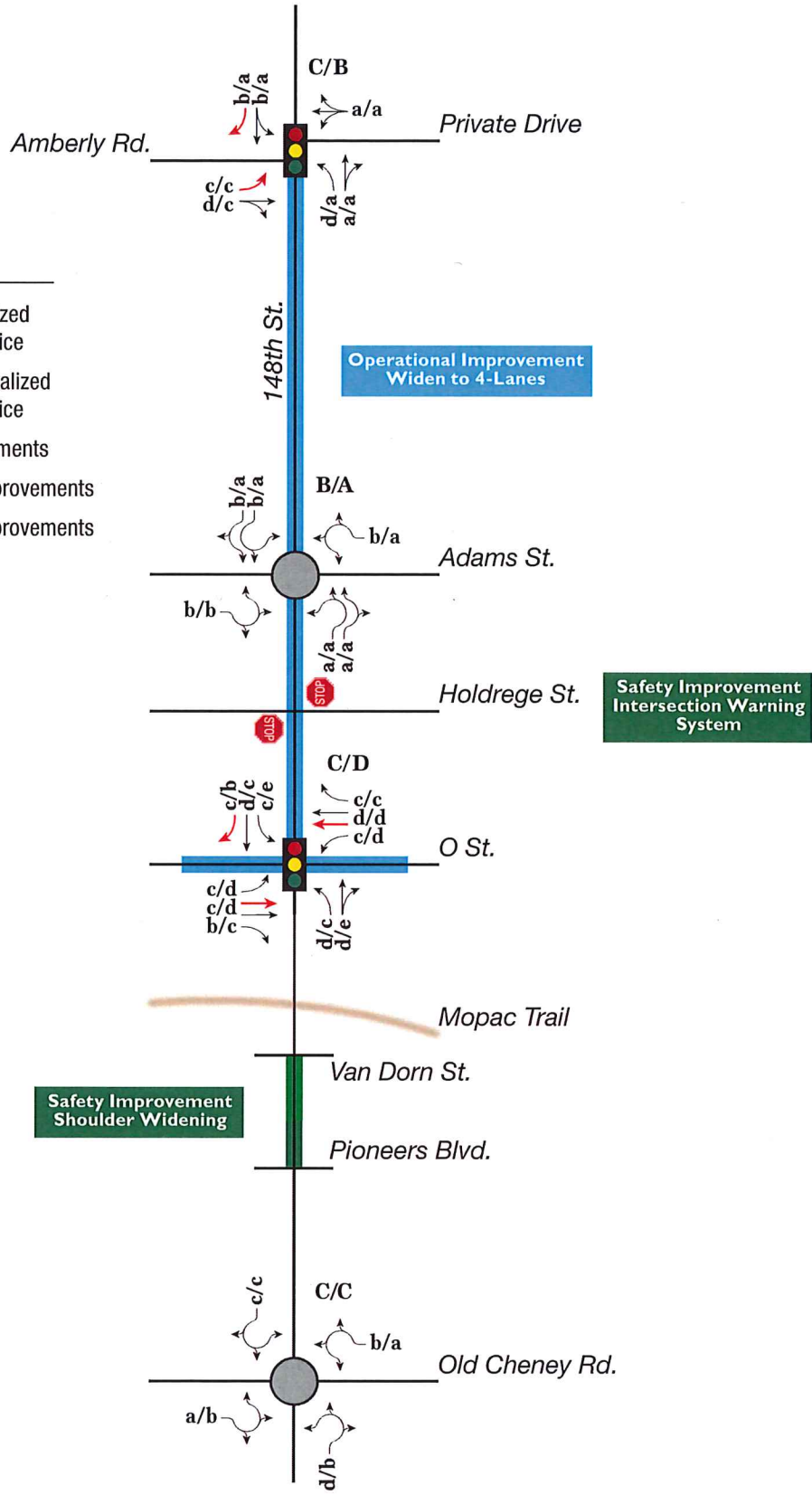


2040 Traffic Volumes

FIGURE 5

LEGEND

- X/X = AM/PM Peak Hour Signalized Intersection Level of Service
- x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service
- = Proposed Safety Improvements
- ↷ = Proposed Operational Improvements
- = Proposed Operational Improvements Widen to 4-Lanes
- ⊙ = Roundabout
- STOP = Stop Sign
- 🚦 = Traffic Signal

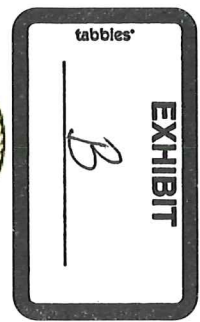


2040 Future Operations with Roundabout

FIGURE 6

S. 68th Street Operations and Safety Study

08/30/18



Speed Study

A speed study was completed at five locations and the results are shown in **Table 1**.

Table 1. 85th Percentile & Median Speed

Roadway	Location	85 th Percentile Speed (mph)		Median Speed (mph)	
		NB	SB	NB	SB
S. 68th Street	North #1	66.95	65.65	58.39	48.93
S. 68th Street	North Central #2	59.09	59.50	53.91	56.00
S. 68th Street	Central #3	54.60	66.90	52.00	54.55
S. 68th Street	South Central #4	69.72	66.16	55.18	48.68
S. 68th Street	South #5	62.01	61.60	59.37	54.14
Directional Average		62.47	63.91	55.77	52.46
Overall Roadway Average		63.19		53.92	

The Operations Problem...

Currently, ADT's on S. 68th Street range from 6,600 in the north to 6,175 in the south. In 2040, it is estimated the ADT's will grow and range from 11,360 in the north to 10,630 in the south. Existing and future ADT volumes for the corridor are shown in **Table 2**. The LOS C threshold, per the Lincoln - Lancaster County Planning Department, for a 2-lane surfaced street without turn lanes is of 6,000 ADT. Will turn lanes added the capacity jumps to 14,000 ADT.

Table 2. Roadway Capacity

Roadway Segment		Facility Type	Threshold ADT (LOS C)	2018 Existing ADT	2040 Future ADT
S. 68 th Street	Saltillo Road – Roca Road	2-lane surfaced street, without turn lanes	6,000	6,600	11,360
		2-lane surfaced street, with turn lanes	14,000	6,600	11,360
	Roca Road – Firth Road	2-lane surfaced street, without turn lanes	6,000	6,175	10,630
		2-lane surfaced street, with turn lanes	14,000	6,175	10,630

An auxiliary turn lane analysis was completed for the major study area intersections and the results are shown in **Table 3**.

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S. 68th Street Operations and Safety Study

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Table 3. Auxiliary Turn Lane Analysis Summary

Intersection	Warrant	2018 Existing		2040 Future	
		AM Peak	PM Peak	AM Peak	PM Peak
Saltillo Road & S. 68 th Street	EB Right-Turn Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane
	NB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
	WB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
S. 68 th Street & Roca Road	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	NB Right-Turn Lane	NO	NO	YES	YES
	EB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
	SB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	SB Right-Turn Lane	NO	NO	NO	NO
	WB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
S. 68 th Street & Panama Road	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	NB Right-Turn Lane	NO	YES	YES	YES
	EB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
	SB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	SB Right-Turn Lane	NO	NO	NO	NO
	WB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
S. 68 th Street & Princeton Road	NB Left-Turn Lane	NO	NO	YES	YES
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	One Lane	One Lane
	SB Left-Turn Lane	NO	NO	NO	NO
	SB Right-Turn Lane	YES	NO	YES	YES
	WB Approach	One Lane	One Lane	One Lane	One Lane
S. 68 th Street & Norris High School	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	EB Approach	One Lane	One Lane	Two Lanes	Two Lanes
	SB Right-Turn Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane
S. 68 th Street & Firth Road	EB Left-Turn Lane	NO	NO	NO	NO
	WB Right-Turn Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane
	SB Approach	One Lane	One Lane	One Lane	One Lane

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MUTCD traffic signal warrant analysis was completed for the major study area intersections and the results are shown in **Table 4**.

Table 4. Traffic Control Device Warrant Summary

Intersection	MUTCD Warrant	Is Warrant Met?	
		2018 Existing	2040 Future
S. 68th & Saltillo Road	Warrant 1	YES	YES
	Warrant 2	YES	YES
S. 68th Street & Roca Road	Warrant 1	NO	YES
	Warrant 2	NO	YES
S. 68th Street & Panama Road	Warrant 1	NO	NO (0% WB rights)
	Warrant 2	NO	NO (0% WB rights)
S. 68th Street & Princeton Road	Warrant 1	NO	YES
	Warrant 2	NO	YES
S. 68th Street & Norris High School	Warrant 1	NO	YES
	Warrant 2	NO	YES
S. 68th Street & Firth Road	Warrant 1	NO (0% WB rights)	NO (0% WB rights)
	Warrant 2	NO (0% WB rights)	NO (0% WB rights)

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S. 68th Street Operations and Safety Study

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The Safety Problem...

The crash history for the period of 1/1/2013 to 2/28/2018 was examined between Firth Road and Saltillo Road (including intersections) to locate crash patterns and identify crash causality. Over the 5-year 2-month analysis period 61 crashes occurred in segments along with another 50 at the intersections for a total of 111 accidents. **Figure A** and **Figure B** display the crash rates for roadway segments and intersections along S. 68th Street compared to the Nebraska statewide average crash rates.

Figure A. S. 68th Street Segment Crash Rate Summary

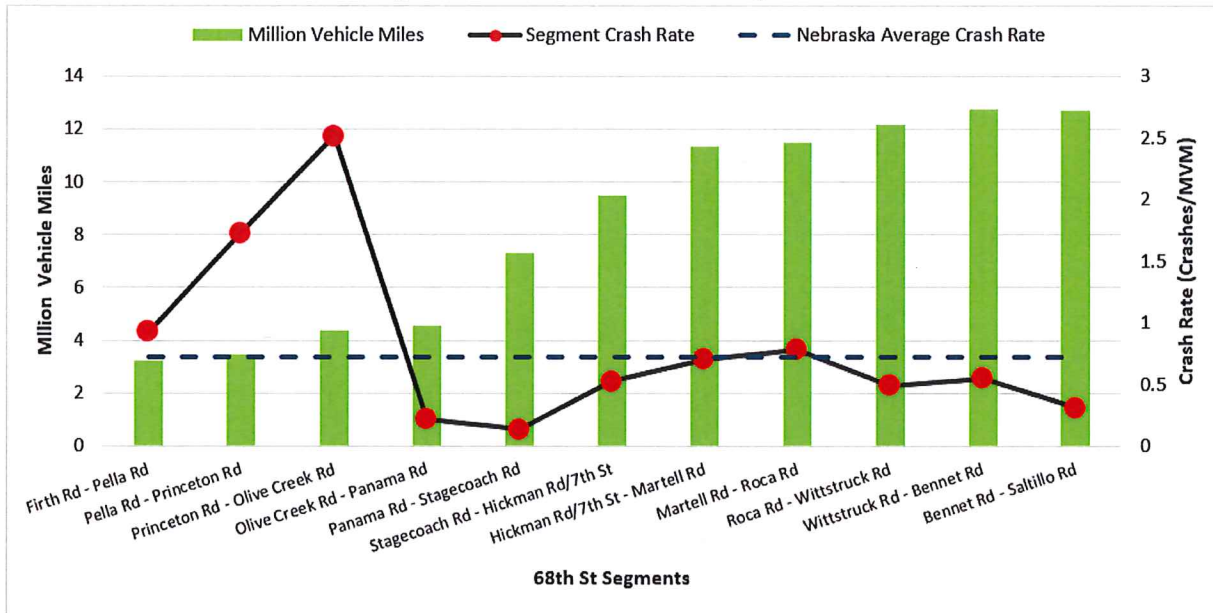
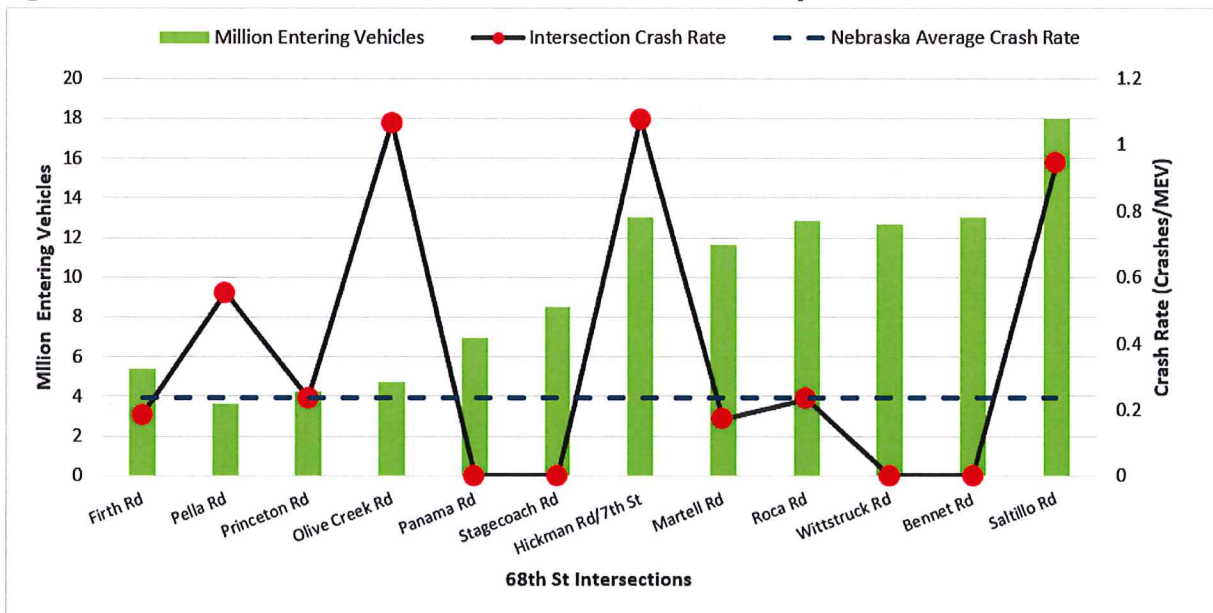


Figure B. S. 68th Street Intersection Crash Rate Summary



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S. 68th Street Operations and Safety Study

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Safety Countermeasures

Countermeasure 1: Saltillo Road Intersection Warning System

The cost for Countermeasure 1 was estimated at \$100,000 in 2018 dollars with a projected life of 10 years.

Table 5 summarizes the benefit-cost calculations for the Countermeasure 1, resulting in a B/C of **18.35**.

Table 5. Countermeasure 1: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 238,400
Value of Avoided Crashes, BENEFIT	\$ 2,018,084
Value of Associated Cost, COST	\$ 110,000
Crash Type Benefit/Cost Ratio	18.35

Countermeasure 2: Construct Shoulder Princeton Road – Olive Creek Road, Turn Lanes on the Northbound Approach at Olive Creek Road

The cost for Countermeasure 2 was estimated at \$1,164,390 in 2018 dollars with a projected life of 20

years. **Table 6** summarizes the benefit-cost calculations for the Countermeasure 2, resulting in a B/C of **1.40**.

