

CITY OF LA VISTA
MAYOR AND CITY COUNCIL REPORT
JANUARY 17, 2012 AGENDA

Subject:	Type:	Submitted By:
APPLICATION FOR PRELIMINARY PUD, LOT 2, BELLA LA VISTA (E OF 132 ND & CHANDLER)	◆ RESOLUTION ORDINANCE RECEIVE/FILE	ANN BIRCH COMMUNITY DEVELOPMENT DIRECTOR

SYNOPSIS

A public hearing has been scheduled and a resolution has been prepared to approve the preliminary planned unit development (PUD) for approximately 36 acres located east of 132nd & Chandler Road.

FISCAL IMPACT

None.

RECOMMENDATION

Approval.

BACKGROUND

A public hearing has been scheduled to consider the preliminary planned unit development application by Bella La Vista Housing Partners, LP, on approximately 36 acres currently platted as Lot 2, Bella La Vista, generally located east of 132nd and Chandler Road.

The property is currently zoned R-3 PUD with the Gateway Corridor Overlay District. The rezoning of the property occurred in 2006 however did not include submittal of a detailed site plan as part of a PUD or Conditional Use Permit approval. This request for approval of a preliminary PUD plan has been submitted by a different developer from the previous rezoning request.

The preliminary PUD plan identifies two lots for multi-family development and an outlot identified as "future development". Phase 1 on proposed Lot 1 consists of 72 units in three buildings, with 38 garages and 103 surface parking stalls. Phase 2 on proposed Lot 2 consists of 144 units in six buildings, with 80 garages and 304 surface parking stalls. Phase 1 will include access from 132nd Street with a new intersection at Chandler Road. An additional access is proposed with a connection to 130th Street which currently is a dead end at the southern boundary of the Millard Highlands South subdivision. Phase 2 identifies that Highland Blvd. will also be connected and is important for site access. A traffic study was conducted and the City's consulting traffic engineer will be available at the Council meeting. A detailed review of the application is contained in the attached staff report. **Revised Preliminary PUD plan was received January 12, 2012. Further staff review is needed; an update will be provided at the Council meeting.**

The Planning Commission held a public hearing on December 8, 2011 recommended approval of the preliminary planned unit development for Lot 2, Bella La Vista subject to satisfactory resolution of items 1-4 with the addition of further discussion on item one with regard to the need of the connection of 130th Street.

RESOLUTION NO. _____

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF LA VISTA, NEBRASKA, DETERMINING CONDITIONS FOR APPROVAL OF THE PRELIMINARY PLANNED UNIT DEVELOPMENT (PUD) PLAN FOR LOT 2, BELLA LA VISTA, A SUBDIVISION LOCATED IN THE SW 1/4 OF SECTION 18, T14N, R12E OF THE 6TH P.M., SARPY COUNTY, NEBRASKA.

WHEREAS, the owners of the above described piece of property have made application for approval of a preliminary planned unit development plan for Lot 2, Bella La Vista; and

WHEREAS, the City Administrator and the City Engineer have reviewed the preliminary planned unit development plan; and

WHEREAS, on December 8, 2011, the La Vista Planning Commission held a public hearing and reviewed the preliminary planned unit development plan and recommended approval subject to resolution of the following items identified by the city engineer and staff:

1. A connection at 130th Street is needed.
2. The traffic study indicated the need for a left-turn bay on 132nd Street which requires a preliminary geometric plan for the widening of 132nd Street. Any additional comments from Felsburg, Holt and Ullevig will need to be addressed in the final copy of the traffic study as well.
3. There is a significant excess of stalls in Phase 2 and consideration should be given to deleting stalls and increasing green space such as for play space.
4. The proposed vertical curve at Sta. 16+84 on Chandler Plaza needs to be lengthened to provide the minimum 175' sight distance per the Subdivision Regulations.

NOW THEREFORE, BE IT RESOLVED by the Mayor and City Council of the City of La Vista, Nebraska, that the preliminary Planned Unit Development (PUD) plan for Lot 2, Bella La Vista, located in the SW 1/4 of Section 18, T14N, R12E of the 6th P.M., Sarpy County, Nebraska, generally located east of 132nd Street and Chandler Road be, and hereby is, approved subject to the items listed above.

PASSED AND APPROVED THIS 17TH DAY OF JANUARY, 2012.

CITY OF LA VISTA

Douglas Kindig, Mayor

ATTEST:

Pamela A. Buethe, CMC
City Clerk



CITY OF LA VISTA
PLANNING DIVISION

RECOMMENDATION REPORT

CASE NUMBER: 2011-PUD-01

FOR HEARING OF:

January 17, 2012

Report Prepared on: January 12, 2012

I. GENERAL INFORMATION

A. APPLICANT:

Bella La Vista Housing Partners, LP
416 East Third Street
Kansas City, MO 64106

B. PROPERTY OWNER:

Bella La Vista Housing Partners, LP
416 East Third Street
Kansas City, MO 64106

C. LOCATION: East of Chandler Road and 132nd Street

D. LEGAL DESCRIPTION: Lot 2, Bella La Vista

E. REQUESTED ACTION(S): Approval of Preliminary PUD for Lot 2, Bella La Vista

F. EXISTING ZONING AND LAND USE: R-3 – High Density Residential with the Gateway Corridor Overlay District; Vacant/Agricultural

G. PURPOSE OF REQUEST: Approval of Preliminary PUD for the development of a two-phase multi-family residential complex development, with an outlot identified as “future development”.

H. SIZE OF SITE: 36.19 Acres

II. BACKGROUND INFORMATION

A. EXISTING CONDITION OF SITE: Existing Lot 2, Bella Vista is rolling terrain, sloping downward towards the south.

B. GENERAL NEIGHBORHOOD/AREA LAND USES AND ZONING:

1. **North:** R-1 Single-Family Residential; Millard Highlands South
2. **East:** C-3 Highway Commercial/Office Park; Southport West
3. **South:** C-3 Highway Commercial/Office Park; Bella La Vista Lot 1
4. **West:** I-1 Light Industrial; Centech Business Park

C. RELEVANT CASE HISTORY:

1. An amendment to the Future Land Use Map of the Comprehensive Plan from a commercial to a high density residential land use was approved May 16, 2006.
2. Rezoning of the property from TA – Transitional Agriculture to R-3 – High Density Residential was approved June 6, 2006.
3. The minutes from the May 16, 2006 and June 6, 2006 Council meetings indicate the approval was for the future land use amendment and rezoning; the developer would be required to apply for approval of a detailed project layout prior to any construction.

D. APPLICABLE REGULATIONS:

1. Section 5.08 of the Zoning Regulations – R-3 High Density Residential
2. Section 5.15 of the Zoning Regulations – PUD Planned Unit Development
3. Section 5.17 of the Zoning Regulations – Gateway Corridor Overlay District

III. ANALYSIS

A. COMPREHENSIVE PLAN: The Future Land Use Plan of the Comprehensive Plan designates the area for high-density residential development. Additional relevant statements within the Comprehensive Plan include:

Community Goals, Policies, and Action Strategies

Housing Policies (Page 2.8)

2. Promote development of residential options for La Vista's residents of all income levels.
7. Actively access affordable housing programs available from local, state, and federal departments.

Housing Action Strategies (Pages 2.8-2.10)

9. Maximize local public and private resources, organizations and, if needed, create a community based entity, to assist in the promotion and/or development of affordable housing opportunities.
11. Support and utilize the State of Nebraska Consolidated Housing Plan to create affordable housing opportunities in La Vista.
18. Designate areas for high density residential development which have access to adequate infrastructure and public services.
19. All new residential development should be served by adequate city utilities and services.

Transportation Policies (Page 2.13)

1. Provide a transportation system throughout La Vista for the safe and efficient movement of people, goods, and services.

Transportation Action Strategies (Page 2.13)

4. New residential developments in La Vista will require appropriate streets, curbs, gutters and sidewalks needs.

B. OTHER PLANS: Not applicable.

C. TRAFFIC AND ACCESS:

1. The main access for the property will be the intersection of 132nd Street and Chandler Road. A Traffic Impact Study was performed (see attachment and comments under # 4, 5 and 6 below).
2. Phase 1 identifies the extension of 130th Street into the development. Staff did not require the developer to extend 130th Street, however permanent dead end streets are not allowed under the Subdivision Regulations. The developer had the option to construct a turn-around or work with the abutting property owners to vacate the right-of-way at the location of the dead end. Instead the developer is proposing to connect to 130th Street. Staff supports this approach.
3. Phase 2 of the project includes the extension of Highland Blvd. which was required by staff. This secondary access is necessary for adequate emergency access as the future phases develop and Highland Blvd. was constructed to function as a collector street. The section of Highland Blvd. extended into the development includes a chicane (a widened area around a center island) as a traffic calming device.
4. The Traffic Impact Study calls for a left turn lane on 132nd Street. A preliminary geometric plan for the reconfiguration of 132nd Street has been submitted and will be reviewed prior to final PUD plan submittal.
5. The Traffic Impact Study does not address the future traffic generation of the proposed Outlot A. The designation as an outlot will prevent building permits until the traffic impact of development on Outlot A, as well as other issues, are addressed when proposed development plans on this parcel are determined.
6. The Traffic Impact Study needs to be supplemented to include analysis of warrant 2 for 2011 and 2035 traffic volumes with full development at the intersection of 132nd and Chandler. Also, provide additional information on the target volumes used in the analysis of turn-lane volume checks in Section 3.3 of the Traffic Impact Study.
7. The intersection of 132nd and Giles Road is scheduled to be redesigned; a short-term solution is scheduled to be designed in

Plan was submitted 1/12/2012; further review is required in order to determine if any items have been resolved.

VI. PLANNING COMMISSION RECOMMENDATION:

Malmquist moved, seconded by Hewitt to recommend approval of the Preliminary Planned Unit Development for Lot 2 Bella La Vista, subject to satisfactory resolution of items 1-4 as noted in the staff recommendation with the addition of further discussion on item one with regard to the need of the connection of 130th Street.

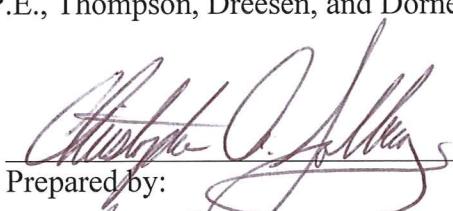
1. A connection at 130th Street is needed. Staff had discussed options with the developer if the street connection was not proposed however the Planning Commission expressed their belief that the connection is needed.
2. The traffic study indicated the need for a left-turn bay on 132nd Street which requires a preliminary geometric plan for the widening of 132nd Street. Any additional comments from Felsburg, Holt and Ullevig (traffic engineering review consultant) will need to be addressed in the final copy of the traffic study as well.
3. There is a significant excess of stalls in Phase 2 and consideration should be given to deleting stalls and increasing green space such as for play space.
4. The proposed vertical curve at Sta. 16+84 on Chandler Plaza needs to be lengthened to provide the minimum 175' sight distance per the Subdivision Regulations.

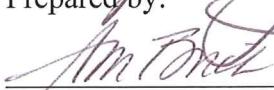
VII. ATTACHMENTS TO REPORT:

1. Vicinity Map
2. Preliminary PUD Site Plan Maps
3. Preliminary PUD Landscape Plan Map
4. Traffic Study
5. 132nd & Giles Road intersection design (short term solution)

VIII. COPIES OF REPORT SENT TO:

1. John Wygowski, Fauss-Wygo
2. Douglas S. Dreesen, P.E., Thompson, Dreesen, and Dorner
3. Public Upon Request



Prepared by:


Community Development Director

1-13-2012

Date

2012 and constructed in 2015 (see attached diagram). The timeframe for the construction of the long-term solution is listed for 2015-2020.

D. UTILITIES:

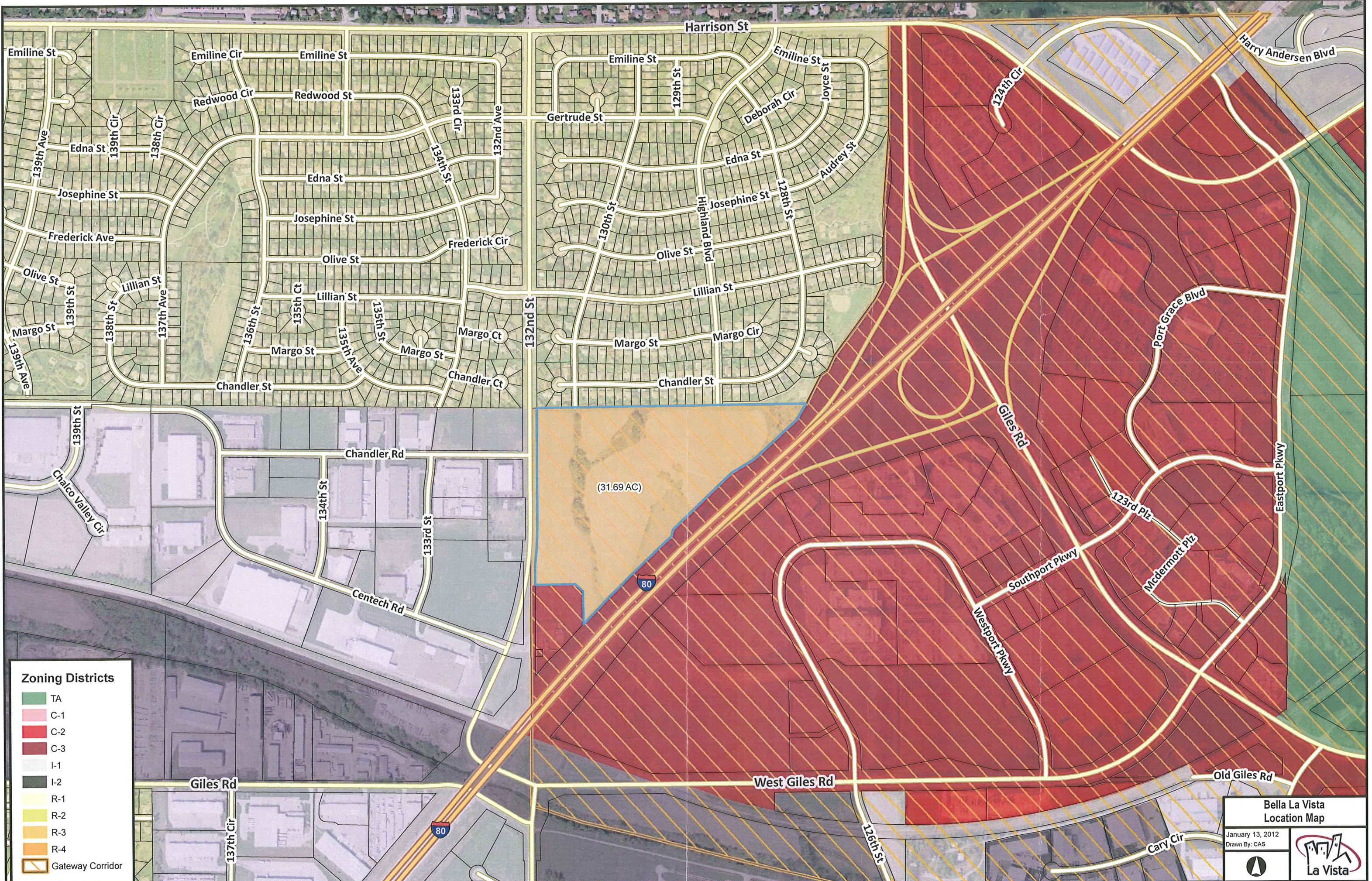
1. The property has access to water, sanitary sewer, gas, power and communication utilities along 132nd Street.
2. The developer will be connecting to an outfall sewer which was constructed by SID # 104, Millard Highlands South.

