
Final Noise Study Report

**Interstate 630 Widening Noise Analysis
From East of Baptist Medical Center
To East of University Avenue
FAP No. 9991
Job No. CA0608
Pulaski County, Arkansas**



Submitted to:



Prepared By:

Kimley»Horn

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

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June 16, 2016

SUBJECT: Noise Study Report **Updated** for Highway Department I-630 Widening
Job CA0608 Baptist Hospital - University Ave. (Widening) (I-630)

Greetings:

The I-630 Noise Study Report has been updated since the draft was released in fall 2015. Additional analyses have been conducted to determine the potential for noise barriers in eight Noise Study Areas (NSA) along the I-630 corridor between Baptist Hospital and University Avenue. Pages 4-6 of the noise study report are enclosed and show the eight NSA.

The updated results indicate that four of the eight NSA meet the AHTD threshold criterion for noise barriers. A neighborhood meeting will be held to collect input on whether benefited residents desire a noise barrier. The only input needed at the meeting will be from benefited residents where the updated noise barrier evaluation resulted in changes from the original analysis. Benefited residents will be contacted by mail and door flyers and invited to attend the neighborhood meeting. Information about the four NSA that meet the AHTD threshold criterion for noise barriers is below.

- **Briarwood Subdivision (NSA 4)**

North of I-630 between N. Rodney Parham Road and S. Mississippi Street

This area meets feasible and reasonable criterion when combined with NSA 5. Benefited residents will have the opportunity to vote on two scenarios: a wall/wall combination and a wall/soil berm combination. A list of the benefited residents is included on page 4 of this letter.

- **Briarwood and Cardinal Heights Subdivisions (NSA 5)**

North of I-630 between S. Mississippi Street and S. Hughes Street

This area meets feasible and reasonable criterion when combined with NSA 4. Benefited residents will have the opportunity to vote on two scenarios: a wall/wall combination and a wall/soil berm combination. A list of the benefited residents is included on page 4 of this letter.

- **Cardinal Heights Subdivision (NSA 6)**

North of I-630 between S. Hughes Street and S. McKinley Street

Benefited residents in this area have already met and voted on two scenarios: a noise wall and a soil berm. No additional benefited residents were identified. No further resident input is needed at this time. The noise abatement evaluation results for this area will be reported in the Final Noise Study Report.

- **University Park (NSA 8)**

South of I-630 between S. Hughes Street and East of University Avenue

This area meets feasible and reasonable criterion. Benefited residents will have the opportunity to vote on a noise wall. A list of the benefited residents is included on page 4 of this letter.

The following noise study areas were studied but **do not meet** the AHTD threshold criterion.

- **Clover Hill Place and Pennbrook Subdivision (NSA 1)**

North of I-630 between Baptist Hospital Interchange and John Barrow Road

- **Henderson Health Sciences Magnet Middle School Area (NSA 2)**

North of I-630, the northeast quadrant of the I-630/John Barrow Road Interchange

- **Woodland Heights Community and Kanis Park Area (NSA 3)**

South of I-630 between John Barrow Road and Rodney Parham Road

- **Freeway Business Park and Haven of Rest Cemetery (NSA 7)**

South of I-630 between S. Rodney Parham Road and S. Hughes Street

In accordance with criteria in the AHTD noise policy, noise abatement is studied first for “feasibility” and, if feasible, for “reasonableness.” Noise barriers for a noise study area must be both feasible and reasonable:

- Feasible – criteria includes the ability to reduce noise by at least five decibels for at least one impacted receiver.
- Reasonable – criteria is met when the cost is \$36,000 or less per benefited receptor (estimated cost of barrier divided by the number of benefited receptors), as well as traffic noise abatement must achieve at least an eight decibel reduction for at least one benefited receptor.

A copy of the noise report is available to download or view at the I-630 Pulaski County project webpage on ConnectingArkansasProgram.com or at bit.ly/CA0608. A printed copy is available to review at the Arkansas State Highway and Transportation Department District 6 Office at 8900 Mabelvale Pike in Little Rock and the McMath Library at 2100 John Barrow Road in Little Rock. The report includes a list of the benefited receivers in Appendix D.

SUMMARY:

- Benefited residents in four of the eight noise study areas have had and/or will have the opportunity to provide input on noise barrier scenarios.
 - Future Meeting: NSAs 4, 5, and 8
 - Meeting Previously Held (November 2015): NSA 6 – no additional meeting is required at this time.
- Benefited residents in NSAs 4, 5, and 8 will be notified in the coming weeks of the time, date, and location of the noise neighborhood meeting. A list of benefited residences is included on page 4 of this letter.
- A copy of the draft noise report is available to review online and at two Little Rock locations.

If you have any questions, please email me at Info@ConnectingArkansasProgram.com or 501-255-1519.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Hetzel", with a stylized flourish at the end.

Jon Hetzel
Communications Manager
Arkansas State Highway and Transportation Department
Connecting Arkansas Program

[See opposite side for list of benefited residents to be notified of neighborhood noise meeting]

Benefited Residents to be notified of Neighborhood Noise Meeting

NSA 4 & 5 Briarwood and Cardinal Heights Subdivisions

Benefited Residents	Benefited Residents
801 S. Rodney Parham Road (Various apartments)	66 Flag Rd
721 Ouachita Dr	64 Flag Rd
724 Legato Dr	62 Flag Rd
715 Ouachita Dr	60 Flag Rd
713 Ouachita Dr	58 Flag Rd
812 Legato Dr	65 Flag Rd
711 Legato Dr	7214 Marguerite Ln
7510 Ouachita Dr	7212 Marguerite Ln
820 Ouachita Circle	7208 Marguerite Ln
816 Ouachita Circle	7204 Marguerite Ln
812 Ouachita Circle	7200 Marguerite Ln
808 Ouachita Circle	7116 Marguerite Ln
7424 Ouachita Dr	7112 Marguerite Ln
7410 Ouachita Dr	7108 Marguerite Ln
7402 Ouachita Dr	7104 Marguerite Ln
7318 Ouachita Dr	30 Templin Trail
818 Ouachita Pl	61 Flag Rd
817 Ouachita Circle	19 Gregory Ln
815 Ouachita Circle	17 Gregory Ln
807 Ouachita Circle	15 Gregory Ln
803 Ouachita Circle	13 Gregory Ln
801 Ouachita Circle	11 Gregory Ln
812 Ouachita Pl	9 Gregory Ln
805 Ouachita Pl	7 Gregory Ln
811 Ouachita Pl	5 Gregory Ln
817 Ouachita Pl	31 Templin Trail
823 Ouachita Pl	

NSA 8 University Park

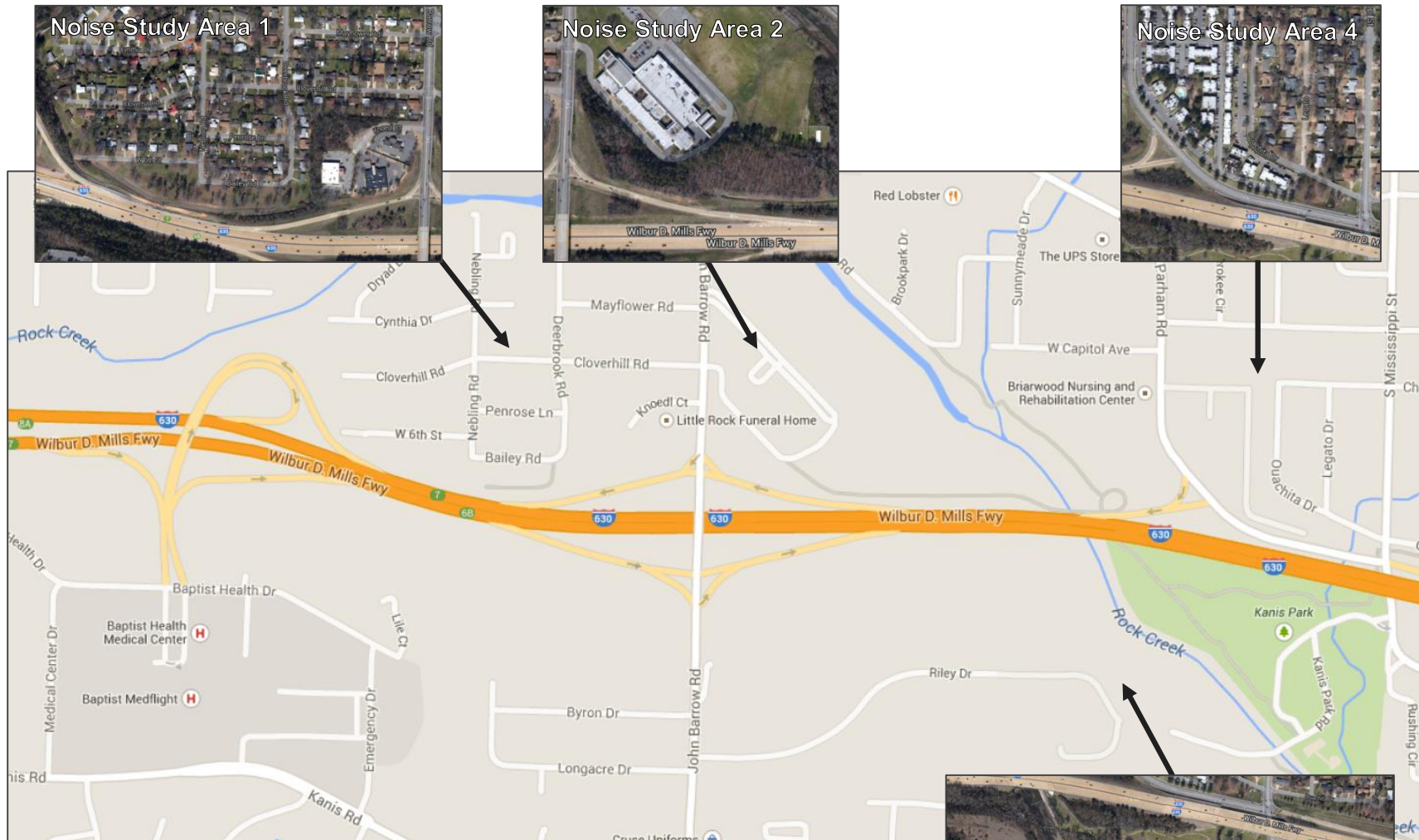
Benefited Residents	Benefited Residents
510 Arthur Drive	710 Arthur Drive
516 Arthur Drive	714 Arthur Drive
610 Arthur Drive	718 Arthur Drive
616 Arthur Drive	802 Arthur Drive
620 Arthur Drive	810 Arthur Drive
704 Arthur Drive	818 Arthur Drive

2.0 Identification of Noise Sensitive Areas and Receptors

Review of available electronic mapping, as well as field reconnaissance, led to the selection of eight study areas with potential for noise impacts, called Noise Study Areas (NSAs). These areas are shown in Figure 2 and Figure 3. Table 2 lists the relevant associated land uses in each NSA that are within 500 feet from the edge of the outside travel lane of I-630 by Activity Category. The applicable NAC for each Activity Category were shown in Table 1.

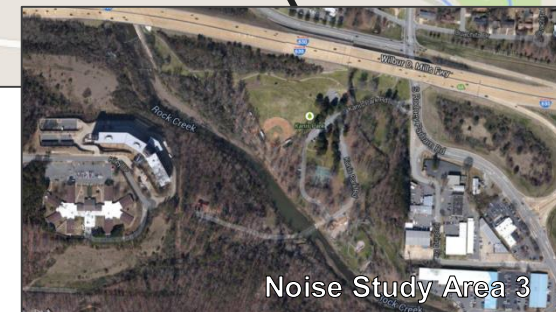
Table 2: Noise Study Area Descriptions

Noise Study Area	Description
1	<p>North of I-630 between Baptist Hospital Interchange and John Barrow Road:</p> <p>Activity Category B (Exterior) – Residences on Bailey Road, Penrose Lane, Nebling Road, W 6th Street, Cloverhill Road, Cynthia Drive, and Deerbrook Road</p> <p>Activity Category F – Various commercial buildings in the northwest quadrant of the I-630/John Barrow Road Interchange</p>
2	<p>Northeast Quadrant of the I-630/John Barrow Road Interchange:</p> <p>Activity Category C (Exterior) – Henderson Health Sciences Magnet Middle School</p>
3	<p>South of I-630 between John Barrow Road and Rodney Parham Road:</p> <p>Activity Category B (Exterior) – Residences in the Woodland Heights Community</p> <p>Activity Category C (Exterior) – Kanis Park</p> <p>Activity Category F – Various commercial buildings south of Rodney Parham Road</p>
4	<p>North of I-630 between N Rodney Parham Road and S Mississippi Street:</p> <p>Activity Category B (Exterior) – Residences on Ouachita Drive, Legato Drive, S Mississippi Street, and a section of the Briarwood Townhome Complex</p> <p>Activity Category C (Exterior) – Briarwood Townhome Complex courtyard area</p>
5	<p>North of I-630 between S Mississippi Street and S Hughes Street:</p> <p>Activity Category B (Exterior) – Residences on S Mississippi Street, Ouachita Drive, Ouachita Circle, Ouachita Place, Flag Road, Gregory Lane, Marguerite Lane, Dove Circle, Blue Bird Drive, and S Hughes Street</p>
6	<p>North of I-630 between S Hughes Street and S McKinley Street:</p> <p>Activity Category B (Exterior) – Residences on S Hughes Street, Blue Bird Drive, Marguerite Lane, and Chickadee Drive</p>
7	<p>South of I-630 between S Rodney Parham Road and S Hughes Street:</p> <p>Activity Category C (Exterior) – Haven of Rest Cemetery</p> <p>Activity Category F – Various commercial buildings along Freeway Drive</p>
8	<p>South of I-630 between S Hughes Street and East of University Avenue:</p> <p>Activity Category B (Exterior) – Residences on S Hughes Street, Arthur Drive, Shirley Drive, and Sherry Drive</p> <p>Activity Category E – Clarion Hotel</p>

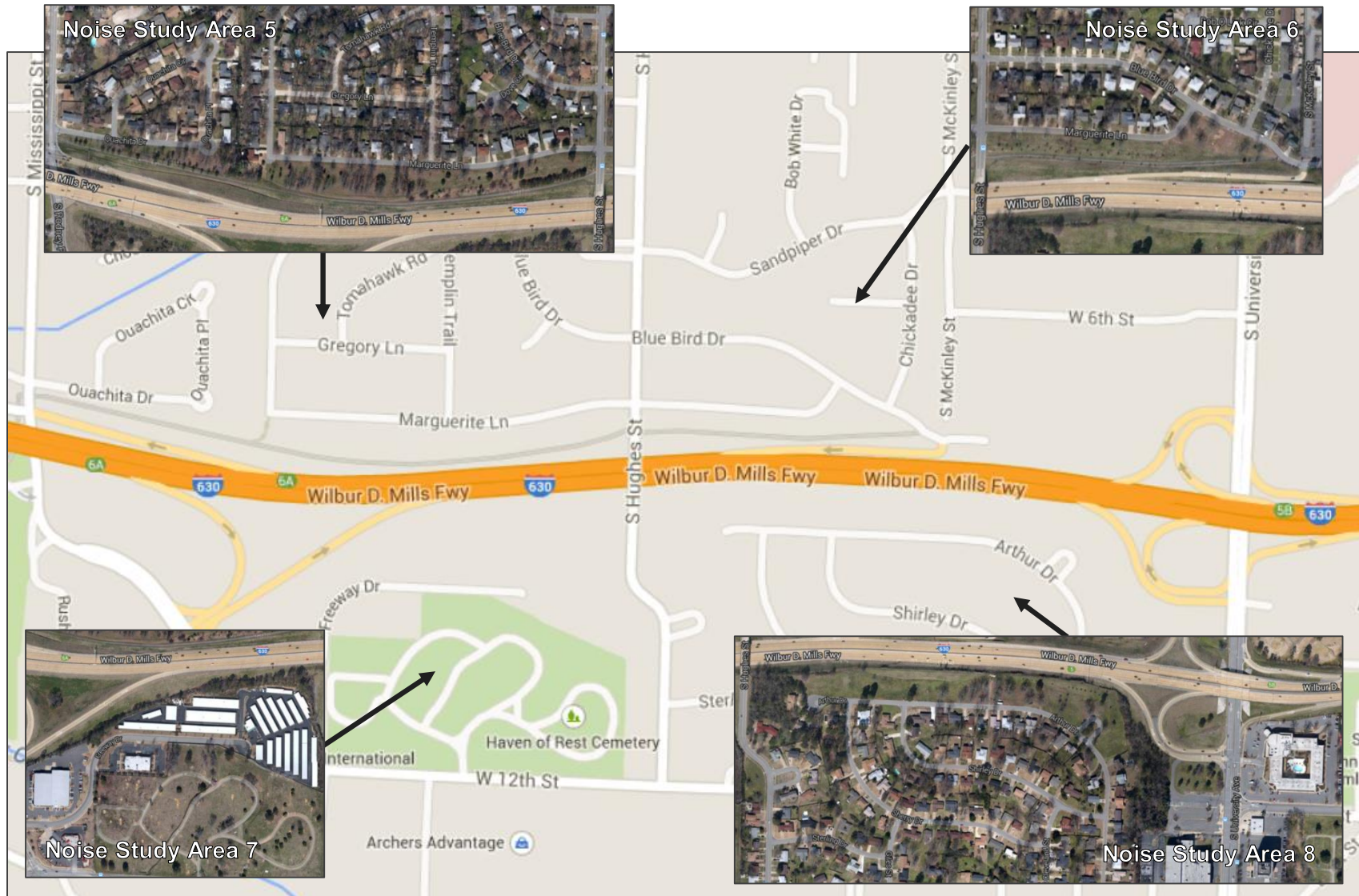


Base map: Google Maps (2014)

Figure 2: Noise Study Areas 1-4



Noise Study Area 3



Base map: Google Maps (2014)

Figure 3: Noise Study Areas 5-8

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Executive Summary

This report documents the results of a noise analysis and abatement design as part of the project widening Interstate 630 (I-630) in Pulaski County. The purpose of this project is to increase capacity and improve traveler safety. The total length of the project is approximately 2.5 miles, extending generally from the Baptist Hospital interchange to the University Avenue interchange in Little Rock.

Eight noise study areas (NSA) were identified along the project, listed below roughly from west to east:

1. Residences north of I-630 between the Baptist Hospital Interchange and John Barrow Road, including those on Bailey Road, Penrose Lane, Nebling Road, W 6th Street, Cloverhill Road, Cynthia Drive, and Deerbrook Road
2. Receivers surrounding the Henderson Health Sciences Magnet Middle School.
3. Receivers south of I-630 between the John Barrow Road Interchange and the Rodney Parham Road Interchange, including noise sensitive areas throughout Kanis Park and residences in the Woodland Heights Retirement Community.
4. Residences north of I-630 between N Rodney Parham Road and S Mississippi Street, including those on Ouachita Drive, Legato Drive, S Mississippi Street, and a section of the Briarwood Townhome Complex.
5. Residences north of I-630 between S Mississippi Street and S Hughes Street, including those along S Mississippi Street, Ouachita Drive, Ouachita Circle, Ouachita Place, Flag Road, Gregory Lane, Marguerite Lane, Dove Circle, Blue Bird Drive, and S Hughes Street
6. Residences north of I-630 between S Hughes Street and S McKinley Street, including those on S Hughes Street, Blue Bird Drive, Marguerite Lane, and Chickadee Drive.
7. Receivers south of I-630 between S Rodney Parham Road and S Hughes Street at the Haven of Rest Cemetery
8. Residences south of I-630 between S Hughes Street and University Avenue, including those along S Hughes Street, Arthur Drive, Shirley Drive, and Sherry Drive

The FHWA Traffic Noise Model (TNM 2.5) computer program was used to calculate “with-project” peak hour equivalent sound levels in the design year (2039) for noise-sensitive receivers in each noise study area. Design Year 2039 AM and PM peak hour traffic projections were developed for the *Interstate 630 Widening Interchange Justification Report* (October 2014) and were used in the noise modeling. The modeling identified future exterior noise impacts, as defined in the AHTD *Policy on Highway Traffic Noise Abatement* (October 15, 2015), for all of the study areas.

Based on the *Interstate 630 Widening Interchange Justification Report* Design Year 2039 peak hour traffic projections, it was determined that the NSAs along the I-630 corridor experience the worst noise hour during different times of the day. The worst noise hour for the NSAs south of I-630 corresponds to the AM peak hour, and the worst noise hour for the NSAs north of I-630 corresponds to the PM peak hour.

Abatement is generally evaluated when impacts are predicted to occur. Noise abatement measures may include alteration of horizontal and vertical alignment and traffic management measures (such as reducing speed limits or prohibition of heavy trucks). However, these forms of mitigation are not feasible for this project. Noise barriers were determined to be the only available abatement measure to reduce noise levels for impacted areas within this project.

Noise barriers were studied for “feasibility” and “reasonableness” at all areas where impacts were predicted. Barriers were considered for the impacted receptors in all NSAs.

“Feasibility” means that a noise barrier will provide at least a five decibel reduction in the one-hour equivalent sound level for at least one impacted residence. Additionally, the noise barrier should not pose any major problems related to design, construction, safety, drainage, maintenance or other factors.

Noise barriers were found to be acoustically feasible for NSAs 3, 4, 5, 6, and 8 because a minimum of 5 dB(A) reduction in design year highway traffic noise levels for at least one impacted receiver was achieved. However, feasibility alone does not dictate whether a noise barrier will be built. Each noise barrier must also pass a “reasonableness” test.

“Reasonableness” is based on a number of factors with regard to all of the individual, specific circumstances of a particular project, including the cost of the noise barrier averaged over the number of residences that are shown in the modeling to benefit from the barrier. To “benefit” means that the sound levels would be reduced five or more decibels by the barrier. The AHTD *Policy on Highway Traffic Noise Abatement* specifies a noise reduction design goal of 8 dB(A) that must be achieved for at least one impacted receiver in order for a noise abatement measure to be considered reasonable.

The studied barrier for NSA 3 was found to not be reasonable because it did not provide enough abatement to meet the AHTD noise reduction design goal of 8 dB(A) at any of the predicted impacted receivers and because the average cost per benefited residence exceeded the AHTD threshold criterion of \$36,000 per benefited receiver.

Five of the studied barrier scenarios for NSAs 4, 5, 6, and 8 met the AHTD threshold criterion of \$36,000 per benefitted receiver and achieved the noise reduction design goal of 8 dB(A) for at least one impacted receiver.

The estimated cost of providing barriers for both NSA 4 and 5 combined, ranged between \$2,268,447 and \$2,764,000, depending on whether a berm/wall combination or a wall/wall combination is constructed. The number of receivers in NSA 4 and 5 that met the 8 dB(A) noise reduction design goal ranged between twenty four (23) and twenty nine (29) for a wall/wall combination and a berm/wall combination, respectively. The total number of benefits ranged between seventy two (72) and eighty one (81) for a berm/wall combination and a wall/wall combination, respectively. Therefore, both proposed noise barrier combination options for NSA 4 and 5 are reasonable.

The estimated cost of providing a barrier for NSA 6 ranged between \$208,081 and \$916,000, depending on whether a berm or a wall is constructed. The number of receivers in NSA 6 that met the 8 dB(A) noise reduction design goal ranged between one and three for a berm and wall, respectively. The total number of benefits ranged between ten (10) and thirty eight (38) for a berm and wall, respectively. Therefore, both proposed noise barrier options for NSA 6 are reasonable.

The estimated cost of providing a barrier for NSA 8 is \$431,900. One of the receivers in NSA 8 met the 8 dB(A) noise reduction design goal, and a total of twelve (12) receivers benefit from the studied barrier. Therefore, the proposed noise barrier for NSA 8 is reasonable.

Separate from these abatement measures, AHTD encourages local communities and developers to practice noise compatibility planning in order to avoid future noise impacts. Generalized noise predictions for the Design Year 2039 were made for areas along I-630 where vacant and possibly developable lands exist. The results estimate that exterior residential and recreational activities would be impacted out to a distance of roughly 500 feet from centerline of the nearest travel lane of I-630. The modeled noise levels and associated impact distance at any particular site along I-630 will vary depending on the actual terrain and other conditions at that site. This information is being included to make local officials and planners aware of anticipated highway noise levels, with the goal that any future development along I-630 will be compatible with these levels.

Contents

Executive Summary	i
1.0 Introduction.....	1
1.1 Traffic Noise Terminology	2
1.2 Criteria for Determining Impacts.....	2
2.0 Identification of Noise Sensitive Areas and Receptors	4
3.0 Measurement of Existing Sound Levels.....	7
4.0 Model Validation.....	10
5.0 Determination of Existing and Future One-Hour Equivalent Sound Levels	11
6.0 Impact Determination Analysis	12
6.1 Summary of Impacts.....	12
6.2 Noise Study Area 1.....	14
6.3 Noise Study Area 2.....	17
6.4 Noise Study Area 3.....	19
6.5 Noise Study Area 4.....	23
6.6 Noise Study Area 5.....	27
6.7 Noise Study Area 6.....	31
6.8 Noise Study Area 7.....	34
6.9 Noise Study Area 8.....	36
7.0 Noise Abatement Evaluation	39
7.1 Noise Barrier for Noise Study Area 1	40
7.2 Noise Barrier for Noise Study Area 2	40
7.3 Noise Barrier for Noise Study Area 3	41
7.4 Noise Barrier for Noise Study Area 4	41
7.5 Noise Barrier for Noise Study Area 5	41
7.6 Noise Barrier for Noise Study Area 6	42
7.7 Noise Barrier for Noise Study Area 7	42
7.8 Noise Barrier for Noise Study Area 8	43
7.9 Statement of Likelihood of Abatement.....	43
7.10 Views of Benefitted Property Owners and Residents.....	44
8.0 Mitigation of Construction Noise	50
9.0 Coordination with Local Officials.....	50
10.0 References.....	51

Appendices

Appendix A: Noise Measurement Results

Appendix B: Traffic Data for Noise Modeling

Appendix C: TNM 2.5 Plan Views

Appendix D: Noise Barrier Evaluation Results

Tables

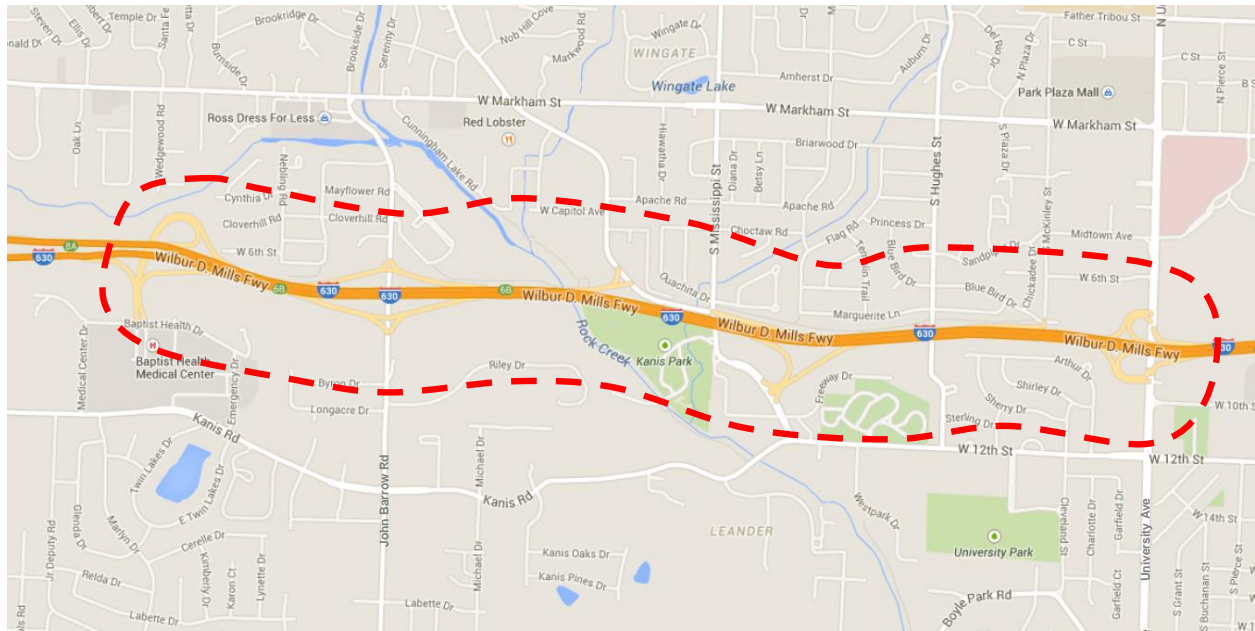
Table 1. Noise Abatement Criteria in 23 CFR 772	3
Table 2. Noise Study Area Descriptions	4
Table 3. Measured Existing Equivalent Sound Levels at Measurement Locations	7
Table 4. Model Validation Results.....	11
Table 5. Summary of Noise Impacts for the Build Scenario (Year 2039)	13
Table 6. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 1.....	14
Table 7. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 2.....	17
Table 8. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 3.....	19
Table 9. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 4.....	23
Table 10. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 5.....	27
Table 11. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 6.....	31
Table 12. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 7.....	34
Table 13. Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 8.....	36
Table 14. Results of Noise Barrier Acoustical Feasibility Analysis	40
Table 15. Results of Noise Barrier Reasonableness Analysis.....	40
Table 16. Design Year (2039) Predicted One-Hour Equivalent Sound Levels for Undeveloped Areas....	50

Figures

Figure 1. Project Area.....	1
Figure 2. Noise Study Areas 1-4	5
Figure 3. Noise Study Areas 5-8	6
Figure 4. Measurement Location 1	8
Figure 5. Measurement Locations 2 and 3	9
Figure 6. Measurement Locations 4 and 5	10
Figure 7. Year 2039 Noise Impacts, NSA 1	16
Figure 8. Year 2039 Noise Impacts, NSA 2.....	18
Figure 9. Year 2039 Noise Impacts, NSA 3.....	22
Figure 10. Year 2039 Noise Impacts, NSA 4.....	26
Figure 11. Year 2039 Noise Impacts, NSA 5.....	30
Figure 12. Year 2039 Noise Impacts, NSA 6.....	33
Figure 13. Year 2039 Noise Impacts, NSA 7	35
Figure 14. Year 2039 Noise Impacts, NSA 8.....	38
Figure 15. Investigated Barrier and Benefitted Receptors, NSA 4 and 5	45
Figure 16. Investigated Barrier and Benefitted Receptors, NSA 4 and 5	46
Figure 17. Investigated Barrier and Benefitted Receptors, NSA 6.....	47
Figure 18. Investigated Barrier and Benefitted Receptors, NSA 6.....	48
Figure 19. Investigated Barrier and Benefitted Receptors, NSA 8.....	49

1.0 Introduction

This report documents the results of a noise analysis and abatement design as part of the project widening Interstate 630 (I-630) in Pulaski County. The purpose of this project is to increase capacity and improve traveler safety. Total length of the project is approximately 2.5 miles, extending generally from the Baptist Hospital interchange to the University Avenue interchange. Figure 1 shows the project area.