Table 6. Countermeasure 2: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 97,986
Value of Avoided Crashes, BENEFIT	\$ 1,914,140
Value of Associated Cost, COST	\$ 1,364,390
Crash Type Benefit/Cost Ratio	1.40

Systemic Improvements

According to the Federal Highway Administration (FHWA), “systemic” improvements focus on high-risk most serious crash types on the entire road system, not just at specific high-spot locations. This leads to widespread implementation of projects to reduce the potential for severe crashes. Due to the number of run off the road crashes, it is recommended that S. 68th Street in the study area be widened to a 28’ top with rumble strips along the edge of the road and 4’ turf shoulders should the road ever need to be repaved due to pavement conditions. It is further recommended that separate left turn lanes be included in S. 68th Street paving at all county road intersections where none exist today. In addition to Olive Creek Road, this would include the intersections of Martell Road, Princeton Road, and Pella Road.

Due the number of crashes involving student drivers on S. 68th Street, it is also recommended that educational programs like Drive Smart Nebraska be implemented at area high schools. These types of programs are committed to eliminating injuries and deaths on Nebraska roads.

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The Cost...

Cost estimates were prepared for the operational, safety, and systemic improvements. Summaries are provided below for each improvement. All cost estimates were completed using 2018 unit costs.

Safety Improvements

Improvement	2018 Cost
S. 68th St and Saltillo Rd – Intersection Warning System	\$ 99,500.00
S. 68th St and Olive Creek Rd – NB Left and Right Turn Lanes	\$ 235,980.00
S. 68th St and Olive Creek Rd – SB Left Turn Lane	\$ 133,760.00
S. 68th St - Olive Creek Rd to Princeton Rd – Shoulders	\$ 1,164,390.00

Operational Improvements

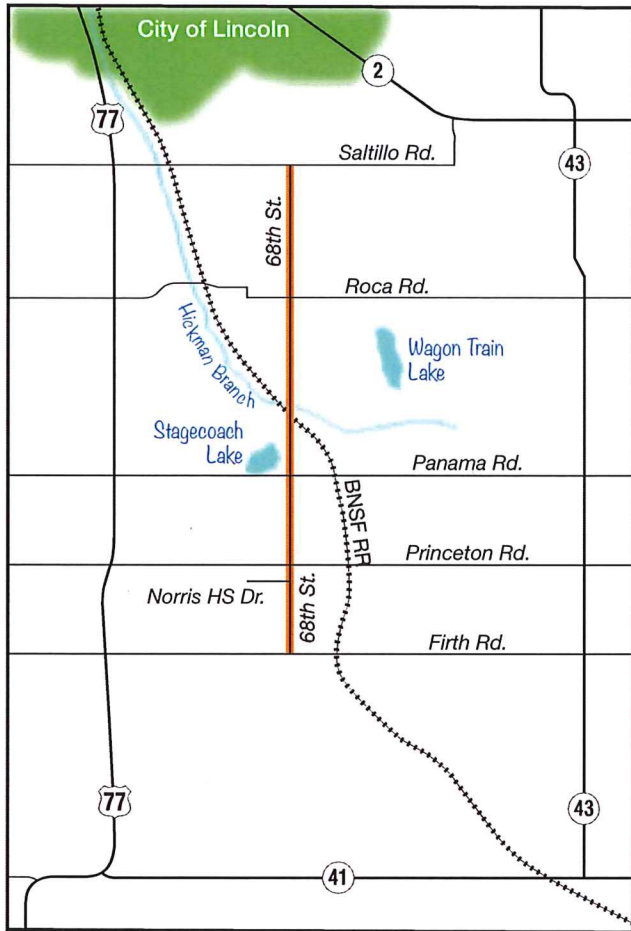
Improvement	2018 Cost
S. 68th St and Saltillo Rd – Traffic Signal	\$ 176,500.00
S. 68th St and Saltillo Rd – Roundabout	\$ 965,130.00
S. 68th St and Roca Rd – Roundabout	\$ 788,970.00
S. 68th St and Panama Rd – NB Right Turn Lane	\$ 130,210.00
S. 68th St and Panama Rd – Roundabout	\$ 719,940.00
S. 68th St and Princeton Rd – Turn Lanes	\$ 217,520.00
S. 68th St and Princeton Rd – Traffic Signal	\$ 176,500.00
S. 68th St and Princeton Rd – Roundabout	\$ 595,880.00
S. 68th St and Norris HS Dr – Eastbound 2-Lane Approach	\$ 111,040.00
S. 68th St and Norris HS Dr – Traffic Signal	\$ 176,500.00
S. 68th St and Norris HS Dr – Roundabout	\$ 615,370.00

Systemic Improvements

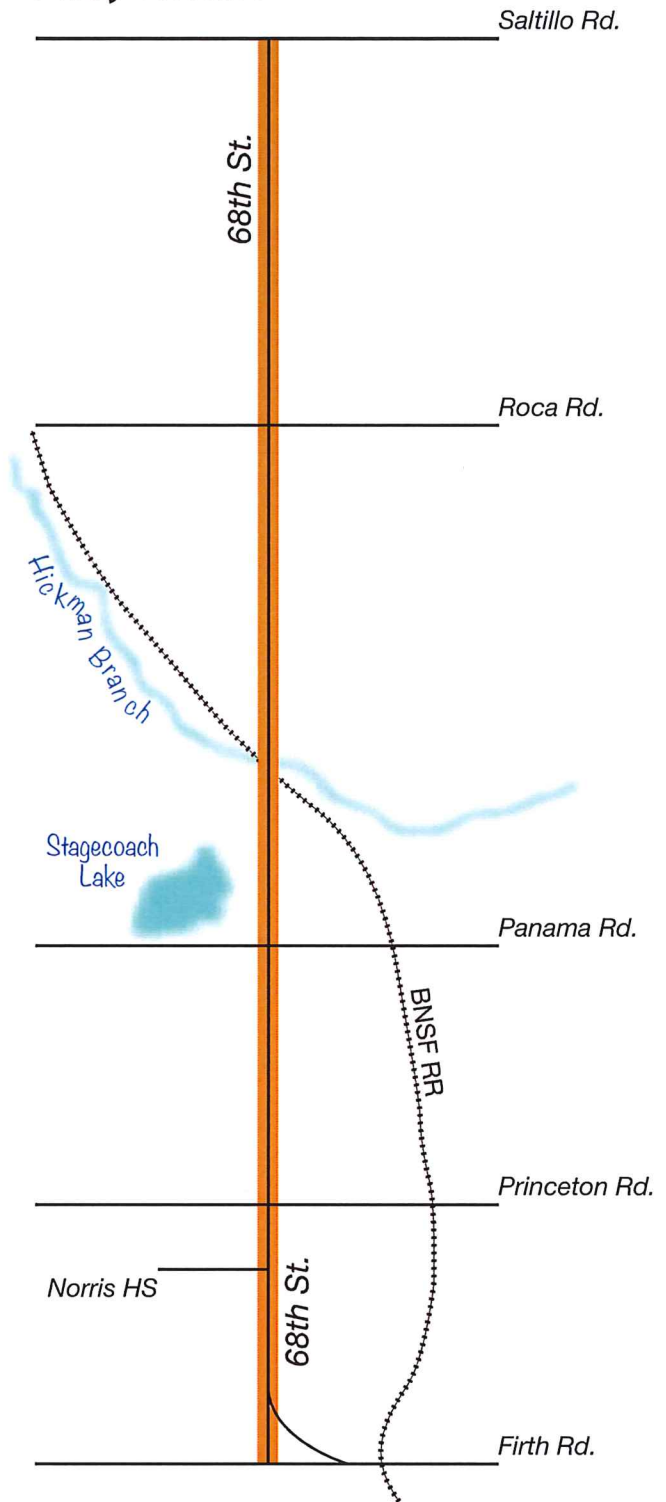
Improvement	2018 Cost
S. 68th St – 28' top with earth shoulders and rumble strips	\$ 9,803,640.00

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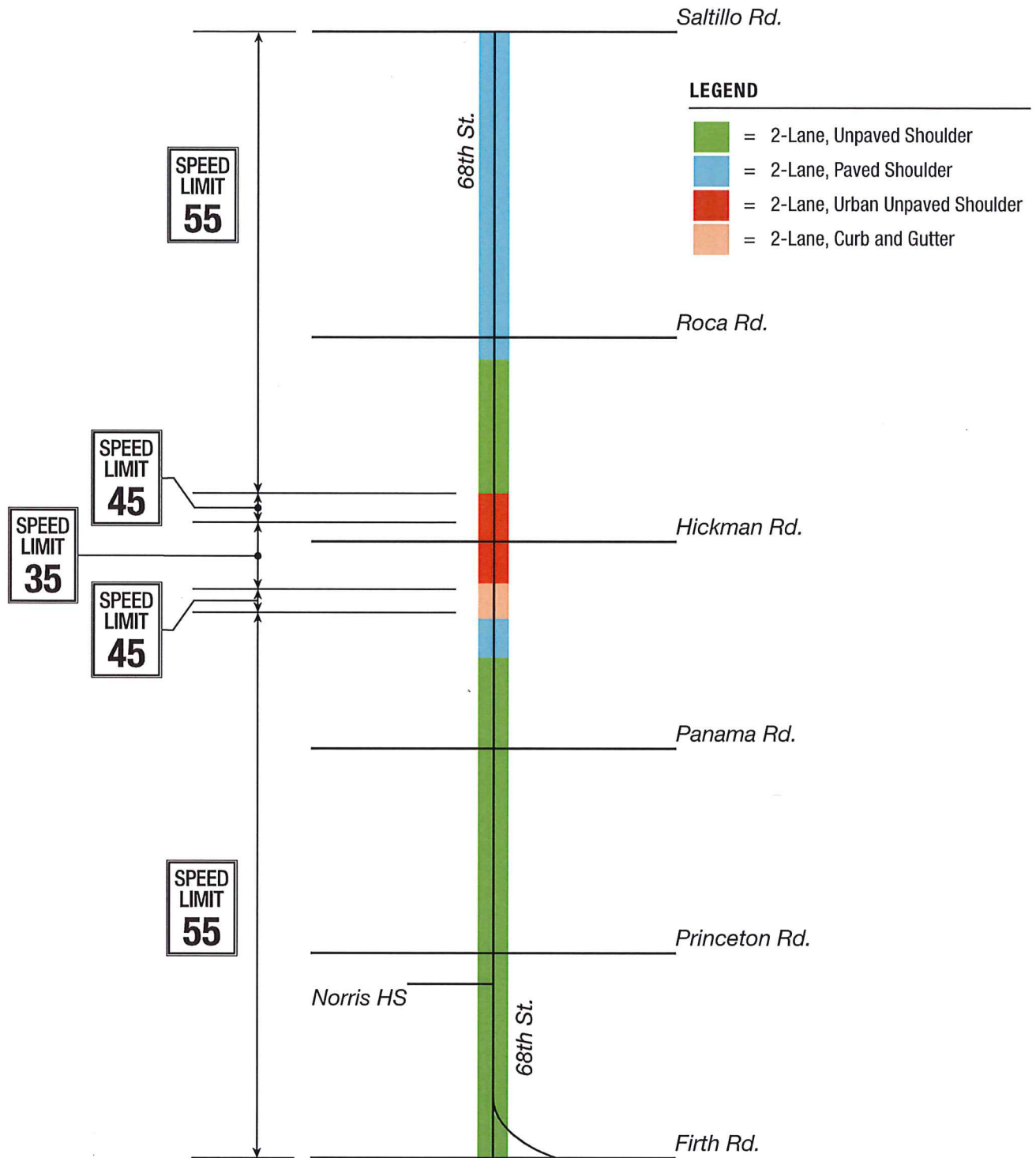
Vicinity Map