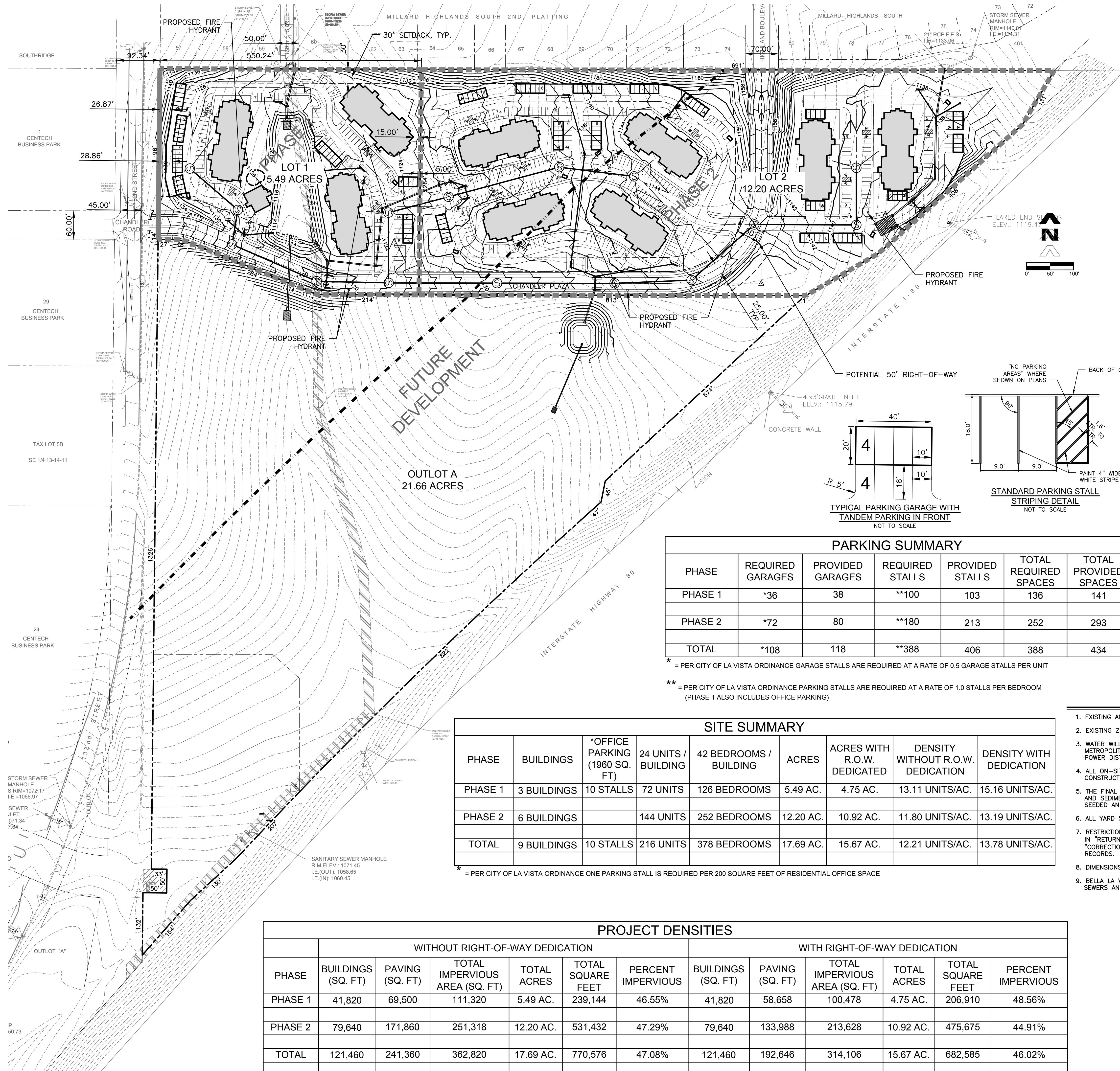
IV. REVIEW COMMENTS:

1. If the Preliminary PUD plan is approved, the applicant will need to apply for final PUD plan approval and overlay district adoption, a Conditional Use Permit, a Replat and approval of a Subdivision Agreement.
2. The proposed building design is currently under review. Design review will need to be finalized as part of the Conditional Use Permit.. The developer has been directed to evaluate the Cimarron Terrace multi-family development as an example of acceptable building design.
3. The required minimum setback of 30' has been met along the north property line however Building 2 in Phase 1 abuts the setback line. A preliminary landscape plan has been submitted and shows "existing tree mass" to be preserved in several areas and the planning of conifers in other areas.
4. Phase 1 contains three buildings with a total of 72 units, 38 garages (36 required) and 103 surface stalls (100 required). Phase 2 contains six buildings with a total of 144 units, 80 garages (72 required) and 304 surface stalls (180 required). Staff believes the parking is excessive and should be replaced by green space or recreation amenities for the residents.
5. The preliminary PUD plan identifies the balance of the property (approximately 21 acres) as Outlot A "future development". Staff recommended this approach since a development plan for this area is undetermined at this time. According to the Subdivision Regulations, outlots are not buildable lots which will require submittal of a replat and detailed plans prior to any development.

V. STAFF RECOMMENDATION:

Approval of the Preliminary PUD for Lot 2, Bella La Vista, as the request is in general conformity with the provisions of the La Vista Comprehensive Plan, does not adversely effect the development of neighboring areas, and meets the requirements of the La Vista Zoning Ordinance, subject to the resolution of the items identified by staff and the City Engineer. **A revised Preliminary PUD**





BELLA LA VISTA REPLAT 1

BEING A REPLATTING OF LOT 2, BELLA LA VISTA,
A SUBDIVISION IN SARPY COUNTY, NEBRASKA

TD2

engineering & surveying

thompson, dreessen & dorner, inc
10836 Old Mill Rd
Omaha, NE 68154
p.402.330.8860 www.td2co.com

Project Name

Bella La Vista

Apartments

Client Name

Garrison Development

A circular vicinity map centered on a project site. The map shows a grid of streets including Harrison Street, 144th Street, 132nd Street, Giles Road, and West Papillion Creek. A diagonal line from the top right to the bottom left divides the map. A hatched area on the left side of this line is labeled 'I-80'. A north arrow is located at the bottom right.

SUBDIVIDER

BELLA LAVISTA HOUSING PARTNERS, LP
416 EAST 3rd STREET
KANSAS CITY, MISSOURI 64106

ENGINEER

THOMPSON, DREESSEN & DORNER, INC.
10836 OLD MILL ROAD
OMAHA, NEBRASKA 68154

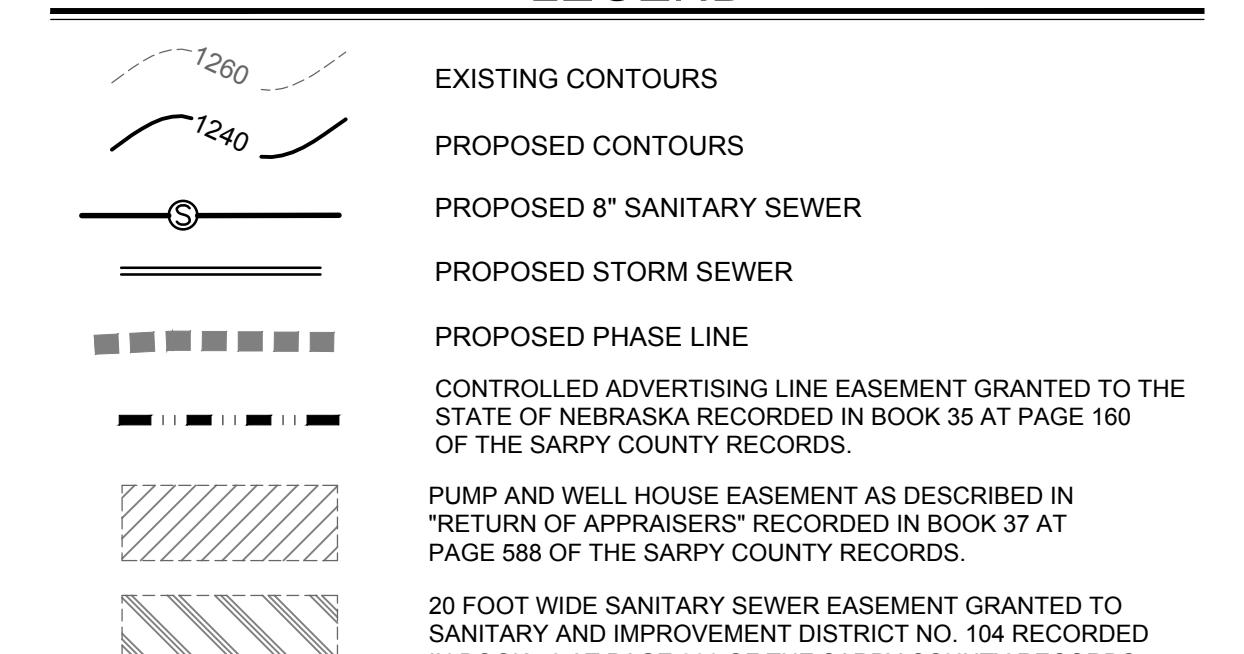
LEGAL DESCRIPTION

LOT 2, BELLA LA VISTA, A SUBDIVISION IN
SARPY COUNTY, NEBRASKA.

NOTES

1. EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 2 FOOT INTERVALS AND ARE BASED ON USGS DATUM.
2. EXISTING ZONING IS R-3. PROPOSED ZONING IS R-3.
3. WATER WILL BE PROVIDED BY METROPOLITAN UTILITIES DISTRICT. GAS WILL BE PROVIDED BY METROPOLITAN UTILITIES DISTRICT OR BLACK HILLS ENERGY. POWER WILL PROVIDED BY OMAHA PUBLIC POWER DISTRICT.
4. ALL ON-SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN PHASES TO COINCIDE WITH BUILDING CONSTRUCTION.
5. THE FINAL GRADING PLAN WILL BE PREPARED IN ACCORDANCE WITH THE CITY OF LA VISTA SOIL EROSION AND SEDIMENT CONTROL MANUAL. ALL PHASE AREAS NOT UNDER CONSTRUCTION SHALL BE PERMANENTLY SEEDED AND MAINTAINED UNTIL SUCH TIME CONSTRUCTION OF THE PHASE BEGINS.
6. ALL YARD SETBACKS SHALL ADHERE TO R-3 ZONING DISTRICT REGULATIONS.
7. RESTRICTION AGAINST DIRECT ACCESS TO AND FROM SUBJECT PROPERTY ONTO INTERSTATE 80 DESCRIBED IN "RETURN OF APPRAISERS" RECORDED IN MISC. BOOK 22 AT PAGE 197 AND CORRECTED BY "CORRECTION AGREEMENT" RECORDED IN MISC. BOOK 53 AT PAGE 749 BOTH OF THE SARPY COUNTY RECORDS.
8. DIMENSIONS SHOWN IN PARENTHESIS PERTAIN TO EASEMENTS.
9. BELLA LA VISTA HOUSE PARTNERS, LP WILL PROVIDE MAINTENANCE OF COMMON AREA FACILITIES SUCH AS SEWERS AND PRIVATE ROADWAY.

| EGFND



Drawn By: RTM Reviewed By: DSD
Job No.: 1610-136 Date: 11-01-11

Preliminary Planned Unit Development Site Plan

Sheet Number

C1.0

2011

TRAFFIC IMPACT STUDY

La Vista, Nebraska

Bella La Vista Apartments
132nd Street & Chandler Road

Garrison Community Development, LLC
416 E Third Street
Kansas City, MO 64106
November 2011





November 11, 2011

Alfred Benesch & Company
14748 West Center Road, Suite 200
Omaha, NE 68144
www.benesch.com
P 402-333-5792
F 402-333-2248

Mr. Garrison Hassenflu
Garrison Community Development, LLC
416 E. 3rd Street
Kansas City, MO 64106

**RE: Traffic Impact Study
Bella LaVista Development
LaVista, NE**

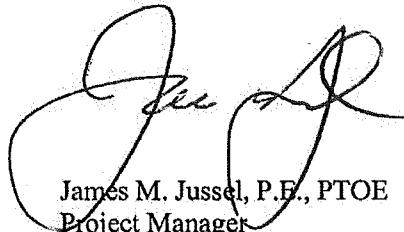
Mr. Hassenflu:

Per your request, Alfred Benesch & Company has prepared this traffic impact study for the proposed Bella LaVista development located in LaVista, NE. This study provides a summary of the traffic engineering procedures and recommendations.