Base map: Google Maps (2014)

Figure 1: Project Area

This study has been prepared in accordance with the FHWA noise standards, *Procedures for Abatement of Highway Traffic and Construction Noise*, 23 CFR 772 [1], and the AHTD *Policy on Highway Traffic Noise Abatement* [2]. The noise analysis included the following tasks:

1. Identification of noise sensitive areas and associated receptors (discrete or representative locations in a noise study area (NSA) for the land uses listed in 23 CFR 772) within 500 feet of the project;
2. Determination of existing sound levels at selected receptors to characterize the existing noise environment in the project area;
3. Determination of future sound levels with and without the project at the receptors;
4. Determination of impacted receptors;
5. Evaluation of noise abatement for impacted areas;
6. Discussion of construction noise; and
7. Coordination with local officials.

Each of these analysis steps is discussed in more detail, following a discussion of basic terminology and AHTD's criteria for determining noise impacts.

1.1 Traffic Noise Terminology

Traffic noise levels are expressed in terms of the hourly, A-weighted equivalent sound level in decibels [dB(A)]. A sound level represents the level of the rapid air pressure fluctuations caused by sources such as traffic that are heard as noise. A decibel is a unit that relates the sound pressure of a noise to the faintest sound the human ear can hear. The A-weighting refers to the amplification or attenuation of the different frequencies of the sound (subjectively, the pitch) to correspond to the way the human ear “hears” these frequencies.

Generally, when the sound level exceeds the mid-60 dB(A) range, outdoor conversation in normal tones at a distance of three feet becomes difficult. A 9-10 dB(A) increase in sound level is typically judged by the listener to be twice as loud as the original sound while a 9-10 dB(A) reduction is judged to be half as loud. Doubling the number of sources (i.e., vehicles) will increase the hourly equivalent sound level by approximately 3 dB(A), which is usually the smallest change in hourly equivalent A-weighted traffic noise levels that people can detect without specifically listening for the change.

Because most environmental noise fluctuates from moment to moment, it is standard practice to condense data into a single level called the equivalent sound level (L_{eq}). The L_{eq} is a steady sound level that would contain the same amount of sound energy as the actual time-varying sound evaluated over the same time period. The L_{eq} averages the louder and quieter moments, but gives much more weight to the louder moments in the averaging. For traffic noise assessment purposes, L_{eq} is typically evaluated over the worst one-hour period and is written as $L_{eq(h)}$.

The term insertion loss (IL) is generally used to describe the reduction in $L_{eq(h)}$ at a location after a noise barrier is constructed. For example, if the $L_{eq(h)}$ at a residence before a barrier is constructed is 75 dB(A) and the $L_{eq(h)}$ after a barrier constructed is 65 dB(A), then the insertion loss would be 10 dB(A).

1.2 Criteria for Determining Impacts

Noise impacts are determined by comparing future “design year” project worst-hour $L_{eq(h)}$ values at areas of frequent human use to: (1) a set of Noise Abatement Criteria (NAC) for different land use categories, and (2) existing $L_{eq(h)}$ values. The FHWA noise standards (23 CFR 772) and AHTD’s noise policy state that when traffic noise impacts have been identified, then noise abatement should be considered.

Table 1 shows the land uses that are classified as Activity Categories A - G and the corresponding NAC.

A receptor is impacted in either of two ways:

1. The predicted, worst-hour, design year $L_{eq(h)}$ approaches or exceeds the NAC, even if there is not a substantial increase over the existing levels. “Approach” is defined by AHTD as one dB(A) less than the appropriate NAC. As an example, the NAC for Activity Category B and C land uses is 67 dB(A). An impact would occur if the design year $L_{eq(h)}$ is predicted to be 66 dB(A) or higher at a point of frequent exterior human use for a land use in either category.
2. The predicted, worst-hour, design year $L_{eq(h)}$ “substantially” exceeds the existing $L_{eq(h)}$, even if the NAC is not approached or exceeded. AHTD defines “substantially” as 10 or more dB(A).

Table 1. Noise Abatement Criteria in 23 CFR 772

Activity Category	Activity Criteria ¹ L _{eq(h)} [dB(A)]	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B²	67	Exterior	Residential
C²	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites ⁴ , schools, television studios, trails, and trail crossings
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E²	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	-	-	Agriculture, airports, bus yards, emergency services, industrial, logging maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G³	-	-	Undeveloped lands that are not permitted

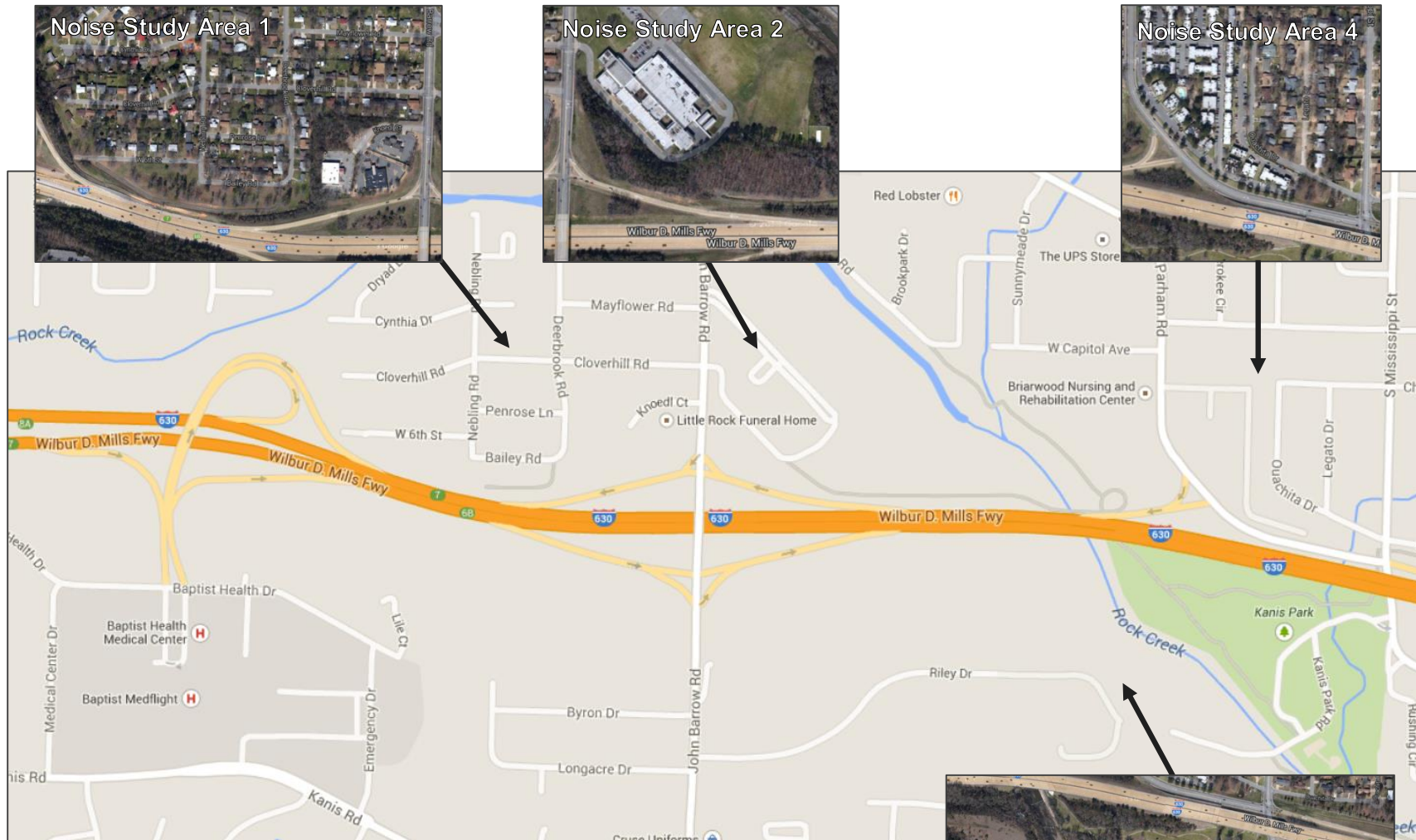
1. The Leq(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement.
2. Includes undeveloped lands that have been permitted for this Activity Category.
3. Indicates no building permits on or before the date of public knowledge.
4. Section 4(f) property means publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance, as initially defined in Section 4(f) of the Department of Transportation Act of 1966 and addressed in 23 CFR 774, Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f)).

2.0 Identification of Noise Sensitive Areas and Receptors

Review of available electronic mapping, as well as field reconnaissance, led to the selection of eight study areas with potential for noise impacts, called Noise Study Areas (NSAs). These areas are shown in Figure 2 and Figure 3. Table 2 lists the relevant associated land uses in each NSA that are within 500 feet from the edge of the outside travel lane of I-630 by Activity Category. The applicable NAC for each Activity Category were shown in Table 1.

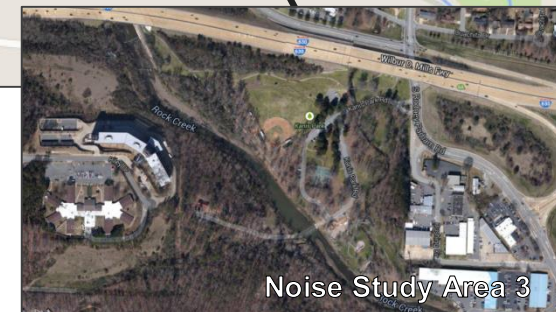
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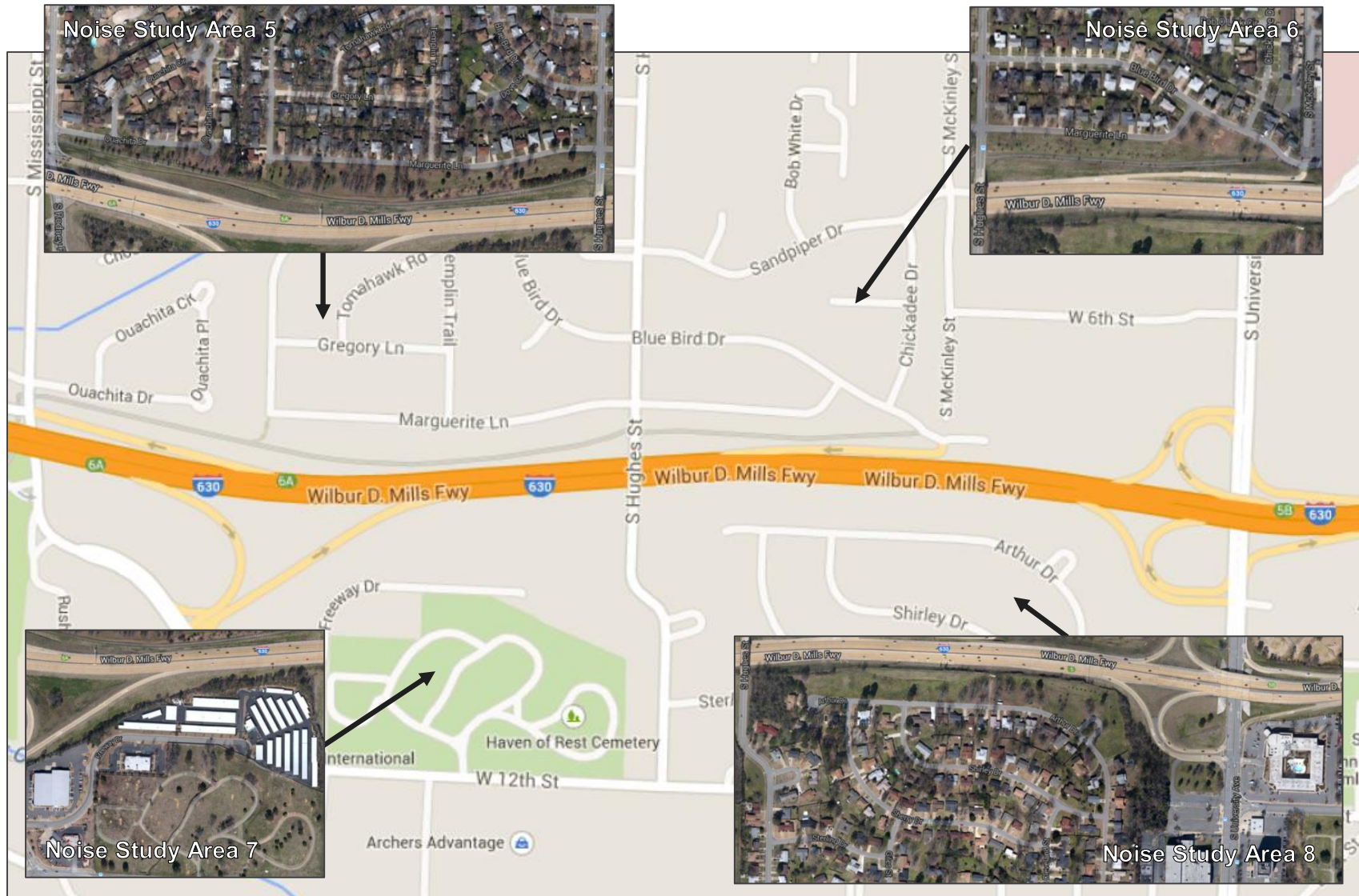
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1	<p>North of I-630 between Baptist Hospital Interchange and John Barrow Road:</p> <p>Activity Category B (Exterior) – Residences on Bailey Road, Penrose Lane, Nebling Road, W 6th Street, Cloverhill Road, Cynthia Drive, and Deerbrook Road</p> <p>Activity Category F – Various commercial buildings in the northwest quadrant of the I-630/John Barrow Road Interchange</p>
2	<p>Northeast Quadrant of the I-630/John Barrow Road Interchange:</p> <p>Activity Category C (Exterior) – Henderson Health Sciences Magnet Middle School</p>
3	<p>South of I-630 between John Barrow Road and Rodney Parham Road:</p> <p>Activity Category B (Exterior) – Residences in the Woodland Heights Community</p> <p>Activity Category C (Exterior) – Kanis Park</p> <p>Activity Category F – Various commercial buildings south of Rodney Parham Road</p>
4	<p>North of I-630 between N Rodney Parham Road and S Mississippi Street:</p> <p>Activity Category B (Exterior) – Residences on Ouachita Drive, Legato Drive, S Mississippi Street, and a section of the Briarwood Townhome Complex</p> <p>Activity Category C (Exterior) – Briarwood Townhome Complex courtyard area</p>
5	<p>North of I-630 between S Mississippi Street and S Hughes Street:</p> <p>Activity Category B (Exterior) – Residences on S Mississippi Street, Ouachita Drive, Ouachita Circle, Ouachita Place, Flag Road, Gregory Lane, Marguerite Lane, Dove Circle, Blue Bird Drive, and S Hughes Street</p>
6	<p>North of I-630 between S Hughes Street and S McKinley Street:</p> <p>Activity Category B (Exterior) – Residences on S Hughes Street, Blue Bird Drive, Marguerite Lane, and Chickadee Drive</p>
7	<p>South of I-630 between S Rodney Parham Road and S Hughes Street:</p> <p>Activity Category C (Exterior) – Haven of Rest Cemetery</p> <p>Activity Category F – Various commercial buildings along Freeway Drive</p>
8	<p>South of I-630 between S Hughes Street and East of University Avenue:</p> <p>Activity Category B (Exterior) – Residences on S Hughes Street, Arthur Drive, Shirley Drive, and Sherry Drive</p> <p>Activity Category E – Clarion Hotel</p>



Base map: Google Maps (2014)

Figure 2: Noise Study Areas 1-4





Base map: Google Maps (2014)

Figure 3: Noise Study Areas 5-8

The land uses along the project corridor studied for noise impacts were either identified as Activity Category B or Activity Category C. Activity Category B receptors are located at exterior areas of frequent human use, such as a patio or yard. Multifamily dwellings, such as an apartment complex, have receptors located at each ground floor unit with a patio and each upper floor unit with a balcony. Activity Category C receptors are either located at individual sites or can involve properties with multiple areas of diverse activity and usage characteristics. The receptor identification metrics for Activity Category C land uses outlined in the AHTD *Policy on Highway Traffic Noise Abatement* was followed for this analysis.

A search of building permits at the time of the analysis revealed no active building permits for new noise sensitive land uses. Any subsequent building permits for noise sensitive land uses would be after the date of public knowledge for the project, and AHTD would not be responsible for noise abatement.

3.0 Measurement of Existing Sound Levels

Noise measurements were conducted at several locations in the project area between September 16, 2014 and September 18, 2014. Table 3 summarizes the measured equivalent sound levels at each of the measurement locations. Figure 4, Figure 5, and Figure 6 show the measurement locations. The individual locations' noise measurement results are provided in Appendix A. Field data sheets and photographs are available upon request.

Short-term noise measurements at these locations were conducted by making a series of consecutive measurements in one-minute intervals, over a 15 minute period at each site, repeated twice. If these measurements differed by more than 3 dB(A), a third measurement was taken, unless the variation could be explained by other noise events occurring during the measurement period. Background noises (i.e., local traffic, dog barking, sirens, etc.) during these measurements were noted, and the corresponding one-minute measurement intervals were eliminated from the calculation of the measured sound level for the overall measurement period. An ambient noise measurement was taken at one location to obtain desirable statistical accuracy for the background noise levels.

Table 3: Measured Existing Equivalent Sound Levels at Measurement Locations

Location (Setup)	Noise Study Area	Date	Period	Measured L_{eq} [dB(A)]
Nebling Road (1.1)	1	9/18/2014	1:52-2:07 PM	60
			2:12-2:27 PM	61
Nebling Road (1.2)	1	9/18/2014	1:52-2:07 PM	54
			2:12-2:27 PM	54
Nebling Road (1.3)	1	9/18/2014	1:52-2:07 PM	51
			2:12-2:27 PM	52
Kanis Park (2.1)	2	9/16/2014	4:37-5:07 PM	64
Kanis Park (2.2)	2	9/16/2014	4:37-5:07 PM	60
Ouachita Place (3.1)	5	9/17/2014	8:52-9:07 AM	66
			9:12-9:27 AM	65
			9:49-10:04 AM	66

Location (Setup)	Noise Study Area	Date	Period	Measured L_{eq} [dB(A)]
Ouachita Place (3.2)	5	9/17/2014	8:52-9:07 AM	59
			9:12-9:27 AM	59
			9:49-10:04 AM	59
Ouachita Place (3.3)	5	9/17/2014	8:52-9:07 AM	56
			9:12-9:27 AM	54
			9:49-10:04 AM	55
Arthur Drive (4.1)	8	9/17/2014	1:18-1:35 PM	65
			1:38-1:53 PM	64
Between Arthur Drive and Shirley Drive (4.2)	8	9/17/2014	1:18-1:35 PM	57
			1:38-1:53 PM	56
Shirley Drive (4.3)	8	9/17/2014	1:18-1:35 PM	52
			1:38-1:53 PM	51
Marguerite Lane (5.1)	6	9/17/2014	2:20-2:35 PM	59
			2:37-2:52 PM	59
Blue Bird Lane (5.2)	6	9/17/2014	2:20-2:35 PM	52
			2:37-2:52 PM	53

As indicated in Table 3, the existing sound levels at the exterior measurement locations were between 51 dB(A) and 66 dB(A). The lower sound levels were recorded at distant measurement locations and the sound levels in the mid 60 dB(A) range were recorded at the first row residences closest to I-630.



Base Image: Google Maps (2014)

Figure 4: Noise Measurement Locations 1.1-1.3



Base Image: Google Maps (2014)

Figure 5: Noise Measurement Locations 2.1-2.2 and 3.1-3.3



Base Image: Google Maps (2014)

Figure 6: Noise Measurement Locations 4.1-4.3 and 5.1-5.2

4.0 Model Validation

AHTD policy requires validation of the FHWA Traffic Noise Model (TNM 2.5) computer program that is used to calculate worst-hour equivalent sound levels for receptors in each NSA for the existing scenario, and for the Build Alternative in the future design year (2039). Validation involves making noise measurements at selected points near the existing roadway while making simultaneous vehicle classification counts of the traffic and estimating travel speed. Then, the traffic counts are factored up to be hourly volumes, and along with the speeds, are entered into a TNM 2.5 model that has been created for the existing highway situation. The modeled levels are compared to the measured levels, and if they are within 3 dB(A) of the measured levels, the model is said to be validated.

Model validation noise measurements were made between September 16, 2014 and September 18, 2014, with simultaneous traffic data collection. Traffic was videotaped for classification counting in the office. The noise measurement locations are listed in Table 4 and labeled on Figure 4, Figure 5, and Figure 6. Appendix A contains the detailed measurement results.

Table 4 lists the validation locations and presents the validation results. As shown in the table, the difference in the predicted and measured levels for the validation locations are all equal to or less than 2 dB(A).

Table 4: Model Validation Results

Location	Setup	Measured L_{eq} [dB(A)]	Predicted L_{eq} [dB(A)]	Predicted-Measured Difference [dB(A)]
Nebbling Road	1.1	61	60	-1
	1.2	54	56	2
	1.3	52	54	2
Kanis Park	2.1	64	65	1
	2.2	60	61	1
Ouachita Place	3.1	66	65	-1
	3.2	59	59	0
	3.3	56	58	2
Arthur Drive/ Shirley Drive	4.1	65	67	2
	4.2	57	57	0
	4.3	52	50	-2
Marguerite Lane/ Blue Bird Drive	5.1	59	61	2
	5.2	53	55	2

5.0 Determination of Existing and Future One-Hour Equivalent Sound Levels

The FHWA TNM 2.5 computer program was then used to calculate loudest-hour equivalent sound levels for the receptors in each NSA for the existing scenario and the future alternative. These receptors included numerous locations representative of each land use at varying distances from I-630.

Existing AM and PM peak hour traffic volumes, including truck percentages, were developed by AHTD for use in the noise modeling for the Existing Scenario. Design Year 2039 AM and PM peak hour traffic projections were developed for the *Interstate 630 Widening Interchange Justification Report* (October 2014) and were used in the noise modeling for the Build Scenario.

Based on the *Interstate 630 Widening Interchange Justification Report* Design Year 2039 peak hour traffic projections, it was determined that the NSAs along the I-630 corridor experience the worst noise hour during different times of the day. The worst noise hour for the NSAs south of I-630 corresponds to the AM peak hour, and the worst noise hour for the NSAs north of I-630 corresponds to the PM peak hour.

For multiple-lane roadways, up to two travel lanes were modeled as a single TNM “roadway”. During the field reconnaissance, speeds higher than the posted speed limit of 60 mph were observed; therefore a speed limit of 65 mph was used for cars and trucks for I-630, and design speeds were used for interchange ramps in TNM.

Receptors were modeled by TNM “receiver” points at areas of frequent human use of a property. For single-family residences, that area could be the front or back yard. For apartments and condominiums, that area could be a patio or balcony or a common use area. For the parks, hotels, picnic areas, and outdoor restaurant dining, receptors were modeled at the common use areas. A TNM receiver could represent more than one receptor, such as several adjacent single-family residences or condominium balconies, or the common use area for an apartment building.

Large buildings were modeled as noise barriers to properly account for the shielding of the traffic noise that they provide to receptors. Single-family houses were modeled as individual noise barriers to account for the shielding that they would provide. Significant terrain features were also modeled. The default ground surface of lawn grass was used, with any large areas of paved ground specifically modeled as pavement.

Appendix C provides plan views of the TNM models for each NSA.

The predicted sound levels and the resulting impacts are discussed in the following section for each NSA.

6.0 Impact Determination Analysis

6.1 Summary of Impacts

An impact assessment was completed for the build alternative for each NSA. As noted previously, a receptor is impacted in two ways:

1. The predicted, worst-hour, design year $L_{eq(h)}$ approaches or exceeds the NAC. AHTD defines “approach” as 1 dB(A) less than the NAC. These levels apply at areas of frequent human use.
2. The predicted, worst-hour, design year $L_{eq(h)}$ “substantially” exceeds the existing $L_{eq(h)}$. “Substantially” is defined by AHTD as an increase of 10 or more dB(A).

Due to the nature of the project – a widening of an Interstate – experience shows that increases over existing levels will be small and far below the AHTD criterion of a 10 or more dB increase. Therefore, no receptors will be impacted by a substantial increase in sound level.

Table 5 summarizes the predicted impacts in each NSA for the Build Scenario. The impacts are then described in detail in the sections that follow.