Study Corridor

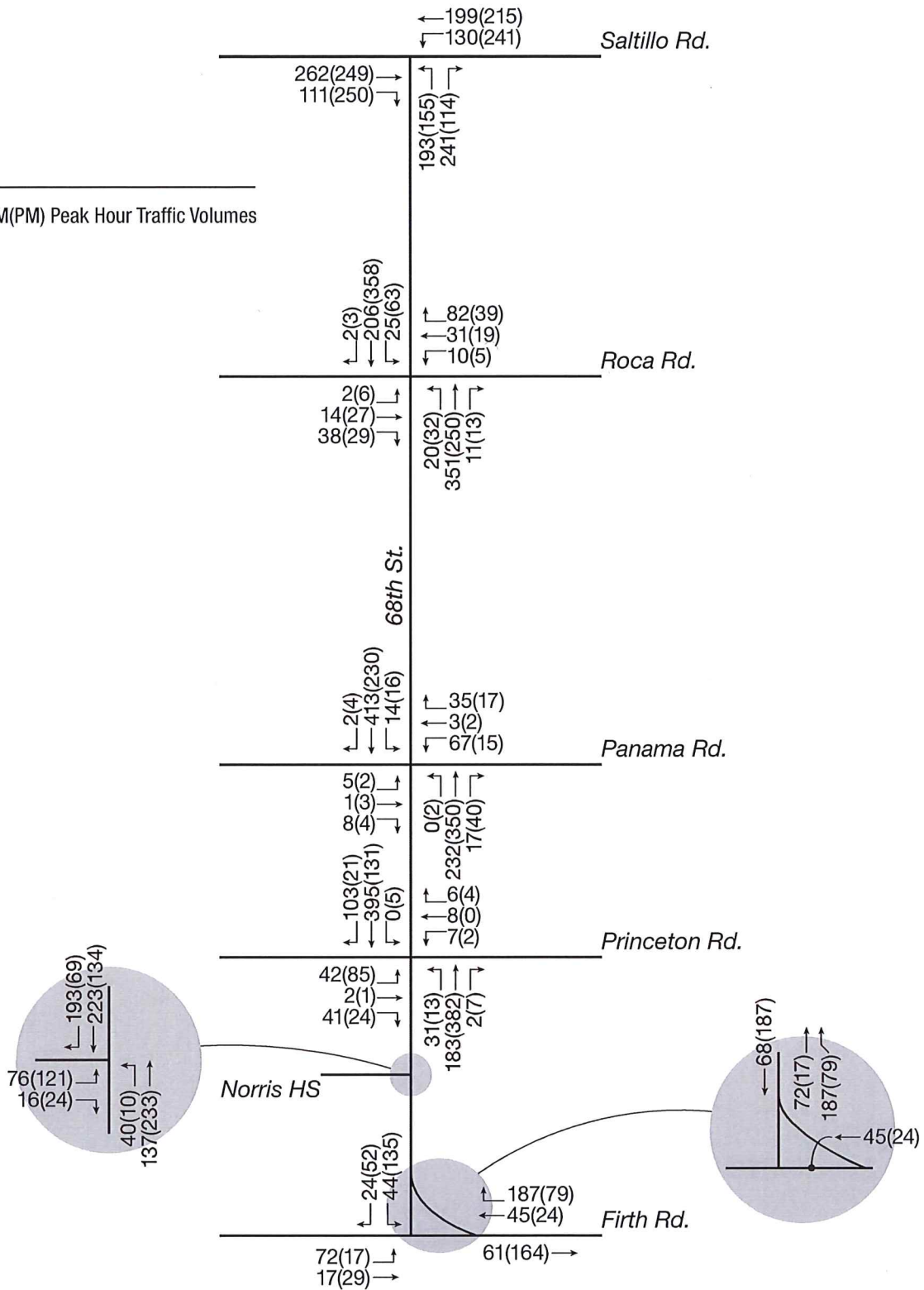


Study Area | **FIGURE 1**



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

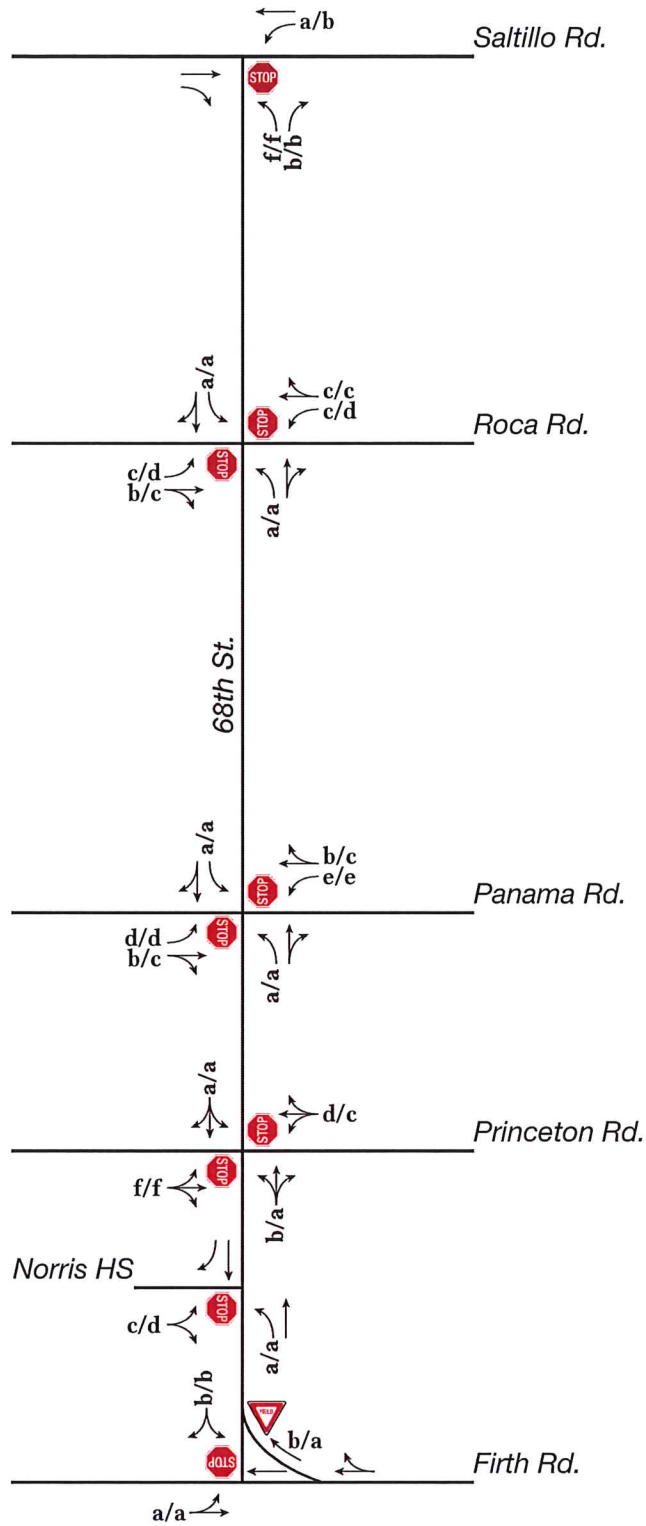


LEGEND

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

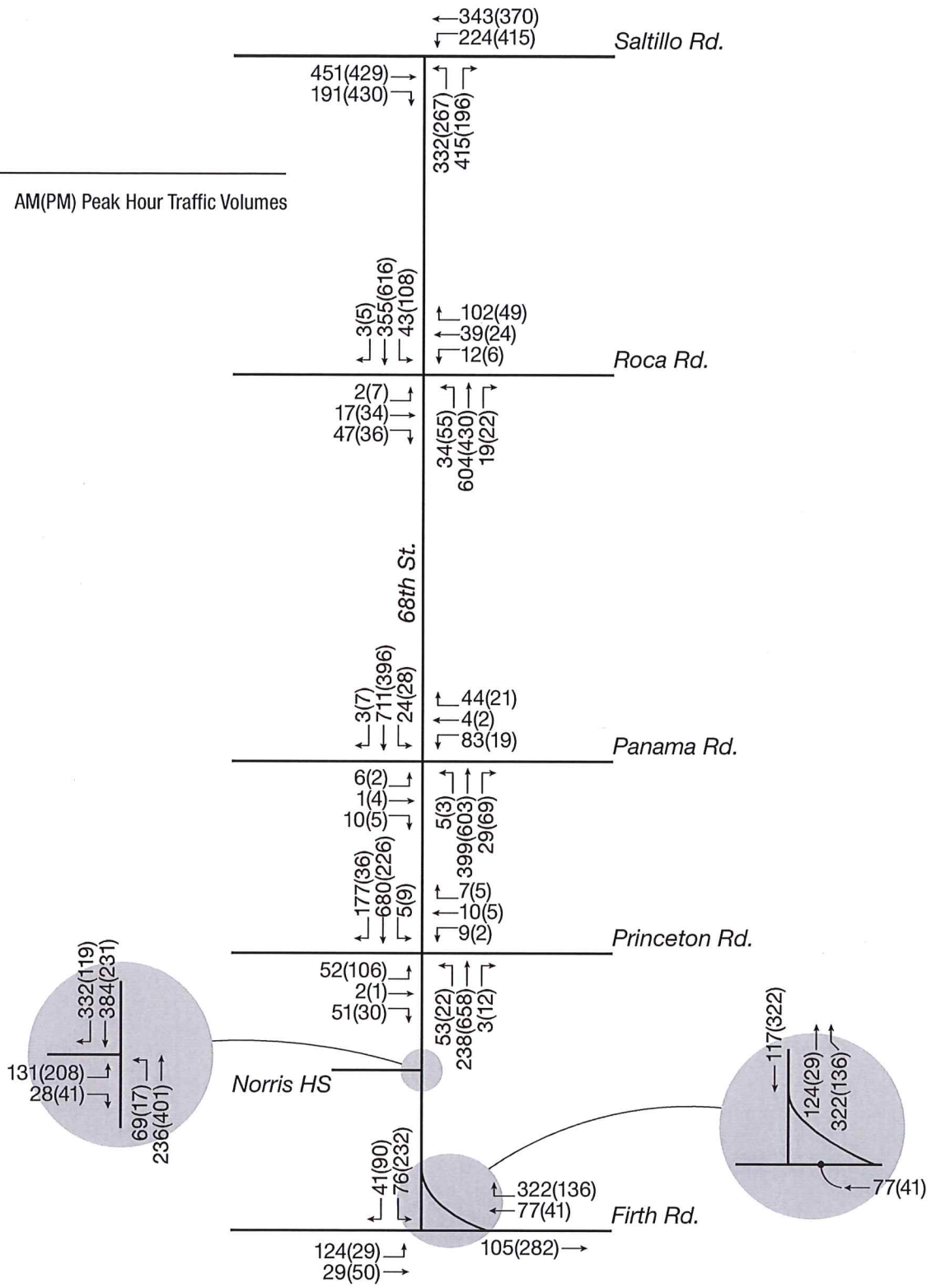
 = Stop Sign

 = Yield Sign









LEGEND

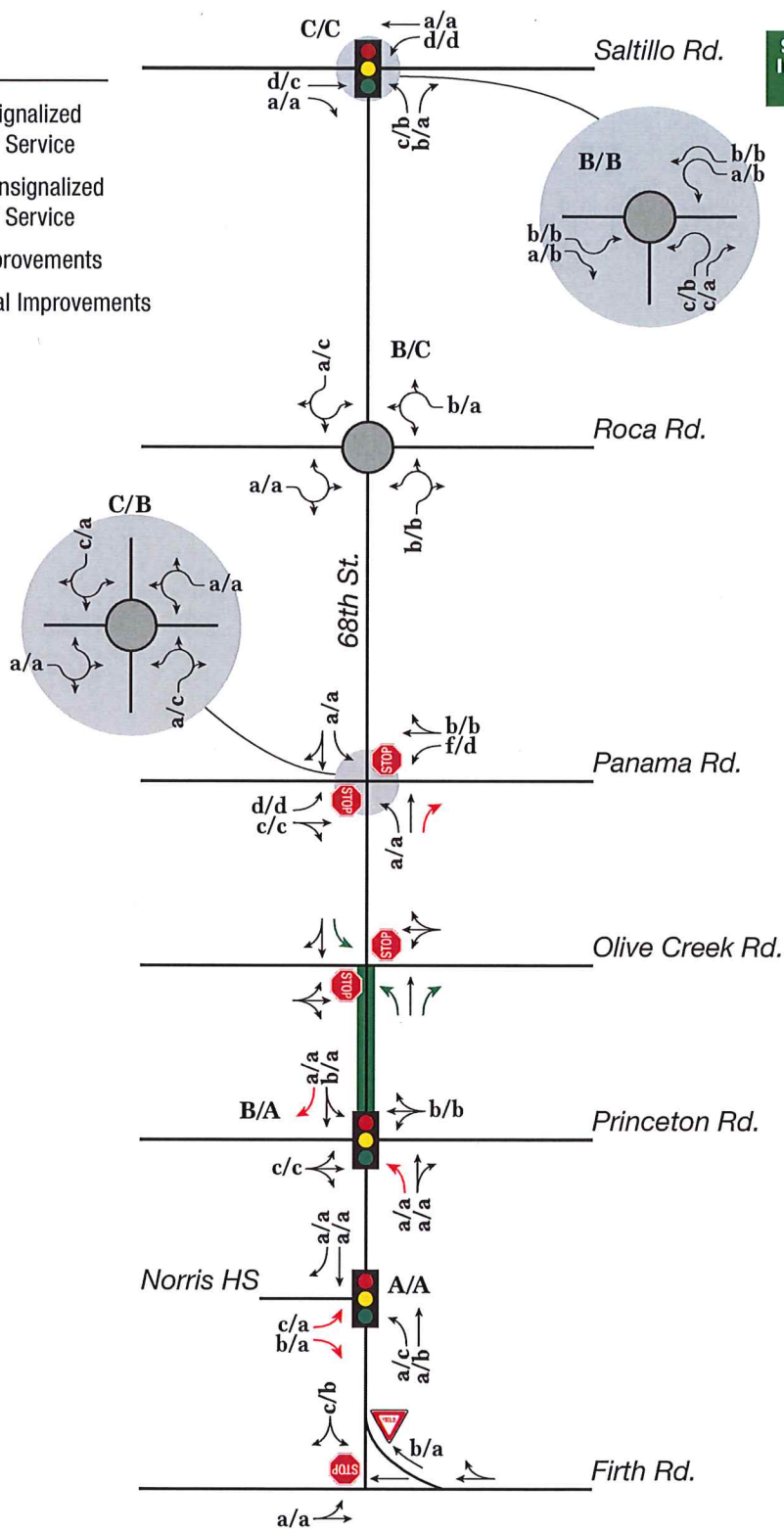
XXX(XXX) = AM(PM) Peak Hour Traffic Volumes



2040 Traffic Volumes | FIGURE 5

LEGEND

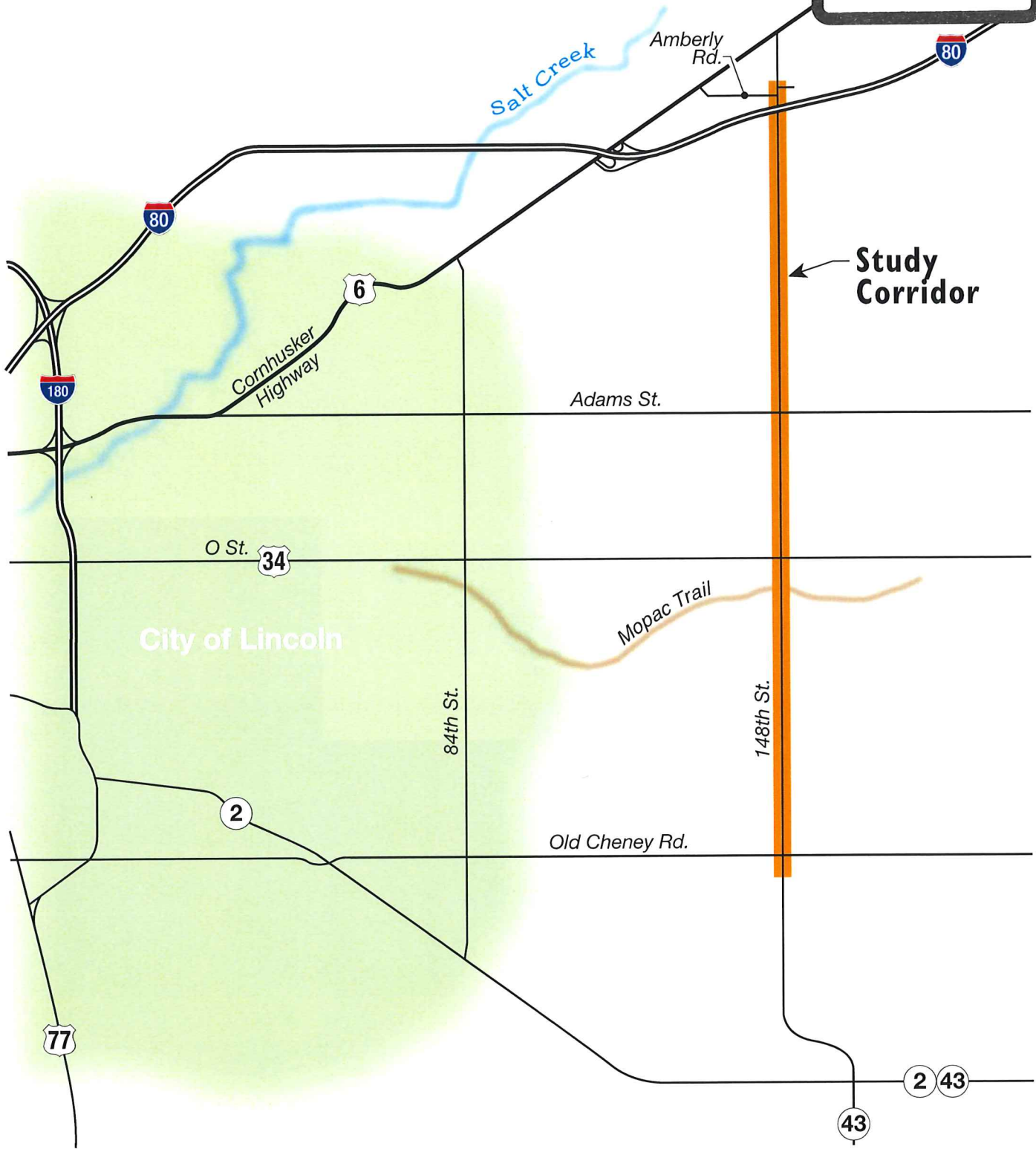
- X/X = AM/PM Peak Hour Signalized Intersection Level of Service
- x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service
-  = Proposed Safety Improvements
-  = Proposed Operational Improvements
-  = Roundabout
-  = Stop Sign
-  = Yield Sign
-  = Traffic Signal