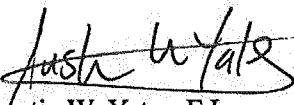
We appreciate the opportunity to be of service to you this very important project. Please feel free to contact us should you have any questions.

Sincerely,

ALFRED BENESCH & COMPANY



James M. Jussel, P.E., PTOE
Project Manager


Austin W. Yates, E.I.
Designer

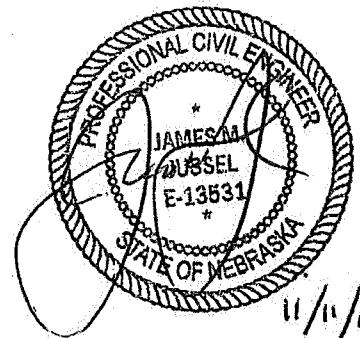


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1.0 INTRODUCTION

1.1 Project Description

This report summarizes the results of the traffic analyses for the proposed Bella La Vista Apartments near 132nd Street & Chandler Road in La Vista, Nebraska. **Figure 1** displays the proposed area of development and the intersections that were studied for this report. The proposed layout of the site was provided by TD2, the site engineer, and is displayed in **Figure 2**.

1.2 Study Objectives and Methodology

The purpose of this traffic study was to evaluate the anticipated traffic impacts that the proposed development will have on traffic operations of the existing street network. The evaluation included an inventory of existing traffic conditions, existing with full development, and future year (2035) with full development.

1.3 Land Uses

1.3.1 Existing Uses

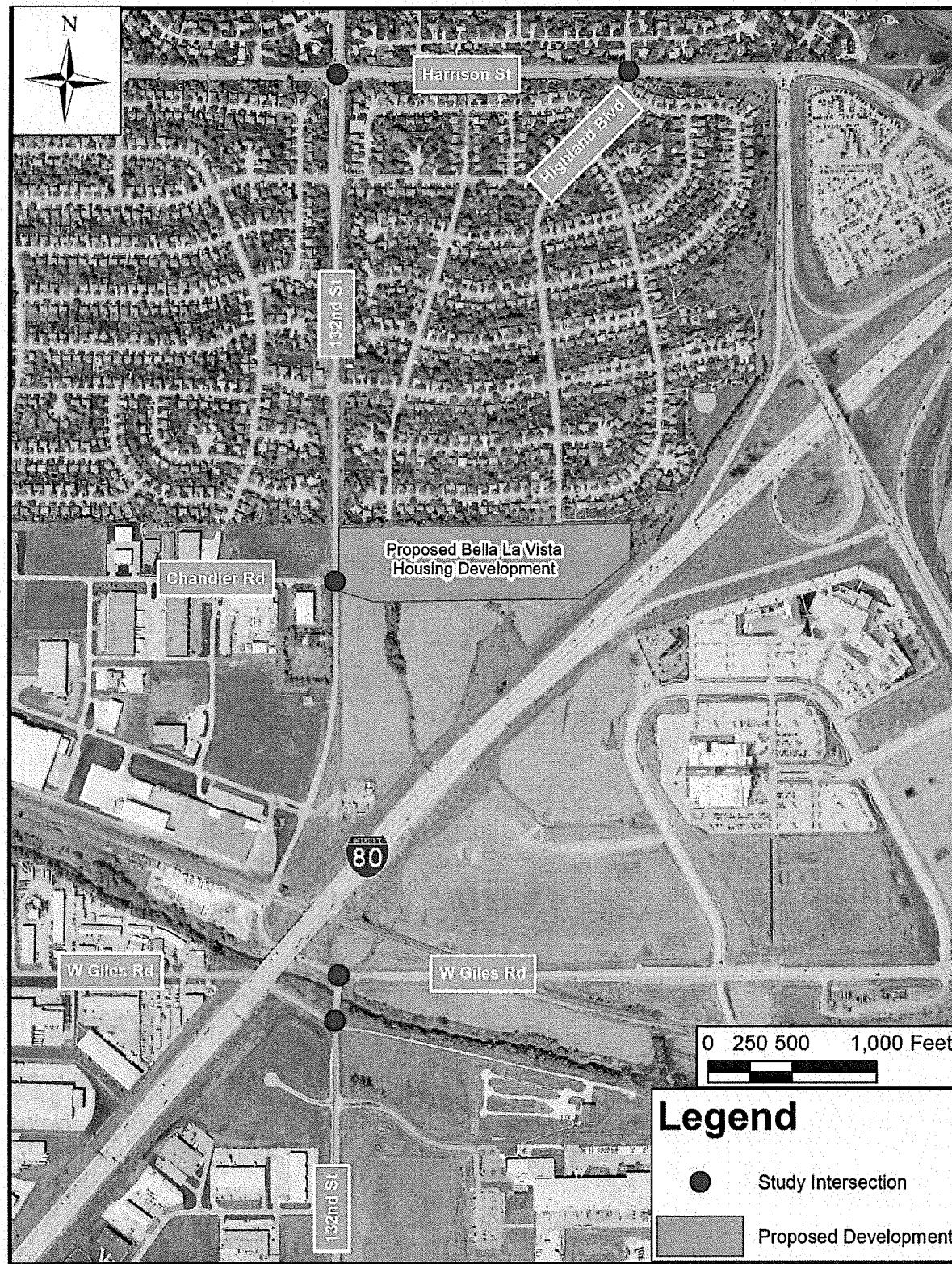
The existing parcel is a vacant lot in a light industrial area.

1.3.2 Future/Proposed Uses

The proposed development is 216 apartments, with a mix of one-bedroom, two-bedroom, and three-bedroom apartments. The development is proposed to be constructed in three phases: Phase 1 is 72 units, Phase 2 is 96 units, and Phase 3 is 48 units.

Bella La Vista Apartments Traffic Impact Study
November 2011

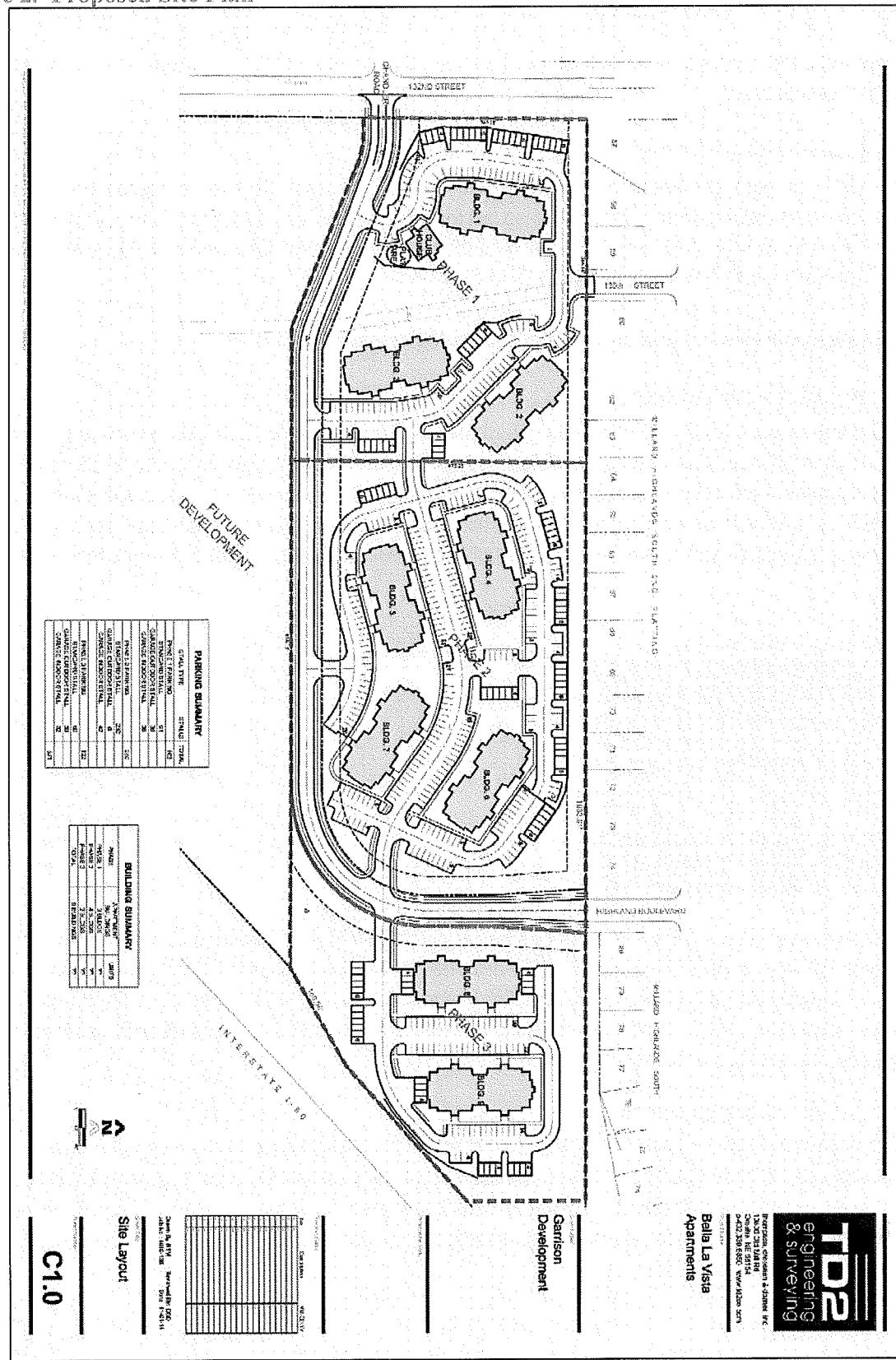
Figure 1. Site Location and Study Area



Bella La Vista Apartments Traffic Impact Study

November 2011

Figure 2. Proposed Site Plan



2.0 EXISTING CONDITIONS

In order to determine the impact of the proposed development, the existing traffic operations without the proposed expansion were benchmarked.

2.1 Existing Traffic Volumes

Alfred Benesch & Company (Benesch) conducted a field survey in August 2011 to obtain the current roadway geometrics at the study intersections. Benesch also performed the AM and PM peak hour turning movement counts from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM at the study intersections; the peak hours were identified as 7:00 AM to 8:00 AM and 4:45 PM to 5:45 PM.

Figure 3 and **Figure 4** display the existing AM and PM traffic volumes.

2.2 Existing Capacity Analyses

Once the traffic volumes and traffic control were determined, a level of service (LOS) analysis was performed for year 2011 Existing AM and PM peak hour conditions using Synchro Studio 7 software. The levels of service for the study intersections were determined as described in the *Highway Capacity Manual, 2000 Edition* (HCM). Level of service is a system of ranking intersection performance using average stop delay per vehicle as the evaluation criteria (expressed as seconds of delay per vehicle, or sec/veh). The HCM LOS rankings are displayed in **Table 1**.

Table 1. HCM Level of Service

LOS	Average Delay [sec/veh]	
	Signalized	Unsignalized
A	≤10	≤10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

The following sections discuss the results of the LOS analysis for each of the Existing scenarios. For this report, acceptable levels of service were considered LOS D or better for intersections and LOS E or better for individual movements. The signal timings (provided by the City of Omaha) and the HCM reports for the intersections are included in the **Appendix**. The study intersections are discussed in detail below. See **Figure 5** and **Figure 6** for a graphical display of the results of the year 2011 Existing LOS analysis.

2.2.1 132nd St & Harrison St

The signalized capacity analysis indicates that the intersection is currently operating with an overall intersection LOS C in the AM. The individual turning movements are operating with LOS D or better except the southbound left turn movement, which currently operates at LOS F during the AM peak period. During the PM peak period, the intersection operates at LOS C and the individual movements operate at LOS D or better.

2.2.2 Highland Blvd & Harrison St

The results of the unsignalized capacity analyses reveal the northbound approach and the southbound left turn operate at unsatisfactory levels of service in the AM and PM peak hours. Please note, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak commuter periods.

2.2.3 132nd St & Chandler Rd

The unsignalized capacity analysis indicate the individual turning movements operate at LOS B or better for both the AM and PM peak periods.

2.2.4 132nd St & W. Giles Rd (East)

The unsignalized capacity analyses show that the individual movements operate at LOS D or better during the AM and PM peak periods except the westbound approach, which currently operates at LOS F during both AM and PM peak periods. As noted above, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak commuter periods. Also, this intersection was previously studied by Schemmer & Associates and is currently in design.

2.2.5 132nd St & W. Giles Rd (West)

According to the unsignalized capacity analyses, the individual movements operate at LOS A during the AM and PM peak periods except the eastbound approach, which currently operates at LOS F during both AM and PM peak periods. As mentioned previously, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak commuter periods. Additionally, this intersection was previously studied by Schemmer & Associates and is currently in design.

2.3 Existing Queuing Analyses

A queue length analysis was performed for year 2011 Existing scenarios. The 95th percentile queue length from Synchro 7 was used to determine the anticipated queue lengths; the queue lengths are rounded up to the nearest 25 feet. The results are displayed in **Figure 5** and **Figure 6**. The queuing analysis reports can be found in the **Appendix**.

2.4 Existing Traffic Signal Warrant Analyses

The *Manual on Uniform Traffic Control Devices, 2009 Edition*, (MUTCD) was used to determine if a traffic signal would be warranted at 132nd Street & Chandler Road with existing traffic volumes. For this study, the peak hour warrant, Warrant 3, was utilized because the traffic volume data is limited to peak hour counts. The peak hour warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. Furthermore, if Warrant 3 is met, it is usually a good predictor that the eight-hour and four-hour volume warrants, Warrants 1 and 2, may also be met. The warrant analysis worksheets are included in the **Appendix**.

When compared to the Warrant 3 thresholds, traffic volumes at this intersection are not anticipated to satisfy warrant criteria for signalization in year 2011. As a result, the intersection was analyzed as unsignalized for the year 2011 Existing analysis scenarios.

3.0 PROPOSED CONDITIONS

The proposed development will generate new trips on the nearby roadway network. The number of new trips is based on the time of day, land use of the development, and the size of the development. Determining these trips is referred to as trip generation and is discussed in the following sections. Once the trip generation is determined, the new trips are added to the existing conditions. The following sections describe the trip generation and trip distribution process.