As shown in Table 5, there will be a total of one hundred forty five (145) impacts to both residential properties (Activity Category B) and Category C properties (Kanis Park). All of the impacts will be in terms of approaching or exceeding the NAC. Approximately one half of these impacts will be in NSA 3. One hundred forty three (143) of the total predicted impacts are residences. NSA 1 and NSA 2 are not predicted to experience any noise impacts due to future traffic volumes. NSA 3 is predicted to have impacts at sixty-six (66) residential balconies at the Woodland Heights retirement community as well as impacts to the walking trail and ball field at Kanis Park. NSA 4 is predicted to have nine (9) impacts to single-family residences and thirteen (13) impacts to apartment patios. NSA 5 is predicted to have twenty-six (26) impacts to single-family residences. NSA 6 is predicted to have ten (10) impacts to single-family residences. NSA 7 is not predicted to experience any noise impacts due to future traffic volumes. NSA 8 is predicted to have nineteen (19) impacts to single-family residences.

Table 5: Summary of Noise Impacts for the Build Scenario (Year 2039)

Noise Study Area	Design Year Sound Levels, $L_{eq(h)}$, [dB(A)]	Increase over Existing Sound Levels, [dB(A)]	Impacts based on NAC?	Impacts based on Substantial Increase	Number and Type of Impacted Receptors
1	Activity Category B: 53-65	1 to 4	No	No	-
2	Activity Category C: 55-62	1 to 3	No	No	-
3	Activity Category B: 67-70 Activity Category C: 65-69	0 to 1	Yes	No	66 retirement residences 2 recreational areas
4	Activity Category B: 52-71	0 to 3	Yes	No	9 single-family homes 13 apartment patios
5	Activity Category B: 49-71	0 to 6	Yes	No	26 single-family homes
6	Activity Category B: 54-71	0 to 4	Yes	No	8 single-family homes 1 duplex (2 total impacts)
7	Activity Category C: 56-59	0 to 1	No	No	-
8	Activity Category B: 54-69 Activity Category E: 57	0 to 2	Yes	No	19 single-family homes

6.2 Noise Study Area 1

Table 6 lists the TNM receivers in NSA 1 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 PM peak hour was determined to be the worst noise hour for this NSA. No impacts are predicted in this NSA. Figure 7 shows the locations of the studied noise-sensitive receptors.

Table 6: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 1

Receiver	Dwelling Units	Existing Sound Level [dB(A)]	Build Sound Level [dB(A)]	Increase over Existing	Number of Impacts
9308 W 6TH ST (R 1)	1	61	63	2	-
9304 W 6TH ST (R 2)	1	61	63	2	-
9300 W 6TH ST (R 3)	1	61	62	1	-
9220 W 6TH ST (R 4)	1	60	63	3	-
9216 W 6TH ST (R 5)	1	60	62	2	-
9212 W 6TH ST (R 6)	1	60	62	2	-
9208 W 6TH ST (R 7)	1	59	61	2	-
9204 W 6TH ST (R 8)	1	60	62	2	-
516 NEBLING RD (R 9)	1	60	62	2	-
621 NEBLING RD (R 10)	1	63	64	1	-
9102 BAILEY RD (R 11)	1	64	65	1	-
9100 BAILEY DR (R 12)	1	63	65	2	-
9006 BAILEY DR (R 13)	1	63	65	2	-
9004 BAILEY DR (R 14)	1	62	65	3	-
9002 BAILEY DR (R 15)	1	62	65	3	-
9000 BAILEY DR (R 16)	1	62	64	2	-
605 DEERBROOK RD (R 17)	1	60	63	3	-
603 DEERBROOK RD (R 18)	1	57	61	4	-
601 DEERBROOK RD (R 19)	1	55	58	3	-
511 DEERBROOK RD (R 20)	1	55	57	2	-
509 DEERBROOK RD (R 21)	1	53	56	3	-
507 DEERBROOK RD (R 22)	1	53	55	2	-
9001 PENROSE LN (R 23)	1	57	58	1	-
9003 PENROSE LN (R 24)	1	57	59	2	-
9005 PENROSE LN (R 25)	1	57	59	2	-
9007 PENROSE LN (R 26)	1	58	60	2	-
9101 PENROSE LN (R 27)	1	58	60	2	-
9103 PENROSE LN (R 28)	1	58	60	2	-
9105 PENROSE LN (R 29)	1	58	61	3	-
506 NEBLING RD (R 30)	1	57	59	2	-
512 NEBLING RD (R 31)	1	56	58	2	-
9209 CLOVERHILL RD (R 32)	1	56	58	2	-

Receiver	Dwelling Units	Existing Sound Level [dB(A)]	Build Sound Level [dB(A)]	Increase over Existing	Number of Impacts
9215 CLOVERHILL RD (R 33)	1	56	58	2	-
9219 CLOVERHILL RD (R 34)	1	56	58	2	-
9221 CLOVERHILL RD (R 35)	1	57	58	1	-
9301 CLOVERHILL RD (R 36)	1	57	58	1	-
9305 CLOVERHILL RD (R 37)	1	57	59	2	-
9309 CLOVERHILL RD (R 38)	1	57	59	2	-
9315 CLOVERHILL RD (R 39)	1	57	58	1	-
9319 CLOVERHILL RD (R 40)	1	57	59	2	-
9319 CLOVERHILL RD (R 41)	1	57	59	2	-
9320 CLOVERHILL RD (R 42)	1	55	57	2	-
9316 CLOVERHILL RD (R 43)	1	56	57	1	-
9312 CLOVERHILL RD (R 44)	1	55	57	2	-
9308 CLOVERHILL RD (R 45)	1	56	57	1	-
9304 CLOVERHILL RD (R 46)	1	56	57	1	-
9300 CLOVERHILL RD (R 47)	1	55	57	2	-
9413 CYNTHIA DR (R 48)	1	52	53	1	-
9409 CYNTHIA DR (R 49)	1	53	54	1	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					0

The predicted sound levels at the residences in NSA 1 are between 53 and 65 dB(A). These sound levels are below the NAC for Activity Category B. None of the residential receptors are impacted by sound levels that approach or exceed the NAC. Future sound level increases over the existing levels range between 1-4 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



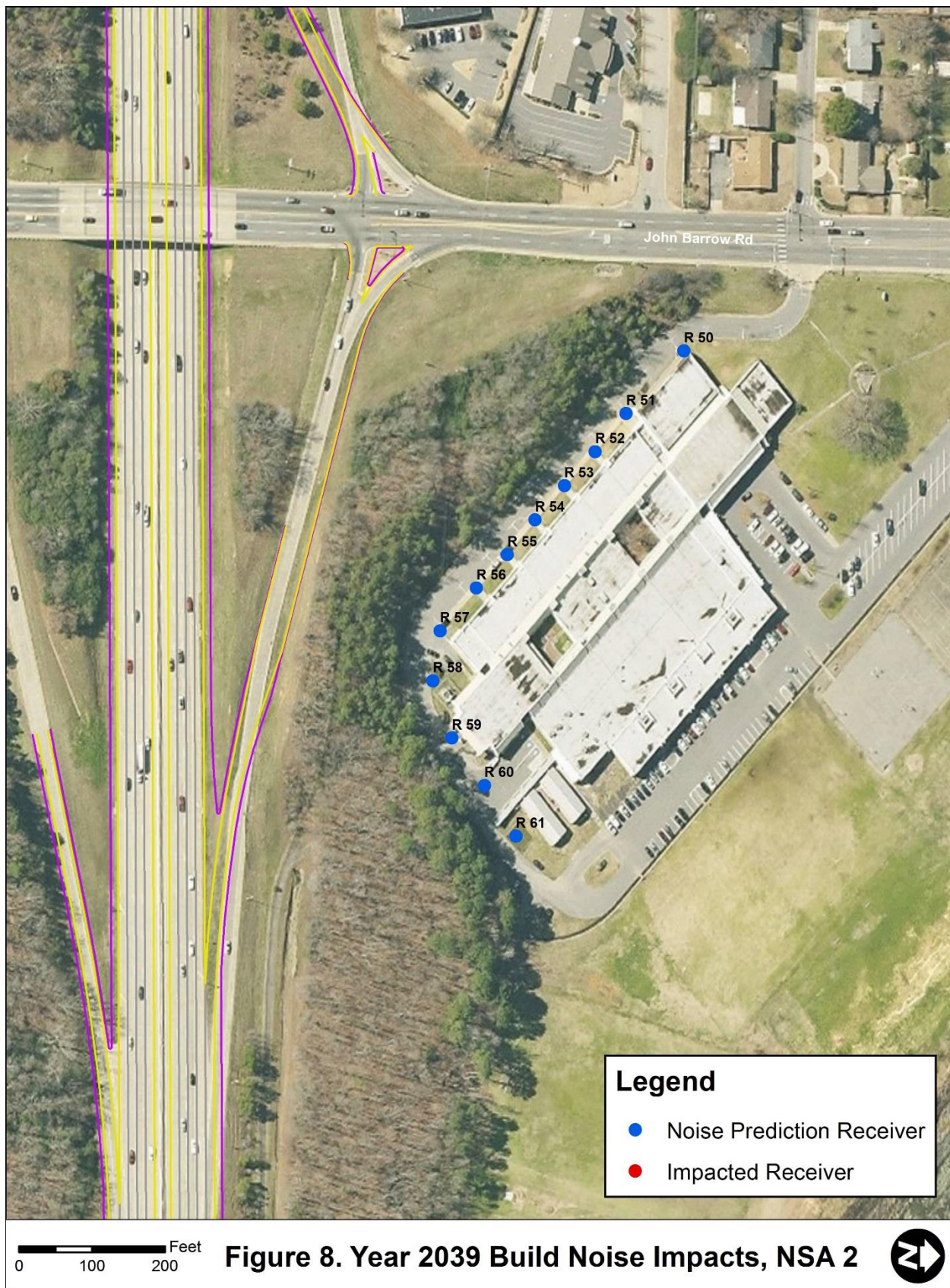
6.3 Noise Study Area 2

Table 7 lists the TNM receivers in NSA 2 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 PM peak hour was determined to be the worst noise hour for this NSA. No impacts are predicted in this NSA. Figure 8 shows the locations of the studied noise-sensitive receptors.

Table 7: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 2

Receiver	Dwelling Units	Existing Sound Level [dB(A)]	Build Sound Level [dB(A)]	Increase over Existing	Number of Impacts
401 JOHN BARROW RD (R 50)	1	56	57	1	-
401 JOHN BARROW RD (R 51)	1	54	56	2	-
401 JOHN BARROW RD (R 52)	1	54	56	2	-
401 JOHN BARROW RD (R 53)	1	54	55	1	-
401 JOHN BARROW RD (R 54)	1	53	56	3	-
401 JOHN BARROW RD (R 55)	1	54	56	2	-
401 JOHN BARROW RD (R 56)	1	54	56	2	-
401 JOHN BARROW RD (R 57)	1	56	59	3	-
401 JOHN BARROW RD (R 58)	1	57	59	2	-
401 JOHN BARROW RD (R 59)	1	58	60	2	-
401 JOHN BARROW RD (R 60)	1	59	61	2	-
401 JOHN BARROW RD (R 61)	1	60	62	2	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					0

The predicted sound levels at the receptors in NSA 2 are between 55 and 62 dB(A). These sound levels are below the NAC for Activity Category C. None of the educational receptors are impacted by sound levels that approach or exceed the NAC. Future sound level increases over the existing levels range between 1-3 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



6.4 Noise Study Area 3

Table 8 lists the TNM receivers in NSA 3 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 AM peak hour was determined to be the worst noise hour for this NSA. Levels in bold italics represent impacts. Figure 9 shows the impacts for the area.

Table 8: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 3

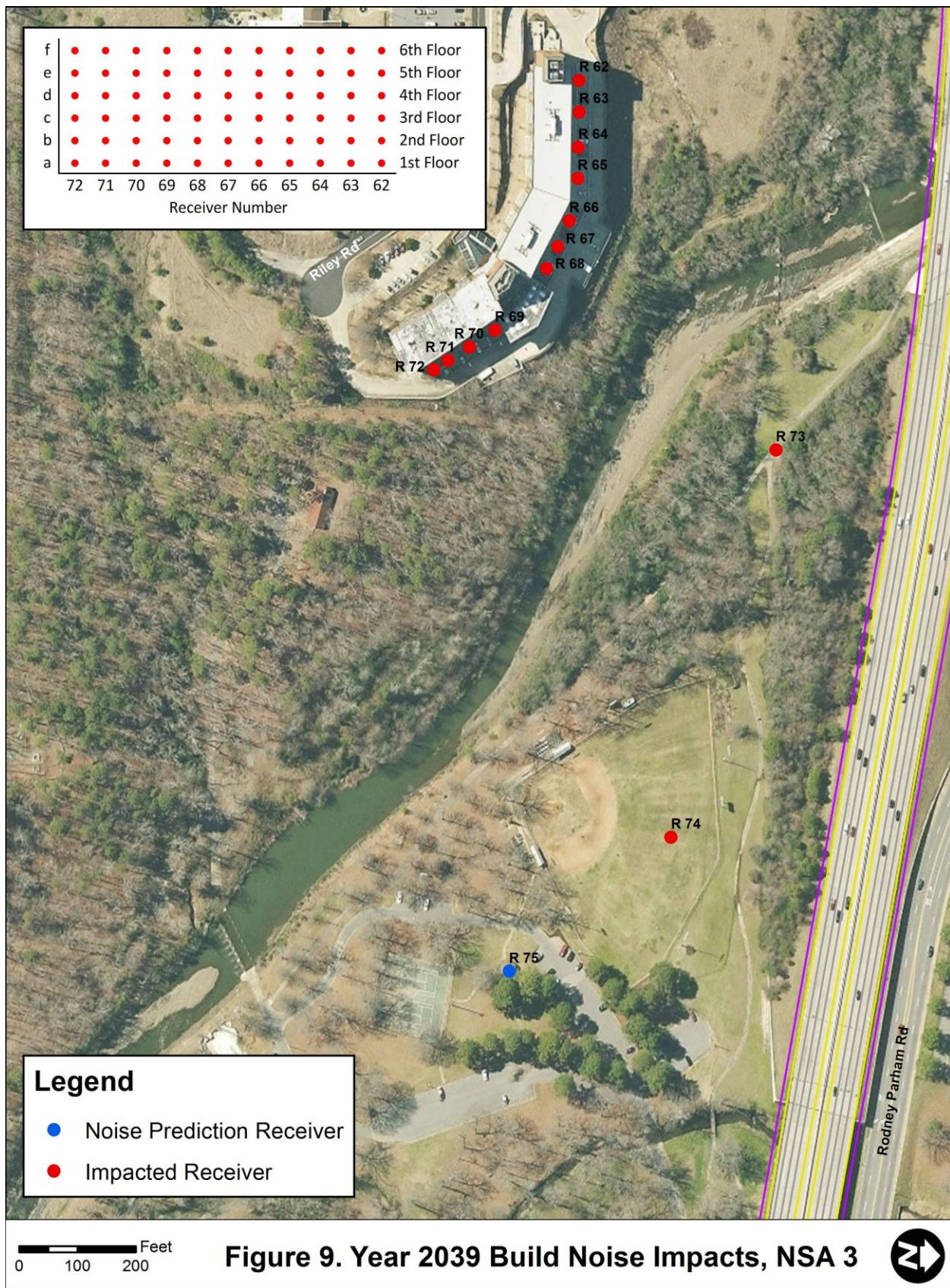
Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
8700 RILEY DR - 1st Floor (R 62a)	1	69	70	1	1
8700 RILEY DR - 1st Floor (R 63a)	1	69	70	1	1
8700 RILEY DR - 1st Floor (R 64a)	1	69	70	1	1
8700 RILEY DR - 1st Floor (R 65a)	1	69	70	1	1
8700 RILEY DR - 1st Floor (R 66a)	1	69	70	1	1
8700 RILEY DR - 1st Floor (R 67a)	1	69	70	1	1
8700 RILEY DR - 1st Floor (R 68a)	1	68	69	1	1
8700 RILEY DR - 1st Floor (R 69a)	1	67	68	1	1
8700 RILEY DR - 1st Floor (R 70a)	1	67	68	1	1
8700 RILEY DR - 1st Floor (R 71a)	1	67	67	0	1
8700 RILEY DR - 1st Floor (R 72a)	1	66	67	1	1
8700 RILEY DR - 2nd Floor (R 62b)	1	69	70	1	1
8700 RILEY DR - 2nd Floor (R 63b)	1	69	70	1	1
8700 RILEY DR - 2nd Floor (R 64b)	1	69	70	1	1
8700 RILEY DR - 2nd Floor (R 65b)	1	69	70	1	1
8700 RILEY DR - 2nd Floor (R 66b)	1	69	70	1	1
8700 RILEY DR - 2nd Floor (R 67b)	1	69	70	1	1
8700 RILEY DR - 2nd Floor (R 68b)	1	69	69	0	1
8700 RILEY DR - 2nd Floor (R 69b)	1	68	68	0	1
8700 RILEY DR - 2nd Floor (R 70b)	1	67	68	1	1
8700 RILEY DR - 2nd Floor (R 71b)	1	67	68	1	1
8700 RILEY DR - 2nd Floor (R 72b)	1	66	67	1	1
8700 RILEY DR - 3rd Floor (R 62c)	1	69	70	1	1
8700 RILEY DR - 3rd Floor (R 63c)	1	69	70	1	1

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
8700 RILEY DR - 3rd Floor (R 64c)	1	69	70	1	1
8700 RILEY DR - 3rd Floor (R 65c)	1	69	70	1	1
8700 RILEY DR - 3rd Floor (R 66c)	1	69	70	1	1
8700 RILEY DR - 3rd Floor (R 67c)	1	69	70	1	1
8700 RILEY DR - 3rd Floor (R 68c)	1	69	69	0	1
8700 RILEY DR - 3rd Floor (R 69c)	1	68	68	0	1
8700 RILEY DR - 3rd Floor (R 70c)	1	67	68	1	1
8700 RILEY DR - 3rd Floor (R 71c)	1	67	68	1	1
8700 RILEY DR - 3rd Floor (R 72c)	1	67	67	0	1
8700 RILEY DR - 4th Floor (R 62d)	1	69	70	1	1
8700 RILEY DR - 4th Floor (R 63d)	1	69	70	1	1
8700 RILEY DR - 4th Floor (R 64d)	1	69	70	1	1
8700 RILEY DR - 4th Floor (R 65d)	1	69	70	1	1
8700 RILEY DR - 4th Floor (R 66d)	1	69	70	1	1
8700 RILEY DR - 4th Floor (R 67d)	1	69	70	1	1
8700 RILEY DR - 4th Floor (R 68d)	1	69	69	0	1
8700 RILEY DR - 4th Floor (R 69d)	1	68	68	0	1
8700 RILEY DR - 4th Floor (R 70d)	1	67	68	1	1
8700 RILEY DR - 4th Floor (R 71d)	1	67	68	1	1
8700 RILEY DR - 4th Floor (R 72d)	1	67	67	0	1
8700 RILEY DR - 5th Floor (R 62e)	1	69	70	1	1
8700 RILEY DR - 5th Floor (R 63e)	1	69	70	1	1
8700 RILEY DR - 5th Floor (R 64e)	1	69	70	1	1
8700 RILEY DR - 5th Floor (R 65e)	1	69	70	1	1
8700 RILEY DR - 5th Floor (R 66e)	1	69	70	1	1
8700 RILEY DR - 5th Floor (R 67e)	1	69	70	1	1
8700 RILEY DR - 5th Floor (R 68e)	1	69	69	0	1
8700 RILEY DR - 5th Floor (R 69e)	1	68	68	0	1

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
8700 RILEY DR - 5th Floor (R 70e)	1	67	68	1	1
8700 RILEY DR - 5th Floor (R 71e)	1	67	68	1	1
8700 RILEY DR - 5th Floor (R 72e)	1	67	67	0	1
8700 RILEY DR - 6th Floor (R 62f)	1	69	70	1	1
8700 RILEY DR - 6th Floor (R 63f)	1	69	70	1	1
8700 RILEY DR - 6th Floor (R 64f)	1	69	70	1	1
8700 RILEY DR - 6th Floor (R 65f)	1	69	70	1	1
8700 RILEY DR - 6th Floor (R 66f)	1	69	70	1	1
8700 RILEY DR - 6th Floor (R 67f)	1	69	70	1	1
8700 RILEY DR - 6th Floor (R 68f)	1	69	69	0	1
8700 RILEY DR - 6th Floor (R 69f)	1	68	68	0	1
8700 RILEY DR - 6th Floor (R 70f)	1	67	68	1	1
8700 RILEY DR - 6th Floor (R 71f)	1	67	68	1	1
8700 RILEY DR - 6th Floor (R 72f)	1	67	67	0	1
KANIS PARK - TRAIL CROSSING (R 73)	1	69	69	0	1
KANIS PARK - BALL FIELD (R 74)	1	68	68	0	1
KANIS PARK - BATHROOMS (R 75)	1	65	65	0	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					68

¹***Bold, italics = Impact***

The predicted sound levels at the receptors in NSA 3 are between 65 and 70 dB(A). There are 66 impacted residential balconies that have predicted sound levels that approach or exceed the NAC for Activity Category B. Residential receivers were modeled at each balcony of the Woodland Heights retirement community. There are 2 impacted recreational exterior areas that have predicted sound levels that approach or exceed the NAC for Activity Category C. Future sound level increases over the existing levels range between 0-1 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



6.5 Noise Study Area 4

Table 9 lists the TNM receivers in NSA 4 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 PM peak hour was determined to be the worst noise hour for this NSA. Levels in bold italics represent impacts. Figure 10 shows the impacts for the area.

Table 9: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 4

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
801 S RODNEY PARHAM RD (R 76) [POOL/TENNIS COURT/PICNIC AREA]	3	59	61	2	-
801 S RODNEY PARHAM RD (R 77)	1	64	65	1	-
801 S RODNEY PARHAM RD (R 78)	1	61	62	1	-
801 S RODNEY PARHAM RD (R 79)	1	62	63	1	-
801 S RODNEY PARHAM RD (R 80)	1	59	60	1	-
801 S RODNEY PARHAM RD (R 81)	1	64	65	1	-
801 S RODNEY PARHAM RD (R 82)	1	60	61	1	-
801 S RODNEY PARHAM RD (R 83)	1	61	62	1	-
801 S RODNEY PARHAM RD (R 84)	1	58	60	2	-
801 S RODNEY PARHAM RD (R 85)	1	65	66	1	1
801 S RODNEY PARHAM RD (R 86)	1	64	65	1	-
801 S RODNEY PARHAM RD (R 87)	1	68	69	1	1
801 S RODNEY PARHAM RD (R 88)	1	60	61	1	-
801 S RODNEY PARHAM RD (R 89)	1	67	68	1	1
801 S RODNEY PARHAM RD (R 90)	1	59	60	1	-
801 S RODNEY PARHAM RD (R 91)	1	66	67	1	1
801 S RODNEY PARHAM RD (R 92)	1	57	58	1	-
801 S RODNEY PARHAM RD (R 93)	1	58	59	1	-
801 S RODNEY PARHAM RD (R 94)	1	68	68	0	1
801 S RODNEY PARHAM RD (R 95)	1	66	66	0	1
801 S RODNEY PARHAM RD (R 96)	1	67	68	1	1
801 S RODNEY PARHAM RD (R 97)	1	64	64	0	-
801 S RODNEY PARHAM RD (R 98)	1	69	70	1	1

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
801 S RODNEY PARHAM RD (R 99)	1	56	58	2	-
801 S RODNEY PARHAM RD (R 100)	1	69	70	1	1
801 S RODNEY PARHAM RD (R 101)	1	56	58	2	-
801 S RODNEY PARHAM RD (R 102)	1	69	70	1	1
801 S RODNEY PARHAM RD (R 103)	1	58	59	1	-
801 S RODNEY PARHAM RD (R 104)	1	69	70	1	1
801 S RODNEY PARHAM RD (R 105)	1	57	59	2	-
801 S RODNEY PARHAM RD (R 106)	1	69	70	1	1
801 S RODNEY PARHAM RD (R 107)	1	57	59	2	-
801 S RODNEY PARHAM RD (R 108)	1	71	71	0	1
801 S RODNEY PARHAM RD (R 109)	1	63	63	0	-
801 S RODNEY PARHAM RD (R 110)	1	60	61	1	-
801 S RODNEY PARHAM RD (R 111)	1	56	58	2	-
801 S RODNEY PARHAM RD (R 112)	1	63	63	0	-
801 S RODNEY PARHAM RD (R 113)	1	56	57	1	-
801 S RODNEY PARHAM RD (R 114)	1	64	65	1	-
801 S RODNEY PARHAM RD (R 115)	1	64	65	1	-
801 S RODNEY PARHAM RD (R 116)	1	60	61	1	-
801 S RODNEY PARHAM RD (R 117)	1	60	61	1	-
801 S RODNEY PARHAM RD (R 118)	1	63	64	1	-
801 S RODNEY PARHAM RD (R 119)	1	61	63	2	-
801 S RODNEY PARHAM RD (R 120)	1	61	62	1	-
801 S RODNEY PARHAM RD (R 121)	1	61	62	1	-
801 S RODNEY PARHAM RD (R 122)	1	60	62	2	-
801 S RODNEY PARHAM RD (R 123)	1	62	63	1	-
801 S RODNEY PARHAM RD (R 124)	1	52	54	2	-
801 S RODNEY PARHAM RD (R 125)	1	51	52	1	-
801 S RODNEY PARHAM RD (R 126)	1	54	55	1	-

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
801 S RODNEY PARHAM RD (R 127)	1	59	60	1	-
721 OUACHITA DR (R 128)	1	65	66	1	1
724 LEGATO DR (R 129)	1	65	66	1	1
715 OUACHITA DR (R 130)	1	61	62	1	-
718 LEGATO DR (R 131)	1	62	64	2	-
713 OUACHITA DR (R 132)	1	62	63	1	-
712 LEGATO DR (R 133)	1	63	64	1	-
812 LEGATO DR (R 134)	1	67	68	1	1
806 S MISSISSIPPI ST (R 135)	1	69	70	1	1
723 LEGATO DR (R 136)	1	64	67	3	1
724 S MISSISSIPPI ST (R 137)	1	68	69	1	1
717 LEGATO DR (R 138)	1	65	67	2	1
718 S MISSISSIPPI ST (R 139)	1	66	68	2	1
711 LEGATO DR (R 140)	1	63	65	2	-
712 S MISSISSIPPI ST (R 141)	1	65	66	1	1
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					22

¹***Bold, italics = Impact***

The predicted sound levels at the receptors in NSA 4 are between 52 and 71 dB(A). There are 22 impacted residential receivers (9 single-family homes and 13 apartment patios) that have predicted sound levels that approach or exceed the NAC for Activity Category B. Future sound level increases over the existing levels range between 0-3 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



6.6 Noise Study Area 5

Table 10 lists the TNM receivers in NSA 5 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 PM peak hour was determined to be the worst noise hour for this NSA. Levels in bold italics represent impacts. Figure 11 shows the impacts for the area.