Safety Improvement Intersection Warning System

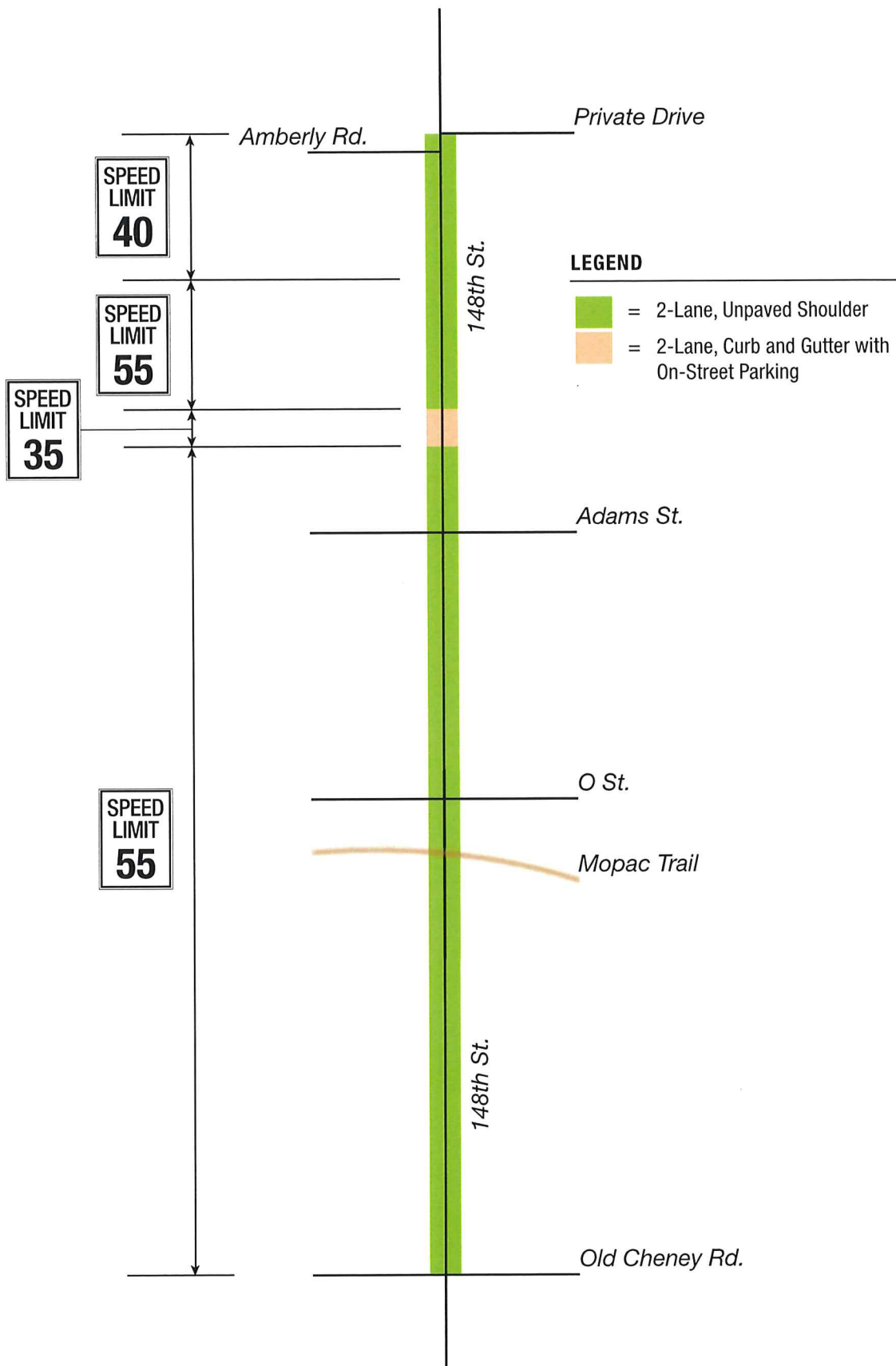
Safety Improvement Shoulder Widening Operations Analysis Not Completed

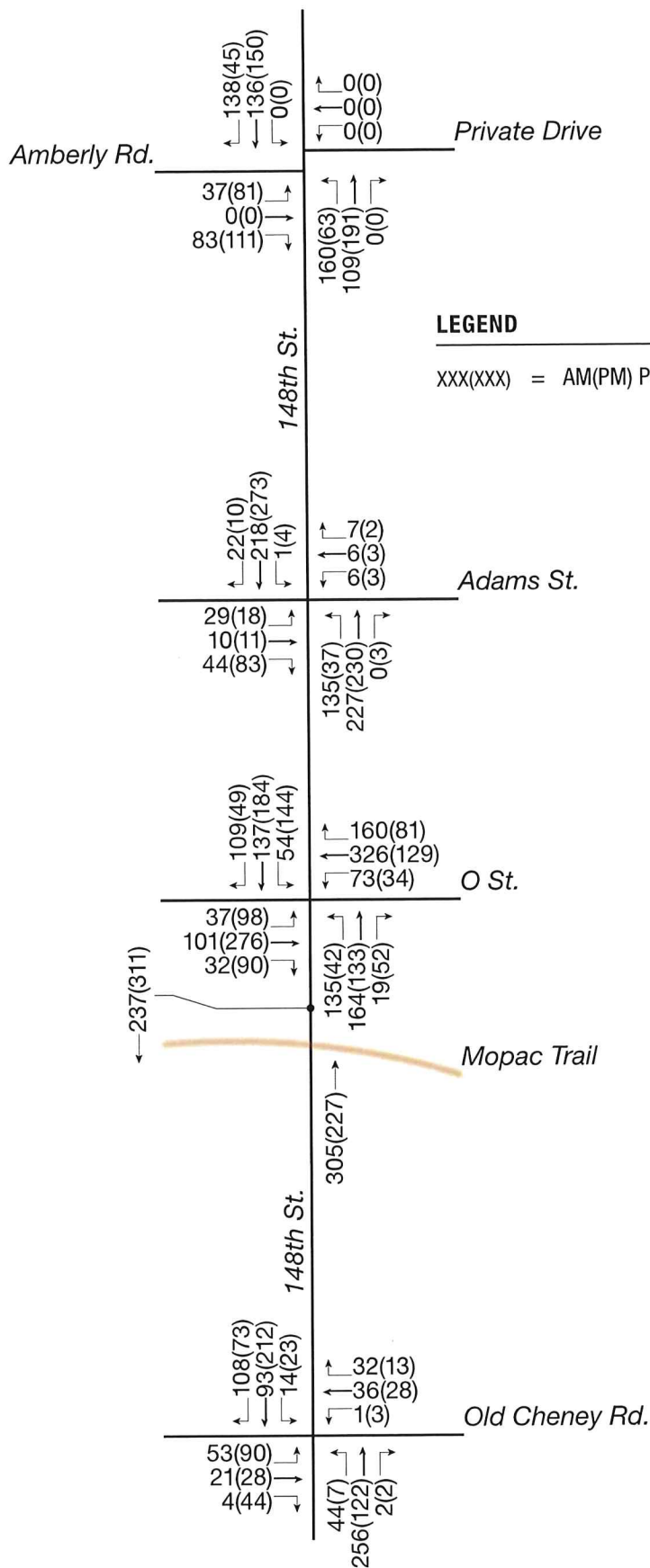




Study Area | **FIGURE 1**







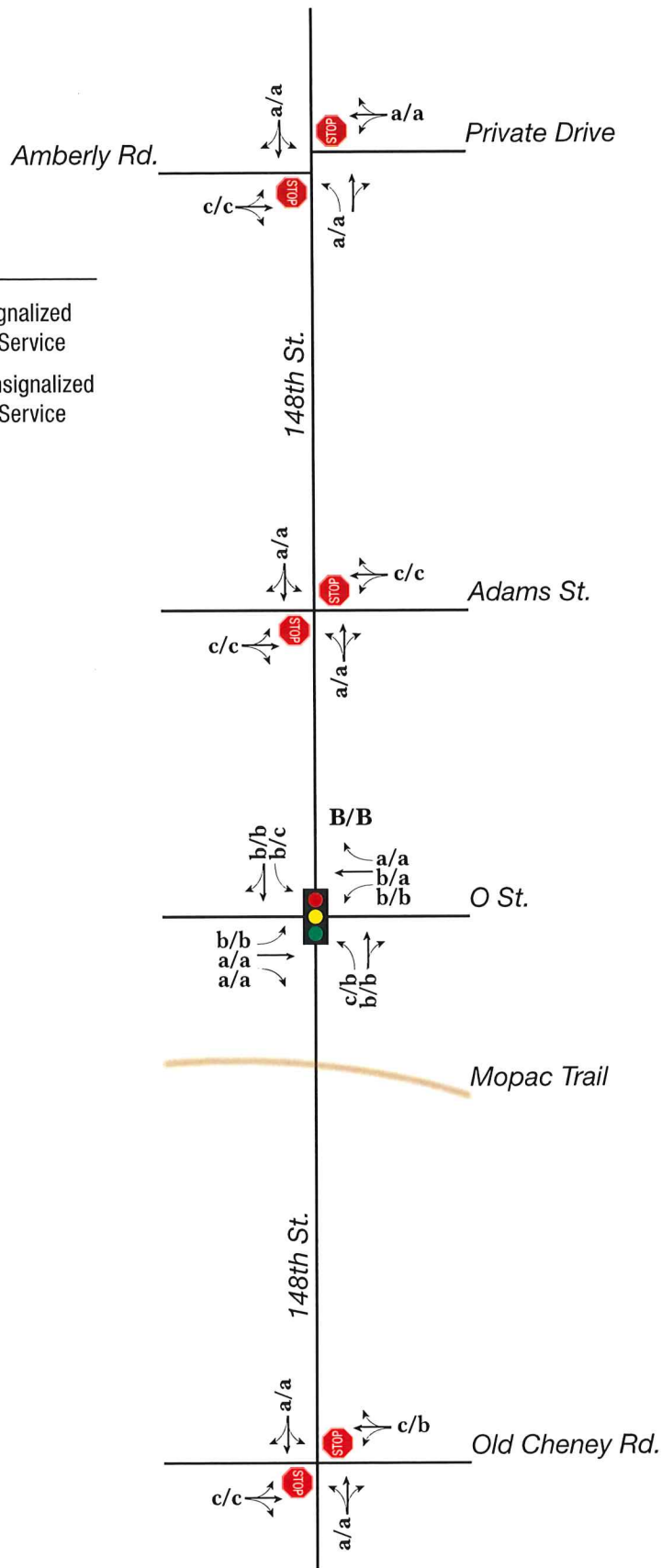
LEGEND

X/X = AM/PM Peak Hour Signalized Intersection Level of Service

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

 = Stop Sign

 = Traffic Signal



148th Street Operations and Safety Study

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Speed Study

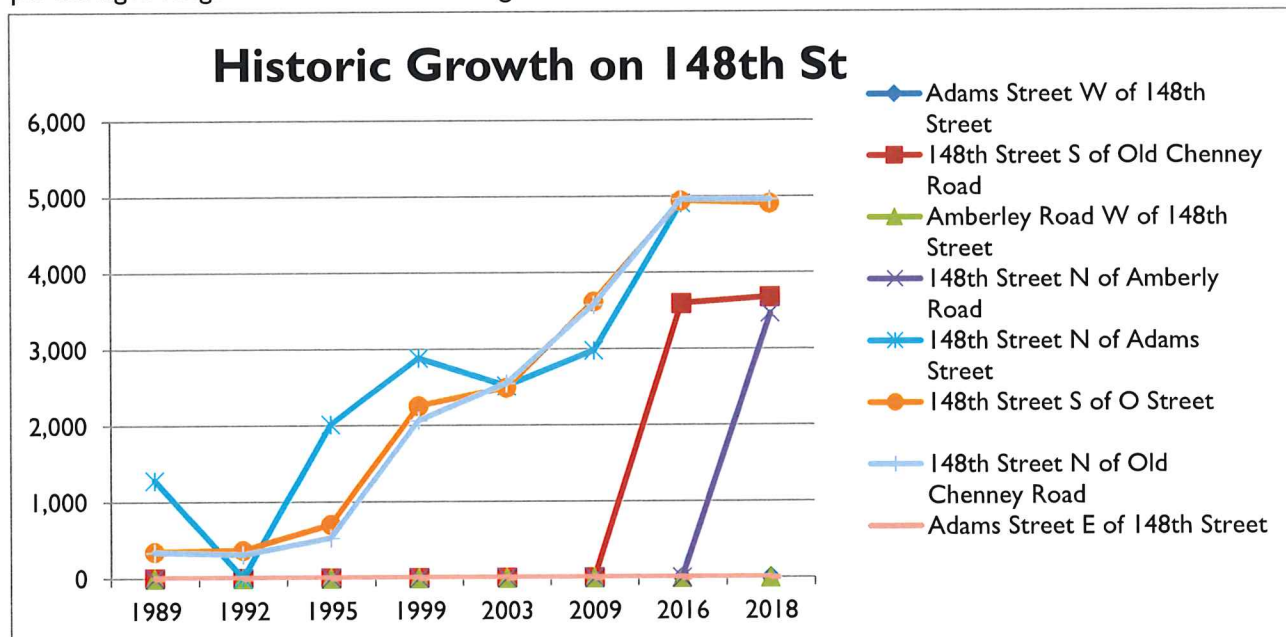
A speed study was completed at three locations and the results are shown in **Table 1**.

Table 1. 85th Percentile & Median Speed

Roadway	Location	85 th Percentile Speed (mph)		Median Speed (mph)	
		NB	SB	NB	SB
148 th Street	North #1	70.82	57.39	55.48	53.69
148 th Street	Central #2	68.81	72.89	59.73	60.26
148 th Street	South #3	61.67	59.04	53.75	56.27
Directional Average		70.35	67.10	63.11	56.32
Overall Roadway Average		65.10		57.14	

Historic Growth

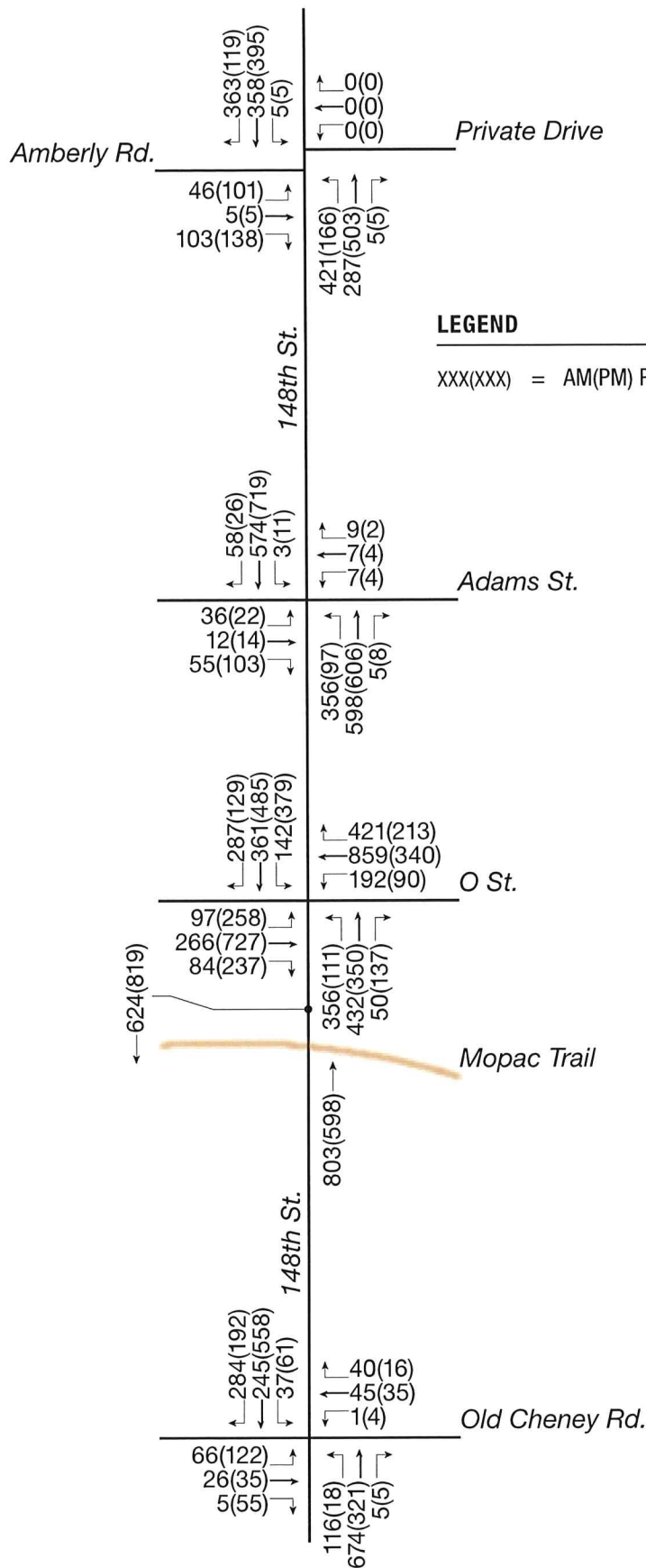
Average annual growth rate along 148th Street in the study area was approximately 4.5%. Heavy vehicle percentages ranged from 8% to 12% along the corridor.