3.1 Trip Generation and Trip Distribution

A trip generation analysis was performed to determine the number of trips generated by the proposed apartments using trip rates documented in the *Institute of Transportation Engineers (ITE) Trip Generation Manual – 8th Edition*. The expected trip generation of the proposed development is shown in **Table 2**.

Table 2. Trip Generation

ITE Code	Land Use	Quantity	Unit	ADT	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
220	Apartment	216	DU	1,500	22	88	110	89	48	136

Please note, there is only one land use type for this development, therefore there was no internal trip reduction. Furthermore, due to the residential nature of the site, no passer-by reduction factors were applied.

Once the trips generated by the proposed development were determined, the trips were distributed throughout the study area network. Trip distribution percentages were developed using existing and future traffic volumes along with engineering judgment. These percentages were used to determine the origin and destination of trips generated by the development. **Figure 7** and **Figure 8** display the site-generated traffic volumes added to the 2011 Existing traffic volumes.

3.2 Future Traffic Volumes

The 2035 Future traffic volumes were developed by applying a 2% per year growth rate to the 2011 Existing traffic volumes. The growth rate was based on historical trends. **Figure 11** and **Figure 12** display the site-generated traffic volumes added to the 2035 traffic volumes.

3.3 Proposed Turn Lane Warrant Checks

After the proposed traffic volumes were developed, 132nd Street & Chandler Road was examined to determine whether or not conditions were satisfied for the installation of left turn lanes. The guidelines are from *A Policy on Geometric Design of Highways and Streets, 2004 Edition*, published by the American Association of State Highway and Transportation Officials (AASHTO), as well as guidelines from National Cooperative Highway Research Program (NCHRP) *Synthesis of Highway Practice 255: Left-Turn Treatments at Intersections*. The methodologies, which account for the opposing vehicular volume, the advancing vehicular volume, and the percentage of left turns, is detailed in the **Appendix**.

The year 2011 Existing plus Full Development turning movement volumes were compared to the turn lane guidelines and neither the northbound nor the southbound left turn movements satisfy the criteria for consideration of a turn lane.

However, when the year 2035 Future plus Full Development volumes are compared to the turn lane guidelines, the southbound left turn movement is anticipated to satisfy criteria for a left-turn lane. As a result, a southbound left turn lane is recommended. Furthermore, a northbound left turn lane is recommended in order to align the northbound and southbound approaches as well as to promote safety by matching driver expectations of opposing lane configurations. The turn lanes should be a minimum of 150 feet long.

Please note, the turn lane warrant checks indicate that turn lanes are anticipated to be needed by the future year. While not necessarily needed on the opening day of the first phase of the development, the turn lanes should be installed as part of Phase 2 or Phase 3 construction.

3.4 Proposed Traffic Signal Warrant Analyses

After the proposed traffic volumes and lane configurations were developed, the 132nd Street & Chandler Road analyzed using the peak hour warrant (Warrant 3) to determine whether or not it is anticipated to satisfy the conditions for the installation of a traffic signal. The warrant analysis worksheets are included in the **Appendix**.

3.4.1 Year 2011 Existing plus Full Development

The intersection at 132nd Street & Chandler Road is not anticipated to satisfy the MUTCD Warrant 3 (Peak Hour) criteria for signalization with the existing plus development traffic volumes. As a result, the intersection remained unsignalized for the year 2011 Existing plus Full Development analysis scenarios.

3.4.2 Year 2035 Future plus Full Development

The intersection at 132nd Street & Chandler Road is anticipated to satisfy MUTCD Warrant 3 (Peak Hour) warrant criteria with the future plus development traffic volumes. Consequently, it was analyzed as signalized for the year 2035 Future plus Full Development analysis scenarios. Furthermore, traffic signal warrants will need to be monitored to determine when the intersection is expected to be signalized.

3.5 Year 2011 Existing plus Full Development Capacity Analyses

Once proposed traffic volumes and traffic control were determined, capacity analyses were performed to measure the proposed traffic operations at the study intersections. The following sections discuss the results of the LOS analysis for each of the scenarios. The HCM reports for the intersections are included in the **Appendix**. **Figure 9** and **Figure 10** display the results of the 2011 Existing plus Full Development LOS analysis.

3.5.1 132nd St & Harrison St

The signalized capacity analysis indicates that the intersection is anticipated to operate with an overall intersection LOS D in the AM. The individual turning movements are anticipated to operate at LOS D or better. During the PM peak period, the intersection is anticipated to operate at LOS C and the individual movements are anticipated to operate at LOS D or better.

3.5.2 Highland Blvd & Harrison St

The results of the unsignalized capacity analyses reveal the northbound approach and the southbound left turn operate at unsatisfactory levels of service in the AM and PM peak hours. As mentioned, LOS F is

not uncommon for stop-controlled approaches to unsignalized intersections during the peak commuter periods.

3.5.3 132nd St & Chandler Rd

The unsignalized capacity analysis indicates that the individual turning movements are anticipated to operate at LOS C or better for both the AM and PM peak periods.

3.5.4 132nd St & W. Giles Rd (East)

The unsignalized capacity analysis indicates that the individual movements are anticipated to operate at LOS E or better during the AM and PM peak periods except the westbound approach, which is anticipated to operate at LOS F during both AM and PM peak periods. As mentioned previously, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak volume conditions.

3.5.5 132nd St & W. Giles Rd (West)

The unsignalized capacity analysis indicates that the individual movements are anticipated to operate at LOS A during the AM and PM peak periods except the eastbound approach, which is anticipated to operate at LOS F during both AM and PM peak periods. Again, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak periods.

3.6 Year 2035 Future plus Full Development Capacity Analyses

The following sections discuss the results of the LOS analysis for each of the scenarios. The HCM reports for the intersections are included in the **Appendix**. **Figure 13** and **Figure 14** display the results of the 2035 Future plus Full Development LOS analysis.

3.6.1 132nd St & Harrison St

The signalized capacity analysis indicates that the intersection is anticipated to operate with overall intersection LOS F in both the AM and PM peak periods. The individual turning movements are anticipated to operate with LOS E or better except the following movements:

- Eastbound thru/right movement is anticipated to operate at LOS F during the AM peak period.
- Westbound left turn movement is anticipated to operate at LOS F during both the AM and PM peak period.
- Westbound thru movement is anticipated to operate at LOS F during the PM peak period.
- Northbound left turn movement is anticipated to operate at LOS F during the AM peak period.
- Southbound left turn movement is anticipated to operate at LOS F during both the AM and PM peak period.

The poor levels of service anticipated at this intersection are not a direct result of the Bella La Vista development but are due to growth in the surrounding area.

3.6.2 Highland Blvd & Harrison St

The results of the unsignalized capacity analyses reveal several deficiencies. In the AM peak hour, the northbound approaches, the southbound left turn, and the westbound left turn are expected to experience undesirable delay. In the PM peak hour, all left turn movements are expected to experience unsatisfactory levels of service., as well as the southbound thru/right, which is expected to function at LOS E. Again,

LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak commuter periods.

3.6.3 132nd St & Chandler Rd

Since this intersection met Warrant 3 criteria with the future volumes, it was analyzed as signalized for the year 2035 Future plus Full Development scenarios. The signalized capacity analysis indicates that the intersection is anticipated to operate with overall intersection LOS B in the AM and PM peak periods. The individual turning movements are anticipated to operate at LOS B or better during both the AM and PM peak periods.

3.6.4 132nd St & W. Giles Rd (East)

The unsignalized capacity analysis indicates that the northbound free movement is anticipated to operate at LOS A during the AM and PM peak periods, however, the eastbound and westbound approaches are anticipated to operate at LOS F during both AM and PM peak periods. As mentioned previously, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak periods.

3.6.5 132nd St & W. Giles Rd (West)

The unsignalized capacity analysis indicates that the northbound and southbound free movements are anticipated to operate at LOS A during the AM and PM peak periods, however, the eastbound approach is anticipated to operate at LOS F during both AM and PM peak periods. As mentioned previously, LOS F is not uncommon for stop-controlled approaches to unsignalized intersections during the peak commuter periods.

It should be noted, the results of the proposed capacity analyses indicate that several movements are anticipated to operate at unacceptable levels of service. The two Giles Road intersections have been previously studied by Schemmer & Associates and the reconfiguration is currently being designed. Furthermore, the intersection at Highland Boulevard & Harrison Street will most likely remain unsignalized due to its proximity to the signals at Giles Road (1,000 feet away) and Harrison Street (1,600 feet away).

3.7 Proposed Queuing Analyses

A queue length analysis was performed for the Full Development scenarios using the methodology described in **Section 2.3**. The results are displayed in **Figure 9**, **Figure 10**, **Figure 13**, and **Figure 14**. The queuing analyses can be found in the **Appendix**.

4.0 RECOMMENDATIONS

The results of the traffic impact study indicate the proposed Bella La Vista Apartment development is not anticipated to have a significant adverse effect on the operations of the AM and PM peak hour of 132nd Street. The following sections discuss some of the analysis results and the subsequent recommendations.

4.1 Turn Lane Additions

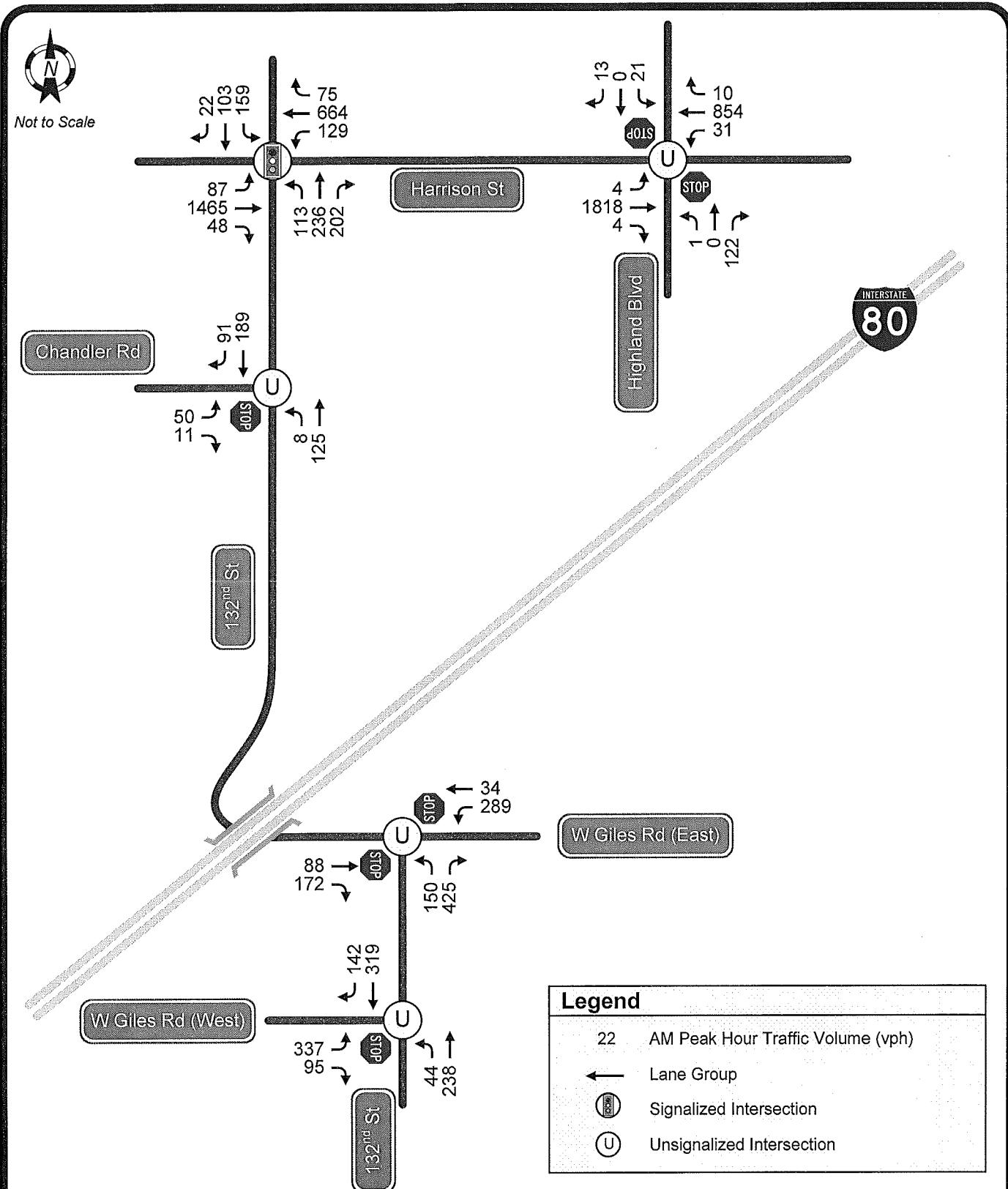
Northbound and southbound left turn lanes should be installed at 132nd Street & Chandler Road as part of the later phases of construction of the development. The southbound left turn movement is expected to meet AASHTO guidelines for an exclusive turn lane and the northbound left turn lane should be constructed to match up with the opposing approach.

4.2 Traffic Signal Additions

Consideration for a traffic signal at 132nd Street & Chandler Road was determined using the MUTCD peak hour warrant (Warrant 3). This intersection meets warrant criteria under the 2035 Future plus Full Development scenarios. Although the year 2011 scenarios do not meet warrant criteria, the signal may become warranted as growth occurs in the area. Therefore, it is recommended that traffic volumes at 132nd Street & Chandler Road be monitored and when traffic volumes satisfy warrant thresholds, a traffic signal should be considered.