Table 10: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 5

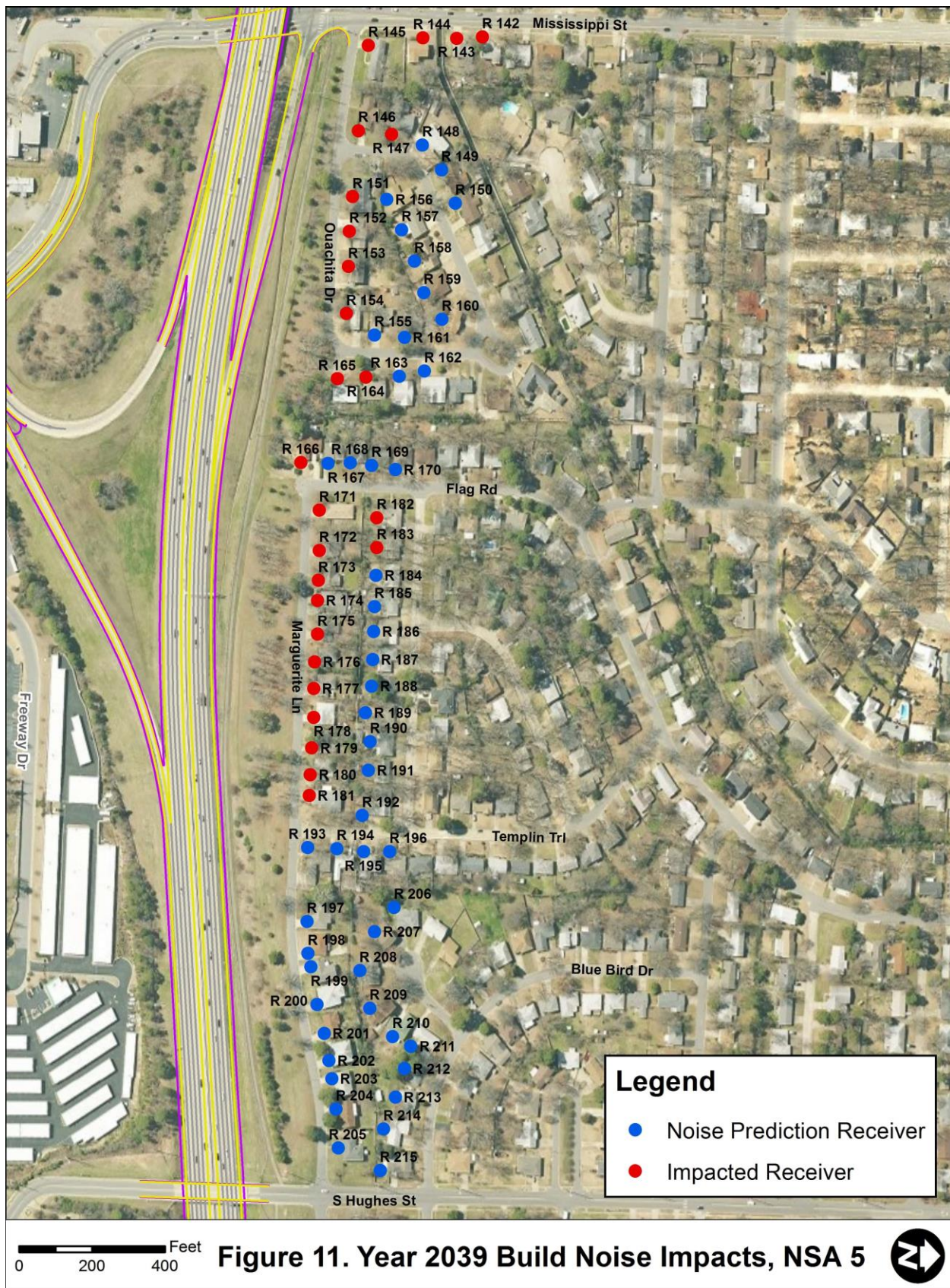
Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
717 S MISSISSIPPI ST (R 142)	1	68	69	1	1
723 S MISSISSIPPI ST (R 143)	1	69	70	1	1
805 MISSISSIPPI ST (R 144)	1	68	69	1	1
7526 OUACHITA DR (R 145)	1	70	71	1	1
7510 OUACHITA DR (R 146)	1	68	69	1	1
820 OUACHITA CIR (R 147)	1	65	66	1	1
816 OUACHITA CIR (R 148)	1	63	64	1	-
812 OUACHITA CIR (R 149)	1	62	64	2	-
808 OUACHITA CIR (R 150)	1	63	64	1	-
7424 OUACHITA DR (R 151)	1	69	70	1	1
7410 OUACHITA DR (R 152)	1	68	70	2	1
7402 OUACHITA DR (R 153)	1	68	69	1	1
7318 OUACHITA DR (R 154)	1	67	68	1	1
818 OUACHITA PL (R 155)	1	62	63	1	-
817 OUACHITA CIR (R 156)	1	64	65	1	-
815 OUACHITA CIR (R 157)	1	60	61	1	-
807 OUACHITA CIR (R 158)	1	61	62	1	-
803 OUACHITA CIR (R 159)	1	61	62	1	-
801 OUACHITA CIR (R 160)	1	58	59	1	-
812 OUACHITA PL (R 161)	1	60	61	1	-
805 OUACHITA PL (R 162)	1	62	63	1	-
811 OUACHITA PL (R 163)	1	64	65	1	-
817 OUACHITA PL (R 164)	1	66	66	0	1
823 OUACHITA PL (R 165)	1	68	68	0	1
66 FLAG RD (R 166)	1	67	68	1	1
64 FLAG RD (R 167)	1	65	65	0	-
62 FLAG RD (R 168)	1	63	63	0	-
60 FLAG RD (R 169)	1	63	63	0	-
58 FLAG RD (R 170)	1	63	64	1	-
65 FLAG RD (R 171)	1	68	68	0	1

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
7214 MARGUERITE LN (R 172)	1	68	70	2	1
7212 MARGUERITE LN (R 173)	1	68	70	2	1
7208 MARGUERITE LN (R 174)	1	68	71	3	1
7204 MARGUERTIE LN (R 175)	1	68	70	2	1
7200 MARGUERITE LN (R 176)	1	67	70	3	1
7116 MARGUERITE LN (R 177)	1	67	70	3	1
7112 MARGUERITE LN (R 178)	1	66	69	3	1
7108 MARGUERITE LN (R 179)	1	66	68	2	1
7104 MARGUERITE LN (R 180)	1	65	68	3	1
30 TEMPLIN TRL (R 181)	1	65	67	2	1
61 FLAG RD (R 182)	1	65	66	1	1
19 GREGORY LN (R 183)	1	65	67	2	1
17 GREGORY LN (R 184)	1	63	65	2	-
15 GREGORY LN (R 185)	1	56	58	2	-
13 GREGORY LN (R 186)	1	61	63	2	-
11 GREGORY LN (R 187)	1	61	63	2	-
9 GREGORY LN (R 188)	1	61	62	1	-
7 GREGORY LN (R 189)	1	60	62	2	-
5 GREGORY LN (R 190)	1	59	60	1	-
3 GREGORY LN (R 191)	1	58	59	1	-
1 GREGORY LN (R 192)	1	57	58	1	-
31 TEMPLIN TRL (R 193)	1	62	65	3	-
29 TEMPLIN TRL (R 194)	1	56	58	2	-
27 TEMPLIN TRL (R 195)	1	56	58	2	-
25 TEMPLIN TRL (R 196)	1	48	49	1	-
7000 MARGUERITE LN (R 197)	1	61	64	3	-
6920 MARGUERITE LN (R 198)	1	61	63	2	-
6912 MARGUERITE LN (R 199)	1	61	63	2	-
6908 MARGUERITE LN (R 200)	1	60	62	2	-
6900 MARGUERITE LN (R 201)	1	59	62	3	-
6822 MARGUERITE LN (R 202)	1	60	63	3	-
6816 MARGUERITE LN (R 203)	1	60	63	3	-

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
6808 MARGUERITE LN (R 204)	1	61	63	2	-
6800 MARGUERITE LN (R 205)	1	60	63	3	-
7 DOVE CIR (R 206)	1	51	52	1	-
9 DOVE CIR (R 207)	1	51	53	2	-
8 DOVE CIR (R 208)	1	54	55	1	-
6 DOVE CIR (R 209)	1	48	50	2	-
4 DOVE CIR (R 210)	1	48	50	2	-
2 DOVE CIR (R 211)	1	48	52	4	-
6807 BLUEBIRD DR (R 212)	1	49	52	3	-
6805 BLUEBIRD DR (R 213)	1	51	56	5	-
6803 BLUEBIRD DR (R 214)	1	52	57	5	-
6801 BLUEBIRD DR (R 215)	1	53	59	6	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					26

¹***Bold, italics = Impact***

The predicted sound levels at the receptors in NSA 5 are between 49 and 71 dB(A). There are 26 impacted single-family homes that have predicted sound levels that approach or exceed the NAC for Activity Category B. Future sound level increases over the existing levels range between 0-6 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



6.7 Noise Study Area 6

Table 11 lists the TNM receivers in NSA 6 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 PM peak hour was determined to be the worst noise hour for this NSA. Levels in bold italics represent impacts. Figure 12 shows the impacts for the area.

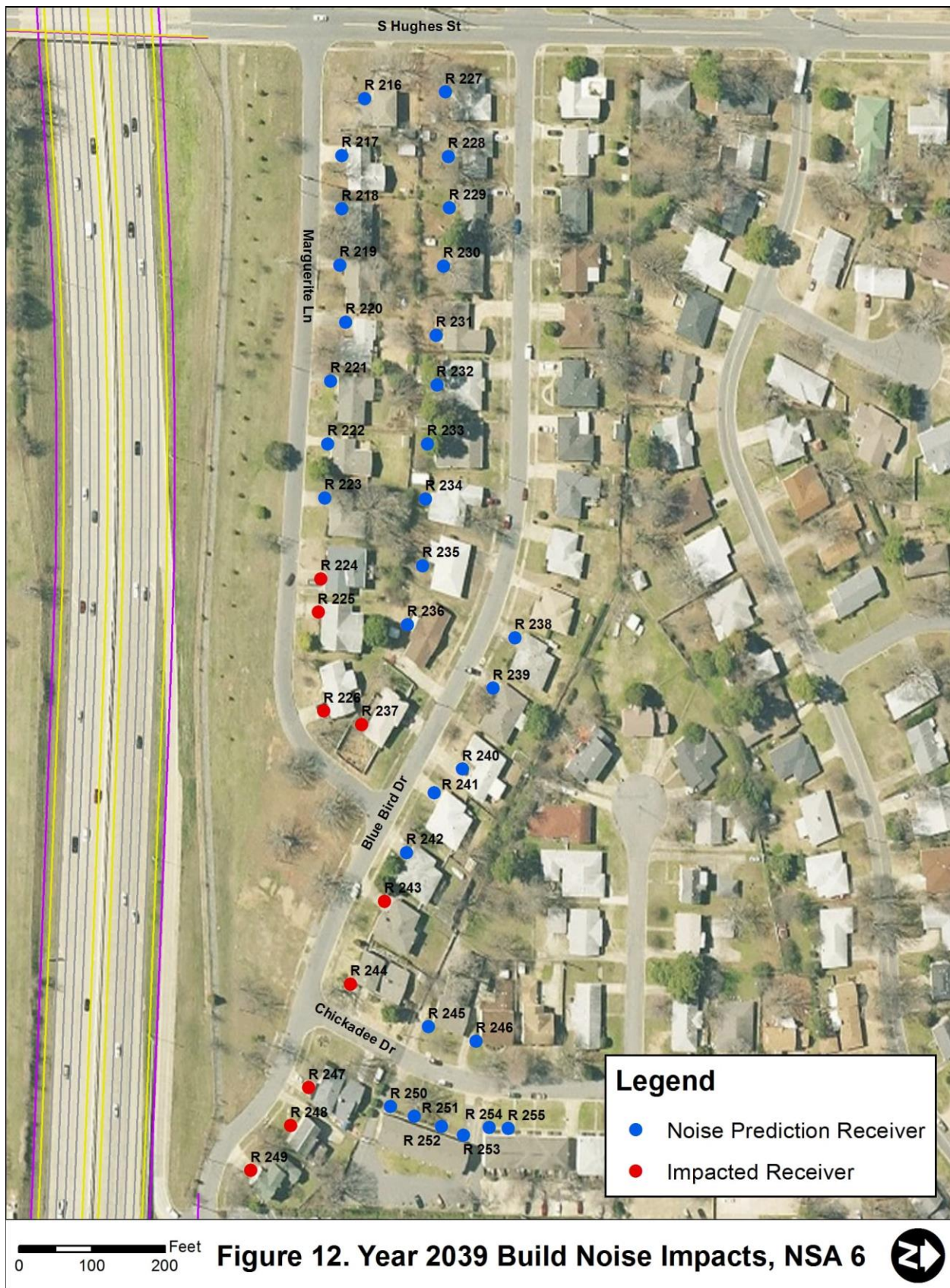
Table 11: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 6

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
701 S HUGHES ST (R 216)	1	57	60	3	-
6712 MARGUERITE LN (R 217)	1	59	62	3	-
6708 MARGUERITE LN (R 218)	1	59	62	3	-
6704 MARGUERITE LN (R 219)	1	60	62	2	-
6700 MARGUERITE LN (R 220)	1	60	63	3	-
6612 MARGUERITE LN (R 221)	1	62	65	3	-
6608 MARGUERITE LN (R 222)	1	62	65	3	-
6604 MARGUERITE LN (R 223)	1	62	65	3	-
6600 MARGUERITE LN (R 224)	1	63	66	3	1
6512 MARGUERITE LN (R 225)	1	63	66	3	1
6506 MARGUERITE LN (R 226)	1	67	71	4	1
6723 BLUEBIRD DR (R 227)	1	52	54	2	-
6715 BLUEBIRD DR (R 228)	1	52	54	2	-
6709 BLUEBIRD DR (R 229)	1	53	55	2	-
6705 BLUEBIRD DR (R 230)	1	54	56	2	-
6701 BLUEBIRD DR (R 231)	1	55	57	2	-
6615 BLUEBIRD DR (R 232)	1	56	57	1	-
6609 BLUEBIRD DR (R 233)	1	56	58	2	-
6605 BLUEBIRD DR (R 234)	1	56	58	2	-
6601 BLUEBIRD DR (R 235)	1	55	57	2	-
6515 BLUEBIRD DR (R 236)	1	55	58	3	-
6500 MARGUERITE LN (R 237)	1	65	68	3	1
6516 BLUEBIRD DR (R 238)	1	56	59	3	-
6512 BLUEBIRD DR (R 239)	1	57	59	2	-

Receiver	Dwelling Units	Existing Sound Level [dB(A)] ¹	Build Sound Level [dB(A)] ¹	Increase over Existing	Number of Impacts
6508 BLUEBIRD DR (R 240)	1	59	61	2	-
6504 BLUEBIRD DR (R 241)	1	61	64	3	-
6500 BLUEBIRD DR (R 242)	1	63	65	2	-
6420 BLUEBIRD DR (R 243)	1	63	66	3	1
616 CHICKADEE DR (R 244)	1	64	66	2	1
612 CHICKADEE DR (R 245)	1	60	63	3	-
608 CHICKADEE DR (R 246)	1	59	62	3	-
6412 BLUEBIRD DR (R 247)	1	64	67	3	1
6408 BLUEBIRD DR (R 248)	1	65	67	2	1
6400/6402 BLUEBIRD DR (R 249)	2	67	69	2	2
615 CHICKADEE DR (R 250)	1	57	60	3	-
615 CHICKADEE DR (R 251)	1	57	60	3	-
615 CHICKADEE DR (R 252)	1	57	60	3	-
615 CHICKADEE DR (R 253)	1	57	60	3	-
607 CHICKADEE DR (R 254)	1	58	61	3	-
607 CHICKADEE DR (R 255)	1	58	60	2	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					10

¹***Bold, italics = Impact***

The predicted sound levels at the receptors in NSA 6 are between 54 and 71 dB(A). These sound levels are above the NAC for Activity Category B. Ten of the residential receptors are impacted by a sound level approaching or exceeding the NAC. Future sound level increases over the existing levels range between 1-4 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



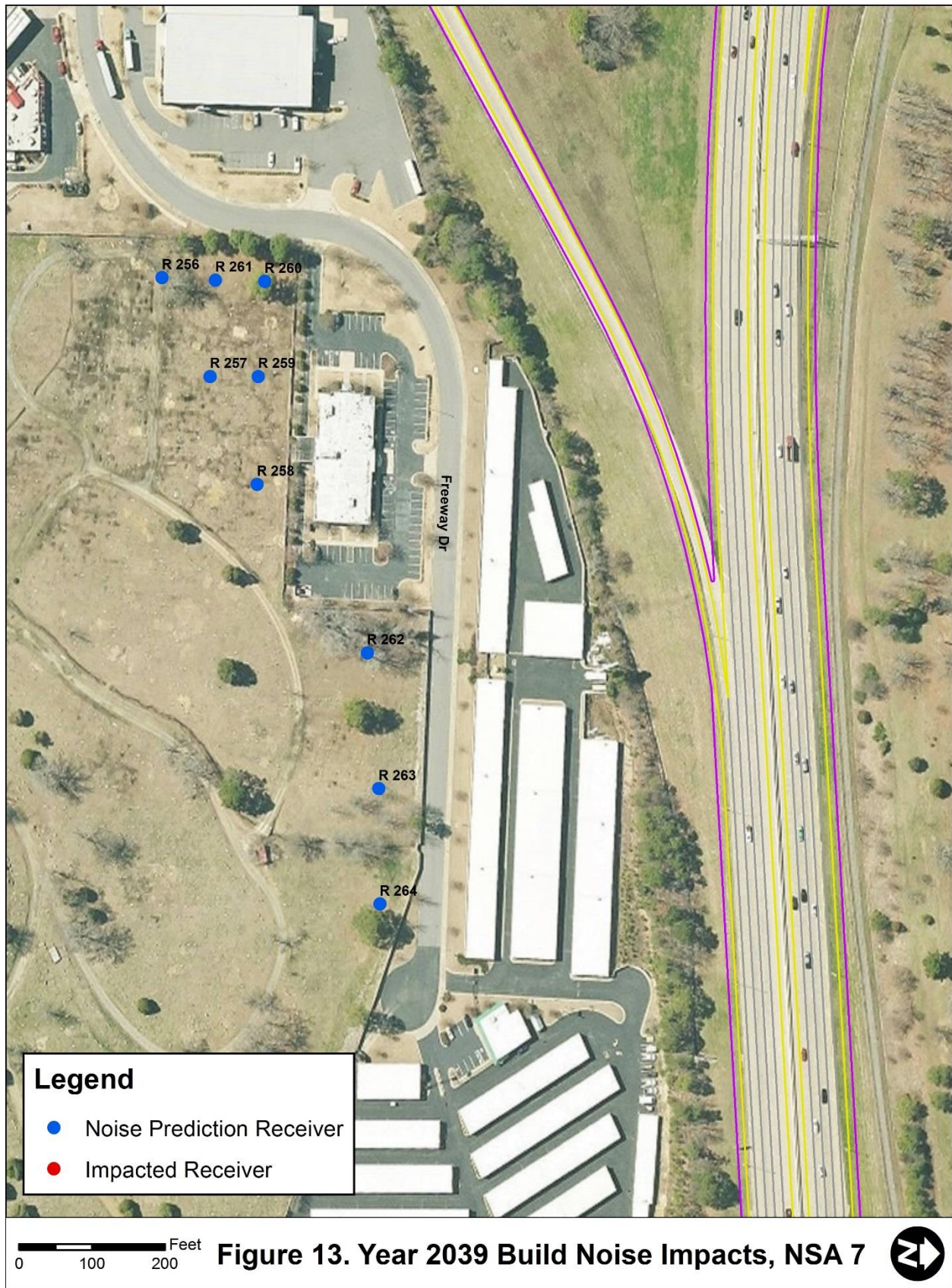
6.8 Noise Study Area 7

Table 12 lists the TNM receivers in NSA 7 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 AM peak hour was determined to be the worst noise hour for this NSA. No impacts are predicted in this NSA. Figure 13 shows the locations of the studied noise-sensitive receptors.

Table 12: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 7

Receiver	Dwelling Units	Existing Sound Level [dB(A)]	Build Sound Level [dB(A)]	Increase over Existing	Number of Impacts
7102 W 12TH ST (R 256)	1	59	59	0	-
7102 W 12TH ST (R 257)	1	57	58	1	-
7102 W 12TH ST (R 258)	1	58	58	0	-
7102 W 12TH ST (R 259)	1	57	57	0	-
7102 W 12TH ST (R 260)	1	59	59	0	-
7102 W 12TH ST (R 261)	1	58	59	1	-
7102 W 12TH ST (R 262)	1	57	58	1	-
7102 W 12TH ST (R 263)	1	55	56	1	-
7102 W 12TH ST (R 264)	1	56	57	1	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					0

The predicted sound levels at the receptors in NSA 7 are between 56 and 59 dB(A). None of the receptors are predicted to approach or exceed the NAC for Activity Category C. Future sound level increases over the existing levels range between 0-1 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



6.9 Noise Study Area 8

Table 13 lists the TNM receivers in NSA 8 and the one-hour equivalent sound levels for the Existing and Design Year 2039 Build scenarios. The traffic associated with the Design Year 2039 AM peak hour was determined to be the worst noise hour for this NSA. Levels in bold italics represent impacts. Figure 14 shows the impacts for the area.

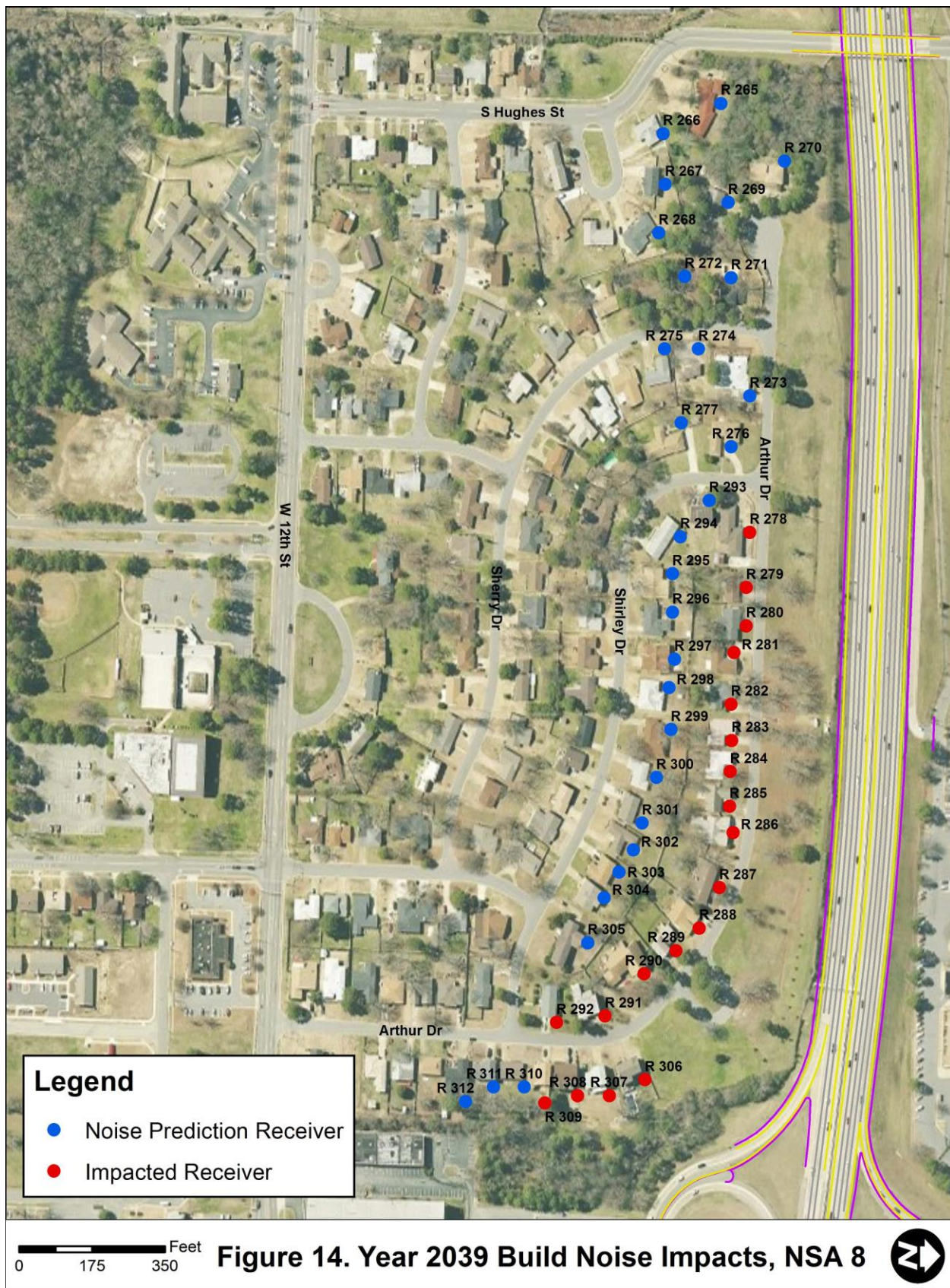
Table 13: Year 2039 One-Hour Equivalent Sound Levels and Impacts, NSA 8

Receiver	Dwelling Units	Existing Sound Level [dB(A)]	Build Sound Level [dB(A)]	Increase over Existing	Number of Impacts
913 S HUGHES ST (R 265)	1	56	57	1	-
917 HUGHES CT (R 266)	1	53	54	1	-
8 HUGHES CT (R 267)	1	56	57	1	-
10 HUGHES CT (R 268)	1	54	55	1	-
306 ARTHUR DR (R 269)	1	59	60	1	-
303 ARTHUR DR (R 270)	1	61	62	1	-
6615 SHERRY DR (R 271)	1	56	57	1	-
6609 SHERRY DR (R 272)	1	55	55	0	-
6520 SHERRY DR (R 273)	1	62	64	2	-
6518 SHERRY DR (R 274)	1	53	54	1	-
6516 SHERRY DR (R 275)	1	55	56	1	-
6513 SHIRLEY DR (R 276)	1	61	62	1	-
6507 SHIRLEY DR (R 277)	1	54	56	2	-
510 ARTHUR DR (R 278)	1	64	66	2	1
516 ARTHUR DR (R 279)	1	64	66	2	1
610 ARTHUR DR (R 280)	1	64	66	2	1
616 ARTHUR DR (R 281)	1	64	66	2	1
620 ARTHUR DR (R 282)	1	65	67	2	1
704 ARTHUR DR (R 283)	1	67	69	2	1
710 ARTHUR DR (R 284)	1	67	69	2	1
714 ARTHUR DR (R 285)	1	67	69	2	1
718 ARTHUR DR (R 286)	1	67	69	2	1
802 ARTHUR DR (R 287)	1	67	69	2	1
810 ARTHUR DR (R 288)	1	67	69	2	1
818 ARTHUR DR (R 289)	1	66	68	2	1
824 ARTHUR DR (R 290)	1	66	68	2	1
910 ARTHUR DR (R 291)	1	66	67	1	1
6200 SHIRLEY DR (R 292)	1	65	66	1	1
6412 SHIRLEY DR (R 293)	1	59	61	2	-
6410 SHIRLEY DR (R 294)	1	54	55	1	-
6408 SHIRLEY DR (R 295)	1	56	58	2	-
6406 SHIRLEY DR (R 296)	1	58	59	1	-

Receiver	Dwelling Units	Existing Sound Level [dB(A)]	Build Sound Level [dB(A)]	Increase over Existing	Number of Impacts
6402 SHIRLEY DR (R 297)	1	59	60	1	-
6400 SHIRLEY DR (R 298)	1	59	61	2	-
6312 SHIRLEY DR (R 299)	1	60	61	1	-
6310 SHIRLEY DR (R 300)	1	61	62	1	-
6308 SHIRLEY DR (R 301)	1	62	63	1	-
6302 SHIRLEY DR (R 302)	1	63	64	1	-
6214 SHIRLEY DR (R 303)	1	63	65	2	-
6212 SHIRLEY DR (R 304)	1	63	65	2	-
6210 SHIRLEY DR (R 305)	1	63	64	1	-
905 ARTHUR DR (R 306)	1	65	66	1	1
909 ARTHUR DR (R 307)	1	66	68	2	1
915 ARTHUR DR (R 308)	1	66	68	2	1
923 ARTHUR DR (R 309)	1	66	67	1	1
1001 ARTHUR DR (R 310)	1	63	64	1	-
1005 ARTHUR DR (R 311)	1	63	64	1	-
1011 ARTHUR DR (R 312)	1	63	64	1	-
925 S UNIVERSITY AVE (R 313)	1	56	57	1	-
Predicted "Build" Alternative Design Year 2039 Traffic Noise Impacts					19

¹ ***Bold, italics = Impact***

The predicted sound levels at the receptors in NSA 8 are between 54 and 69 dB(A). There are 19 impacted single-family homes that have predicted sound levels that approach or exceed the NAC for Activity Category B. Future sound level increases over the existing levels range between 0-2 dB(A). None of the receptors will experience future sound level increases exceeding the 10 dB(A) AHTD criterion.