The Operations Problem...

Currently, ADT's on 148th Street range from 5,850 in the north to 4,960 in the south. In 2040, it is estimated the ADT's will grow and range from 15,410 in the north to 13,065 in the south. Existing and future ADT volumes for the corridor are shown in **Table 2**. The LOS C threshold, per the Lincoln - Lancaster County Planning Department, for a 2-lane surfaced street without turn lanes is of 6,000 ADT. With turn lanes added the capacity jumps to 14,000 ADT. If the roadway is widened to a 4-lane street with turn lanes included the capacity increases to 24,000.

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2040 Traffic Volumes

FIGURE 5

148th Street Operations and Safety Study

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Table 2. Roadway Capacity

Roadway Segment		Facility Type	Threshold ADT (LOS C)	2018 Existing ADT	2040 Future ADT
148 th Street	Amberly Road – O Street	2-lane surfaced street, without turn lanes	6,000	5,850	15,410
		2-lane surfaced street, with turn lanes	14,000	5,850	15,410
		4-lane surfaced street, with turn lanes	24,000	5,850	15,410
	O Street – Old Cheney Road	2-lane surfaced street, without turn lanes	6,000	4,960	13,065
		2-lane surfaced street, with turn lanes	14,000	4,960	13,065

An auxiliary turn lane analysis was completed for the major study area intersections and the results are shown in **Table 3**.

Table 3. Auxiliary Turn Lane Analysis Summary

Intersection	Warrant	2018 Existing		2040 Future	
		AM Peak	PM Peak	AM Peak	PM Peak
148th Street & Old Cheney Road	NB Left-Turn Lane	NO	NO	YES	YES
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	Two Lanes	Two Lanes
	SB Left-Turn Lane	NO	NO	YES	YES
	SB Right-Turn Lane	YES	YES	YES	YES
	WB Approach	One Lane	One Lane	One Lane	One Lane
148th Street & Adams St	NB Left-Turn Lane	YES	NO	YES	YES
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	One Lane	One Lane
	SB Left-Turn Lane	NO	NO	YES	YES
	SB Right-Turn Lane	YES	YES	YES	YES
	WB Approach	One Lane	One Lane	One Lane	One Lane
148th Street & Amberly Road / Private Drive	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	Two Lanes	Two Lanes
	SB Left-Turn Lane	NO	NO	NO	NO
	SB Right-Turn Lane	NO	NO	YES	YES
	WB Approach	NO	NO	NO	NO

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MUTCD traffic signal warrant analysis was completed for the major study area intersections and the results are shown in **Table 4**.

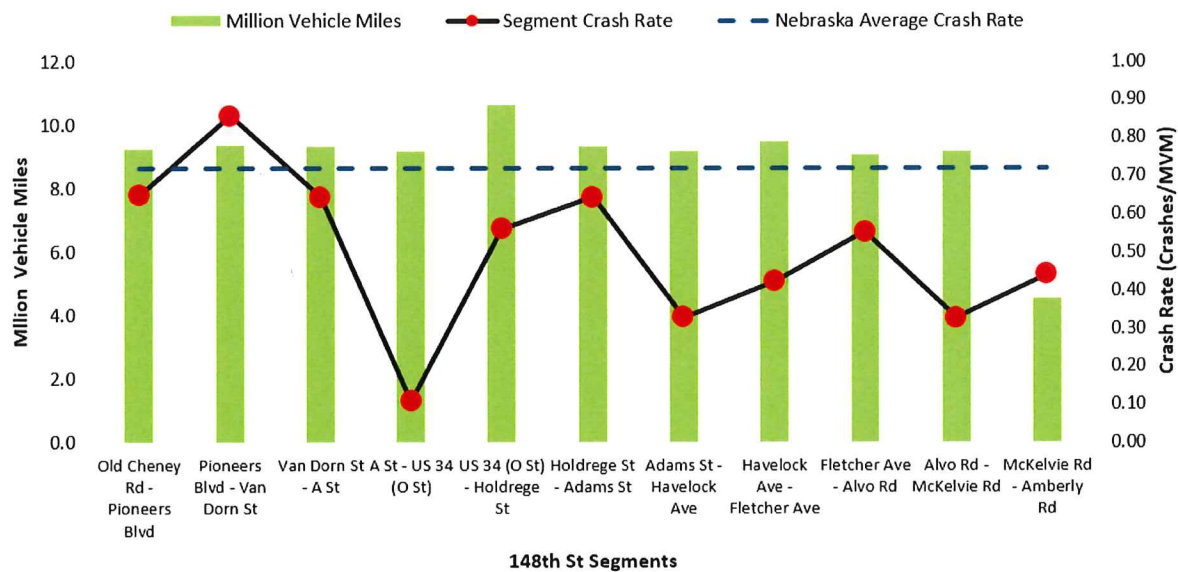
Table 4. Traffic Control Device Warrant Summary

Intersection	MUTCD Warrant	Is Warrant Met?	
		2018 Existing	2040 Future
148th & Amberly Road	Warrant 1	NO	NO (0% EB rights)
	Warrant 2	NO	YES (0% EB rights)
148th & Adams Street	Warrant 1	NO	YES
	Warrant 2	NO	YES
148th Street & Old Cheney Road	Warrant 1	NO	YES
	Warrant 2	NO	YES

The Safety Problem...

The crash history for the period of 1/1/2013 to 2/28/2018 was examined between Old Cheney Road and Amberly Road (including intersections) to locate crash patterns and identify crash causality. Over the 5-year 2-month analysis period 50 crashes occurred in segments along with another 35 at the intersections for a total of 85 accidents. **Figure A** and **Figure B** display the crash rates for roadway segments and intersections along 148th Street compared to the Nebraska statewide average crash rates.

Figure A. 148th Street Segment Crash Rate Summary



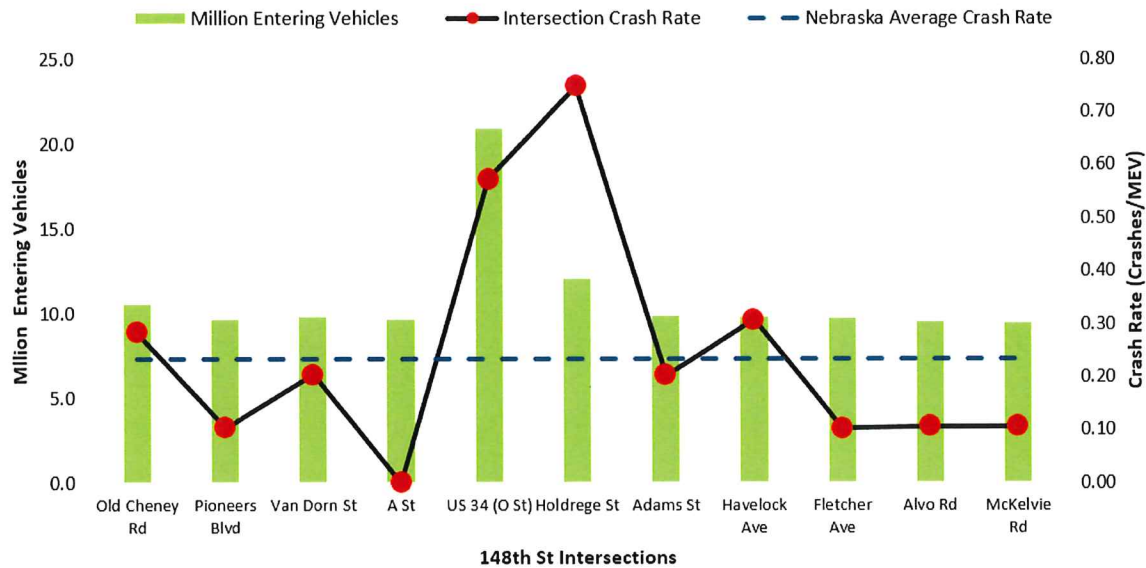
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Figure B. 148th Street Intersection Crash Rate Summary



Safety Countermeasures

Countermeasure 1: Pioneers Boulevard to Van Dorn Street (Construct 6' Paved Shoulders & Roadside Rumble Strips)

The cost for Countermeasure 1 was estimated at \$1,223,530 in 2018 dollars with a projected life of 20 years. **Table 5** summarizes the B/C calculations for the Countermeasure 1, resulting in a B/C of **2.36**.

Table 5. Countermeasure 1: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 140,505
Value of Avoided Crashes, BENEFIT	\$ 3,360,140
Value of Associated Cost, COST	\$ 1,423,530
Crash Type Benefit/Cost Ratio	2.36

Countermeasure 2: Holdrege Street Intersection Warning System

The cost for Countermeasure 2 was estimated at \$100,000 in 2018 dollars with a projected life of 10 years. **Table 6** summarizes the B/C calculations for the Countermeasure 2, resulting in a B/C of **4.59**.

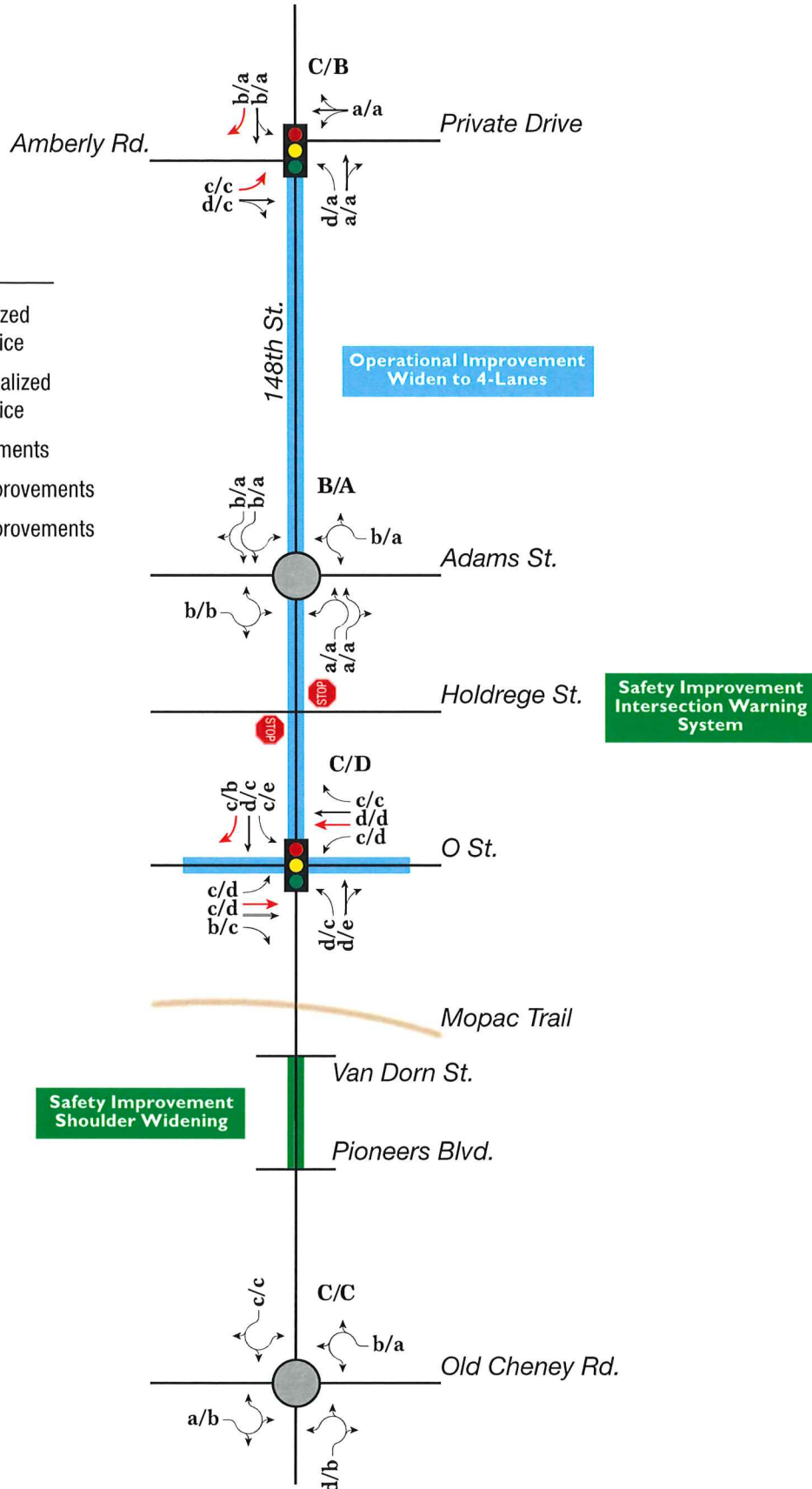
Table 6. Countermeasure 2: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 238,400
Value of Avoided Crashes, BENEFIT	\$ 504,521
Value of Associated Cost, COST	\$ 110,000
Crash Type Benefit/Cost Ratio	4.59

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LEGEND

- X/X = AM/PM Peak Hour Signalized Intersection Level of Service
- x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service
- = Proposed Safety Improvements
- ↷ = Proposed Operational Improvements
- = Proposed Operational Improvements Widen to 4-Lanes
- ⊙ = Roundabout
- STOP = Stop Sign
- 🚦 = Traffic Signal



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Systemic Improvements

According to the Federal Highway Administration (FHWA), systemic improvements focus on high-risk roadway features rather than specific locations. This leads to widespread implementation of projects to reduce the potential for severe crashes. Due to the significant number of run off the road crashes and high truck percentages, it is recommended that 148th Street in the study area be widened to a 28' top with earth shoulders should the road ever need to be repaved due to pavement conditions.