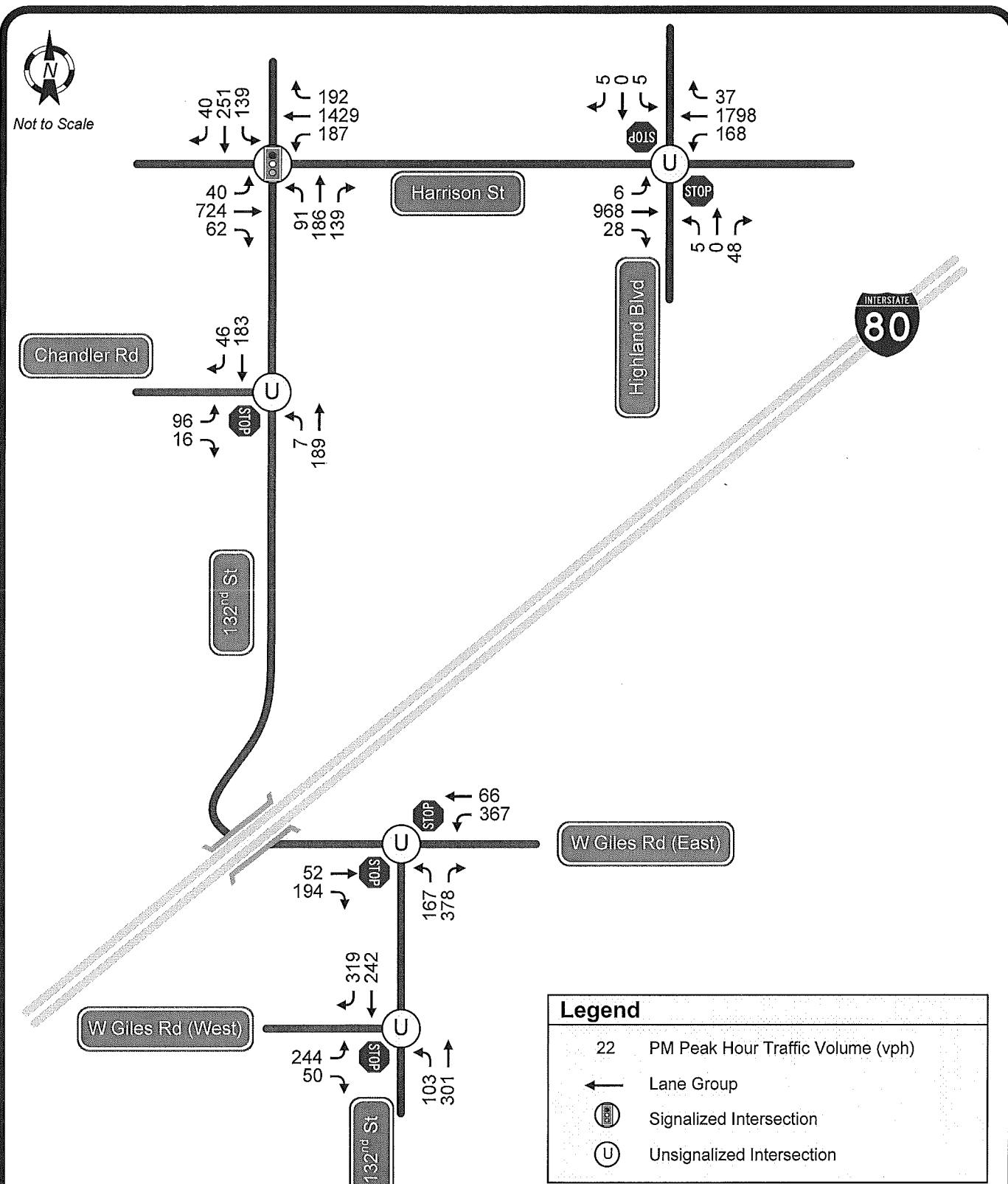
4.3 Future Roadway System Improvements

This study did not include any improvements at the 132nd Street & Harrison Street because no improvements are included in the MAPA LRTP. The deficiencies along Harrison Street are not a direct result of this development but are due to projected growth in the surrounding area. Both intersections at 132nd Street and West Giles Road will be improved as part of a current design project.



Traffic Impact Study
Bella La Vista Apartments
La Vista, NE

Year 2011 Existing
AM Peak Hour Traffic Volumes
Figure 3



Traffic Impact Study
Bella La Vista Apartments
La Vista, NE

Year 2011 Existing
PM Peak Hour Traffic Volumes
Figure 4

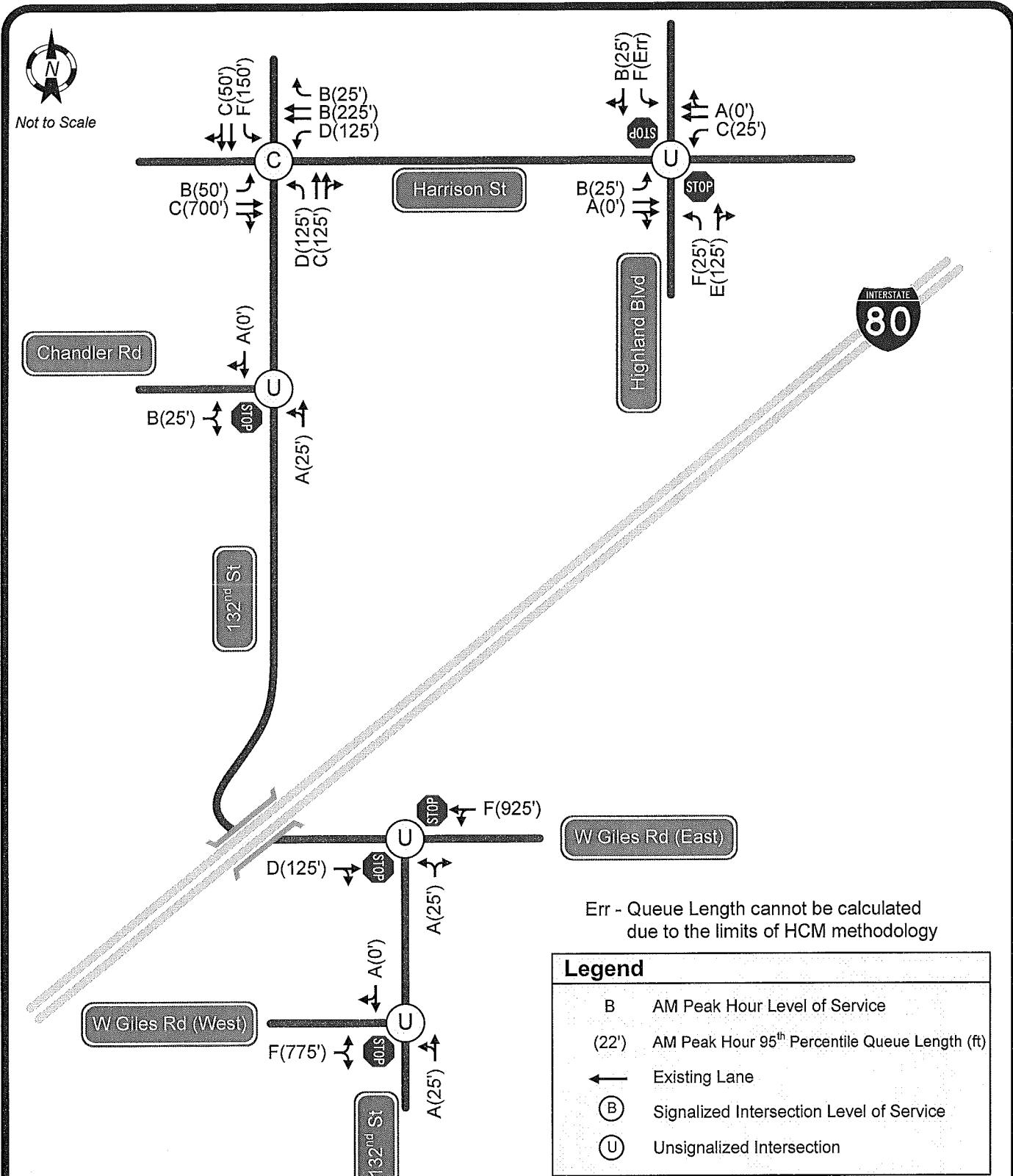
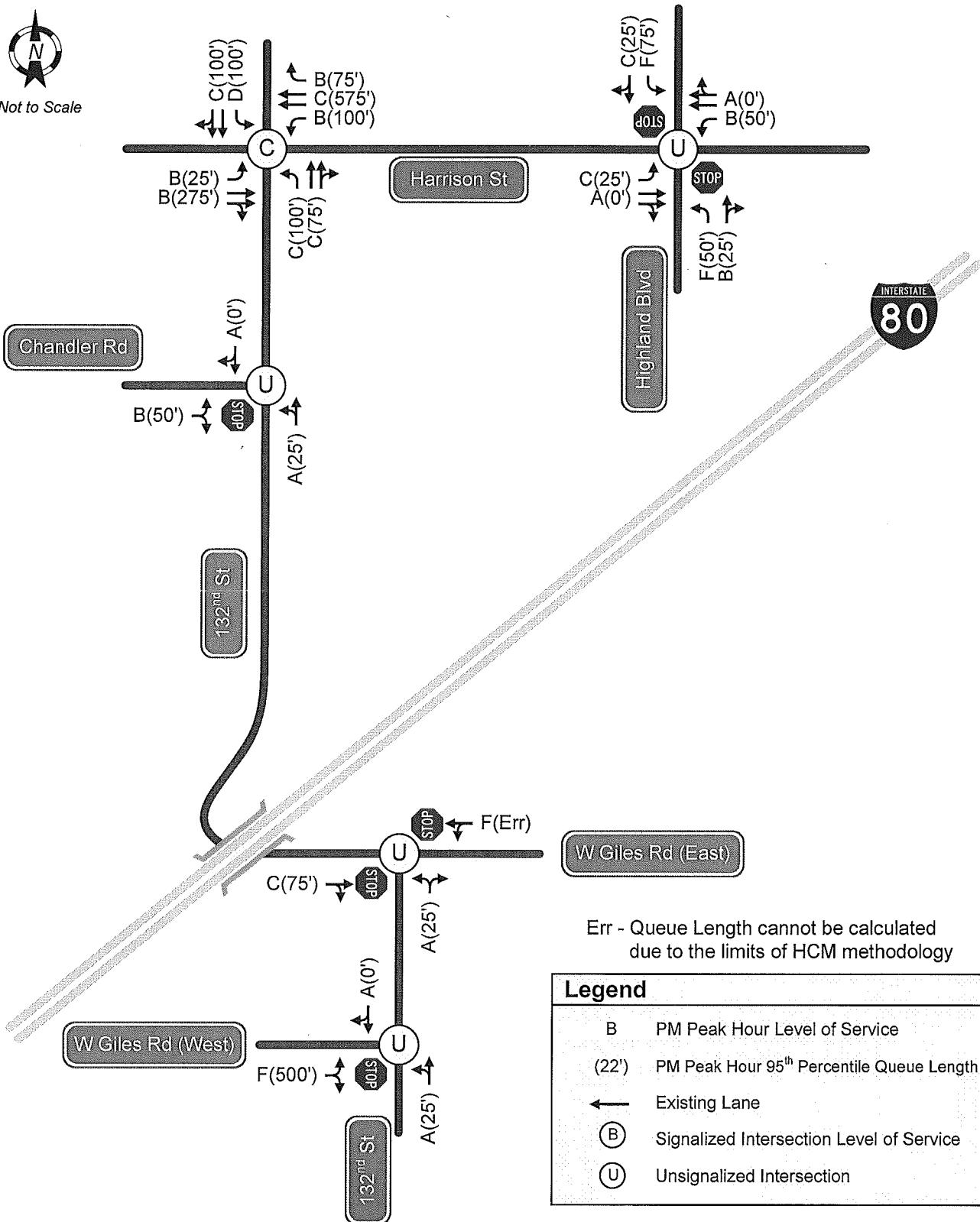