7.0 Noise Abatement Evaluation

In accordance with criteria in the AHTD noise policy, noise abatement needs to be studied first for “feasibility” and, if feasible, for “reasonableness.” Noise barriers must be both feasible and reasonable to be deemed likely for construction.

Feasibility includes acoustical and engineering considerations. Acoustical feasibility means that a noise barrier will provide at least a 5 dB(A) reduction in the L_{eq} for at least one of the impacted receivers. If a barrier cannot meet this criterion, abatement is considered to not be acoustically feasible. Additionally, the noise barrier should be feasible from an engineering perspective. Engineering feasibility takes into account topography, drainage, safety, barrier height, utilities, and access and maintenance needs (which may include right-of-way considerations). If a barrier poses engineering problems, it may not be feasible, even if it meets the acoustical feasibility criterion, and it will not be recommended for construction.

If feasible, then the barriers are assessed for reasonableness in accordance with the criteria in AHTD’s noise policy. All proposed noise abatement must meet the following three criteria to be considered reasonable by AHTD. If any of the criteria is not met, noise abatement measures will not be constructed.

1. *Consideration and Obtaining Views of Residents and Property Owners:* The viewpoints of the affected property owners and residents are important. For those barriers found to be reasonable by the Cost-Effectiveness and Design Goal criteria below, viewpoints of the benefited receptors and affected property owners will be sought.
2. *Cost-Effectiveness:* If the estimated cost of constructing a noise barrier (including installation and additional necessary construction such as foundations or guardrails) divided by the number of benefited receptors [those who would receive a reduction of at least five dB(A)] is \$36,000 or less per benefited receptor, a barrier is considered to be cost-effective. For initial considerations, an estimated unit cost of \$35 per square foot for reflective barriers, \$40 for absorptive barriers, and \$50 for barriers on structures is used in this cost-effectiveness calculation.
3. *Design Goal for Noise Abatement:* Traffic noise abatement must achieve at least a 8 dB(A) reduction for at least one impacted receptor.

According to the FHWA noise standards and AHTD policy, abatement needs to be evaluated when impacts are predicted to occur. Noise barriers must be shown to be both feasible and reasonable, as described earlier, to be deemed likely for construction. Based on the predicted impacts, the potential for noise barriers was studied for NSAs 3, 4, 5, 6, and 8.

In general, noise abatement measures may include noise barriers, alteration of horizontal and vertical alignment, and traffic management measures (such as reducing speed limits or prohibition of heavy trucks). Neither of the latter two forms of abatement is feasible for this project because the widening of I-630 is in the median, I-630 is a major truck route, and reduced speeds that are still safe for Interstate highway travel do not result in substantial noise reductions.

Noise barriers were determined to be the only potential abatement measure to reduce noise levels for impacted areas. As stated earlier, barriers must pass acoustical feasibility and reasonableness tests.

The FHWA TNM 2.5 program was used to predict one-hour equivalent sound levels with barriers present and to evaluate alternative noise barrier designs for each area.

The predicted “with barrier” one-hour equivalent sound levels and noise reductions for each modeled receiver are provided in Appendix D, along with details on the investigated noise barriers that were determined to be feasible and reasonable.

Table 14 summarizes the acoustical feasibility analysis, and Table 15 summarizes the reasonableness analysis for the studied barriers that were determined to be feasible and reasonable.

Table 14: Results of Noise Barrier Acoustical Feasibility Analysis

Proposed Noise Barrier	Noise Study Area	Barrier Length (ft.)	Average Height (ft.)	Number of Impacted Receptors	Receptors with at least a 5 dB(A) Noise Reduction	Acoustically Feasible? ¹
2	4 and 5	2,200	19.6	48	81	Yes
3		1,650	14.2			
2	4 and 5	2,200	15.5	48	72	Yes
BERM B		2,000	18.3			
4	6	1,650	13.9	10	38	Yes
BERM H	6	1,175	15.4	10	10	Yes
ROW	8	1,178	10.3	19	12	Yes

¹A noise abatement measure is acoustically feasible if one of the impacted receptors receives at least a 5 dB(A) noise reduction

Table 15: Results of Noise Barrier Reasonableness Analysis

Proposed Noise Barrier	Noise Study Area	Benefitted Receptors	Impacts with 8 dB(A) Noise Reduction	Noise Reduction Goal Met? ¹	Cost	Cost per Benefitted Receptor ⁴	Noise Barrier Reasonable?
2	4 and 5	81	23	Yes	\$2,764,000 ²	\$34,123	Yes
3							
2	4 and 5	72	29	Yes	\$2,268,447 ²³	\$31,506	Yes
BERM B							
4	6	38	3	Yes	\$916,000 ²	\$24,105	Yes
BERM H	6	10	1	Yes	\$208,081 ³	\$20,808	Yes
ROW	8	12	1	Yes	\$431,900 ²	\$35,992	Yes

¹At least 1 is needed to meet criterion
²Based on \$35 per square foot for reflective barriers, \$40 per square foot for absorptive barriers, and \$50 per square foot for structure mounted barriers. See Appendix D for full cost breakdown.
³Based on \$5.36 per cubic yard of cut and \$6.82 per cubic yard of fill. See Appendix D for full cost breakdown.
⁴Less than \$36,000 per benefitted receptor is needed to meet reasonable criterion

7.1 Noise Barrier for Noise Study Area 1

There were no predicted traffic noise impacts in NSA 1. Therefore, noise abatement was not considered.

7.2 Noise Barrier for Noise Study Area 2

There were no predicted traffic noise impacts in NSA 2. Therefore, noise abatement was not considered.

7.3 Noise Barrier for Noise Study Area 3

The following noise barrier was found to be acoustically feasible, but not reasonable in terms of the AHTD noise reductions design goal criteria. A 3,050-ft long barrier at the edge of shoulder, extending from the end of the John Barrow Road On-Ramp to the middle of the EB I-630 Off-Ramp to S Rodney Parham Road was studied. Portions of the noise barrier would be on structure over Rock Creek and Rodney Parham Road. The cost for absorptive barriers was used due to the presence of residences in NSA 4 and NSA 5 on the opposite side of I-630. Detailed information for the barrier is available upon request.

7.4 Noise Barrier for Noise Study Area 4

As shown in Table 14 and Table 15, two different noise barrier scenarios studied for NSA 4 were determined to be feasible and reasonable.

The following noise barrier combination (Scenario 1) was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 2,200-ft long barrier (NB 2) at the edge of shoulder, extending from the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road was studied. A portion of NB 2 is on structure over Rodney Parham Road. In addition to NB 2, another 1,650-ft long barrier (NB 3) at the edge of shoulder, extending from the middle of the I-630 WB Off-Ramp to Rodney Parham Road to the S Hughes Street overpass was studied.

The following noise barrier combination (Scenario 2) was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 2,200-ft long barrier (NB 2) at the edge of shoulder, extending from the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road was studied. A portion of NB 2 is on structure over Rodney Parham Road. In addition to NB 2, a 2,000-ft long soil berm (BERM B) in the existing right-of-way bound by Mississippi Street on the west, Ouachita Drive and Marguerite Lane on the north, S Hughes Street on the east, and I-630 on the south was studied. Berm B also includes a 500-ft long noise wall beginning at Mississippi Street and continuing east along the center of Berm B, ranging from 10-ft to 1-ft in height.

One additional noise barrier scenario was studied for NSA 4, but was not reasonable in terms of the AHTD cost-effectiveness criteria. A single noise barrier (NB 2) along the edge of shoulder, extending from the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road was studied. Detailed information for the barrier is available upon request.

See Figure 15, Figure 16, and Appendix D for additional details. The cost for absorptive barriers was used due to the presence of recreational land uses in NSA 3 on the opposite side of I-630.

7.5 Noise Barrier for Noise Study Area 5

As shown in Table 14 and Table 15, two different noise barrier scenarios studied for NSA 5 were determined to be feasible and reasonable.

The following noise barrier combination (Scenario 1) was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 2,200-ft long barrier (NB 2) at the edge of shoulder, extending from the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road was studied. A portion of NB 2 is on structure over Rodney Parham Road. In addition to NB 2, another

1,650-ft long barrier (NB 3) at the edge of shoulder, extending from the middle of the I-630 WB Off-Ramp to Rodney Parham Road to the S Hughes Street overpass was studied.

The following noise barrier combination (Scenario 2) was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 2,200-ft long barrier (NB 2) at the edge of shoulder, extending from the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road was studied. A portion of NB 2 is on structure over Rodney Parham Road. In addition to NB 2, a 2,000-ft long soil berm (BERM B) in the existing right-of-way bound by Mississippi Street on the west, Ouachita Drive and Marguerite Lane on the north, S Hughes Street on the east, and I-630 on the south was studied. Berm B also includes a 500-ft long noise wall beginning at Mississippi Street and continuing east along the center of Berm B, ranging from 10-ft to 1-ft in height.

Four additional noise barrier scenarios were studied for NSA 5, but were not reasonable in terms of the AHTD cost-effectiveness criteria. A single noise barrier (NB 3) along the edge of shoulder, extending from the middle of the I-630 WB Off-Ramp to Rodney Parham Road to the S Hughes Street overpass was studied. A single noise barrier (NB 3 REV) along the edge of the right-of-way closest to the residences along Ouachita Drive and Marguerite Lane was studied. A soil berm (BERM A) in the existing right-of-way bound by Mississippi Street on the west, Ouachita Drive and Marguerite Lane on the north, S Hughes Street on the east, and I-630 on the south was studied. A larger soil berm (BERM B) in the existing right-of-way bound by Mississippi Street on the west, Ouachita Drive and Marguerite Lane on the north, S Hughes Street on the east, and I-630 on the south was also studied. Detailed information for the barriers is available upon request.

See Figure 15, Figure 16, and Appendix D for additional details. The cost for absorptive barriers was used due to the presence of a cemetery in NSA 7 on the opposite side of I-630.

7.6 Noise Barrier for Noise Study Area 6

As shown in Table 14 and Table 15, two different noise barrier scenarios studied for NSA 6 were determined to be feasible and reasonable.

The following noise barrier (Scenario 1) was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 1,650-ft long barrier (NB 4) at the edge of shoulder, extending from the S Hughes Street overpass to the University Avenue On-Ramp to I-630 WB was studied.

The following noise barrier (Scenario 2) was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 1,175-ft long soil berm (BERM H) in the existing right-of-way bound by S Hughes Street on the west, Marguerite Lane and Bluebird Drive on the north/east, and I-630 on the south was studied.

See Figure 17, Figure 18, and Appendix D for additional details. The cost for absorptive barriers was used due to the presence of residential land uses in NSA 8 on the opposite side of I-630.

7.7 Noise Barrier for Noise Study Area 7

There were no predicted traffic noise impacts in NSA 7. Therefore, noise abatement was not considered.

7.8 Noise Barrier for Noise Study Area 8

As shown in Table 14 and Table 15, one noise barrier scenario studied for NSA 8 was determined to be feasible and reasonable.

The following noise barrier was found to be acoustically feasible and reasonable in terms of the AHTD noise reduction design goal and reasonable in terms of the AHTD cost-effectiveness criteria. A 1,178-ft long barrier (NSA 8 ROW) along the edge of right-of way, adjacent to Arthur Drive was studied.

Four additional noise barrier scenarios were studied for NSA 8, but were not reasonable in terms of the AHTD cost-effectiveness criteria. A single barrier (NB 5) at the top of cut slope, extending from the S Hughes Street overpass to the end of the University Avenue Off-Ramp from I-630 EB was studied. A soil berm (BERM K) in the existing right-of-way bound by S Hughes Street on the west, I-630 on the north, the University Avenue Off-Ramp on the east, and Arthur Drive on the south was studied. A single barrier (NB 6) along the top of cut slope south of I-630 EB was studied. A combination of a soil berm (BERM K) in the existing right-of-way and a single barrier (NB 6) along the top of cut slope south of I-630 EB was studied.

See Figure 19 and Appendix D for additional details. The cost for reflective barriers since the proposed barrier is located far away from the residential land uses in NSA 6 on the opposite side of I-630.

7.9 Statement of Likelihood of Abatement

Based on the studies completed to date, the Arkansas State Highway and Transportation Department has identified the following impacts:

- 143 residential receptors
- 2 recreational receptors

The State has determined that noise abatement is feasible and reasonable in five locations:

1. Noise wall combination along the shoulder of I-630 WB between the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road and along the shoulder and top of cut slope of I-630 WB between the middle of the I-630 WB Off-Ramp to Rodney Parham Road to the S Hughes Street overpass (NB 2 and NB 3)
2. Noise wall and berm combination along the shoulder of I-630 WB between the gore area of the I-630 WB On-Ramp from Rodney Parham Road to the gore area of the I-630 WB Off-Ramp to Rodney Parham Road and in the existing right-of-way bound by Mississippi Street on the west, Ouachita Drive and Marguerite Lane on the north, S Hughes Street on the east, and I-630 on the south (NB 2 and BERM B)
3. Noise wall between the S Hughes Street overpass to the University Avenue On-Ramp to I-630 WB along the shoulder on the north side of I-630 (NB 4)
4. Noise berm in existing right-of-way bound by S Hughes Street on the west, Marguerite Lane and Bluebird Drive on the north/east, and I-630 on the south (BERM H)
5. Noise wall along the edge of right of way, adjacent to Arthur Drive and south of I-630 (NSA 8 ROW)

The costs for of the above studied noise abatement measures have been estimated to have a preliminary cost that meets the AHTD cost-effectiveness criteria. Therefore, each of the studied noise abatement measures are considered to be reasonable. See Appendix D for additional details.

7.10 Views of Benefitted Property Owners and Residents

The final step in determining reasonableness of any abatement system is the solicitation of the viewpoints of the benefitted property owners and residents. If the cost-effectiveness and noise reduction design reasonableness criteria are still met after additional design investigations, then the viewpoints of the benefitted residents and property owners will be sought and considered before final decisions are made.

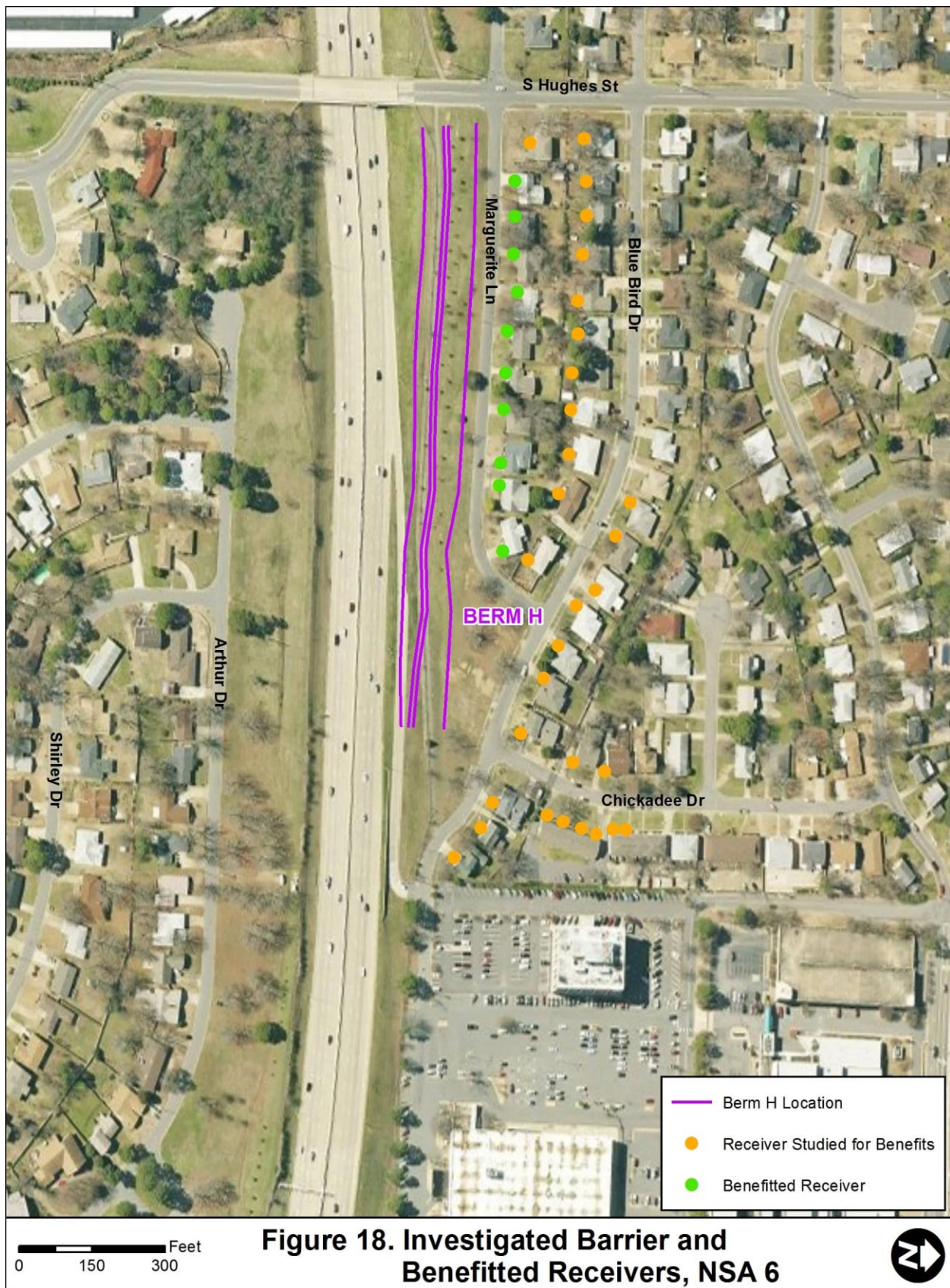
At public meeting was held on November 3, 2015 at The Centre at University Park to inform the public of the traffic noise studies that had been completed at that time. A presentation was given to provide the public with information on the steps taken throughout the noise analysis and give statistics on the noise barriers that were being considered. After the presentation, breakout areas were used to allow the public to ask questions about the noise studies.

Following the public meeting, the residents receiving benefits from the studied noise barriers were sent information on them in order to facilitate the voting process.











8.0 Mitigation of Construction Noise

The major construction elements of this project are expected to consist of land clearing, earth moving, hauling, grading, paving and bridge construction. General construction noise impacts for passing traffic and those individuals living or working near the project can be expected particularly from clearing, earth moving and paving operations. Motorized equipment shall be maintained with appropriate mufflers to minimize construction noise levels. During certain phases of construction (example, land clearing) and during certain seasons of the year, there will be areas along the project where no construction activity is taking place. Also, considering the relatively short-term nature of construction noise, impacts are not expected to be excessive. Yet, for brief periods of time, some construction noise impacts could be substantial (an increase in existing noise levels by 10 dB(A) or greater), even though exiting I-630 traffic noise levels will remain high. These episodes usually occur during daytime work hours. As a result, these impacts will be minimized to adjacent residents. Additionally, nearby structures usually contribute to transmission loss and a resulting moderation of intrusive construction noise.

9.0 Coordination with Local Officials

AHTD encourages local communities and developers to practice noise compatibility planning in order to avoid future noise impacts. Two guidance documents on noise compatible land use planning are available from FHWA: “The Audible Landscape: A Manual for Highway Noise and Land Use” and “Entering the Quiet Zone: Noise Compatible Land Use Planning.”

Table 16 presents future predicted equivalent sound levels based on an assumed at-grade situation for areas along I-630 where vacant and possibly developable lands exist. Noise predictions were made at distances of 100, 200, 300, 400, 500, and 600 feet from I-630 for the Design Year 2039. The results showed exterior residential activities would be considered to be impacted, in terms of a level of 66 or more dB(A), out to a distance of roughly 500 feet from centerline of the nearest travel lane of I-630. These values do not represent predicted levels at every location at a particular distance back from the roadway. Sound levels will vary with changes in terrain and other site conditions. This information is being included to make local officials and planners aware of anticipated highway noise levels so that future development will be compatible with these levels.

Table 16: Design Year (2039) Predicted One-Hour Equivalent Sound Levels for Undeveloped Areas

Distance* (ft.)	$L_{eq(h)}$ [dB(A)]
100	76.9
200	73.1
300	70.2
400	68.0
500	66.2
600	64.7

*Perpendicular distance to the centerline of the nearest travel lane of I-630

10.0 References

- [1] *Procedures for Abatement of Highway Traffic and Construction Noise*, 23 CFR 772, Federal Highway Administration.
- [2] *Policy on Highway Traffic Noise Abatement*, Arkansas Highway and Transportation Department, revised October 15, 2015.

Appendix A – Noise Measurement Results

<i>Measurement Location</i>	<i>Appendix Page</i>
Along Nebling Road (NSA 1)	A-2
Kanis Park (NSA 3)	A-5
Along Ouachita Place (NSA 5)	A-7
Between Arthur Drive and Shirley Drive (NSA 8)	A-13
Between Marguerite Lane and Blue Bird Drive (NSA 7)	A-16

Date: **09/18/14**Area: **NSA 1**Site: **NE Corner of Nebling Rd and Bailey Rd (ML 1.1)**Description: **Residential, 1st Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:52:22	60.7	66.5	1174897.555	Yes	
2	14:53:22	59.7	62.0	933254.3008	Yes	
3	14:54:22	59.7	62.9	933254.3008	Yes	
4	14:55:22	61.8	69.7	1513561.248	Yes	
5	14:56:22	59.4	61.6	870963.59	Yes	
6	14:57:22	60.8	64.4	1202264.435	Yes	
7	14:58:22	59.8	61.8	954992.586	Yes	
8	14:59:22	60.3	62.7	1071519.305	Yes	
9	15:00:22	60.4	63.6	1096478.196	Yes	
10	15:01:22	61.0	63.5	1258925.412	Yes	
11	15:02:22	60.0	62.2	1000000	Yes	
12	15:03:22	59.3	61.8	851138.0382	Yes	
13	15:04:22	60.6	64.4	1148153.621	Yes	
14	15:05:22	60.6	65.1	1148153.621	Yes	
15	15:06:22	60.3	63.2	1071519.305	Yes	
Leq of Good Periods					60.3	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:12:00	60.6	65.3	1148153.621	Yes	
2	15:13:00	60.8	65.0	1202264.435	Yes	
3	15:14:00	60.3	62.8	1071519.305	Yes	
4	15:15:00	61.2	64.8	1318256.739	Yes	
5	15:16:00	61.6	66.5	1445439.771	Yes	
6	15:17:00	60.6	62.3	1148153.621	Yes	
7	15:18:00	60.2	62.7	1047128.548	Yes	
8	15:19:00	60.4	63.6	1096478.196	Yes	
9	15:20:00	60.8	64.3	1202264.435	Yes	
10	15:21:00	60.1	62.6	1023292.992	Yes	
11	15:22:00	62.6	68.3	1819700.859	Yes	
12	15:23:00	61.6	63.6	1445439.771	Yes	
13	15:24:00	60.6	62.8	1148153.621	Yes	
14	15:25:00	61.4	65.7	1380384.265	Yes	
15	15:26:00	60.9	64.5	1230268.771	Yes	
Leq of Good Periods					61	

Date: **09/18/14**Area: **NSA 1**Site: **NE Corner of Nebling Rd and Penrose Ln (ML 1.2)**Description: **Residential, 2nd Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:52:22	52.6	59.2	181970.1	Yes	
2	14:53:22	52	53.9	158489.3	Yes	
3	14:54:22	51.8	56	151356.1	Yes	
4	14:55:22	52.4	54.8	173780.1	Yes	
5	14:56:22	52.2	54	165958.7	Yes	
6	14:57:22	55.5	68.6	354813.4	Yes	
7	14:58:22	52.5	57.3	177827.9	Yes	
8	14:59:22	52.1	56	162181	Yes	
9	15:00:22	52.5	55.1	177827.9	Yes	
10	15:01:22	53.5	56.6	223872.1	Yes	
11	15:02:22	53.1	62.5	204173.8	Yes	
12	15:03:22	52.5	57.3	177827.9	Yes	
13	15:04:22	56.5	66.9	446683.6	Yes	
14	15:05:22	55.5	61.5	354813.4	Yes	
15	15:06:22	54.3	57.9	269153.5	Yes	
Leq of Good Periods					53.5	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:12:00	53.9	60.8	245470.9	Yes	
2	15:13:00	53	57	199526.2	Yes	
3	15:14:00	53.3	58.1	213796.2	Yes	
4	15:15:00	53.3	57.3	213796.2	Yes	
5	15:16:00	55.2	66	331131.1	Yes	
6	15:17:00	52.4	56.1	173780.1	Yes	
7	15:18:00	52	53.9	158489.3	Yes	
8	15:19:00	52.1	54.2	162181	Yes	
9	15:20:00	53.1	56.4	204173.8	Yes	
10	15:21:00	52.7	58.1	186208.7	Yes	
11	15:22:00	56.4	65.9	436515.8	Yes	
12	15:23:00	53.4	56.7	218776.2	Yes	
13	15:24:00	53.1	56.3	204173.8	Yes	
14	15:25:00	54.5	60.6	281838.3	Yes	
15	15:26:00	52.6	55.3	181970.1	Yes	
Leq of Good Periods					53.6	

Date: **09/18/14**Area: **NSA 1**Site: **SE Corner of Nebling Rd and Cloverhill Rd (ML 1.3)**Description: **Residential, 3rd Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:52:22	53.3	63.7	213796.2	Yes	
2	14:53:22	50.9	58.8	123026.9	Yes	
3	14:54:22	49.2	50.8	83176.38	Yes	
4	14:55:22	51.2	59.4	131825.7	Yes	
5	14:56:22	48.8	49.9	75857.76	Yes	
6	14:57:22	49.4	52	87096.36	Yes	
7	14:58:22	54.2	64.2	263026.8	Yes	
8	14:59:22	49.9	53.2	97723.72	Yes	
9	15:00:22	51.6	59.3	144544	Yes	
10	15:01:22	50.5	54.7	112201.8	Yes	
11	15:02:22	53	61.2	199526.2	Yes	
12	15:03:22	52.1	60.7	162181	Yes	
13	15:04:22	48.4	50.1	69183.1	Yes	
14	15:05:22	52.3	59	169824.4	Yes	
15	15:06:22	49.9	53.4	97723.72	Yes	
Leq of Good Periods					51.3	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:12:00	63.1	73.6	0	No	Loud local auto
2	15:13:00	49.4	51.7	87096.36	Yes	
3	15:14:00	50.6	57.1	114815.4	Yes	
4	15:15:00	56.9	67.2	489778.8	Yes	
5	15:16:00	48.8	57.7	75857.76	Yes	
6	15:17:00	48.4	49.6	69183.1	Yes	
7	15:18:00	52.2	62.7	165958.7	Yes	
8	15:19:00	59.4	68.1	0	No	Loud local auto
9	15:20:00	49.1	53.6	81283.05	Yes	
10	15:21:00	54.6	62.3	288403.2	Yes	
11	15:22:00	49.6	50.8	91201.08	Yes	
12	15:23:00	52.2	60	165958.7	Yes	
13	15:24:00	52.4	55.9	173780.1	Yes	
14	15:25:00	52.2	56.8	165958.7	Yes	
15	15:26:00	54.2	61.7	263026.8	Yes	
Leq of Good Periods					52.3	