It is also recommended that educational programs like Drive Smart Nebraska be implemented at area high schools. These types of programs are committed to eliminating injuries and deaths on Nebraska roads.

The Cost...

Cost estimates were prepared for the operational, safety, and systemic improvements. Summaries are provided below for each improvement. All cost estimates were completed using 2018 unit costs.

Safety Improvements

Improvement	2018 Cost
148th St and Holdrege St – Intersection Warning System	\$ 99,500.00
148th St – Van Dorn Rd to Pioneers Blvd – Shoulders	\$ 1,223,530.00

Operational Improvements

Improvement	2018 Cost
148th St - O St. to Amberly Rd Widening to 4 Lanes	\$ 28,939,380.00
O St - 98th St to 148th St Widening to 4 Lanes	\$ 14,619,390.00
148th St and Amberly Rd – SB Right Turn Lane	\$ 126,070.00
148th St and Amberly Rd – Eastbound 2-Lane Approach	\$ 313,710.00
148th St and Amberly Rd – Traffic Signal	\$ 176,500.00
148th St and Amberly Rd – Roundabout	\$ 791,350.00
148th St and Adams St – Roundabout	\$ 764,470.00
148th St and O St – SB Right Turn Lane	\$ 141,450.00
148th St and Old Cheney Rd – Roundabout	\$ 825,490.00

Systemic Improvements

Improvement	2018 Cost
148th St – 28' top with earth shoulders and rumble strips	\$ 9,545,200.00

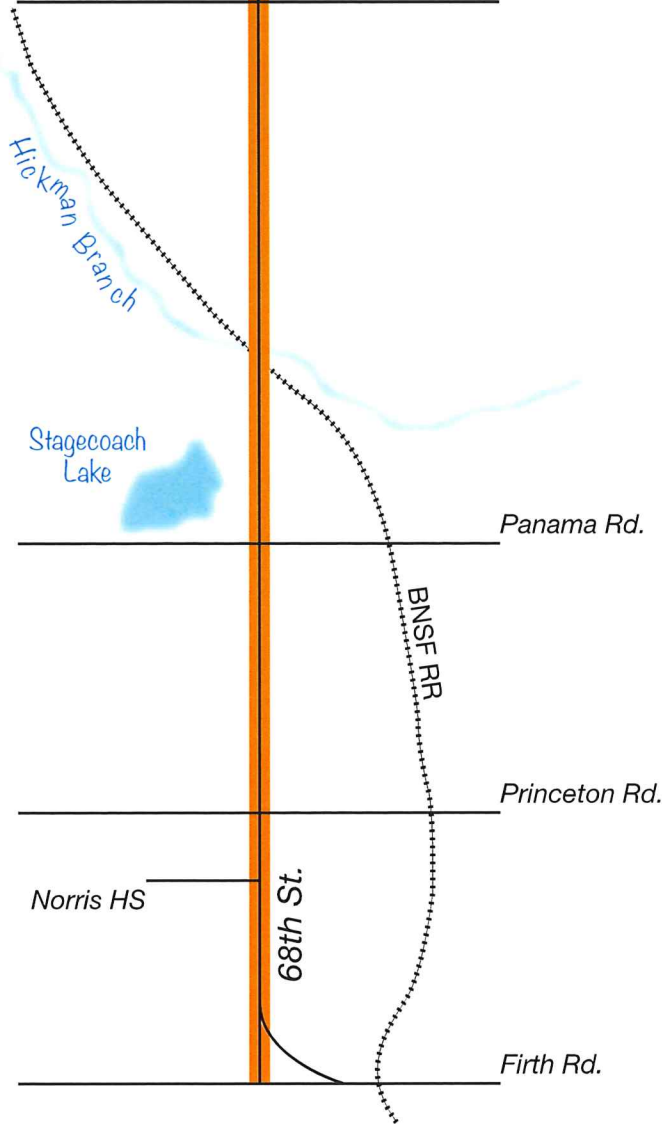
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Study Corridor

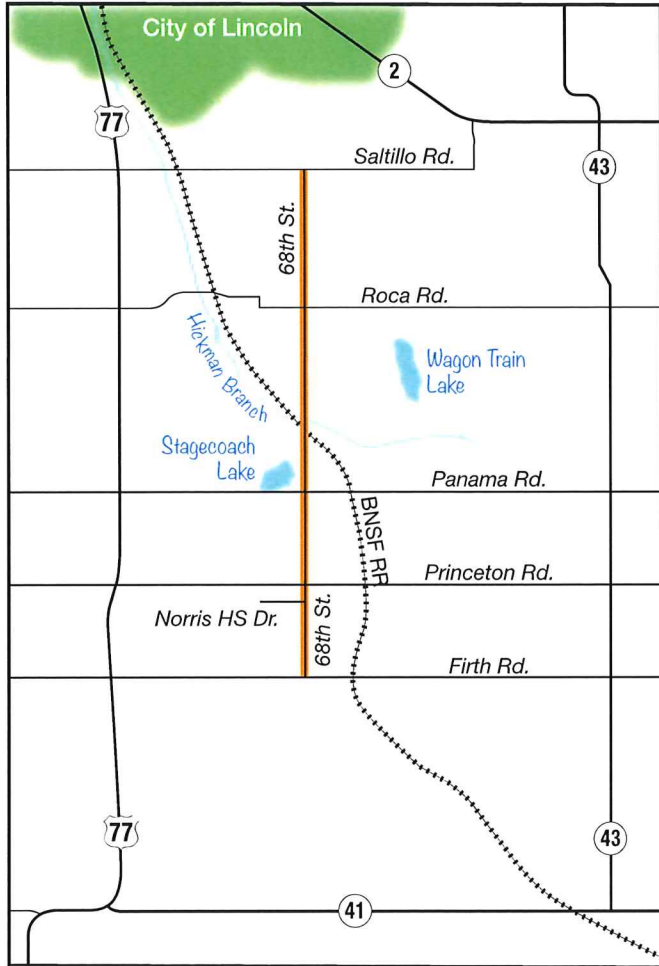
Salttilo Rd.

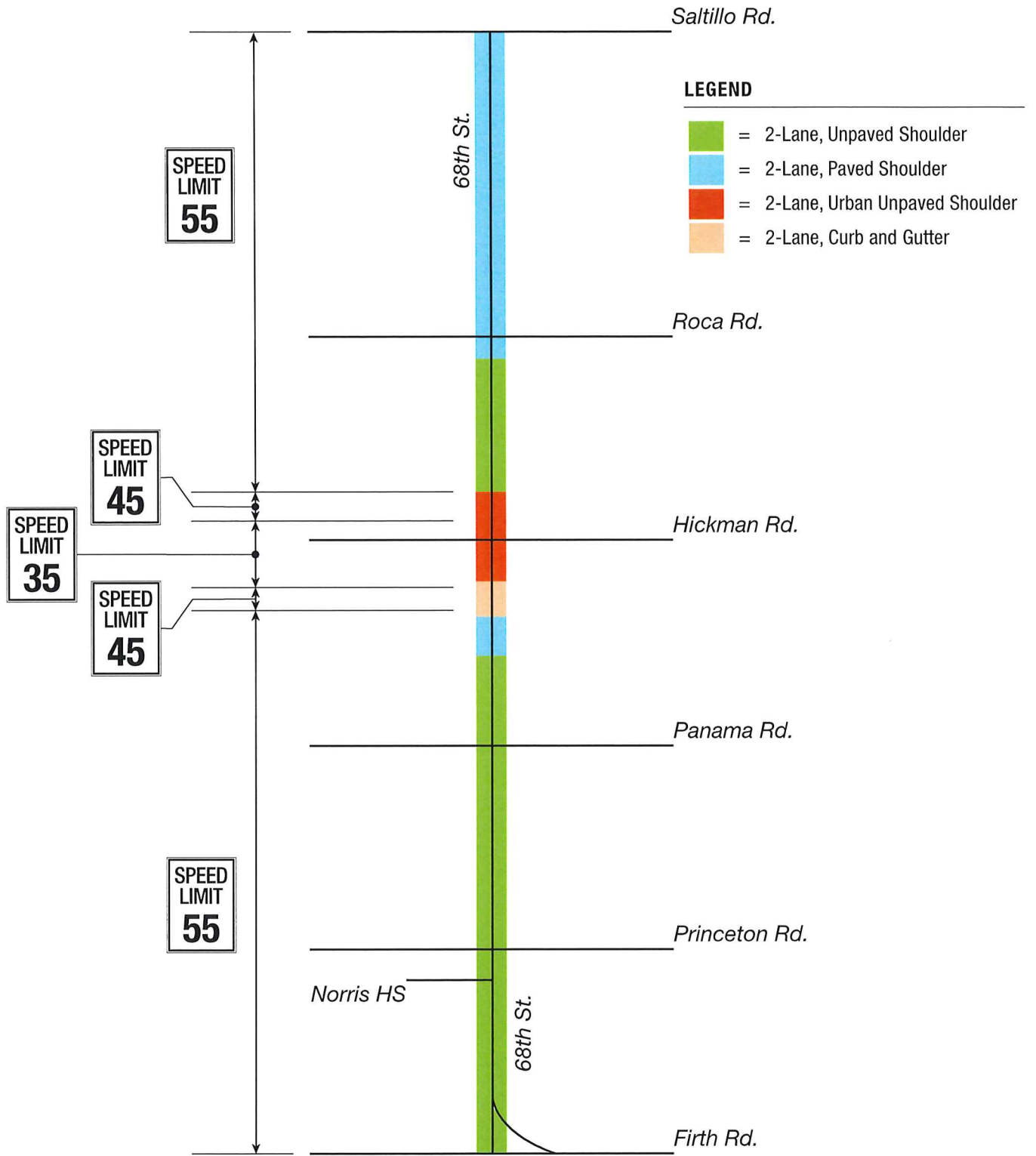
68th St.

Roca Rd.



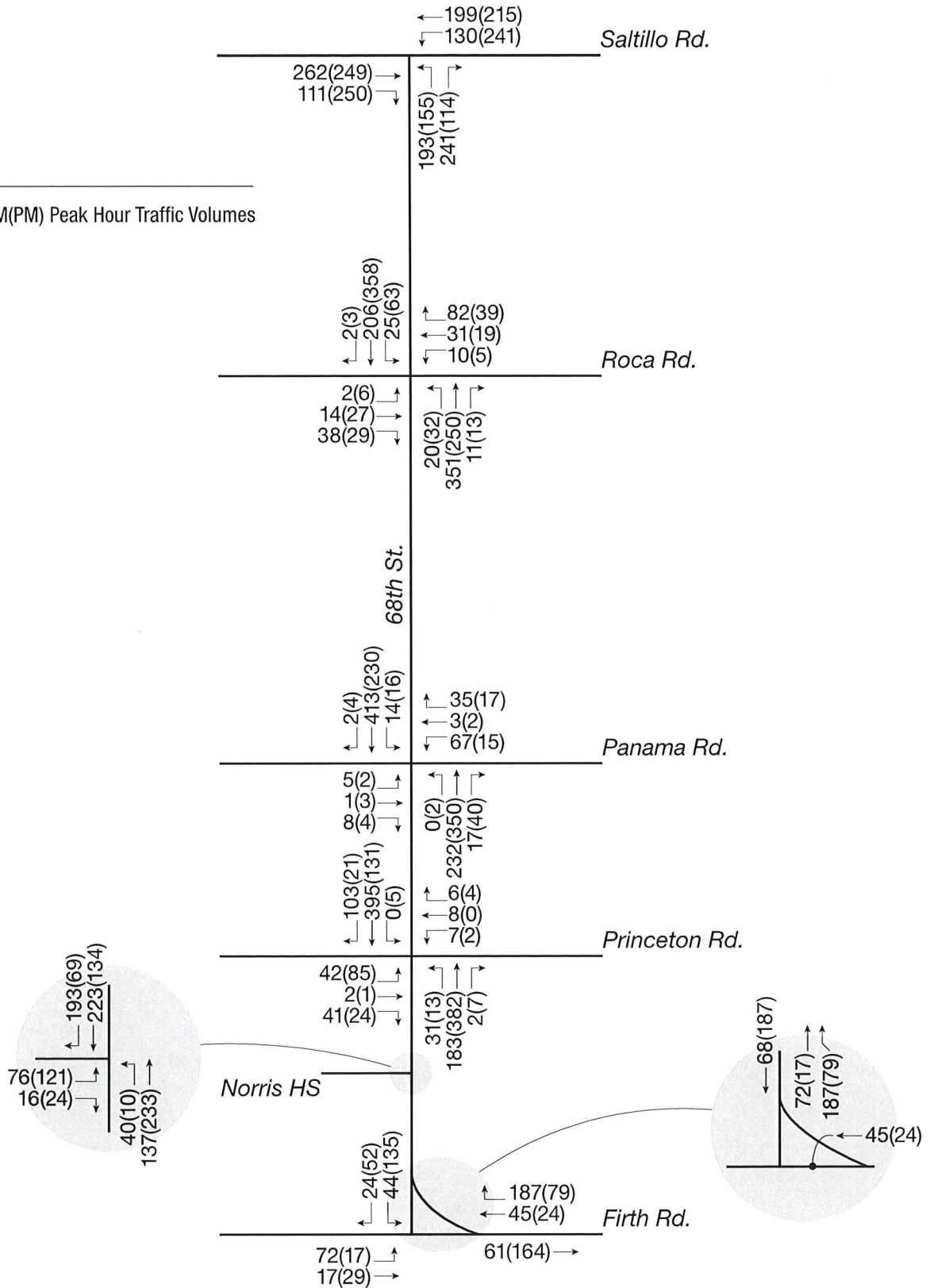
Vicinity Map





LEGEND


XXX(XXX) = AM(PM) Peak Hour Traffic Volumes



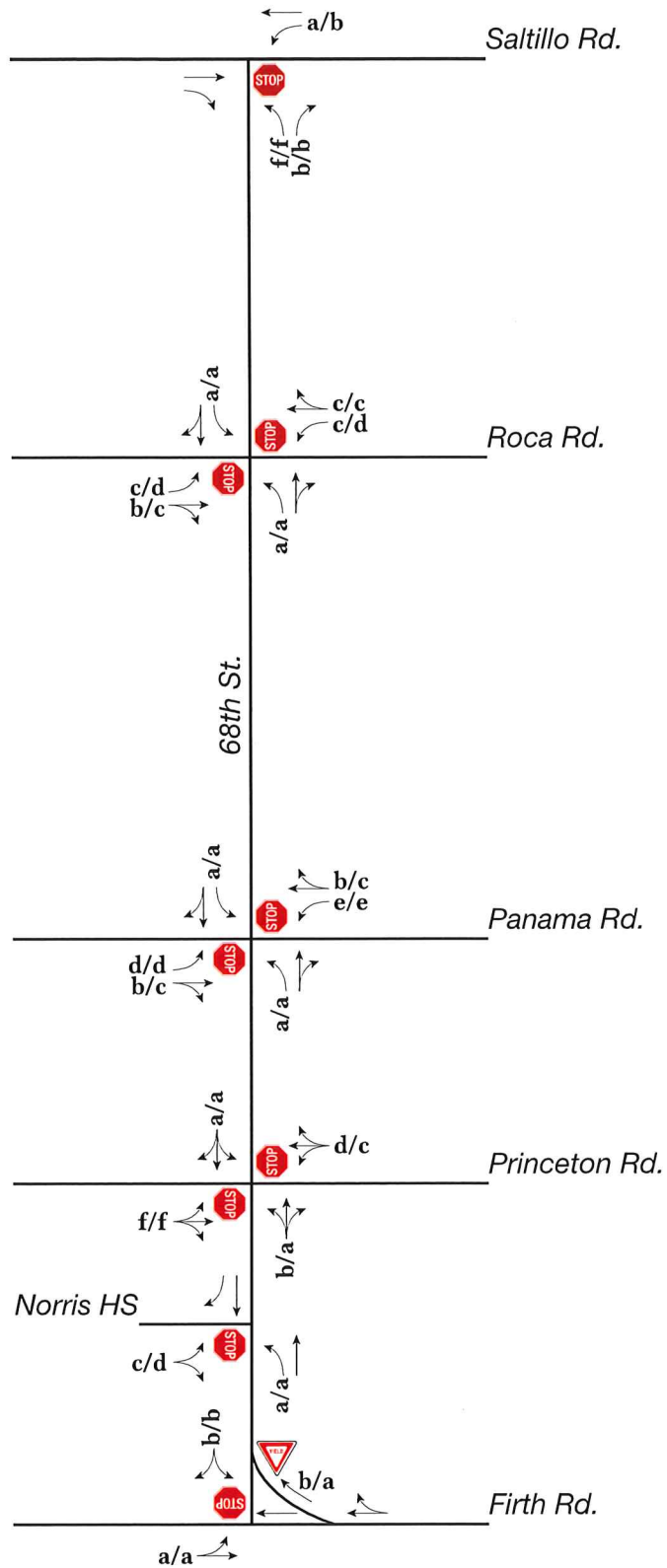
2018 Existing Traffic Volumes | FIGURE 3