Figure 5



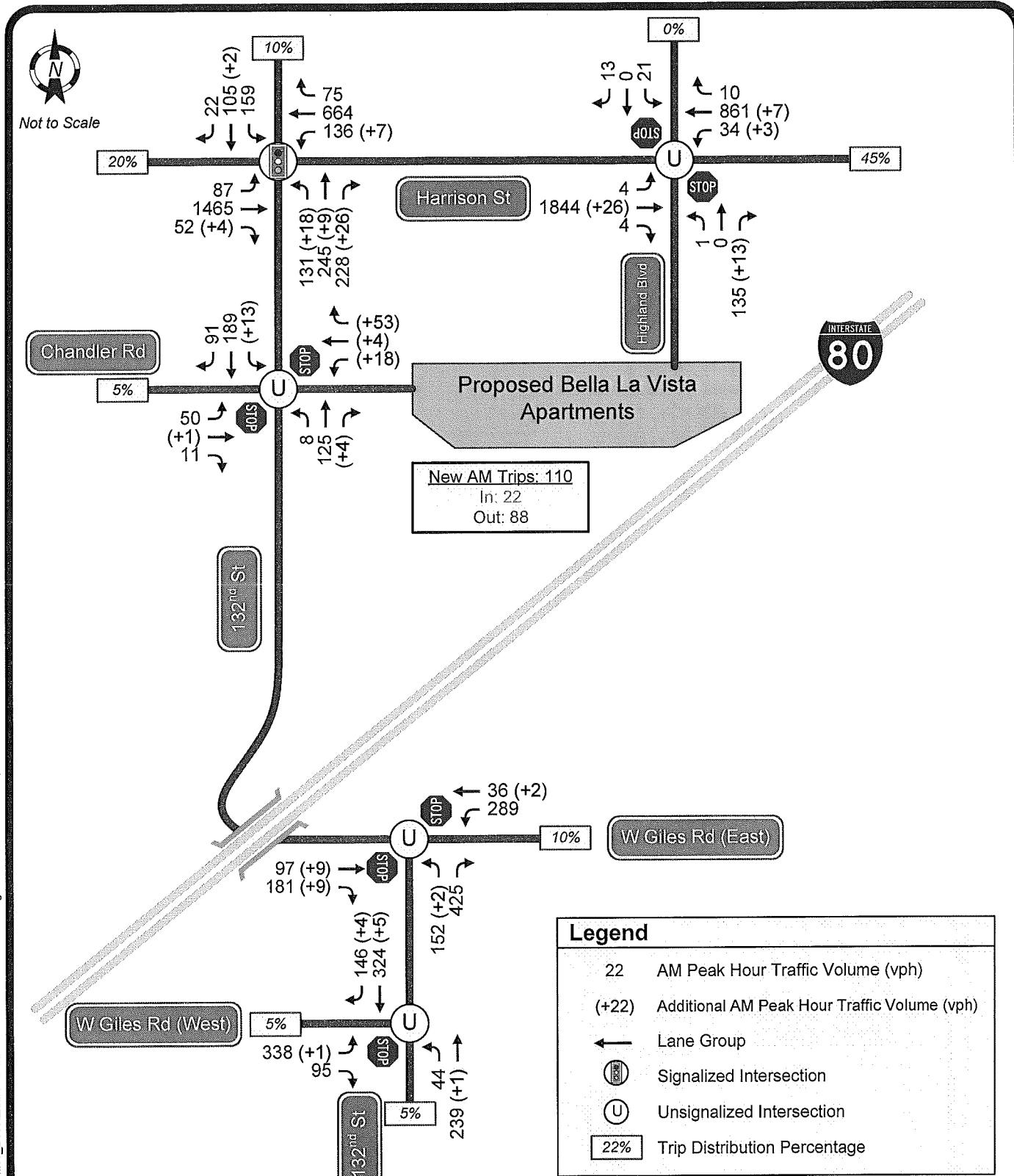
Not to Scale



Err - Queue Length cannot be calculated
due to the limits of HCM methodology

Traffic Impact Study
Bella La Vista Apartments
La Vista, NE

Year 2011 Existing
PM Peak Hour Level of Service and Queue Length
Figure 6



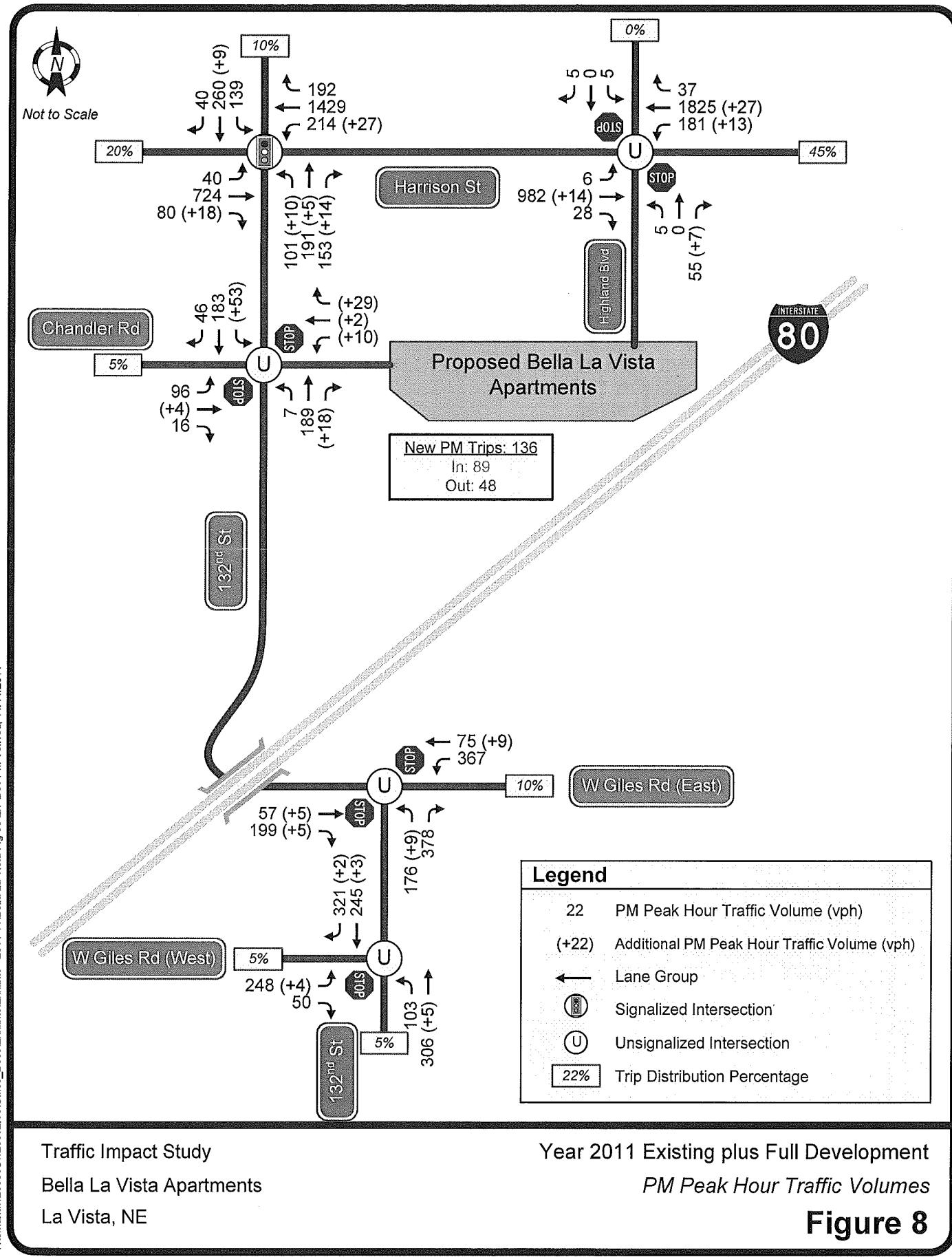
Traffic Impact Study

Bella La Vista Apartments

La Vista, NE

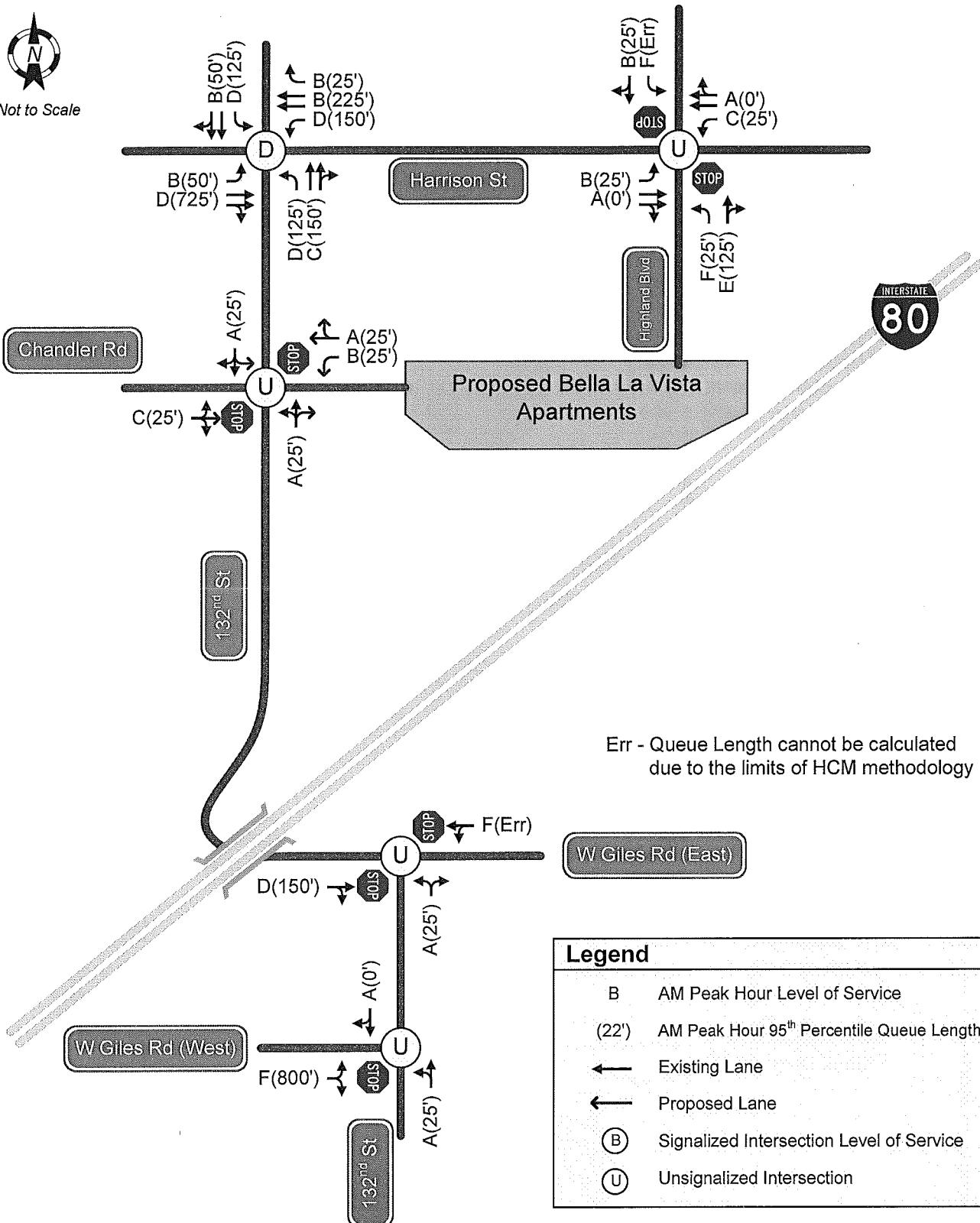
Year 2011 Existing plus Full Development
AM Peak Hour Traffic Volumes

Figure 7





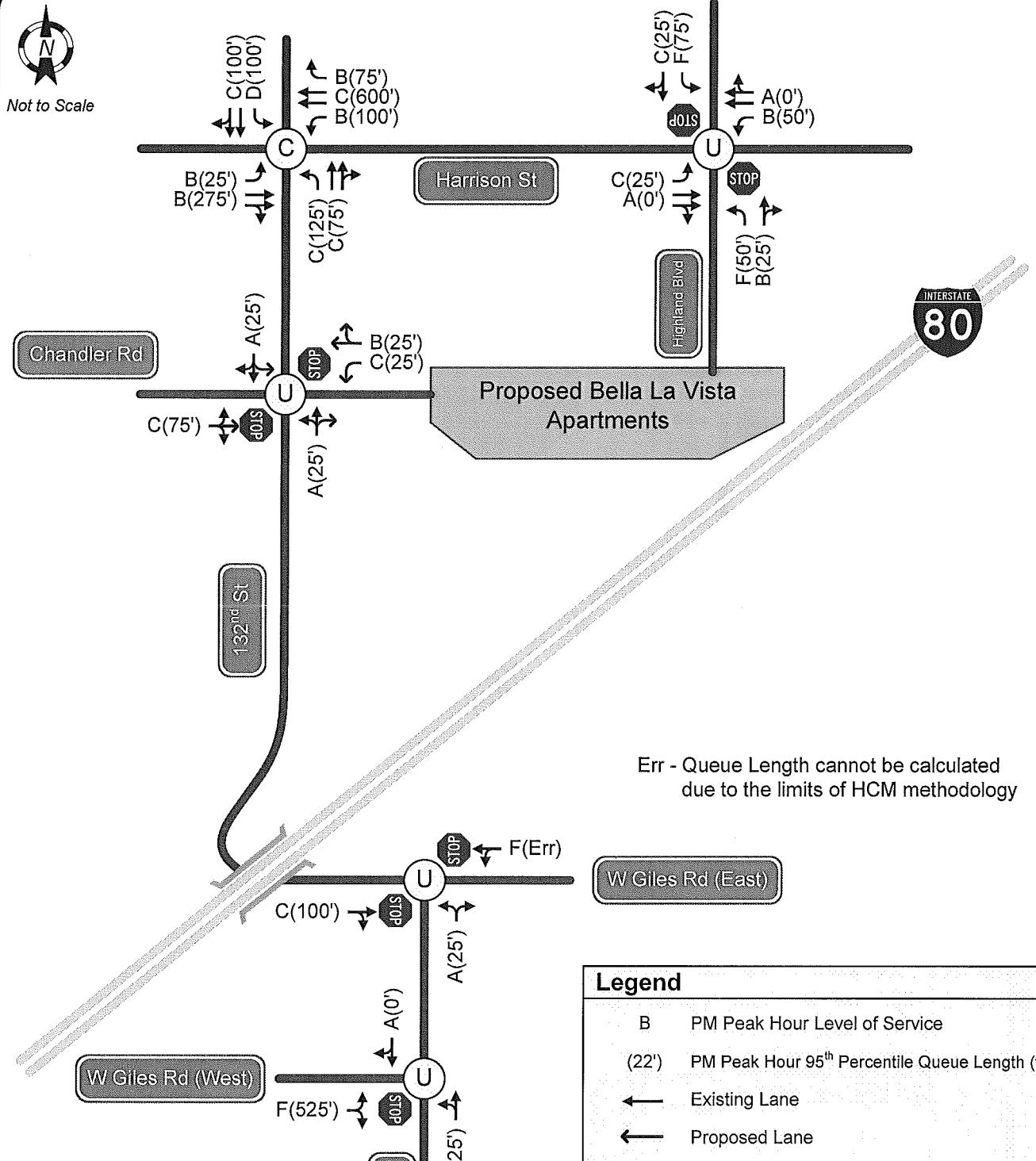
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Traffic Impact Study
Bella La Vista Apartments
La Vista, NE