Date: **09/16/14**Area: **NSA 3**Site: **Kanis Park Baseball Field (ML 2.1)**Description: **Recreational****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	17:37:09	64.3	67.2	2691535	Yes	
2	17:38:09	63.2	64.8	2089296	Yes	
3	17:39:09	64.3	66.6	2691535	Yes	
4	17:40:09	63.1	67.6	2041738	Yes	
5	17:41:09	63	65	1995262	Yes	
6	17:42:09	63.8	66.2	2398833	Yes	
7	17:43:09	64.2	66.6	2630268	Yes	
8	17:44:09	64.9	67.4	3090295	Yes	
9	17:45:09	63.3	66.5	2137962	Yes	
10	17:46:09	63	65.7	1995262	Yes	
11	17:47:09	63.1	65.3	2041738	Yes	
12	17:48:09	63.7	65.9	2344229	Yes	
13	17:49:09	62.4	64.5	1737801	Yes	
14	17:50:09	63.9	66.6	2454709	Yes	
15	17:51:09	63.2	65.8	2089296	Yes	
16	17:52:09	63.2	65.6	2089296	Yes	
17	17:53:09	63.1	65.6	2041738	Yes	
18	17:54:09	63.4	65.6	2187762	Yes	
19	17:55:09	62.8	65	1905461	Yes	
20	17:56:09	62.7	65.5	1862087	Yes	
21	17:57:09	64.7	68	2951209	Yes	
22	17:58:09	63.9	66.3	2454709	Yes	
23	17:59:09	63.8	66	2398833	Yes	
24	18:00:09	62.9	65.3	1949845	Yes	
25	18:01:09	63.5	65.5	2238721	Yes	
26	18:02:09	62.7	66.9	1862087	Yes	
27	18:03:09	64.5	67.3	2818383	Yes	
28	18:04:09	63.6	65.5	2290868	Yes	
29	18:05:09	63.6	65.6	2290868	Yes	
30	18:06:09	64.1	66.4	2570396	Yes	
Leq of Good Periods					63.6	

Date: **09/16/14**Area: **NSA 3**Site: **Kanis Park Tennis Courts (ML 2.2)**Description: **Recreational****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	17:37:09	61.5	63.1	1412538	Yes	
2	17:38:09	59.5	61	891250.9	Yes	
3	17:39:09	60.8	62.8	1202264	Yes	
4	17:40:09	59.9	64.1	977237.2	Yes	
5	17:41:09	59.9	62.3	977237.2	Yes	
6	17:42:09	60.8	63.3	1202264	Yes	
7	17:43:09	61.2	63.8	1318257	Yes	
8	17:44:09	61.2	62.9	1318257	Yes	
9	17:45:09	60.3	62.7	1071519	Yes	
10	17:46:09	59.9	62.7	977237.2	Yes	
11	17:47:09	59.7	60.8	933254.3	Yes	
12	17:48:09	61.1	63.4	1288250	Yes	
13	17:49:09	59.8	62	954992.6	Yes	
14	17:50:09	60.1	62	1023293	Yes	
15	17:51:09	59.4	61.4	870963.6	Yes	
16	17:52:09	59.5	62	891250.9	Yes	
17	17:53:09	60.1	61.7	1023293	Yes	
18	17:54:09	60.2	62.8	1047129	Yes	
19	17:55:09	59.6	62.4	912010.8	Yes	
20	17:56:09	59.1	61.2	812830.5	Yes	
21	17:57:09	61.7	63.8	1479108	Yes	
22	17:58:09	60.8	62.3	1202264	Yes	
23	17:59:09	61.5	63.5	1412538	Yes	
24	18:00:09	60.1	61.8	1023293	Yes	
25	18:01:09	60.4	63.9	1096478	Yes	
26	18:02:09	59.6	63.2	912010.8	Yes	
27	18:03:09	61.2	63.4	1318257	Yes	
28	18:04:09	60	61.7	1000000	Yes	
29	18:05:09	60.2	62	1047129	Yes	
30	18:06:09	60.8	62.9	1202264	Yes	
Leq of Good Periods					60.4	

Date: **09/17/14**Area: **NSA 5**Site: **SE Corner of Ouachita Dr and Ouachita PI (ML 3.1)**Description: **Residential, 1st Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	9:52:07	66.4	69.6	4365158	Yes	
2	9:53:07	66.6	69.5	4570882	Yes	
3	9:54:07	67	69.9	5011872	Yes	
4	9:55:07	67.1	71.4	5128614	Yes	
5	9:56:07	67.1	69.1	5128614	Yes	
6	9:57:07	66.2	68.6	4168694	Yes	
7	9:58:07	64.8	68.2	3019952	Yes	
8	9:59:07	66.7	70.1	4677351	Yes	
9	10:00:07	65.5	68.3	3548134	Yes	
10	10:01:07	65.2	68.5	3311311	Yes	
11	10:02:07	66.3	70.2	4265795	Yes	
12	10:03:07	64.4	69.5	2754229	Yes	
13	10:04:07	65.2	67.6	3311311	Yes	
14	10:05:07	64.9	67.9	3090295	Yes	
15	10:06:07	65.3	68.8	3388442	Yes	
Leq of Good Periods					66	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	10:11:33	65	68.6	3162278	Yes	
2	10:12:33	64	66.7	2511886	Yes	
3	10:13:33	65	68	3162278	Yes	
4	10:14:33	65.9	70.5	3890451	Yes	
5	10:15:33	64.8	68.8	3019952	Yes	
6	10:16:33	65.3	68.3	3388442	Yes	
7	10:17:33	64.4	67.2	2754229	Yes	
8	10:18:33	65.8	71.1	3801894	Yes	
9	10:19:33	64.7	68	2951209	Yes	
10	10:20:33	64.1	68.4	2570396	Yes	
11	10:21:33	64.9	68.7	3090295	Yes	
12	10:22:33	68	74.2	6309573	Yes	
13	10:23:33	64.1	67.5	2570396	Yes	
14	10:24:33	63.6	66.3	2290868	Yes	
15	10:25:33	65.5	69.8	3548134	Yes	
Leq of Good Periods					65.1	

Set 3

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	10:48:46	66	69.7	3981072	Yes	
2	10:49:46	64.9	67.7	3090295	Yes	
3	10:50:46	65.7	68.1	3715352	Yes	
4	10:51:46	66.7	69.3	4677351	Yes	
5	10:52:46	64.4	66.8	2754229	Yes	
6	10:53:46	65.8	67.9	3801894	Yes	
7	10:54:46	65.3	68.2	3388442	Yes	
8	10:55:46	65.6	68.5	3630781	Yes	
9	10:56:46	65.4	67.4	3467369	Yes	
10	10:57:46	65.1	68.3	3235937	Yes	
11	10:58:46	66.6	70.2	4570882	Yes	
12	10:59:46	64.8	67.1	3019952	Yes	
13	11:00:46	65.2	67.4	3311311	Yes	
14	11:01:46	65.1	67.7	3235937	Yes	
15	11:02:46	64.8	67.8	3019952	Yes	
Leq of Good Periods					65.5	

Date: **09/17/14**Area: **NSA 5**Site: **Across from 811 Ouachita PI (ML 3.2)**Description: **Residential, 2nd Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	9:52:07	59.7	62.6	933254.3	Yes	
2	9:53:07	60	63	1000000	Yes	
3	9:54:07	60.5	64.5	1122018	Yes	
4	9:55:07	60.6	67.1	1148154	Yes	
5	9:56:07	60.2	62.5	1047129	Yes	
6	9:57:07	59.6	61.7	912010.8	Yes	
7	9:58:07	58.2	61.6	660693.4	Yes	
8	9:59:07	59.9	63.6	977237.2	Yes	
9	10:00:07	58.6	61.3	724436	Yes	
10	10:01:07	58.6	63.8	724436	Yes	
11	10:02:07	59.4	63.6	870963.6	Yes	
12	10:03:07	57.9	63.7	616595	Yes	
13	10:04:07	58.6	61.3	724436	Yes	
14	10:05:07	58.2	60.8	660693.4	Yes	
15	10:06:07	58.8	61.8	758577.6	Yes	
Leq of Good Periods					59.3	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	10:11:33	58.4	60.7	691831	Yes	
2	10:12:33	57.9	65.1	616595	Yes	
3	10:13:33	59.2	66.4	831763.8	Yes	
4	10:14:33	59.2	65.6	831763.8	Yes	
5	10:15:33	57.8	62.2	602559.6	Yes	
6	10:16:33	58.7	65.9	741310.2	Yes	
7	10:17:33	57.7	62.3	588843.7	Yes	
8	10:18:33	59.4	64	870963.6	Yes	
9	10:19:33	58.7	61.2	741310.2	Yes	
10	10:20:33	58.1	62.9	645654.2	Yes	
11	10:21:33	58.8	61.8	758577.6	Yes	
12	10:22:33	75.6	89.6	0	No	Garbage truck
13	10:23:33	58.8	68.6	758577.6	Yes	
14	10:24:33	57.5	60.1	562341.3	Yes	
15	10:25:33	59	63.2	794328.2	Yes	
Leq of Good Periods					58.6	

Set 3

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	10:48:46	59.8	64.8	954992.6	Yes	
2	10:49:46	58.6	61.4	724436	Yes	
3	10:50:46	59.3	62.8	851138	Yes	
4	10:51:46	60.2	63	1047129	Yes	
5	10:52:46	57.9	60.9	616595	Yes	
6	10:53:46	59.1	61.8	812830.5	Yes	
7	10:54:46	58.6	61	724436	Yes	
8	10:55:46	58.9	62.1	776247.1	Yes	
9	10:56:46	58.9	61.6	776247.1	Yes	
10	10:57:46	58.5	62.5	707945.8	Yes	
11	10:58:46	59.8	64.3	954992.6	Yes	
12	10:59:46	58.1	60.4	645654.2	Yes	
13	11:00:46	58.7	61.6	741310.2	Yes	
14	11:01:46	58.8	61.5	758577.6	Yes	
15	11:02:46	58.5	62.3	707945.8	Yes	
Leq of Good Periods					59	

Date: **09/17/14**Area: **NSA 5**Site: **NE Corner of Ouachita PI and Ouachita Cir (ML 3.3)**Description: **Residential, 3rd Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	9:52:07	56.5	58.9	446683.6	Yes	
2	9:53:07	56.4	58.1	436515.8	Yes	
3	9:54:07	56.6	58.2	457088.2	Yes	
4	9:55:07	57.8	65	602559.6	Yes	
5	9:56:07	57.4	65	549540.9	Yes	
6	9:57:07	56	57.2	398107.2	Yes	
7	9:58:07	55.6	57.2	363078.1	Yes	
8	9:59:07	54.4	56.8	275422.9	Yes	
9	10:00:07	56.1	58.3	407380.3	Yes	
10	10:01:07	54.9	57.3	309029.5	Yes	
11	10:02:07	54.8	58.2	301995.2	Yes	
12	10:03:07	54.9	57.1	309029.5	Yes	
13	10:04:07	53.7	56.4	234422.9	Yes	
14	10:05:07	54.6	56.1	288403.2	Yes	
15	10:06:07	54.2	56.3	263026.8	Yes	
Leq of Good Periods					60.3	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	10:11:33	54	56.6	251188.6	Yes	
2	10:12:33	54.7	56.4	295120.9	Yes	
3	10:13:33	53.6	55.6	229086.8	Yes	
4	10:14:33	55.7	61	371535.2	Yes	
5	10:15:33	54.9	58.5	309029.5	Yes	
6	10:16:33	53.5	56.1	223872.1	Yes	
7	10:17:33	53.8	55.4	239883.3	Yes	
8	10:18:33	53.4	55.4	218776.2	Yes	
9	10:19:33	55.1	59.7	323593.7	Yes	
10	10:20:33	54.4	56.5	275422.9	Yes	
11	10:21:33	54.1	57.9	257039.6	Yes	
12	10:22:33	55.2	58.1	331131.1	Yes	
13	10:23:33	73.7	85.4	0	No	Garbage truck
14	10:24:33	67.6	74.5	0	No	Garbage truck
15	10:25:33	67.6	68.6	0	No	Garbage truck
Leq of Good Periods					61	

Set 3

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	10:48:46	54.5	55.9	281838.3	Yes	
2	10:49:46	55.4	59.1	346736.9	Yes	
3	10:50:46	55.1	57.6	323593.7	Yes	
4	10:51:46	55.1	56.8	323593.7	Yes	
5	10:52:46	56.2	59.2	416869.4	Yes	
6	10:53:46	55.4	58.1	346736.9	Yes	
7	10:54:46	56	57.7	398107.2	Yes	
8	10:55:46	54.4	56.7	275422.9	Yes	
9	10:56:46	55.6	57.8	363078.1	Yes	
10	10:57:46	55.9	59.3	389045.1	Yes	
11	10:58:46	54.3	56.3	269153.5	Yes	
12	10:59:46	55.3	57.6	338844.2	Yes	
13	11:00:46	54.8	57.8	301995.2	Yes	
14	11:01:46	54.7	57.2	295120.9	Yes	
15	11:02:46	54.7	56.5	295120.9	Yes	
Leq of Good Periods					61	

Date: **09/17/14**Area: **NSA 8**Site: **Across from 620 Arthur Dr (ML 4.1)**Description: **Residential, 1st Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:18:22	64.6	66.5	2884032	Yes	
2	14:19:22	65.6	72.1	3630781	Yes	
3	14:20:22	63.6	65.7	2290868	Yes	
4	14:21:22	63.9	65.5	2454709	Yes	
5	14:22:22	64.5	67.1	2818383	Yes	
6	14:23:22	65.5	67.7	3548134	Yes	
7	14:24:22	64.8	68.1	3019952	Yes	
8	14:25:22	64.5	65.8	2818383	Yes	
9	14:26:22	64.1	66	2570396	Yes	
10	14:27:22	64.6	67	2884032	Yes	
11	14:28:22	65.3	68.1	3388442	Yes	
12	14:29:22	63.9	65.3	2454709	Yes	
13	14:30:22	63.8	65.5	2398833	Yes	
14	14:31:22	63.6	65.5	2290868	Yes	
15	14:32:22	64.2	73.1	2630268	Yes	
Leq of Good Periods					64.5	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:38:26	63.4	66.3	2187762	Yes	
2	14:39:26	63.6	66.2	2290868	Yes	
3	14:40:26	62.9	67.3	1949845	Yes	
4	14:41:26	64.1	66.6	2570396	Yes	
5	14:42:26	63.6	65.9	2290868	Yes	
6	14:43:26	64.2	66.8	2630268	Yes	
7	14:44:26	64.1	65.9	2570396	Yes	
8	14:45:26	63.4	65.5	2187762	Yes	
9	14:46:26	62.6	64.1	1819701	Yes	
10	14:47:26	63.5	66	2238721	Yes	
11	14:48:26	64.2	67	2630268	Yes	
12	14:49:26	64.9	67.4	3090295	Yes	
13	14:50:26	64	66.3	2511886	Yes	
14	14:51:26	63.3	65.3	2137962	Yes	
15	14:52:26	63.7	66.5	2344229	Yes	
Leq of Good Periods					63.7	

Date: **09/17/14**Area: **NSA 8**Site: **Between 620 Arthur Dr and 6400 Shirley Dr (ML 4.2)**Description: **Residential, 2nd Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:18:22	56.6	59.7	457088.2	Yes	
2	14:19:22	56.9	64.1	489778.8	Yes	
3	14:20:22	55.1	56.8	323593.7	Yes	
4	14:21:22	55.6	56.9	363078.1	Yes	
5	14:22:22	56.2	58.5	416869.4	Yes	
6	14:23:22	59.7	66.4	933254.3	Yes	
7	14:24:22	58.9	66.4	776247.1	Yes	
8	14:25:22	56.2	58.1	416869.4	Yes	
9	14:26:22	56.1	57.6	407380.3	Yes	
10	14:27:22	56.7	58.8	467735.1	Yes	
11	14:28:22	57.1	59.9	512861.4	Yes	
12	14:29:22	55.9	57.7	389045.1	Yes	
13	14:30:22	55.5	60.9	354813.4	Yes	
14	14:31:22	55.1	56.4	323593.7	Yes	
15	14:32:22	54.6	59.6	288403.2	Yes	
Leq of Good Periods					56.6	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:38:26	56.8	61.1	478630.1	Yes	
2	14:39:26	56.3	59.1	426579.5	Yes	
3	14:40:26	55.3	58.1	338844.2	Yes	
4	14:41:26	56.6	59	457088.2	Yes	
5	14:42:26	54.9	60.6	309029.5	Yes	
6	14:43:26	57.7	62.2	588843.7	Yes	
7	14:44:26	56	63.7	398107.2	Yes	
8	14:45:26	54.7	61.2	295120.9	Yes	
9	14:46:26	54.5	57.5	281838.3	Yes	
10	14:47:26	55	57	316227.8	Yes	
11	14:48:26	56	58.1	398107.2	Yes	
12	14:49:26	56.5	59.6	446683.6	Yes	
13	14:50:26	56.5	58.7	446683.6	Yes	
14	14:51:26	55	56.4	316227.8	Yes	
15	14:52:26	54.6	56	288403.2	Yes	
Leq of Good Periods					55.9	

Date: **09/17/14**Area: **NSA 8**Site: **6400 Shirley Dr (ML 4.3)**Description: **Residential, 3rd Row****Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:18:22	49.9	51.4	97723.72	Yes	
2	14:19:22	54.5	63.8	281838.3	Yes	
3	14:20:22	50.6	54.3	114815.4	Yes	
4	14:21:22	49.9	51.6	97723.72	Yes	
5	14:22:22	50.6	51.7	114815.4	Yes	
6	14:23:22	50.5	52.2	112201.8	Yes	
7	14:24:22	53.3	60.5	213796.2	Yes	
8	14:25:22	51.5	53.3	141253.8	Yes	
9	14:26:22	53.1	55.3	204173.8	Yes	
10	14:27:22	52.2	55.3	165958.7	Yes	
11	14:28:22	51.7	52.6	147910.8	Yes	
12	14:29:22	51.5	52.8	141253.8	Yes	
13	14:30:22	50.8	52.6	120226.4	Yes	
14	14:31:22	50.2	52.1	104712.9	Yes	
15	14:32:22	52.6	61.1	181970.1	Yes	
Leq of Good Periods					51.7	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	14:38:26	52.8	58.4	190546.1	Yes	
2	14:39:26	51.3	56.6	134896.3	Yes	
3	14:40:26	55.3	65.1	338844.2	Yes	
4	14:41:26	50.6	52.4	114815.4	Yes	
5	14:42:26	49.7	51.5	93325.43	Yes	
6	14:43:26	49.3	52.7	85113.8	Yes	
7	14:44:26	49.9	53.2	97723.72	Yes	
8	14:45:26	49.4	50.5	87096.36	Yes	
9	14:46:26	49.2	50	83176.38	Yes	
10	14:47:26	51	58.4	125892.5	Yes	
11	14:48:26	51.5	59.6	141253.8	Yes	
12	14:49:26	50.2	51.4	104712.9	Yes	
13	14:50:26	50.6	52.3	114815.4	Yes	
14	14:51:26	49.2	50.3	83176.38	Yes	
15	14:52:26	49	50.2	79432.82	Yes	
Leq of Good Periods					51	

Date: 09/17/14

Area: NSA 7

Site: 6608 Marguerite Ln (ML 5.1)

Description: Residential, 1st Row**Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:20:00	57.1	59.6	512861.4	Yes	
2	15:21:00	58.8	64.2	758577.6	Yes	
3	15:22:00	59.5	65.8	891250.9	Yes	
4	15:23:00	59.2	61.2	831763.8	Yes	
5	15:24:00	59.2	64.6	831763.8	Yes	
6	15:25:00	60.1	64.8	1023293	Yes	
7	15:26:00	59	63.4	794328.2	Yes	
8	15:27:00	57.9	62.6	616595	Yes	
9	15:28:00	57.7	60.9	588843.7	Yes	
10	15:29:00	57.3	61.4	537031.8	Yes	
11	15:30:00	59.2	64.8	831763.8	Yes	
12	15:31:00	59.2	63.6	831763.8	Yes	
13	15:32:00	58.3	61.3	676083	Yes	
14	15:33:00	57.4	59.7	549540.9	Yes	
15	15:34:00	58.7	61.3	741310.2	Yes	
Leq of Good Periods					58.7	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:37:21	59.4	68.6	870963.6	Yes	
2	15:38:21	57.5	62	562341.3	Yes	
3	15:39:21	58.7	63.8	741310.2	Yes	
4	15:40:21	58.3	61.7	676083	Yes	
5	15:41:21	58	63.5	630957.3	Yes	
6	15:42:21	57.3	59.3	537031.8	Yes	
7	15:43:21	59.6	68.8	912010.8	Yes	
8	15:44:21	58.6	65.8	724436	Yes	
9	15:45:21	57.9	60.1	616595	Yes	
10	15:46:21	59.1	62.9	812830.5	Yes	
11	15:47:21	57.9	61.1	616595	Yes	
12	15:48:21	60.1	68.3	1023293	Yes	
13	15:49:21	59.6	67.1	912010.8	Yes	
14	15:50:21	58.4	60.8	691831	Yes	
15	15:51:21	60.5	72.6	1122018	Yes	
Leq of Good Periods					58.8	

Date: 09/17/14

Area: NSA 8

Site: 6603 Blue Bird Dr (ML 5.2)

Description: Residential, 2nd Row**Set 1**

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:20:00	48.4	52.6	69183.1	Yes	
2	15:21:00	53.3	63.5	213796.2	Yes	
3	15:22:00	49.9	54.8	97723.72	Yes	
4	15:23:00	54.5	66.7	281838.3	Yes	
5	15:24:00	50.7	52.8	117489.8	Yes	
6	15:25:00	50.8	56.3	120226.4	Yes	
7	15:26:00	49.1	53.2	81283.05	Yes	
8	15:27:00	61.8	78	0	No	School Bus
9	15:28:00	54	66.8	251188.6	Yes	
10	15:29:00	46.7	49.3	46773.51	Yes	
11	15:30:00	51.4	63.2	138038.4	Yes	
12	15:31:00	51.5	65.3	141253.8	Yes	
13	15:32:00	50.7	63.7	117489.8	Yes	
14	15:33:00	49.5	55.7	89125.09	Yes	
15	15:34:00	56.3	69.3	426579.5	Yes	
Leq of Good Periods					51.9	

Set 2

Period	Time Start	Leq	Lmax	SPL	Keep?	Note
1	15:37:21	51.5	62.6	141253.8	Yes	
2	15:38:21	47.3	54.5	53703.18	Yes	
3	15:39:21	54.3	69.4	269153.5	Yes	
4	15:40:21	48.1	50.6	64565.42	Yes	
5	15:41:21	49	53.9	79432.82	Yes	
6	15:42:21	51	61.7	125892.5	Yes	
7	15:43:21	59.3	73.8	0	No	School Bus
8	15:44:21	56.5	72	446683.6	Yes	
9	15:45:21	53.9	68.9	245470.9	Yes	
10	15:46:21	52.7	64.1	186208.7	Yes	
11	15:47:21	47.8	50.7	60255.96	Yes	
12	15:48:21	49.1	55.1	81283.05	Yes	
13	15:49:21	55.9	71.9	389045.1	Yes	
14	15:50:21	55.4	68.1	346736.9	Yes	
15	15:51:21	53.8	68.5	239883.3	Yes	
Leq of Good Periods					52.9	

Appendix B –Traffic Data for Noise Modeling

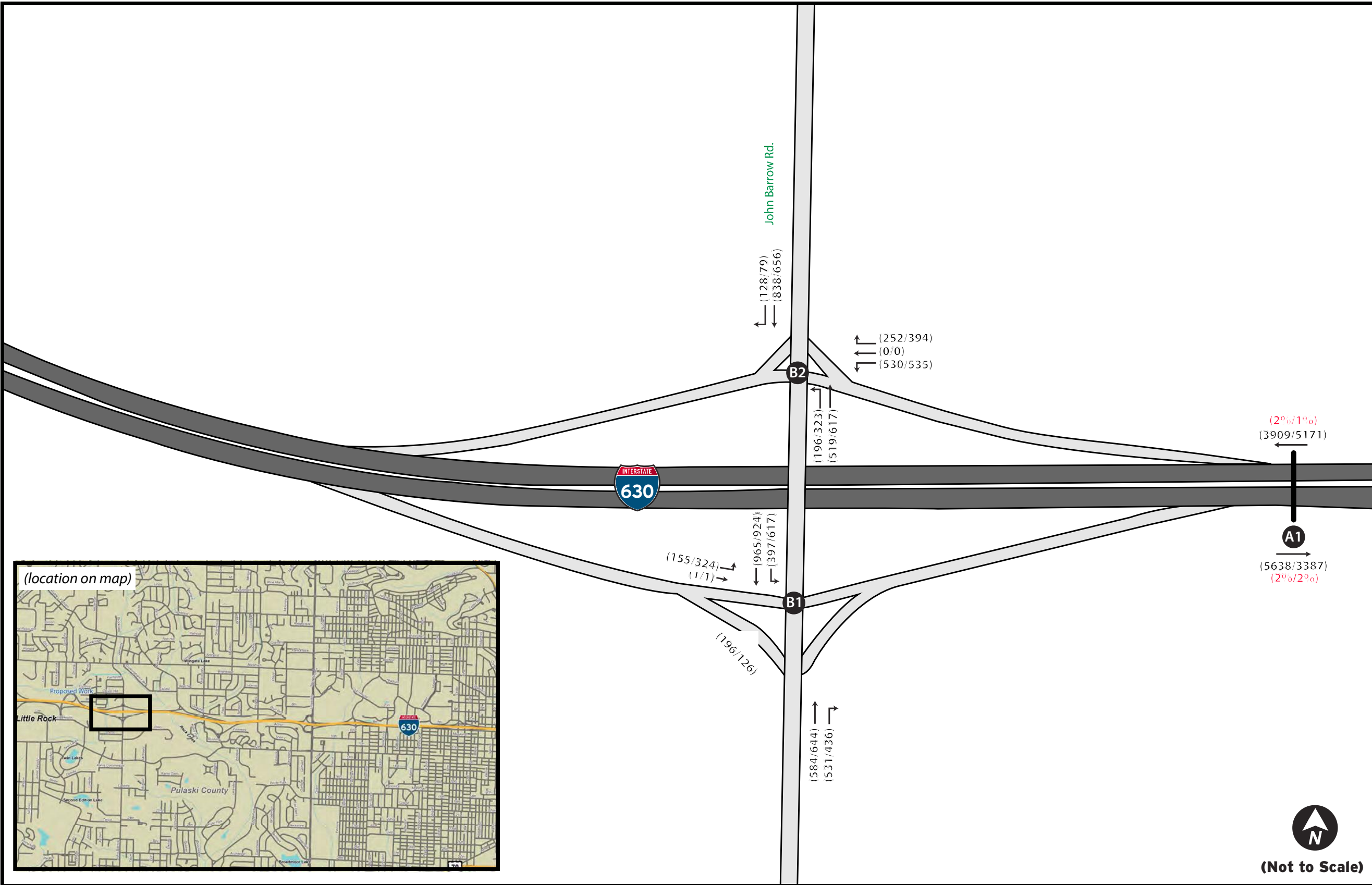
<i>Traffic</i>	<i>Appendix Page</i>
Existing 2013 Traffic Counts (Exhibit 4.1 from CA0608 Forecast)	B-2
Existing 2013 Traffic Counts (Exhibit 4.2 from CA0608 Forecast)	B-3
Existing 2013 Traffic Counts (Exhibit 4.3 from CA0608 Forecast)	B-4
Build Alternative Traffic Counts (2039) [Sheet 1 of 5]	B-5
Build Alternative Traffic Counts (2039) [Sheet 2 of 5]	B-6
Build Alternative Traffic Counts (2039) [Sheet 3 of 5]	B-7
Build Alternative Traffic Counts (2039) [Sheet 4 of 5]	B-8
Build Alternative Traffic Counts (2039) [Sheet 5 of 5]	B-9
TNM 2.5 Traffic Inputs	B-10

EXHIBIT 4.1

CA0608 - I-630, Baptist Hospital to University Avenue Existing 2013 Traffic Counts