LEGEND

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

 = Stop Sign

 = Yield Sign



S. 68th Street Operations and Safety Study

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Speed Study

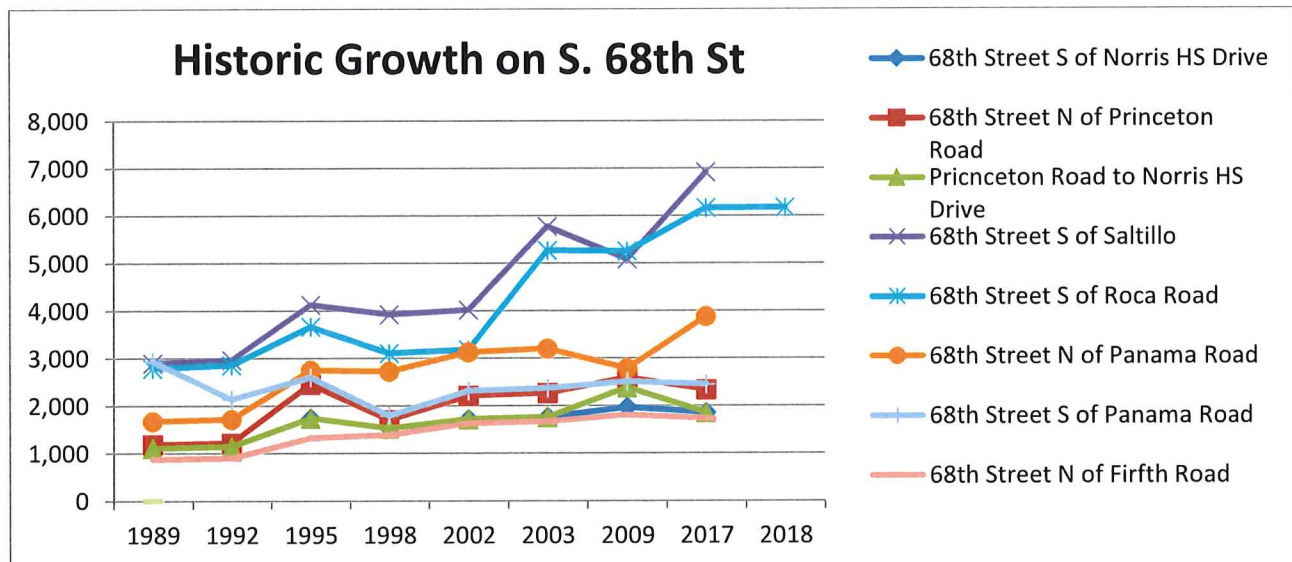
A speed study was completed at five locations and the results are shown in **Table I**.

Table I. 85th Percentile & Median Speed

Roadway	Location	85 th Percentile Speed (mph)		Median Speed (mph)	
		NB	SB	NB	SB
S. 68th Street	North #1	66.95	65.65	58.39	48.93
S. 68th Street	North Central #2	59.09	59.50	53.91	56.00
S. 68th Street	Central #3	54.60	66.90	52.00	54.55
S. 68th Street	South Central #4	69.72	66.16	55.18	48.68
S. 68th Street	South #5	62.01	61.60	59.37	54.14
Directional Average		62.47	63.91	55.77	52.46
Overall Roadway Average		63.19		53.92	

Historic Growth

Average annual growth rate along S. 68th Street in the study area was approximately 2.5%. Heavy vehicle percentages ranged from 2% to 3% along the corridor.



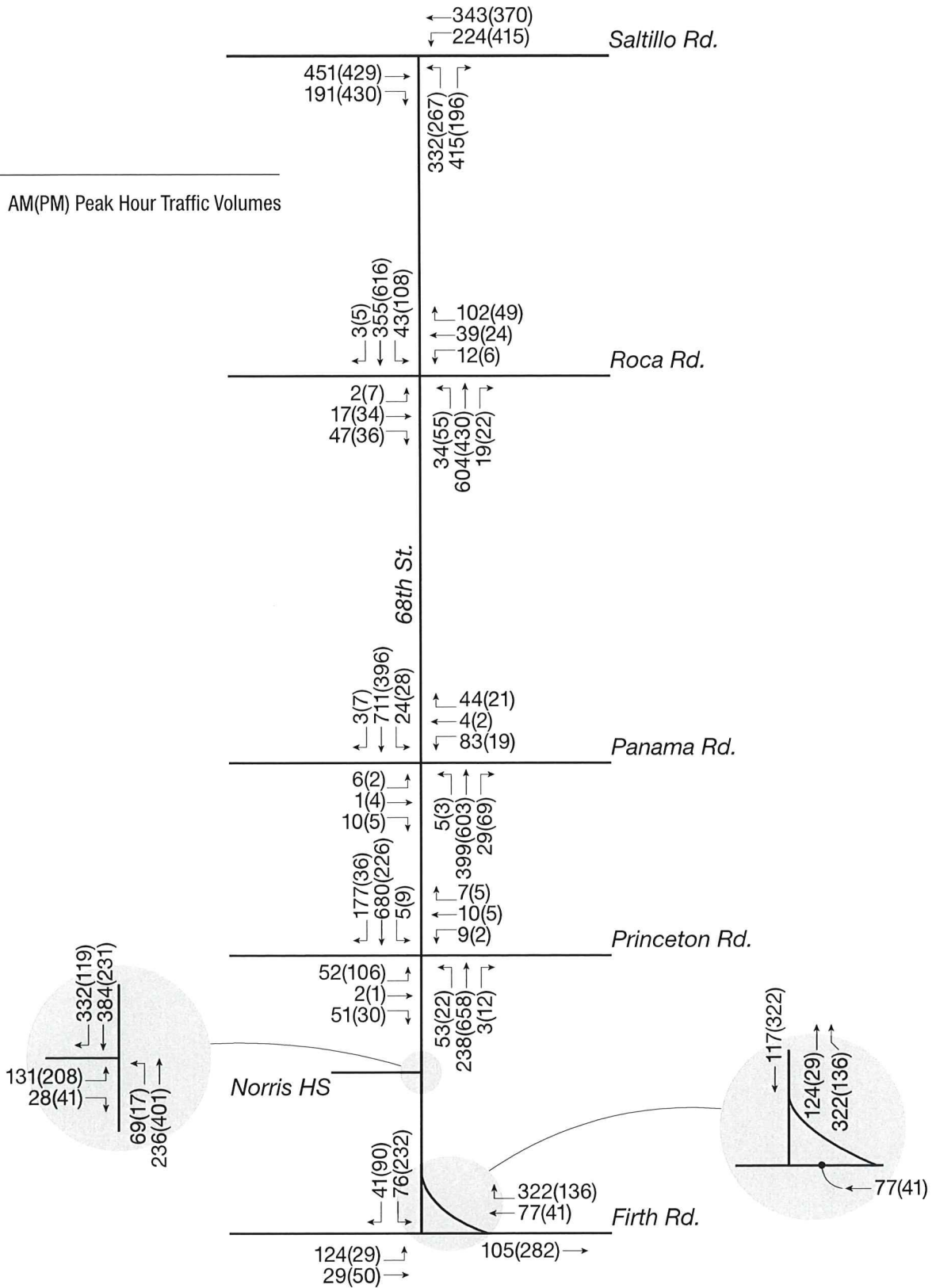
The Operations Problem...

Currently, ADT's on S. 68th Street range from 6,600 in the north to 6,175 in the south. In 2040, it is estimated the ADT's will grow and range from 11,360 in the north to 10,630 in the south. Existing and future ADT volumes for the corridor are shown in **Table 2**. The LOS C threshold, per the Lincoln - Lancaster County Planning Department, for a 2-lane surfaced street without turn lanes is of 6,000 ADT. Will turn lanes added the capacity jumps to 14,000 ADT.

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XXX(XXX) = AM(PM) Peak Hour Traffic Volumes



S. 68th Street Operations and Safety Study

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Table 2. Roadway Capacity

Roadway Segment		Facility Type	Threshold ADT (LOS C)	2018 Existing ADT	2040 Future ADT
S. 68 th Street	Saltillo Road – Roca Road	2-lane surfaced street, without turn lanes	6,000	6,600	11,360
		2-lane surfaced street, with turn lanes	14,000	6,600	11,360
	Roca Road – Firth Road	2-lane surfaced street, without turn lanes	6,000	6,175	10,630
		2-lane surfaced street, with turn lanes	14,000	6,175	10,630

An auxiliary turn lane analysis was completed for the major study area intersections and the results are shown in **Table 3**.

Table 3. Auxiliary Turn Lane Analysis Summary

Intersection	Warrant	2018 Existing		2040 Future	
		AM Peak	PM Peak	AM Peak	PM Peak
Saltillo Road & S. 68 th Street	EB Right-Turn Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane
	NB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
	WB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
S. 68 th Street & Roca Road	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	NB Right-Turn Lane	NO	NO	YES	YES
	EB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
	SB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	SB Right-Turn Lane	NO	NO	NO	NO
	WB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
S. 68 th Street & Panama Road	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	NB Right-Turn Lane	NO	YES	YES	YES
	EB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane
	SB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	SB Right-Turn Lane	NO	NO	NO	NO
	WB Approach	Existing Two Lane	Existing Two Lane	Existing Two Lane	Existing Two Lane

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S. 68th Street Operations and Safety Study

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S. 68 th Street & Princeton Road	NB Left-Turn Lane	NO	NO	YES	YES
	NB Right-Turn Lane	NO	NO	NO	NO
	EB Approach	One Lane	One Lane	One Lane	One Lane
	SB Left-Turn Lane	NO	NO	NO	NO
	SB Right-Turn Lane	YES	NO	YES	YES
	WB Approach	One Lane	One Lane	One Lane	One Lane
S. 68 th Street & Norris High School	NB Left-Turn Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane	Existing LT Lane
	EB Approach	One Lane	One Lane	Two Lanes	Two Lanes
	SB Right-Turn Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane
S. 68 th Street & Firth Road	EB Left-Turn Lane	NO	NO	NO	NO
	WB Right-Turn Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane	Existing RT Lane
	SB Approach	One Lane	One Lane	One Lane	One Lane

MUTCD traffic signal warrant analysis was completed for the major study area intersections and the results are shown in **Table 4**.

Table 4. Traffic Control Device Warrant Summary

Intersection	MUTCD Warrant	Is Warrant Met?	
		2018 Existing	2040 Future
S. 68th & Saltillo Road	Warrant 1	YES	YES
	Warrant 2	YES	YES
S. 68th Street & Roca Road	Warrant 1	NO	YES
	Warrant 2	NO	YES
S. 68th Street & Panama Road	Warrant 1	NO	NO (0% WB rights)
	Warrant 2	NO	NO (0% WB rights)
S. 68th Street & Princeton Road	Warrant 1	NO	YES
	Warrant 2	NO	YES
S. 68th Street & Norris High School	Warrant 1	NO	YES
	Warrant 2	NO	YES
S. 68th Street & Firth Road	Warrant 1	NO (0% WB rights)	NO (0% WB rights)
	Warrant 2	NO (0% WB rights)	NO (0% WB rights)

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S. 68th Street Operations and Safety Study

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The Safety Problem...

The crash history for the period of 1/1/2013 to 2/28/2018 was examined between Firth Road and Saltillo Road (including intersections) to locate crash patterns and identify crash causality. Over the 5-year 2-month analysis period 61 crashes occurred in segments along with another 50 at the intersections for a total of 111 accidents. **Figure A** and **Figure B** display the crash rates for roadway segments and intersections along S. 68th Street compared to the Nebraska statewide average crash rates.