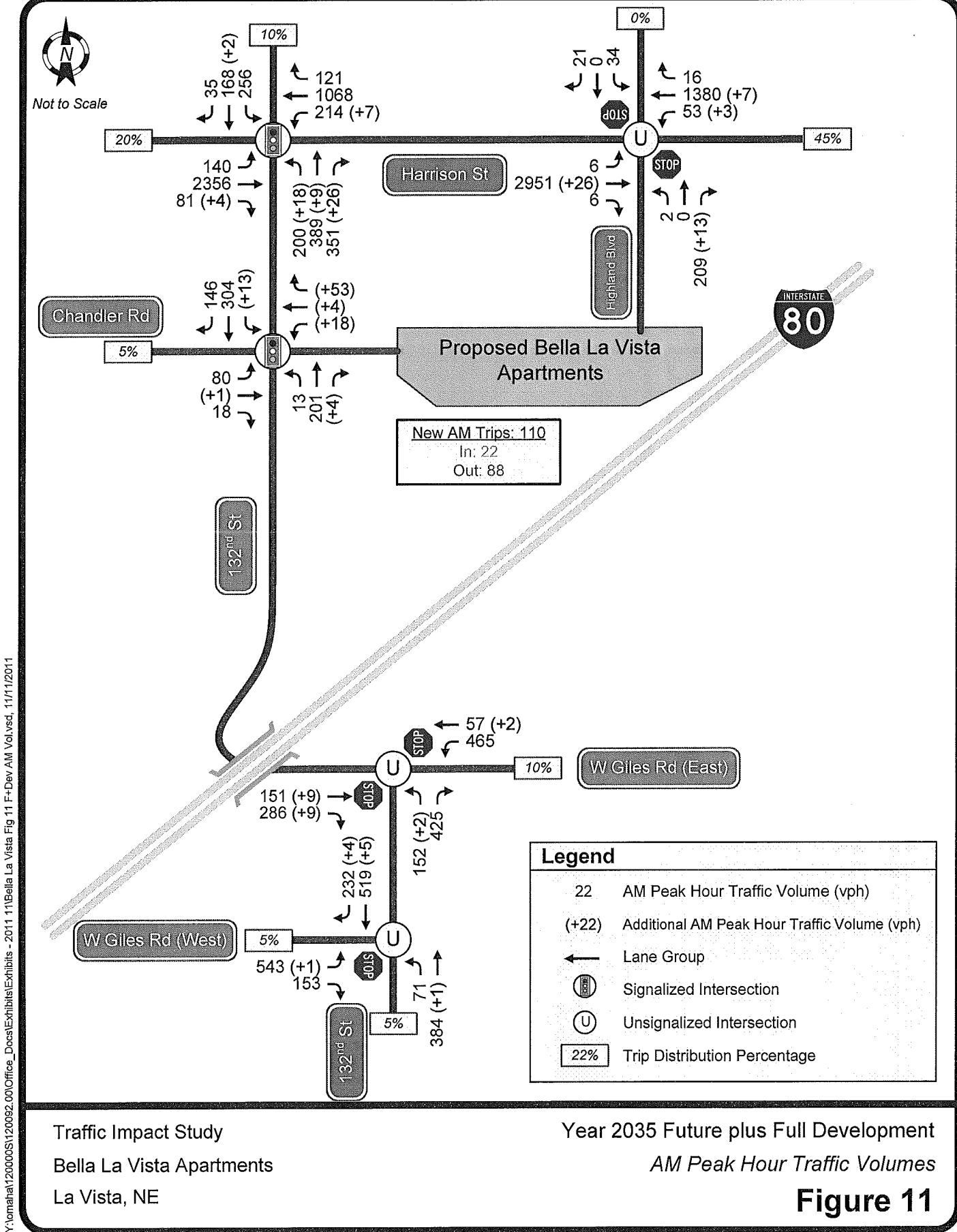
Year 2011 Existing plus Full Development
AM Peak Hour Level of Service and Queue Length

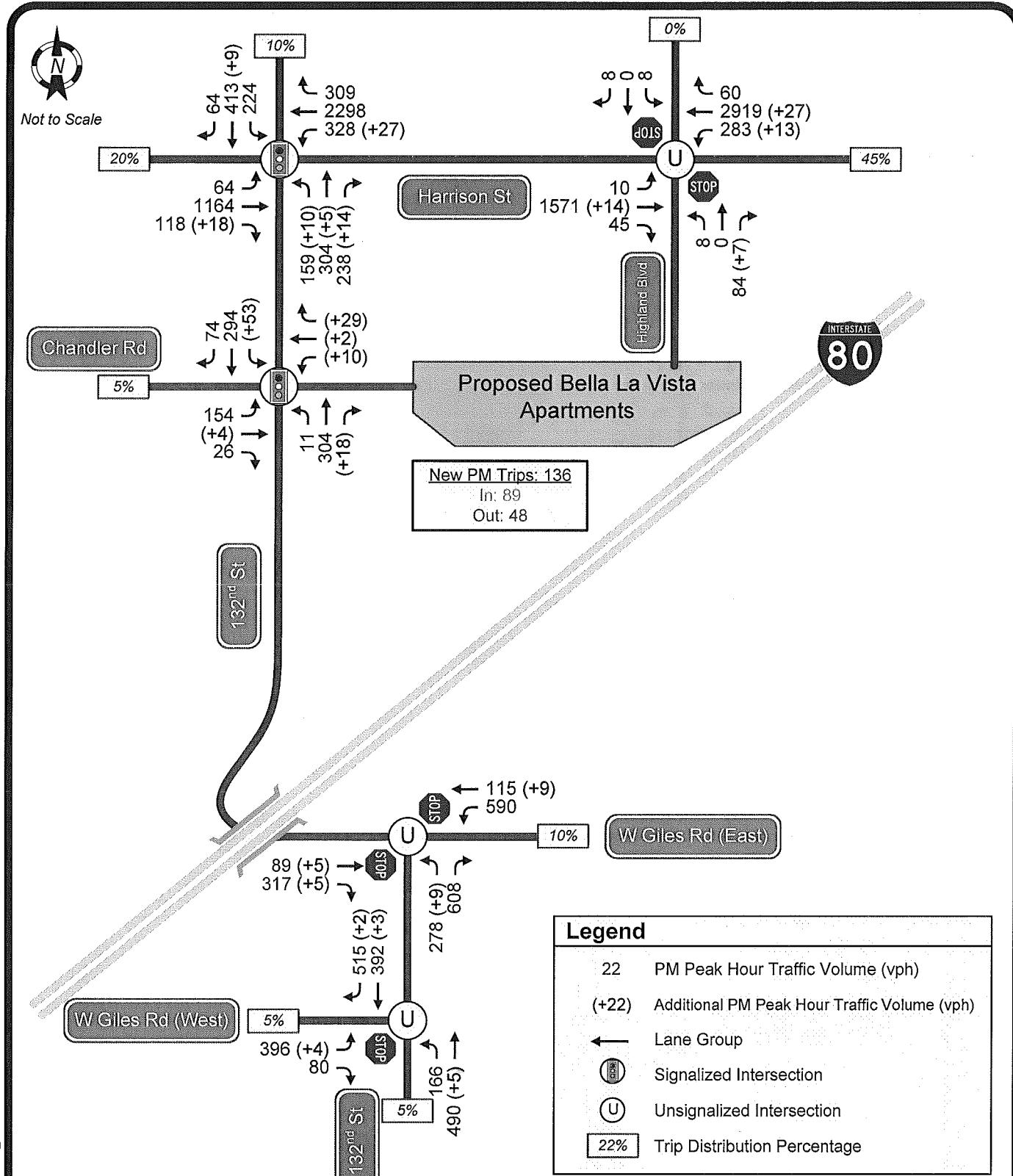
Figure 9

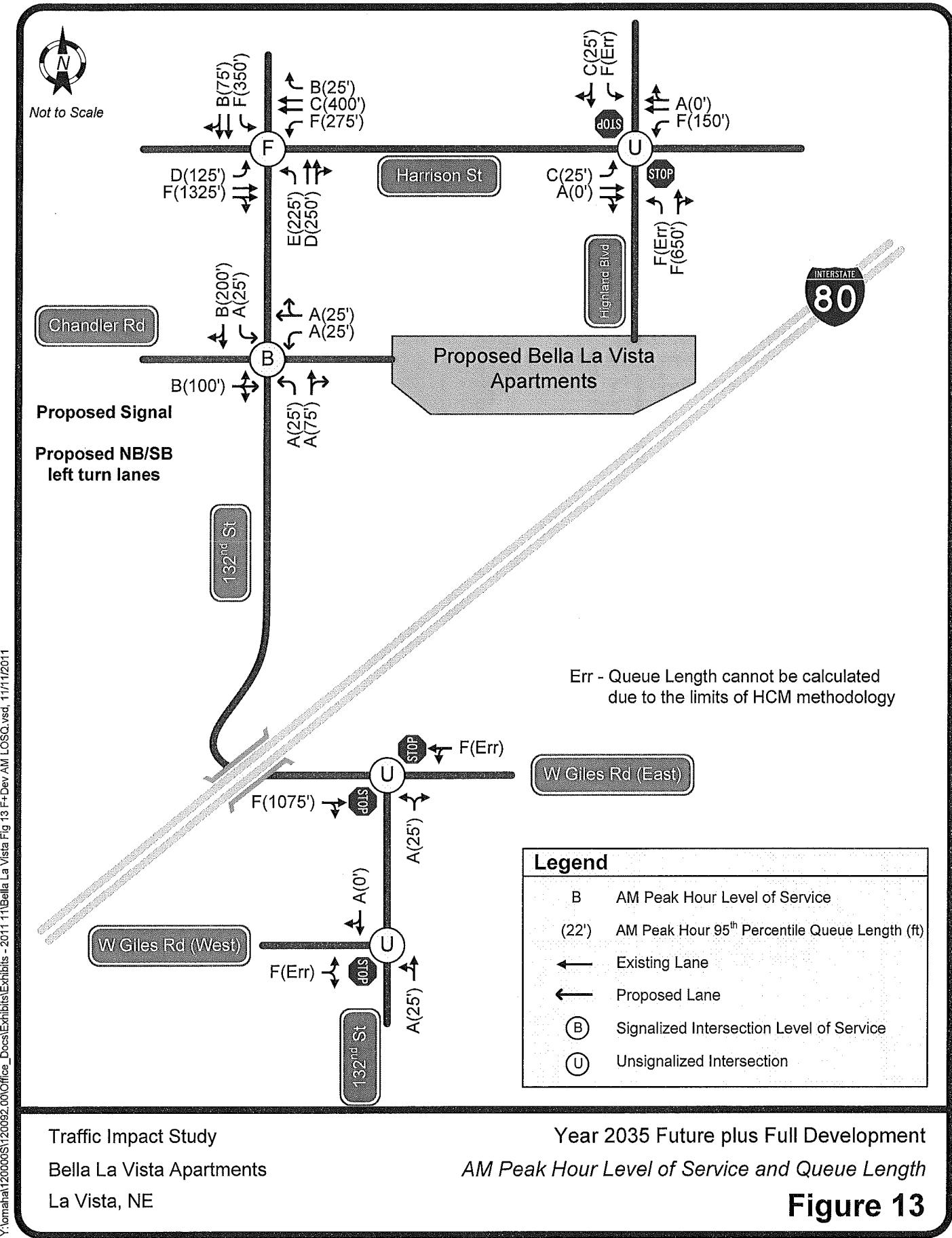


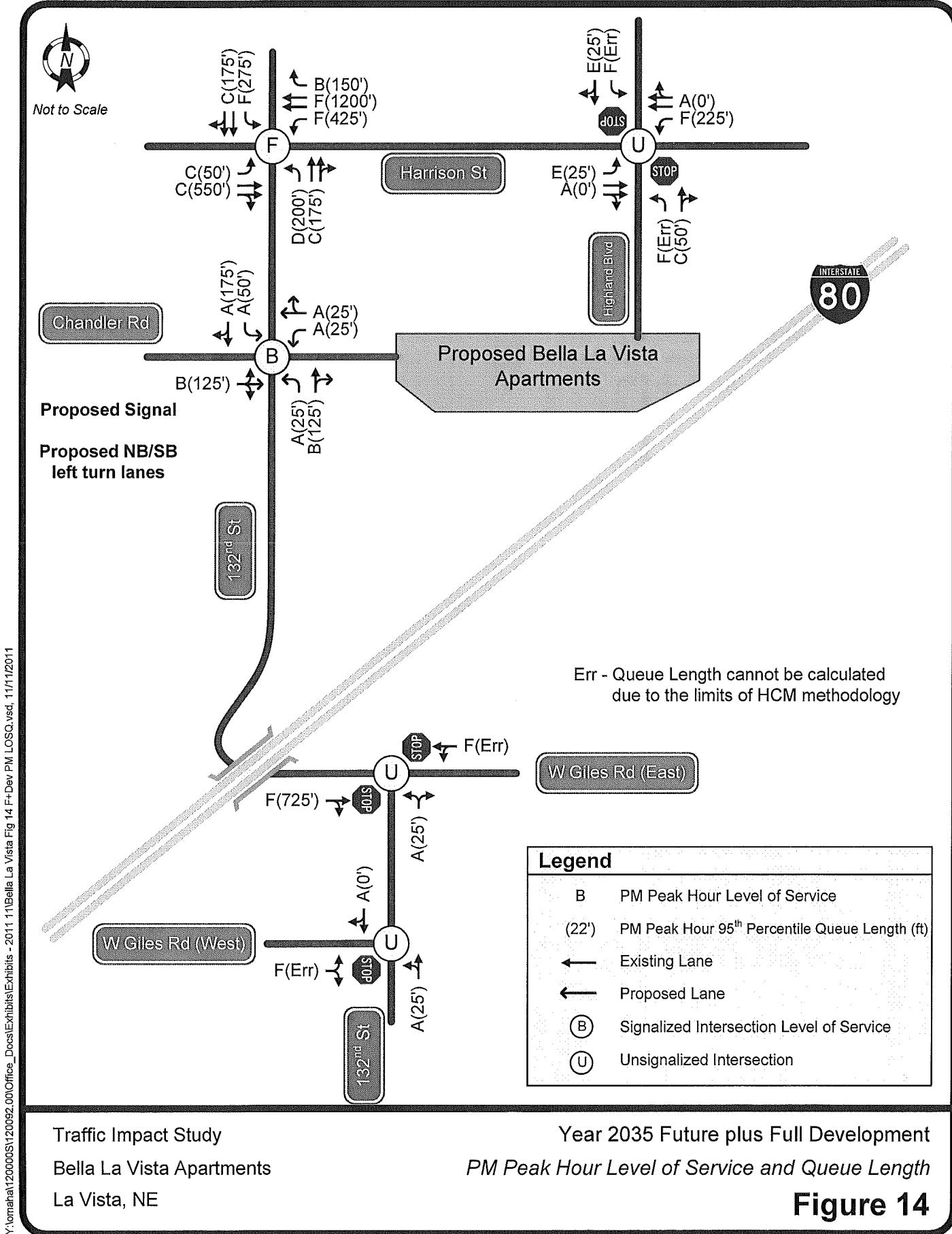
Traffic Impact Study
Bella La Vista Apartments
La Vista, NE