March 2014



Legend

— 48-hour counts

●●● 24-hour counts

- A Mainline Count
- B Turning movement count
- C Ramp count

(AM/PM) Traffic Counts [Volumes shown are raw counts taken September 2013]
(AM/PM) Truck Percent
Peak hour Times: 7:15AM–8:15 AM and 4:30 PM–5:30 PM



EXHIBIT 4.2

CA0608 - I-630, Baptist Hospital to University Avenue Existing 2013 Traffic Counts



March 2014

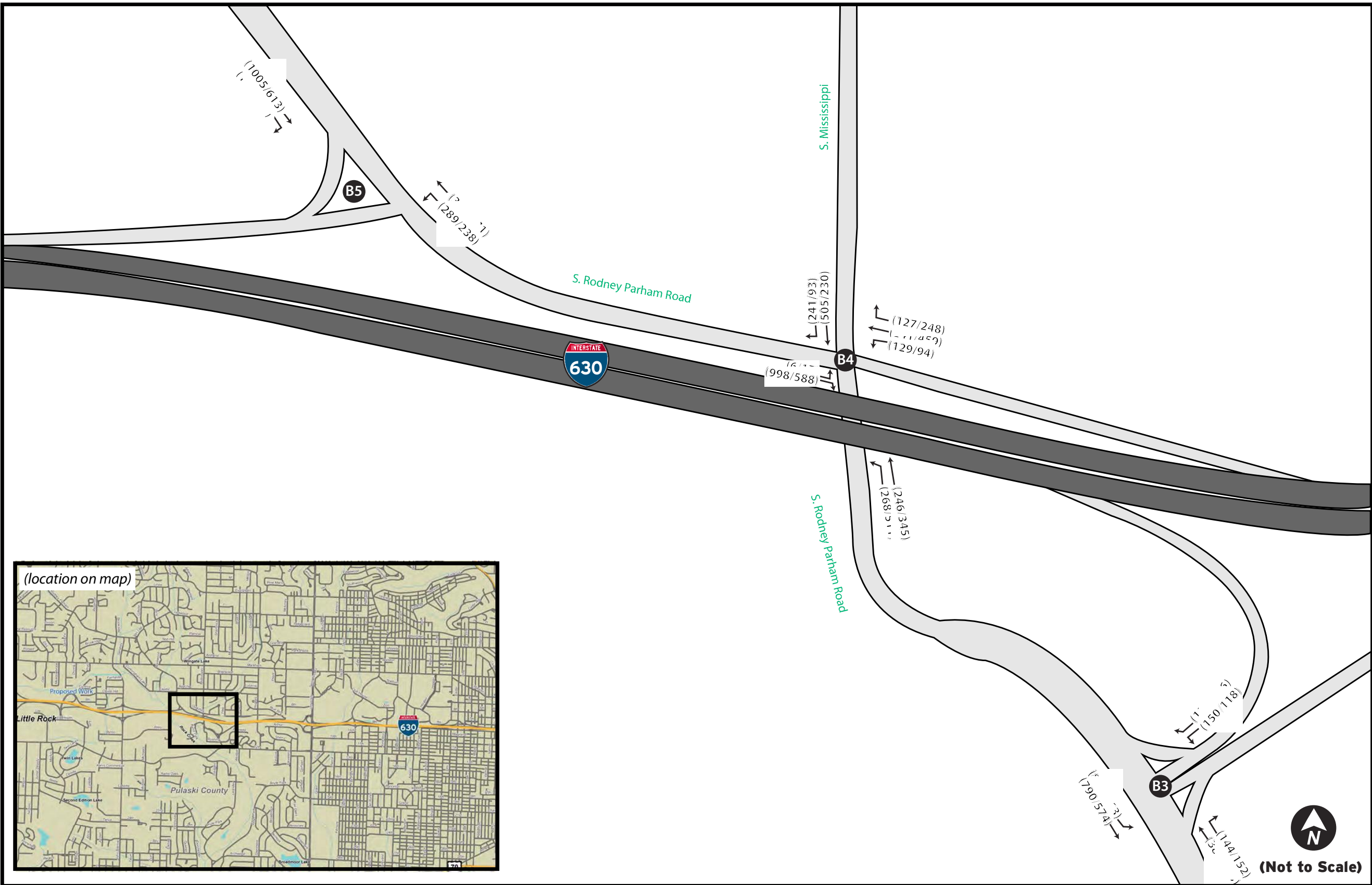
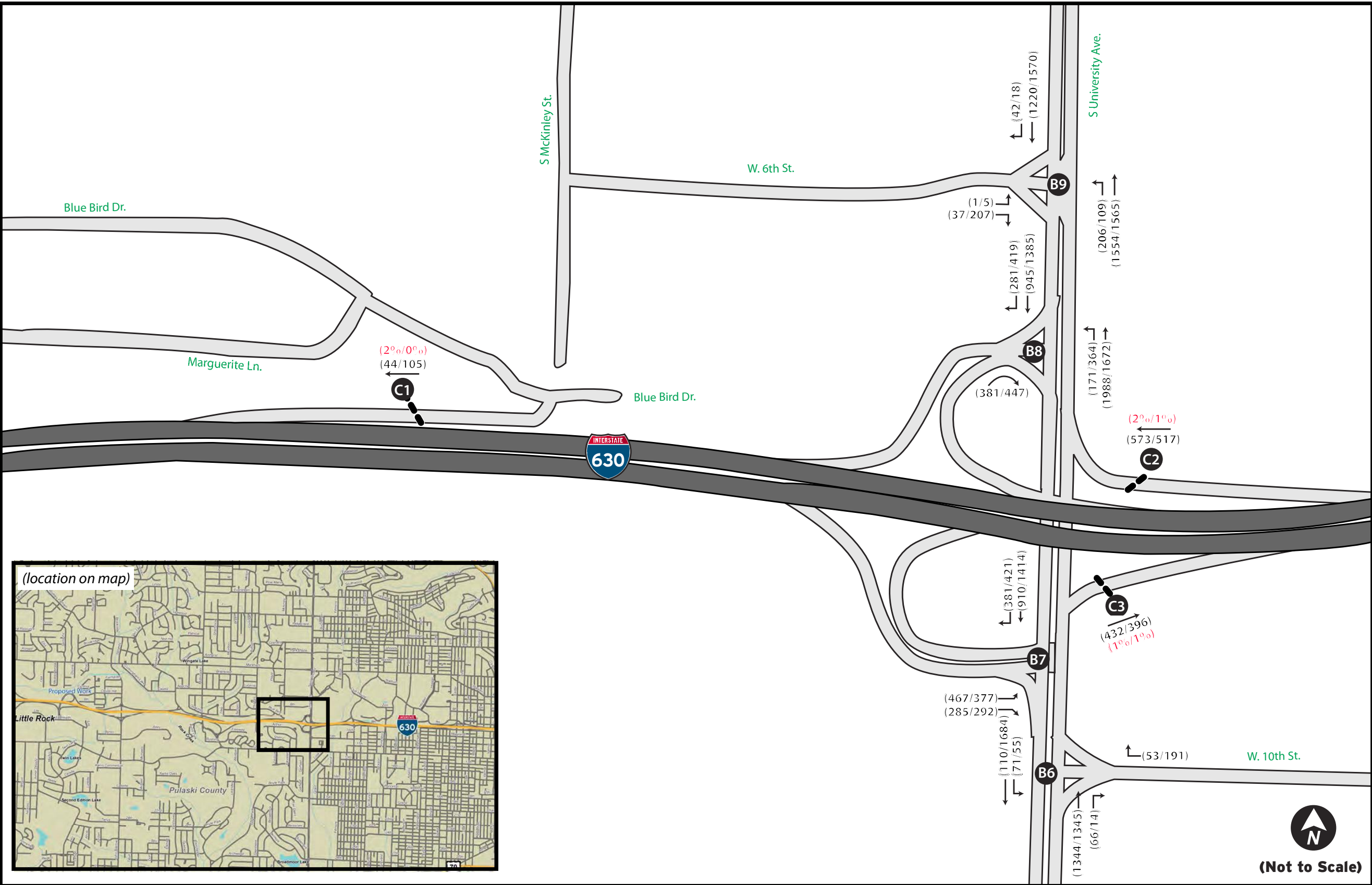


EXHIBIT 4.3

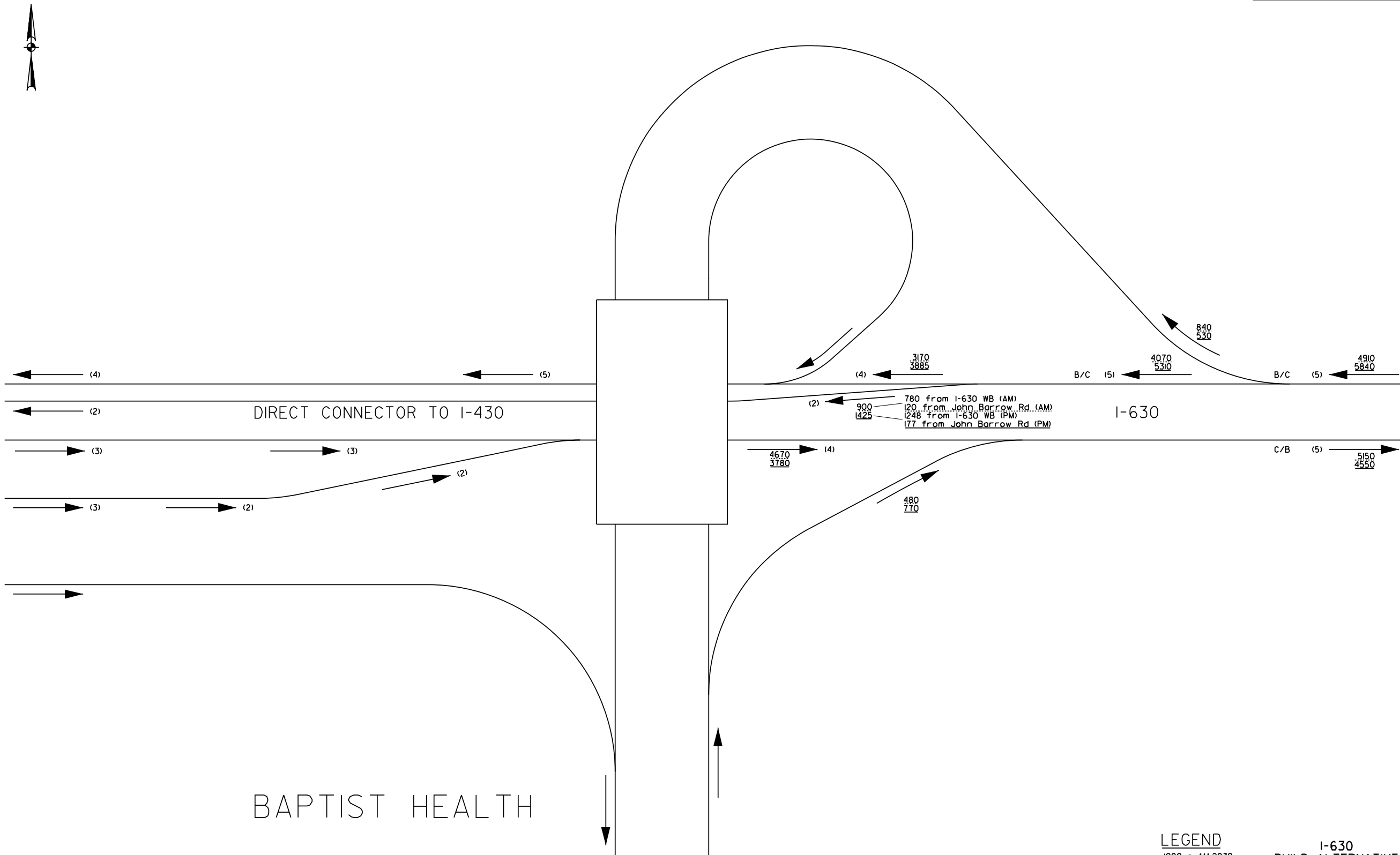
CA0608 - I-630, Baptist Hospital to University Avenue Existing 2013 Traffic Counts



March 2014

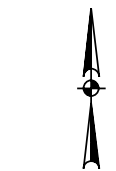


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA0608		
				② I-630 - TRAFFIC COUNTS				



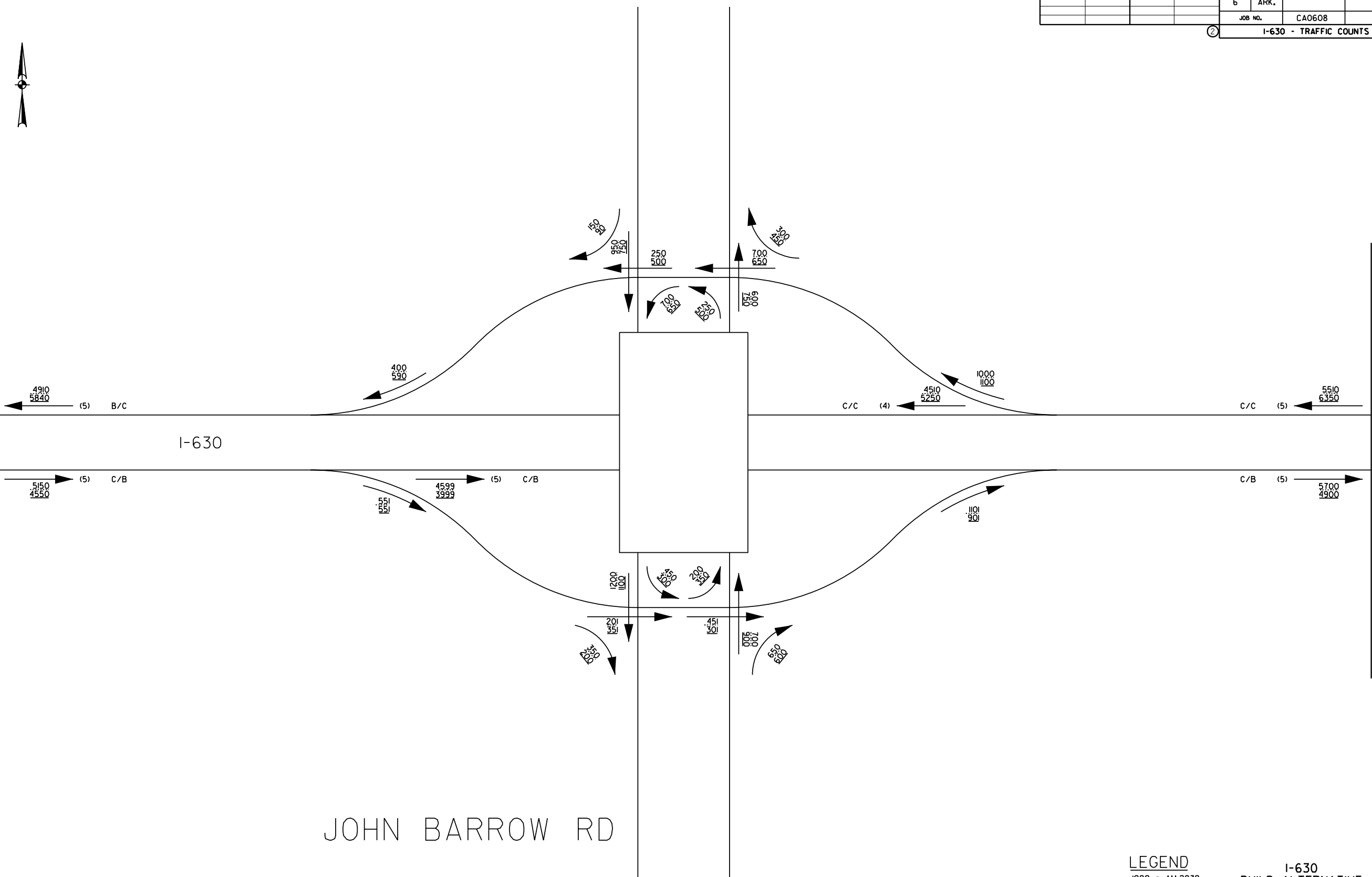
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA0608		
				② I-630 - TRAFFIC COUNTS				



MATCH SHEET 1 OF 5

MATCH SHEET 3 OF 5



JOHN BARROW RD

LEGEND
1000 = AM 2039
1000 = PM 2039
(1) = NO. LANES
A/B = AM/PM LOS

**I-630
BUILD ALTERNATIVE
TRAFFIC COUNTS
YEAR: 2039
SHEET 2 OF 5**

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA0608		
				② I-630 - TRAFFIC COUNTS				



MATCH SHEET 2 OF 5

MATCH SHEET 4 OF 5

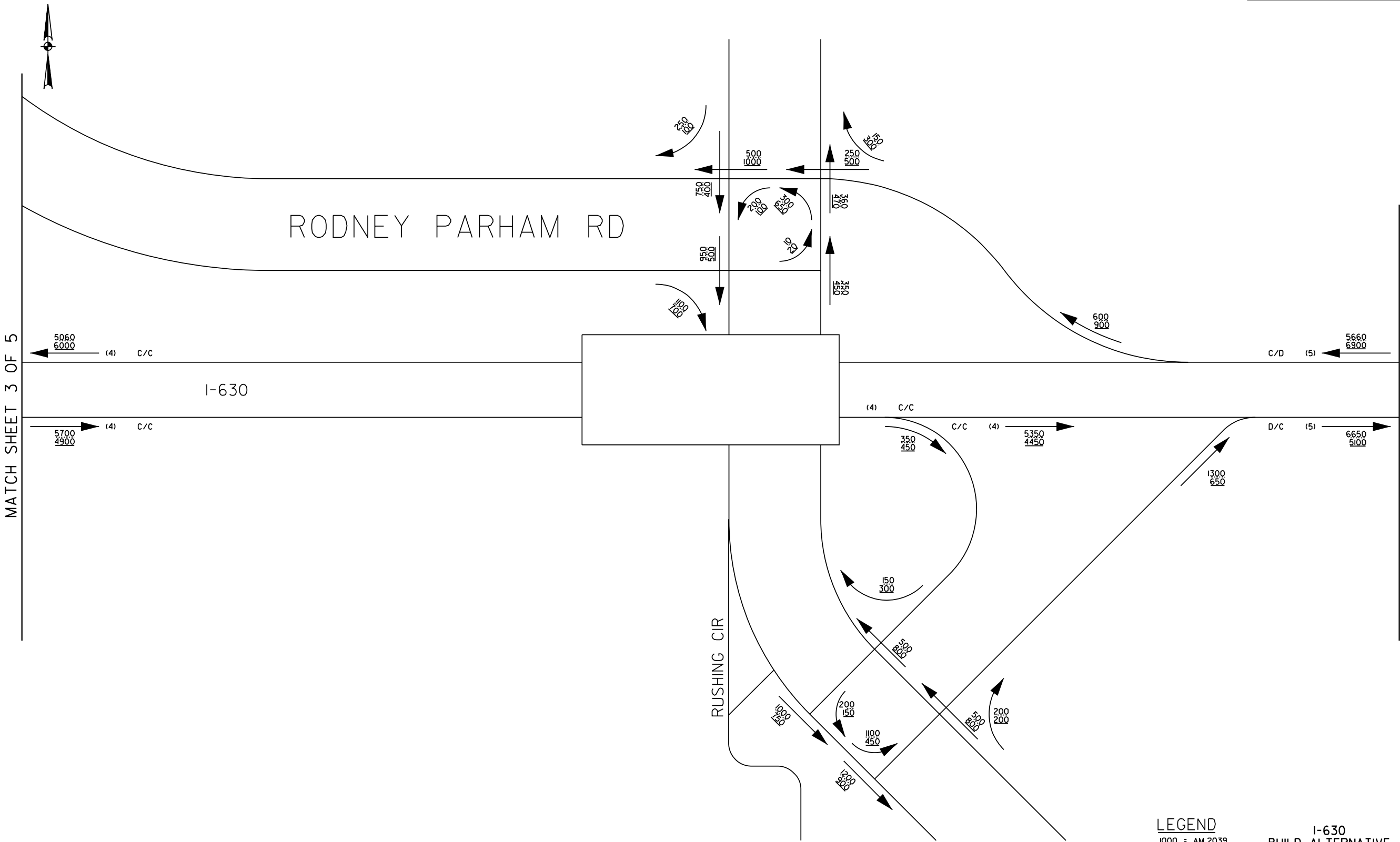


LEGEND

1000 = AM 2039
1000 = PM 2039
(1) = NO. LANES
A/B = AM/PM LOS

I-630
BUILD ALTERNATIVE
TRAFFIC COUNTS
YEAR: 2039
SHEET 3 OF 5

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA0608		
				②	I-630 - TRAFFIC COUNTS			



LEGEND
1000 = AM 2039
1000 = PM 2039
(1) = NO. LANES
A/B = AM/PM LOS

I-630
BUILD ALTERNATIVE
TRAFFIC COUNTS
YEAR: 2039
SHEET 4 OF 5

Existing (2013) Traffic Volumes - PM Peak Hour

I-630 WB, West of John Barrow Rd On Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	4644	Autos	4505	65
Direction	WB	MT	93	65
d	2	HT	46	65
t	1		4644	

I-630 EB, West of John Barrow Rd Off Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	2785	Autos	2673	65
Direction	EB	MT	56	65
d	2	HT	56	65
t	2		2785	

I-630 WB, Between John Barrow Rd Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	4242	Autos	4115	65
Direction	WB	MT	85	65
d	2	HT	42	65
t	1		4242	

I-630 EB, Between John Barrow Rd Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	2334	Autos	2240	65
Direction	EB	MT	47	65
d	2	HT	47	65
t	2		2334	

I-630 WB, Between John Barrow and Rodney Parham Ramps					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	5171	Autos	5016	65	3344	1672
Direction	WB	MT	103	65	69	34
d	2	HT	52	65	35	17
t	1		5171			

I-630 EB, Between John Barrow and Rodney Parham Ramps					Inside	Outside
Traffic Information		EB Traffic Volumes and Speed				
Peak Hr Vol	3387	Autos	3251	65	2167	1084
Direction	EB	MT	68	65	45	23
d	2	HT	68	65	45	23
t	2		3387			

I-630 WB, Between Rodney Parham Ramps					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	4832	Autos	4687	65	3125	1562
Direction	WB	MT	97	65	65	32
d	2	HT	48	65	32	16
t	1		4832			

I-630 EB, Between Rodney Parham Ramps					Inside	Outside
Traffic Information		EB Traffic Volumes and Speed				
Peak Hr Vol	3033	Autos	2911	65	1941	970
Direction	EB	MT	61	65	41	20
d	2	HT	61	65	41	20
t	2		3033			

I-630 WB, Between Rodney Parham and Blue Bird Ramps					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	5633	Autos	5464	65	3643	1821
Direction	WB	MT	113	65	75	38
d	2	HT	56	65	37	19
t	1		5633			

I-630 WB, Between Blue Bird and University Ramps					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	5528	Autos	5362	65	3575	1787
Direction	WB	MT	111	65	74	37
d	2	HT	55	65	37	18
t	1		5528			

I-630 EB, Between Rodney Parham and University Ramps					Inside	Outside
Traffic Information		EB Traffic Volumes and Speed				
Peak Hr Vol	3548	Autos	3406	65	2271	1135
Direction	EB	MT	71	65	47	24
d	2	HT	71	65	47	24
t	2		3548			

I-630 WB, Between University Ramps, West of University Ave					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	5192	Autos	5036	65	3357	1679
Direction	WB	MT	104	65	69	35
d	2	HT	52	65	35	17
t	1		5192			

I-630 EB, Between University Ramps, West of University Ave					Inside	Outside
Traffic Information		EB Traffic Volumes and Speed				
Peak Hr Vol	3300	Autos	3168	65	2112	1056
Direction	EB	MT	66	65	44	22
d	2	HT	66	65	44	22
t	2		3300			

I-630 WB, Between University Ramps, East of University Ave					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	4745	Autos	4603	65	3069	1534
Direction	WB	MT	95	65	63	32
d	2	HT	47	65	31	16
t	1		4745			

I-630 EB, Between University Ramps, East of University Ave					Inside	Outside
Traffic Information		EB Traffic Volumes and Speed				
Peak Hr Vol	2879	Autos	2763	65	1842	921
Direction	EB	MT	58	65	39	19
d	2	HT	58	65	39	19
t	2		2879			

I-630 WB, East of University Ave					Inside	Outside
Traffic Information		WB Traffic Volumes and Speed				
Peak Hr Vol	5709	Autos	5538	65	3692	1846
Direction	WB	MT	114	65	76	38
d	2	HT	57	65	38	19
t	1		5709			

I-630 EB, East of University Ave					Inside	Outside
Traffic Information		EB Traffic Volumes and Speed				
Peak Hr Vol	3696	Autos	3548	65	2365	1183
Direction	EB	MT	74	65	49	25
d	2	HT	74	65	49	25
t	2		3696			

John Barrow Rd NB, South of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1080	Autos	1047	35
Direction	NB	MT	22	35
d	2	HT	11	35
t	1		1080	

John Barrow Rd SB, South of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1050	Autos	1018	35
Direction	SB	MT	21	35
d	2	HT	11	35
t	1		1050	

John Barrow Rd NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	968	Autos	939	35
Direction	NB	MT	19	35
d	2	HT	10	35
t	1		968	

John Barrow Rd SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1541	Autos	1495	35
Direction	SB	MT	31	35
d	2	HT	15	35
t	1		1541	

Existing (2013) Traffic Volumes - PM Peak Hour

John Barrow Rd NB, North of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1011	Autos	981	35
Direction	NB	MT	20	35
d	2	HT	10	35
t	1		1011	

I-630 WB Off Ramp to John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	929	Autos	901	45
Direction	WB	MT	19	45
d	2	HT	9	45
t	1		929	

I-630 EB Off Ramp to John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	451	Autos	437	45
Direction	EB	MT	9	45
d	2	HT	5	45
t	1		451	

I-630 WB Off Ramp to Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	801	Autos	777	45
Direction	WB	MT	16	45
d	2	HT	8	45
t	1		801	

I-630 EB Off Ramp to Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	354	Autos	343	45
Direction	EB	MT	7	45
d	2	HT	4	45
t	1		354	

Rodney Parham NB, South of I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	765	Autos	742	30
Direction	NB	MT	15	30
d	2	HT	8	30
t	1		765	

Rodney Parham NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	856	Autos	830	30
Direction	NB	MT	17	30
d	2	HT	9	30
t	1		856	

Rodney Parham NB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1109	Autos	1076	30
Direction	NB	MT	22	30
d	2	HT	11	30
t	1		1109	

Rodney Parham NB, North of I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	871	Autos	845	30
Direction	NB	MT	17	30
d	2	HT	9	30
t	1		871	

S Mississippi NB				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	610	Autos	592	35
Direction	NB	MT	12	35
d	2	HT	6	35
t	1		610	

Blue Bird Ln On Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	105	Autos	103	45
Direction	WB	MT	2	45
d	2	HT	0	45
t	0		105	

John Barrow Rd SB, North of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	735	Autos	713	35
Direction	SB	MT	15	35
d	2	HT	7	35
t	1		735	

I-630 WB On Ramp from John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	402	Autos	390	45
Direction	WB	MT	8	45
d	2	HT	4	45
t	1		402	

I-630 EB On Ramp from John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	1054	Autos	1022	45
Direction	EB	MT	21	45
d	2	HT	11	45
t	1		1054	

I-630 WB On Ramp from Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	339	Autos	329	45
Direction	WB	MT	7	45
d	2	HT	3	45
t	1		339	

I-630 EB On Ramp from Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	515	Autos	500	45
Direction	EB	MT	10	45
d	2	HT	5	45
t	1		515	

Rodney Parham SB, South of I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	692	Autos	671	30
Direction	SB	MT	14	30
d	2	HT	7	30
t	1		692	