Figure A. S. 68th Street Segment Crash Rate Summary

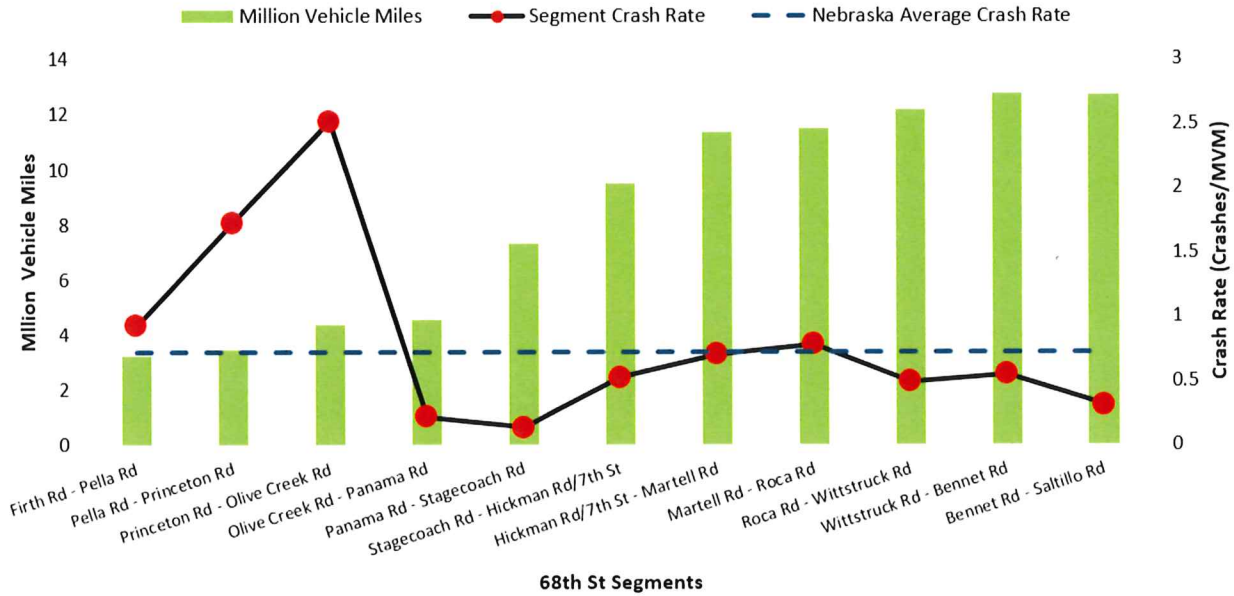
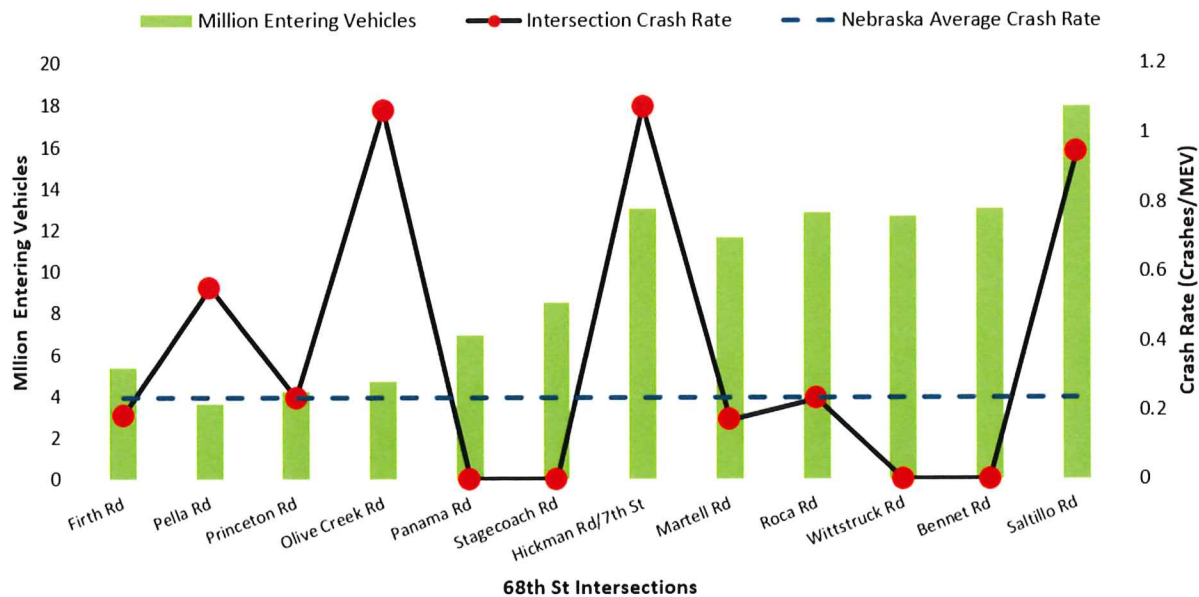


Figure B. S. 68th Street Intersection Crash Rate Summary



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S. 68th Street Operations and Safety Study

08/30/18



Safety Countermeasures

Countermeasure 1: Saltillo Road Intersection Warning System

The cost for Countermeasure 1 was estimated at \$100,000 in 2018 dollars with a projected life of 10 years.

Table 5 summarizes the benefit-cost calculations for the Countermeasure 1, resulting in a B/C of **18.35**.

Table 5. Countermeasure 1: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 238,400
Value of Avoided Crashes, BENEFIT	\$ 2,018,084
Value of Associated Cost, COST	\$ 110,000
Crash Type Benefit/Cost Ratio	18.35

Countermeasure 2: Construct Shoulder Princeton Road – Olive Creek Road, Turn Lanes on the Northbound

Approach at Olive Creek Road

The cost for Countermeasure 2 was estimated at \$1,164,390 in 2018 dollars with a projected life of 20

years. **Table 6** summarizes the benefit-cost calculations for the Countermeasure 2, resulting in a B/C of **1.40**.

Table 6. Countermeasure 2: Benefit-Cost Calculation by Crash Type

Average Cost/Crash (1/2013 through 2/2018 average weighting crash type)	\$ 97,986
Value of Avoided Crashes, BENEFIT	\$ 1,914,140
Value of Associated Cost, COST	\$ 1,364,390
Crash Type Benefit/Cost Ratio	1.40







Systemic Improvements

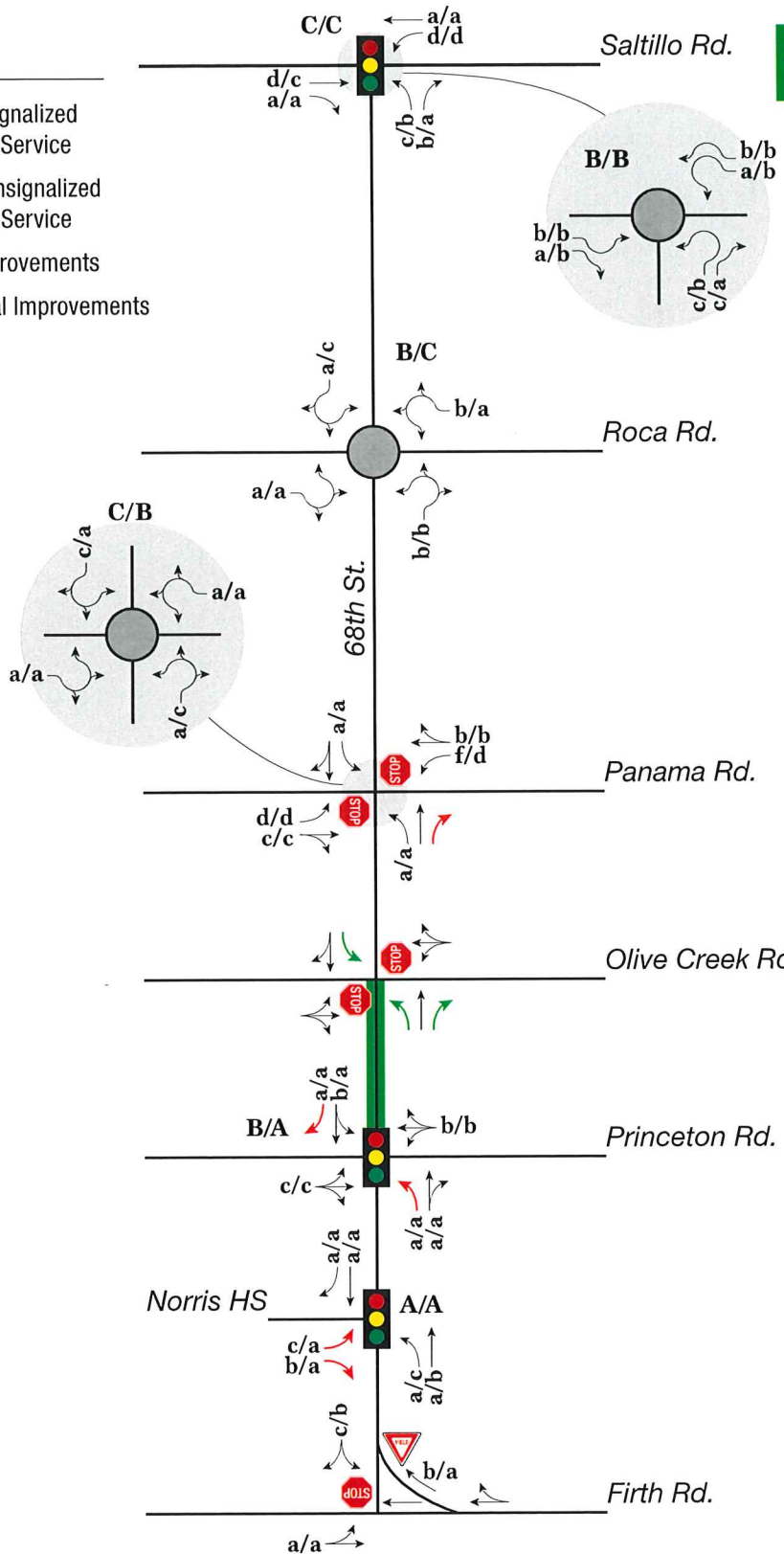
According to the Federal Highway Administration (FHWA), “systemic” improvements focus on high-risk most serious crash types on the entire road system, not just at specific high-spot locations. This leads to widespread implementation of projects to reduce the potential for severe crashes. Due to the number of run off the road crashes, it is recommended that S. 68th Street in the study area be widened to a 28’ top with rumble strips along the edge of the road and 4’ turf shoulders should the road ever need to be repaved due to pavement conditions. It is further recommended that separate left turn lanes be included in S. 68th Street paving at all county road intersections where none exist today. In addition to Olive Creek Road, this would include the intersections of Martell Road, Princeton Road, and Pella Road.

Due the number of crashes involving student drivers on S. 68th Street, it is also recommended that educational programs like Drive Smart Nebraska be implemented at area high schools. These types of programs are committed to eliminating injuries and deaths on Nebraska roads.

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- X/X = AM/PM Peak Hour Signalized Intersection Level of Service
- x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service
-  = Proposed Safety Improvements
-  = Proposed Operational Improvements
-  = Roundabout
-  = Stop Sign
-  = Yield Sign
-  = Traffic Signal



**Safety Improvement
Intersection Warning
System**

**Safety Improvement
Shoulder Widening
Operations Analysis
Not Completed**



S. 68th Street Operations and Safety Study

08/30/18



The Cost...

Cost estimates were prepared for the operational, safety, and systemic improvements. Summaries are provided below for each improvement. All cost estimates were completed using 2018 unit costs.

Safety Improvements

Improvement	2018 Cost
S. 68th St and Saltillo Rd – Intersection Warning System	\$ 99,500.00
S. 68th St and Olive Creek Rd – NB Left and Right Turn Lanes	\$ 235,980.00
S. 68th St and Olive Creek Rd – SB Left Turn Lane	\$ 133,760.00
S. 68th St - Olive Creek Rd to Princeton Rd – Shoulders	\$ 1,164,390.00

Operational Improvements

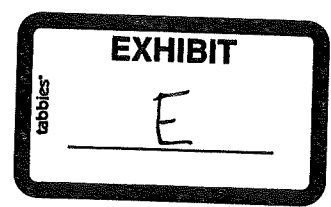
Improvement	2018 Cost
S. 68th St and Saltillo Rd – Traffic Signal	\$ 176,500.00
S. 68th St and Saltillo Rd – Roundabout	\$ 965,130.00
S. 68th St and Roca Rd – Roundabout	\$ 788,970.00
S. 68th St and Panama Rd – NB Right Turn Lane	\$ 130,210.00
S. 68th St and Panama Rd – Roundabout	\$ 719,940.00
S. 68th St and Princeton Rd – Turn Lanes	\$ 217,520.00
S. 68th St and Princeton Rd – Traffic Signal	\$ 176,500.00
S. 68th St and Princeton Rd – Roundabout	\$ 595,880.00
S. 68th St and Norris HS Dr – Eastbound 2-Lane Approach	\$ 111,040.00
S. 68th St and Norris HS Dr – Traffic Signal	\$ 176,500.00
S. 68th St and Norris HS Dr – Roundabout	\$ 615,370.00

Systemic Improvements

Improvement	2018 Cost
S. 68th St – 28' top with earth shoulders and rumble strips	\$ 9,803,640.00

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August 29, 2018

VIA FEDERAL EXPRESS

Department of the Treasury
Internal Revenue Service
Tax Exempt/Government Entities Division
Employee Plans
TE/GE:EP:RA:VC:7554
9350 Flair Drive
El Monte, CA 91731-2885

Re: Lancaster County, Nebraska ("Lancaster")
Voluntary Correction Program Application
Control Number: 911751832

Dear Ms. Saito:

We appreciate your patience as we collected more information regarding Lancaster's voluntary correction program application, Control Number: 911751832 (the "Application"). As the representative designated on the Form 2848 submitted with the Application, I am responding directly to your request regarding whether the retroactive amendment proposed in the Application would discriminate in favor of highly compensated employees ("HCEs"), even though governmental plans like the Lancaster County, Nebraska Employees Retirement Plan (the "Plan") are not subject to the Internal Revenue Code's nondiscrimination rules.

The proposed amendment would not discriminate in favor of highly compensated employees. The amendment would apply universally to all participants. As background, since 2009 every participant in the Plan was eligible to make the rollover contributions described in the Application. 100% of the Plan's participants were given the opportunity to roll money over to the Plan from 457(b) and 403(b) plans and SIMPLE and traditional IRAs. No exceptions.

29 participants elected to make rollover contributions to the Plan from 457(b) plans, 403(b) plans, SIMPLE IRAs, and traditional IRAs since 2009. Only one of the participants was an HCE; the other 28 participants were non-highly compensated.

We believe it is clear that the proposed amendment does not disproportionately favor HCEs. We also note that the retroactive amendment simply allows money to remain in the Plan. If the amendment was not approved, all 29 participants (28 of whom are *not* HCEs) would receive



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

8/28/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER UNICO Group, Inc. 1128 Lincoln Mall Suite 200 Lincoln NE 68508	CONTACT NAME: Cortney Moderacki PHONE (A/C, No., Ext): (402) 434-7200 E-MAIL ADDRESS: cmoderacki@unicogroup.com	FAX (A/C, No.): (402) 434-7272	
	INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED UNICO Group, Inc. 1128 Lincoln Mall Suite 200 Lincoln NE 68508	INSURER A: Cincinnati Insurance Co.		10677
	INSURER B: Cincinnati Casualty Co.		28665
	INSURER C:		
	INSURER D:		
	INSURER E:		
INSURER F:			

COVERAGES

CERTIFICATE NUMBER: 17-18 All Lines

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			EPP0164629	10/20/2017	10/20/2018	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						MED EXP (Any one person) \$ 10,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PERSONAL & ADV INJURY \$ 1,000,000
	OTHER:						GENERAL AGGREGATE \$ 2,000,000
							PRODUCTS - COMP/OP AGG \$ 2,000,000
							\$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY			EPP0164629	10/20/2017	10/20/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS						BODILY INJURY (Per person) \$
	<input type="checkbox"/> HIRED AUTOS	<input type="checkbox"/> SCHEDULED AUTOS	<input type="checkbox"/> NON-OWNED AUTOS				BODILY INJURY (Per accident) \$
							PROPERTY DAMAGE (Per accident) \$
							Coverage \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB			EPP0164629	10/20/2017	10/20/2018	EACH OCCURRENCE \$ 10,000,000
	<input type="checkbox"/> EXCESS LIAB	<input type="checkbox"/> OCCUR	<input type="checkbox"/> CLAIMS-MADE				AGGREGATE \$ 10,000,000
	DED	RETENTION \$					\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			EWC0348411-02	10/20/2017	10/20/2018	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y/N	N/A				E.L. EACH ACCIDENT \$ 100,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 100,000
							E.L. DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Lancaster County c/o Lancaster Co. Risk Management is shown as Additional Insured as respects the General Liability policy. Waiver of Subrogation applies in favor of Certificate Holder on Workers' Compensation.

CERTIFICATE HOLDER**CANCELLATION**

Lancaster County
 c/o Lancaster Co. Risk Management
 555 S. 10th Street
 Lincoln, NE 68508

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

J. Scott Nelson/CM

J. Scott Nelson

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ACORD 25 (2014/01)

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INS025 (2014/01)

EXHIBIT

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