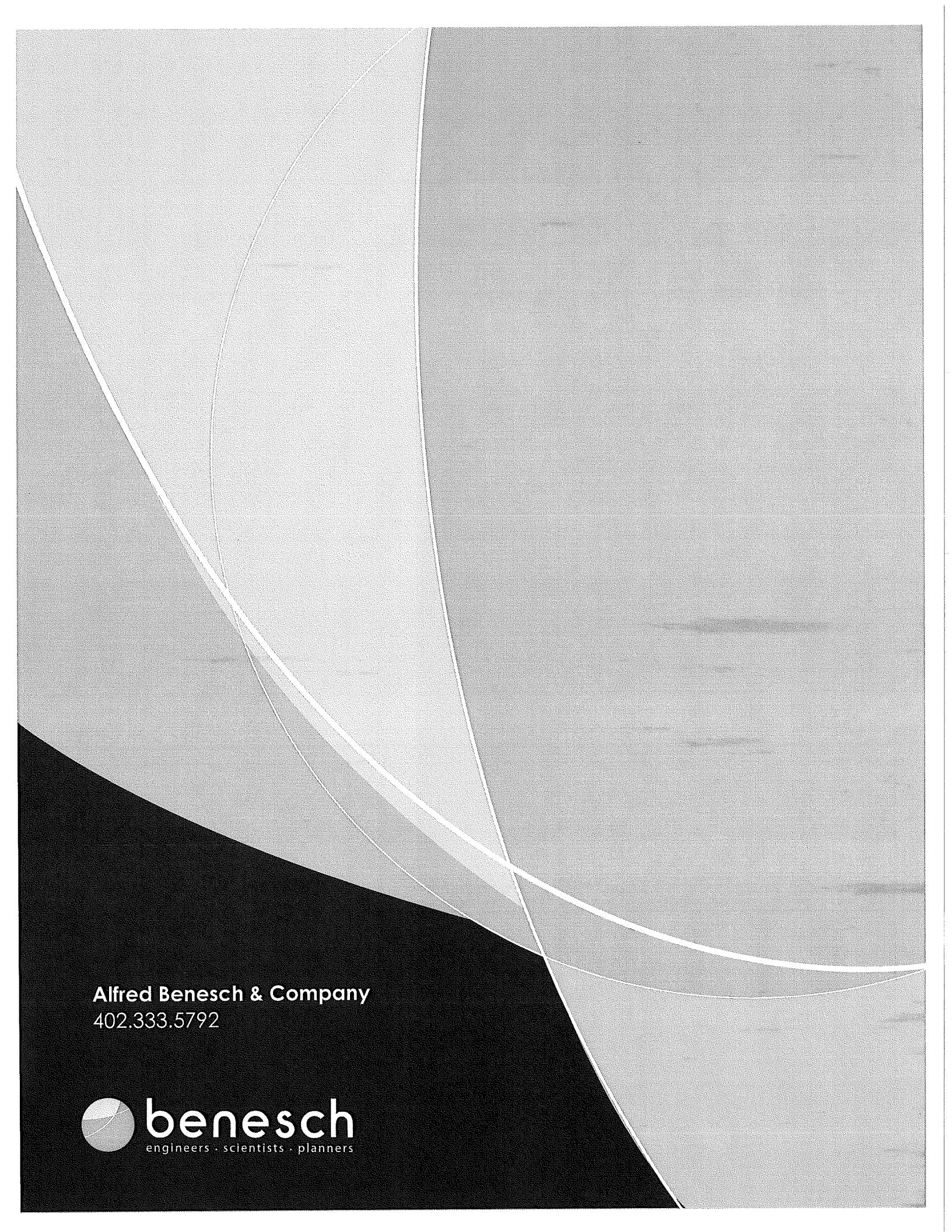
Year 2011 Existing plus Full Development
PM Peak Hour Level of Service and Queue Length
Figure 10







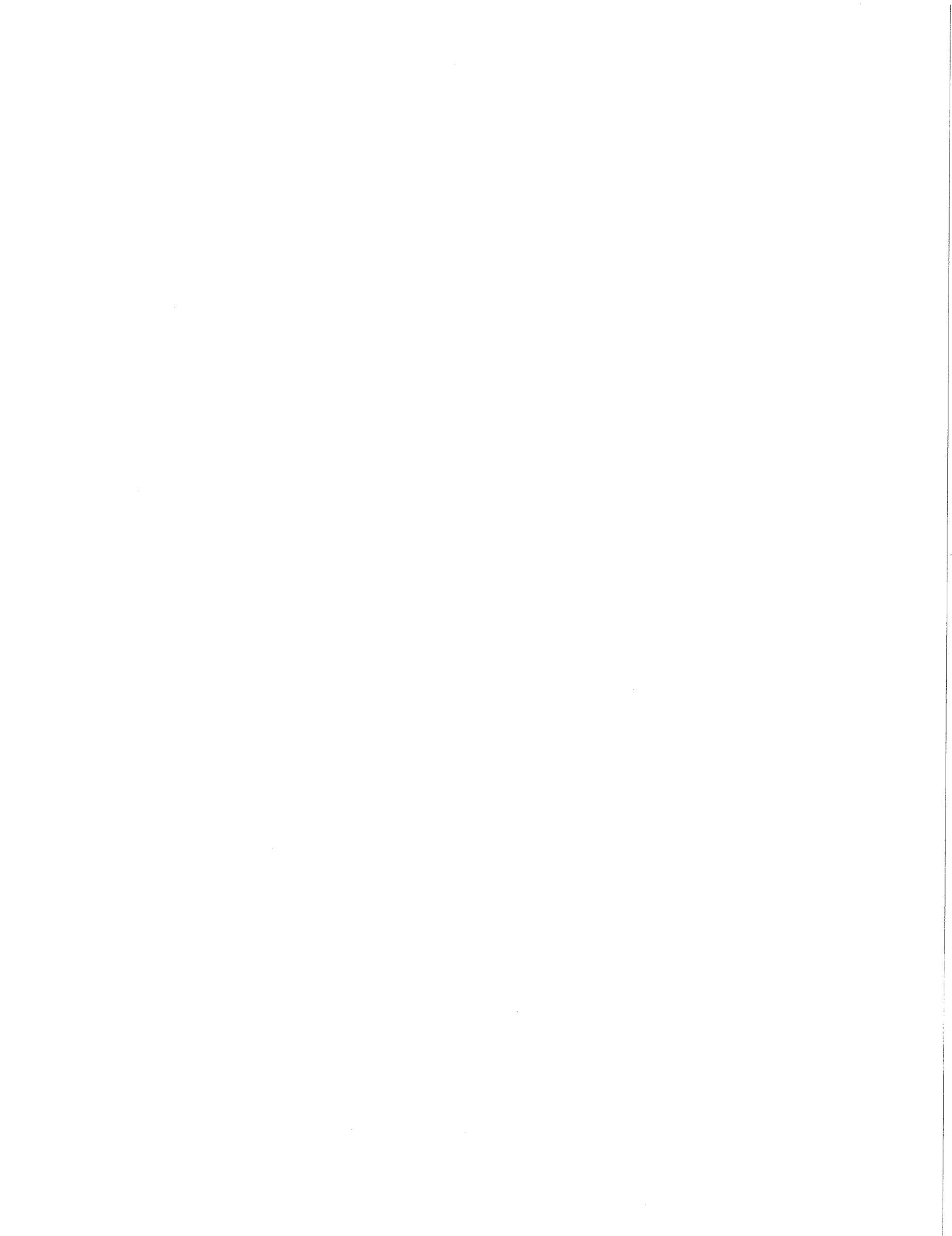




The background of the advertisement features a large, abstract graphic composed of several curved, overlapping bands of varying shades of gray and white. These bands create a sense of depth and motion, resembling a stylized landscape or a series of overlapping architectural structures. The graphic is set against a dark, solid black background at the bottom of the page.

Alfred Benesch & Company
402.333.5792







Memorandum

TO: Doug Dreessen (TD2)
FROM: Jim Jussel (Benesch), Austin Yates (Benesch)
SUBJECT: Bella La Vista Traffic Impact Study - City of La Vista Comments
DATE: November 28, 2011

This memo details the response to comments from John Kottmann (City of La Vista) on the Bella La Vista Preliminary PUD, dated November 18, 2011.

Comment 7a: "Future traffic generation from Lot 3 is not addressed."

The traffic impact study for the proposed Bella La Vista development addresses the impacts to traffic operations from current plan showing 216 apartments on Lot 2. Currently, TD2 does not have a site plan for the remaining lots. As a result, the other lots were not included in the traffic impact study. Upon completion of the new site plan for the additional lots, the traffic impact study would need to be updated.

To provide an estimate of additional traffic, Benesch assumed a similar density of Lot 2 (9 buildings per 16.35 acres with 24 units per building) for Lot 3. The fully-built development (Lot 2 and Lot 3) of 38.57 acres would have 504 apartments. **Table 1** provides a summary of the trip generation for Lots 2 and 3. Please note, this is an estimation of the amount of site-generated traffic that would be expected for Lot 3. Impacts to the surrounding roadway network have not been assessed but would be included as part of an updated traffic impact study including Lot 3.

Table 1. Assumed Full Build Trip Generation

Lot	Units	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
2	216	1,500	22	88	110	89	48	136
3	288	1,900	29	116	145	114	62	176
Total	504	3,200	51	204	255	203	110	312

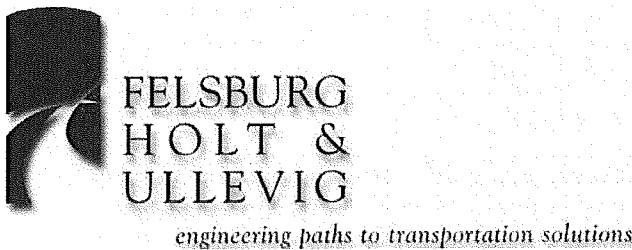


Comment 7b: "The need for a northbound right-turn bay at the entrance onto 132nd Street was not addressed."

Based on the traffic assignment, the northbound right turn movement at 132nd Street & Chandler Road is anticipated to be about 18 vehicles in the PM peak hour, with an advancing volume of 322 vehicles in the future year (see **Figure 12** in the traffic impact study). Furthermore, the intersection is anticipated to satisfy "Peak Hour" traffic signal warrant criteria by the Year 2035.

For estimation purposes, Benesch used the Minnesota Department of Transportation (Mn/DOT) Report 2008-25TS, "Traffic Volume Thresholds for Requiring Right Turn Lanes and Treatments on Two-Lane Roads" to determine if a right turn lane should be considered. The volume criteria in this report indicates that for the Year 2035 traffic volumes at 132nd Street & Chandler Road, the threshold for a northbound right turn lane is approximately 45 to 50 vehicles per hour, which is greater than the predicted movement of 18 vehicles per hour. This threshold would be applicable for a two-lane roadway along 132nd Street and stop control for Chandler Road, which would be a "worst-case scenario" for requiring a right turn lane.

The intersection is anticipated to meet the Peak Hour Signal Warrant by the Year 2035 and the predicted right turn movement is expected to be about 18 vehicles per hour. Therefore, based on the right turn lane guidelines we used, a northbound right turn lane was not analyzed at the intersection 132nd Street & Chandler Road.



November 30, 2011

RE: Bella La Vista TIS Review
FHU No. 11-120-02

Mr. John Kottmann, PE
City Engineer
City of La Vista
9900 Portal Road
La Vista, NE 68128

Dear Mr. Kottmann:

We have completed our review of the Bella La Vista Traffic Impact Study (TIS) prepared by Alfred Benesch & Company dated November 11, 2011, the supplemental memo dated 11.28.11, the preliminary plat dated 11.01.11, and landscape plan for the site dated 09.13.11 that you have provided. The proposed Bella La Vista development is located on the northeast quadrant of the intersection of 132nd Street with Chandler Road in La Vista, Nebraska. Based upon our review of the information provided and a site field review, we offer the following comments:

- Please provide page numbers on the main body of the TIS report.
- TIS Section 2.2: We acknowledge that several of the existing movements at the study intersections operate at LOS F.
- TIS Section 2.4: Typically MUTCD Traffic Signal Warrant 3 is only used for specific locations with traffic generators that turn over in a one hour period, such as factory entrances. While we concur that Warrant 3 can be used as a predictor for Warrants 1 and 2, it appears that there is enough count data (7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM) to analyze Warrant 2. Please use this data to analyze Warrant 2 to verify the results of the Warrant 3 analysis for 2011 traffic volumes.
- TIS Section 3.1 We concur with the trip generation values for 216 apartment units on Lot 2. We also concur with the assumed trip generation values for Lot 3 as presented in the supplemental memo, and acknowledge that they are not included in the TIS. As mentioned in the supplemental memo, if Lot 3 is developed in the future, the TIS will need to be updated.
- TIS Section 3.2 We have reviewed the methodology to determine 2035 background traffic volumes and back-checked the 2035 Future plus Full Development scenario AM and PM Peak Hour traffic volumes, and concur with the totals for the study intersections.

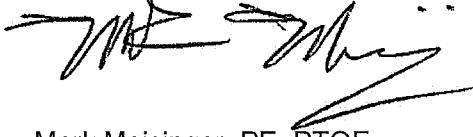
November 30, 2011
Mr. John Kottmann, PE
Page 2

- TIS Section 3.3: While we concur with the results of the turn-lane warrant checks, please provide additional information on the target volumes needed to satisfy the warrants. (The table in the appendix provides data that must be interpolated to verify that the warrants have been met. Further explanation of the specific values used on each approach for opposing volumes, advancing volumes, and % left turns would be helpful for the reviewing agency.)
- TIS Section 3.4: See above comment for Section 2.4. Please analyze Warrant 2 for 2011 and 2035 traffic volumes with Full Development.
- TIS Section 3.6: We acknowledge that several of the existing movements at the study intersections operate at LOS F, and as a result future intersection operations would also be expected to operate at LOS F. It is expected that future improvements at the intersection of 132nd Street with W. Giles Road (currently under design) would improve operations from those reported.
- TIS Section 4.0: We concur with the recommendations as presented in the TIS.
- Supplemental Memo, Comment 7b: A cursory review of NCHRP Report 279 indicates that the results of the northbound right-turn lane warrant analysis is correct; traffic volumes at this location do not warrant the construction of an auxiliary right-turn lane.

If you have any questions regarding this review of the traffic study or if you would like to meet to discuss it in further detail, please give me a call.

Sincerely,

FELSBURG HOLT & ULLEVIG



Mark Meisinger, PE, PTOE
Transportation Engineer

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