Rodney Parham SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	937	Autos	909	30
Direction	SB	MT	19	30
d	2	HT	9	30
t	1		937	

Rodney Parham SB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	613	Autos	595	30
Direction	SB	MT	12	30
d	2	HT	6	30
t	1		613	

Rodney Parham SB, North of I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	741	Autos	719	30
Direction	SB	MT	15	30
d	2	HT	7	30
t	1		741	

S Mississippi SB				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	323	Autos	314	35
Direction	SB	MT	6	35
d	2	HT	3	35
t	1		323	

Existing (2013) Traffic Volumes - PM Peak Hour

I-630 WB On Ramp from University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	783	Autos	759	45
Direction	WB	MT	16	45
d	2	HT	8	45
t	1		783	

I-630 EB Off Ramp to University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	669	Autos	649	45
Direction	EB	MT	13	45
d	2	HT	7	45
t	1		669	

I-630 WB Off Ramp to University Ave NB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	517	Autos	502	45
Direction	WB	MT	10	45
d	2	HT	5	45
t	1		517	

University Ave NB to I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1359	Autos	1318	40
Direction	NB	MT	27	40
d	2	HT	14	40
t	1		1359	

University Ave NB Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1326	Autos	1286	40
Direction	NB	MT	27	40
d	2	HT	13	40
t	1		1326	

University Ave NB North of I-630 WB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1672	Autos	1622	40
Direction	NB	MT	33	40
d	2	HT	17	40
t	1		1672	

W 6th St				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	339	Autos	329	20
Direction		MT	7	20
d	2	HT	3	20
t	1		339	

I-630 WB Off Ramp to University Ave SB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	447	Autos	434	45
Direction	WB	MT	9	45
d	2	HT	4	45
t	1		447	

I-630 EB On Ramp from University Ave SB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	421	Autos	409	45
Direction	EB	MT	8	45
d	2	HT	4	45
t	1		421	

I-630 EB On Ramp from University Ave NB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	396	Autos	388	45
Direction	EB	MT	4	45
d	1	HT	4	45
t	1		396	

University Ave SB from I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1706	Autos	1655	40
Direction	SB	MT	34	40
d	2	HT	17	40
t	1		1706	

University Ave SB Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1835	Autos	1780	40
Direction	SB	MT	37	40
d	2	HT	18	40
t	1		1835	

University Ave SB North of I-630 WB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1804	Autos	1750	40
Direction	SB	MT	36	40
d	2	HT	18	40
t	1		1804	

Future (2039) Traffic Volumes - PM Peak Hour

I-630 WB, Direct Connector to I-430				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	1425	Autos	1382	60
Direction	WB	MT	29	60
d	2	HT	14	60
t	1		1425	

I-630 WB Off Ramp to Baptist Hospital				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	530	Autos	520	35
Direction	WB	MT	5	35
d	1	HT	5	35
t	1		530	

I-630 WB, West of Baptist Health Off Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5310	Autos	5151	60
Direction	WB	MT	106	60
d	2	HT	53	60
t	1		5310	

I-630 WB, West of John Barrow Rd On Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5840	Autos	5665	65
Direction	WB	MT	117	65
d	2	HT	58	65
t	1		5840	

I-630 WB, Between John Barrow Rd Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5250	Autos	5092	65
Direction	WB	MT	105	65
d	2	HT	53	65
t	1		5250	

I-630 WB, Between John Barrow and Rodney Parham Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	6350	Autos	6159	65
Direction	WB	MT	127	65
d	2	HT	64	65
t	1		6350	

I-630 WB, Between Rodney Parham Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	6000	Autos	5820	65
Direction	WB	MT	120	65
d	2	HT	60	65
t	1		6000	

I-630 WB, Between Rodney Parham and University Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	6900	Autos	6693	65
Direction	WB	MT	138	65
d	2	HT	69	65
t	1		6900	

I-630 WB, Between University Ramps, West of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5800	Autos	5626	65
Direction	WB	MT	116	65
d	2	HT	58	65
t	1		5800	

I-630 WB, Between University Ramps, East of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	6300	Autos	6111	65
Direction	WB	MT	126	65
d	2	HT	63	65
t	1		6300	

I-630 WB, East of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	6900	Autos	6693	65
Direction	WB	MT	138	65
d	2	HT	69	65
t	1		6900	

John Barrow Rd NB, South of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1500	Autos	1455	35
Direction	NB	MT	30	35
d	2	HT	15	35
t	1		1500	

I-630 WB, West of Baptist Hospital On Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	3885	Autos	3768	60
Direction	EB	MT	78	60
d	2	HT	39	60
t	1		3885	

I-630 EB On Ramp from Baptist Hospital				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	770	Autos	754	65
Direction	EB	MT	8	65
d	1	HT	8	65
t	1		770	

I-630 EB, West of Baptist Health On Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	3780	Autos	3628	60
Direction	EB	MT	76	60
d	2	HT	76	60
t	2		3780	

I-630 EB, West of John Barrow Rd Off Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4550	Autos	4368	65
Direction	EB	MT	91	65
d	2	HT	91	65
t	2		4550	

I-630 EB, Between John Barrow Rd Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	3999	Autos	3839	65
Direction	EB	MT	80	65
d	2	HT	80	65
t	2		3999	

I-630 EB, Between John Barrow and Rodney Parham Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4900	Autos	4704	65
Direction	EB	MT	98	65
d	2	HT	98	65
t	2		4900	

I-630 EB, Between Rodney Parham Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4450	Autos	4272	65
Direction	EB	MT	89	65
d	2	HT	89	65
t	2		4450	

I-630 EB, Between Rodney Parham and University Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5100	Autos	4896	65
Direction	EB	MT	102	65
d	2	HT	102	65
t	2		5100	

I-630 EB, Between University Ramps, West of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4300	Autos	4128	65
Direction	EB	MT	86	65
d	2	HT	86	65
t	2		4300	

I-630 EB, Between University Ramps, East of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4800	Autos	4608	65
Direction	EB	MT	96	65
d	2	HT	96	65
t	2		4800	

I-630 EB, East of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5250	Autos	5040	65
Direction	EB	MT	105	65
d	2	HT	105	65
t	2		5250	

John Barrow Rd SB, South of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1300	Autos	1261	35
Direction	SB	MT	26	35
d	2	HT	13	35
t	1		1300	

Future (2039) Traffic Volumes - PM Peak Hour

John Barrow Rd NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1250	Autos	1212	35
Direction	NB	MT	25	35
d	2	HT	13	35
t	1		1250	

John Barrow Rd NB, North of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1200	Autos	1164	35
Direction	NB	MT	24	35
d	2	HT	12	35
t	1		1200	

I-630 WB Off Ramp to John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	1100	Autos	1067	45
Direction	WB	MT	22	45
d	2	HT	11	45
t	1		1100	

I-630 EB Off Ramp to John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	551	Autos	534	45
Direction	EB	MT	11	45
d	2	HT	6	45
t	1		551	

I-630 WB Off Ramp to Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	900	Autos	873	45
Direction	WB	MT	18	45
d	2	HT	9	45
t	1		900	

I-630 EB Off Ramp to Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	450	Autos	436	45
Direction	EB	MT	9	45
d	2	HT	5	45
t	1		450	

Rodney Parham NB, South of I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1000	Autos	970	30
Direction	NB	MT	20	30
d	2	HT	10	30
t	1		1000	

Rodney Parham NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1100	Autos	1067	30
Direction	NB	MT	22	30
d	2	HT	11	30
t	1		1100	

Rodney Parham NB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1250	Autos	1212	30
Direction	NB	MT	25	30
d	2	HT	13	30
t	1		1250	

Rodney Parham NB, North of I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1000	Autos	970	30
Direction	NB	MT	20	30
d	2	HT	10	30
t	1		1000	

S Mississippi NB				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	770	Autos	747	35
Direction	NB	MT	15	35
d	2	HT	8	35
t	1		770	

John Barrow Rd SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1400	Autos	1358	35
Direction	SB	MT	28	35
d	2	HT	14	35
t	1		1400	

John Barrow Rd SB, North of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	840	Autos	815	35
Direction	SB	MT	17	35
d	2	HT	8	35
t	1		840	

I-630 WB On Ramp from John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	590	Autos	572	45
Direction	WB	MT	12	45
d	2	HT	6	45
t	1		590	

I-630 EB On Ramp from John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	901	Autos	874	45
Direction	EB	MT	18	45
d	2	HT	9	45
t	1		901	

I-630 WB On Ramp from Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	350	Autos	339	45
Direction	WB	MT	7	45
d	2	HT	4	45
t	1		350	

I-630 EB On Ramp from Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	650	Autos	630	45
Direction	EB	MT	13	45
d	2	HT	7	45
t	1		650	

Rodney Parham SB, South of I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	900	Autos	873	30
Direction	SB	MT	18	30
d	2	HT	9	30
t	1		900	

Rodney Parham SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1200	Autos	1164	30
Direction	SB	MT	24	30
d	2	HT	12	30
t	1		1200	

Rodney Parham SB, West of Mississippi St from I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	700	Autos	679	30
Direction	SB	MT	14	30
d	2	HT	7	30
t	1		700	

Rodney Parham SB, North of I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	800	Autos	776	30
Direction	SB	MT	16	30
d	2	HT	8	30
t	1		800	

S Mississippi SB				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	500	Autos	485	35
Direction	SB	MT	10	35
d	2	HT	5	35
t	1		500	

Future (2039) Traffic Volumes - PM Peak Hour

I-630 WB On Ramp from University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	1100	Autos	1067	45
Direction	WB	MT	22	45
d	2	HT	11	45
t	1		1100	

I-630 EB Off Ramp to University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	800	Autos	776	45
Direction	EB	MT	16	45
d	2	HT	8	45
t	1		800	

I-630 WB Off Ramp to University Ave NB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	600	Autos	582	45
Direction	WB	MT	12	45
d	2	HT	6	45
t	1		600	

University Ave NB to I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1800	Autos	1746	40
Direction	NB	MT	36	40
d	2	HT	18	40
t	1		1800	

University Ave NB Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1800	Autos	1746	40
Direction	NB	MT	36	40
d	2	HT	18	40
t	1		1800	

University Ave NB North of I-630 WB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1900	Autos	1843	40
Direction	NB	MT	38	40
d	2	HT	19	40
t	1		1900	

W 6th St				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	370	Autos	359	20
Direction		MT	7	20
d	2	HT	4	20
t	1		370	

I-630 WB Off Ramp to University Ave SB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	500	Autos	485	45
Direction	WB	MT	10	45
d	2	HT	5	45
t	1		500	

I-630 EB On Ramp from University Ave SB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	500	Autos	485	45
Direction	EB	MT	10	45
d	2	HT	5	45
t	1		500	

I-630 EB On Ramp from University Ave NB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	450	Autos	440	45
Direction	EB	MT	5	45
d	1	HT	5	45
t	1		450	

University Ave SB from I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	2050	Autos	1988	40
Direction	SB	MT	41	40
d	2	HT	21	40
t	1		2050	

University Ave SB Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	2100	Autos	2037	40
Direction	SB	MT	42	40
d	2	HT	21	40
t	1		2100	

University Ave SB North of I-630 WB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	2100	Autos	2037	40
Direction	SB	MT	42	40
d	2	HT	21	40
t	1		2100	

Existing (2013) Traffic Volumes - AM Peak Hour

I-630 WB, West of John Barrow Rd On Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3451	Autos	3347	65
Direction	WB	MT	69	65
d	2	HT	35	65
t	1		3451	

I-630 EB, West of John Barrow Rd Off Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5062	Autos	4860	65
Direction	EB	MT	101	65
d	2	HT	101	65
t	2		5062	

I-630 WB, Between John Barrow Rd Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3127	Autos	3033	65
Direction	WB	MT	63	65
d	2	HT	31	65
t	1		3127	

I-630 EB, Between John Barrow Rd Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4710	Autos	4522	65
Direction	EB	MT	94	65
d	2	HT	94	65
t	2		4710	

I-630 WB, Between John Barrow and Rodney Parham Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3909	Autos	3792	65
Direction	WB	MT	78	65
d	2	HT	39	65
t	1		3909	

I-630 EB, Between John Barrow and Rodney Parham Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5638	Autos	5412	65
Direction	EB	MT	113	65
d	2	HT	113	65
t	2		5638	

I-630 WB, Between Rodney Parham Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3514	Autos	3409	65
Direction	WB	MT	70	65
d	2	HT	35	65
t	1		3514	

I-630 EB, Between Rodney Parham Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5352	Autos	5138	65
Direction	EB	MT	107	65
d	2	HT	107	65
t	2		5352	

I-630 WB, Between Rodney Parham and Blue Bird Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	4011	Autos	3891	65
Direction	WB	MT	80	65
d	2	HT	40	65
t	1		4011	

I-630 EB, Between Rodney Parham and University Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	6315	Autos	6063	65
Direction	EB	MT	126	65
d	2	HT	126	65
t	2		6315	

I-630 WB, Between Blue Bird and University Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3967	Autos	3848	65
Direction	WB	MT	79	65
d	2	HT	40	65
t	1		3967	

I-630 EB, Between Rodney Parham and University Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	6315	Autos	6063	65
Direction	EB	MT	126	65
d	2	HT	126	65
t	2		6315	

I-630 WB, Between University Ramps, East of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3515	Autos	3410	65
Direction	WB	MT	70	65
d	2	HT	35	65
t	1		3515	

I-630 EB, Between University Ramps, East of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5563	Autos	5341	65
Direction	EB	MT	111	65
d	2	HT	111	65
t	2		5563	

I-630 WB, Between University Ramps, West of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	3896	Autos	3779	65
Direction	WB	MT	78	65
d	2	HT	39	65
t	1		3896	

I-630 EB, Between University Ramps, West of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5944	Autos	5706	65
Direction	EB	MT	119	65
d	2	HT	119	65
t	2		5944	

I-630 WB, East of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	4469	Autos	4335	65
Direction	WB	MT	89	65
d	2	HT	45	65
t	1		4469	

I-630 EB, East of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	6376	Autos	6120	65
Direction	EB	MT	128	65
d	2	HT	128	65
t	2		6376	

John Barrow Rd NB, South of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1115	Autos	1082	35
Direction	NB	MT	22	35
d	2	HT	11	35
t	1		1115	

John Barrow Rd SB, South of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1161	Autos	1126	35
Direction	SB	MT	23	35
d	2	HT	12	35
t	1		1161	

Existing (2013) Traffic Volumes - AM Peak Hour

John Barrow Rd NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	739	Autos	717	35
Direction	NB	MT	15	35
d	2	HT	7	35
t	1		739	

John Barrow Rd SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1368	Autos	1327	35
Direction	SB	MT	27	35
d	2	HT	14	35
t	1		1368	

John Barrow Rd NB, North of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	771	Autos	748	35
Direction	NB	MT	15	35
d	2	HT	8	35
t	1		771	

John Barrow Rd SB, North of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	966	Autos	937	35
Direction	SB	MT	19	35
d	2	HT	10	35
t	1		966	

I-630 WB Off Ramp to John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	782	Autos	758	45
Direction	WB	MT	16	45
d	2	HT	8	45
t	1		782	

I-630 WB On Ramp from John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	324	Autos	315	45
Direction	WB	MT	6	45
d	2	HT	3	45
t	1		324	

I-630 EB Off Ramp to John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	352	Autos	341	45
Direction	EB	MT	7	45
d	2	HT	4	45
t	1		352	

I-630 EB On Ramp from John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	929	Autos	901	45
Direction	EB	MT	19	45
d	2	HT	9	45
t	1		929	

I-630 WB Off Ramp to Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	497	Autos	482	45
Direction	WB	MT	10	45
d	2	HT	5	45
t	1		497	

I-630 WB On Ramp from Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	395	Autos	383	45
Direction	WB	MT	8	45
d	2	HT	4	45
t	1		395	

I-630 EB Off Ramp to Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	286	Autos	277	45
Direction	EB	MT	6	45
d	2	HT	3	45
t	1		286	

I-630 EB On Ramp from Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	963	Autos	934	45
Direction	EB	MT	19	45
d	2	HT	10	45
t	1		963	

Rodney Parham NB, South of I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	524	Autos	509	30
Direction	NB	MT	10	30
d	2	HT	5	30
t	1		524	

Rodney Parham SB, South of I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	940	Autos	912	30
Direction	SB	MT	19	30
d	2	HT	9	30
t	1		940	

Rodney Parham NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	516	Autos	501	30
Direction	NB	MT	10	30
d	2	HT	5	30
t	1		516	

Rodney Parham SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1632	Autos	1583	30
Direction	SB	MT	33	30
d	2	HT	16	30
t	1		1632	

Rodney Parham NB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	750	Autos	727	30
Direction	NB	MT	15	30
d	2	HT	8	30
t	1		750	

Rodney Parham SB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1005	Autos	975	30
Direction	SB	MT	20	30
d	2	HT	10	30
t	1		1005	

Rodney Parham NB, North of I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	381	Autos	369	30
Direction	NB	MT	8	30
d	2	HT	4	30
t	1		381	

Rodney Parham SB, North of I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1111	Autos	1078	30
Direction	SB	MT	22	30
d	2	HT	11	30
t	1		1111	

Existing (2013) Traffic Volumes - AM Peak Hour

S Mississippi NB				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	379	Autos	367	35
Direction	NB	MT	8	35
d	2	HT	4	35
t	1		379	

S Mississippi SB				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	746	Autos	724	35
Direction	SB	MT	15	35
d	2	HT	7	35
t	1		746	

Blue Bird Ln On Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	44	Autos	43	45
Direction	WB	MT	1	45
d	2	HT	0	45
t	0		44	

I-630 WB On Ramp from University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	452	Autos	438	45
Direction	WB	MT	9	45
d	2	HT	5	45
t	1		452	

I-630 WB Off Ramp to University Ave SB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	381	Autos	369	45
Direction	WB	MT	8	45
d	2	HT	4	45
t	1		381	

I-630 EB Off Ramp to University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	752	Autos	729	45
Direction	EB	MT	15	45
d	2	HT	8	45
t	1		752	

I-630 EB On Ramp from University Ave SB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	381	Autos	369	45
Direction	EB	MT	8	45
d	2	HT	4	45
t	1		381	

I-630 WB Off Ramp to University Ave NB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	573	Autos	556	45
Direction	WB	MT	11	45
d	2	HT	6	45
t	1		573	

I-630 EB On Ramp from University Ave NB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	432	Autos	424	45
Direction	EB	MT	4	45
d	1	HT	4	45
t	1		432	

University Ave NB to I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1410	Autos	1368	40
Direction	NB	MT	28	40
d	2	HT	14	40
t	1		1410	

University Ave SB from I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1195	Autos	1159	40
Direction	SB	MT	24	40
d	2	HT	12	40
t	1		1195	

University Ave NB Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1366	Autos	1325	40
Direction	NB	MT	27	40
d	2	HT	14	40
t	1		1366	

University Ave SB Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1291	Autos	1252	40
Direction	SB	MT	26	40
d	2	HT	13	40
t	1		1291	

University Ave NB North of I-630 WB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1988	Autos	1928	40
Direction	NB	MT	40	40
d	2	HT	20	40
t	1		1988	

University Ave SB North of I-630 WB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1226	Autos	1189	40
Direction	SB	MT	25	40
d	2	HT	12	40
t	1		1226	

W 6th St				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	286	Autos	277	20
Direction		MT	6	20
d	2	HT	3	20
t	1		286	

Future (2039) Traffic Volumes - AM Peak Hour

I-630 WB, Direct Connector to I-430				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	900	Autos	873	65
Direction	WB	MT	18	65
d	2	HT	9	65
t	1		900	

I-630 WB Off Ramp to Baptist Hospital				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	840	Autos	824	35
Direction	WB	MT	8	35
d	1	HT	8	35
t	1		840	

I-630 WB, West of John Barrow Rd On Ramp				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	4910	Autos	4763	65
Direction	WB	MT	98	65
d	2	HT	49	65
t	1		4910	

I-630 WB, Between John Barrow Rd Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	4510	Autos	4375	65
Direction	WB	MT	90	65
d	2	HT	45	65
t	1		4510	

I-630 WB, Between John Barrow and Rodney Parham Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5510	Autos	5345	65
Direction	WB	MT	110	65
d	2	HT	55	65
t	1		5510	

I-630 WB, Between Rodney Parham Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5060	Autos	4908	65
Direction	WB	MT	101	65
d	2	HT	51	65
t	1		5060	

I-630 WB, Between Rodney Parham and University Ramps				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5660	Autos	5490	65
Direction	WB	MT	113	65
d	2	HT	57	65
t	1		5660	

I-630 WB, Between University Ramps, West of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5100	Autos	4947	65
Direction	WB	MT	102	65
d	2	HT	51	65
t	1		5100	

I-630 WB, Between University Ramps, East of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	5550	Autos	5383	65
Direction	WB	MT	111	65
d	2	HT	56	65
t	1		5550	

I-630 WB, East of University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	6200	Autos	6014	65
Direction	WB	MT	124	65
d	2	HT	62	65
t	1		6200	

I-630 WB, West of Baptist Hospital On Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	3170	Autos	3075	65
Direction	EB	MT	63	65
d	2	HT	32	65
t	1		3170	

I-630 WB, West of Baptist Hospital Off Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4070	Autos	3948	65
Direction	EB	MT	81	65
d	2	HT	41	65
t	1		4070	

I-630 EB, West of John Barrow Rd Off Ramp				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5150	Autos	4944	65
Direction	EB	MT	103	65
d	2	HT	103	65
t	2		5150	

I-630 EB, Between John Barrow Rd Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	4600	Autos	4416	65
Direction	EB	MT	92	65
d	2	HT	92	65
t	2		4600	

I-630 EB, Between John Barrow and Rodney Parham Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5700	Autos	5472	65
Direction	EB	MT	114	65
d	2	HT	114	65
t	2		5700	

I-630 EB, Between Rodney Parham Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5350	Autos	5136	65
Direction	EB	MT	107	65
d	2	HT	107	65
t	2		5350	

I-630 EB, Between Rodney Parham and University Ramps				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	6650	Autos	6384	65
Direction	EB	MT	133	65
d	2	HT	133	65
t	2		6650	

I-630 EB, Between University Ramps, West of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	5800	Autos	5568	65
Direction	EB	MT	116	65
d	2	HT	116	65
t	2		5800	

I-630 EB, Between University Ramps, East of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	6250	Autos	6000	65
Direction	EB	MT	125	65
d	2	HT	125	65
t	2		6250	

I-630 EB, East of University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	6750	Autos	6480	65
Direction	EB	MT	135	65
d	2	HT	135	65
t	2		6750	

Future (2039) Traffic Volumes - AM Peak Hour

John Barrow Rd NB, South of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1350	Autos	1309	35
Direction	NB	MT	27	35
d	2	HT	14	35
t	1		1350	

John Barrow Rd SB, South of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1550	Autos	1503	35
Direction	SB	MT	31	35
d	2	HT	16	35
t	1		1550	

John Barrow Rd NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	900	Autos	873	35
Direction	NB	MT	18	35
d	2	HT	9	35
t	1		900	

John Barrow Rd SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1650	Autos	1600	35
Direction	SB	MT	33	35
d	2	HT	17	35
t	1		1650	

John Barrow Rd NB, North of I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	900	Autos	873	35
Direction	NB	MT	18	35
d	2	HT	9	35
t	1		900	

John Barrow Rd SB, North of I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1100	Autos	1067	35
Direction	SB	MT	22	35
d	2	HT	11	35
t	1		1100	

I-630 WB Off Ramp to John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	1000	Autos	970	45
Direction	WB	MT	20	45
d	2	HT	10	45
t	1		1000	

I-630 WB On Ramp from John Barrow Rd				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	400	Autos	388	45
Direction	WB	MT	8	45
d	2	HT	4	45
t	1		400	

I-630 EB Off Ramp to John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	550	Autos	533	45
Direction	EB	MT	11	45
d	2	HT	6	45
t	1		550	

I-630 EB On Ramp from John Barrow Rd				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	1110	Autos	1077	45
Direction	EB	MT	22	45
d	2	HT	11	45
t	1		1110	

I-630 WB Off Ramp to Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	600	Autos	582	45
Direction	WB	MT	12	45
d	2	HT	6	45
t	1		600	

I-630 WB On Ramp from Rodney Parham				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	450	Autos	436	45
Direction	WB	MT	9	45
d	2	HT	5	45
t	1		450	

I-630 EB Off Ramp to Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	350	Autos	339	45
Direction	EB	MT	7	45
d	2	HT	4	45
t	1		350	

I-630 EB On Ramp from Rodney Parham				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	1300	Autos	1261	45
Direction	EB	MT	26	45
d	2	HT	13	45
t	1		1300	

Rodney Parham NB, South of I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	700	Autos	679	30
Direction	NB	MT	14	30
d	2	HT	7	30
t	1		700	

Rodney Parham SB, South of I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1200	Autos	1164	30
Direction	SB	MT	24	30
d	2	HT	12	30
t	1		1200	

Rodney Parham NB, Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	650	Autos	630	30
Direction	NB	MT	13	30
d	2	HT	7	30
t	1		650	

Rodney Parham SB, Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	2050	Autos	1988	30
Direction	SB	MT	41	30
d	2	HT	21	30
t	1		2050	

Rodney Parham NB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	850	Autos	824	30
Direction	NB	MT	17	30
d	2	HT	9	30
t	1		850	

Rodney Parham SB, West of Mississippi St to I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1100	Autos	1067	30
Direction	SB	MT	22	30
d	2	HT	11	30
t	1		1100	

Future (2039) Traffic Volumes - AM Peak Hour

Rodney Parham NB, North of I-630 WB On Ramp				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	500	Autos	485	30
Direction	NB	MT	10	30
d	2	HT	5	30
t	1		500	

S Mississippi NB				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	510	Autos	495	35
Direction	NB	MT	10	35
d	2	HT	5	35
t	1		510	

I-630 WB On Ramp from University Ave				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	560	Autos	543	45
Direction	WB	MT	11	45
d	2	HT	6	45
t	1		560	

I-630 EB Off Ramp to University Ave				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	850	Autos	824	45
Direction	EB	MT	17	45
d	2	HT	9	45
t	1		850	

I-630 WB Off Ramp to University Ave NB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	650	Autos	630	45
Direction	WB	MT	13	45
d	2	HT	7	45
t	1		650	

University Ave NB to I-630 EB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1780	Autos	1726	40
Direction	NB	MT	36	40
d	2	HT	18	40
t	1		1780	

University Ave NB Between I-630 Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	1830	Autos	1775	40
Direction	NB	MT	37	40
d	2	HT	18	40
t	1		1830	

University Ave NB North of I-630 WB Ramps				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	2300	Autos	2231	40
Direction	NB	MT	46	40
d	2	HT	23	40
t	1		2300	

W 6th St				
Traffic Information		NB Traffic Volumes and Speed		
Peak Hr Vol	290	Autos	281	20
Direction		MT	6	20
d	2	HT	3	20
t	1		290	

Rodney Parham SB, North of I-630 WB On Ramp				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1300	Autos	1261	30
Direction	SB	MT	26	30
d	2	HT	13	30
t	1		1300	

S Mississippi SB				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1000	Autos	970	35
Direction	SB	MT	20	35
d	2	HT	10	35
t	1		1000	

I-630 WB Off Ramp to University Ave SB				
Traffic Information		WB Traffic Volumes and Speed		
Peak Hr Vol	450	Autos	436	45
Direction	WB	MT	9	45
d	2	HT	5	45
t	1		450	

I-630 EB On Ramp from University Ave SB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	450	Autos	436	45
Direction	EB	MT	9	45
d	2	HT	5	45
t	1		450	

I-630 EB On Ramp from University Ave NB				
Traffic Information		EB Traffic Volumes and Speed		
Peak Hr Vol	500	Autos	490	45
Direction	EB	MT	5	45
d	1	HT	5	45
t	1		500	

University Ave SB from I-630 EB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1400	Autos	1358	40
Direction	SB	MT	28	40
d	2	HT	14	40
t	1		1400	

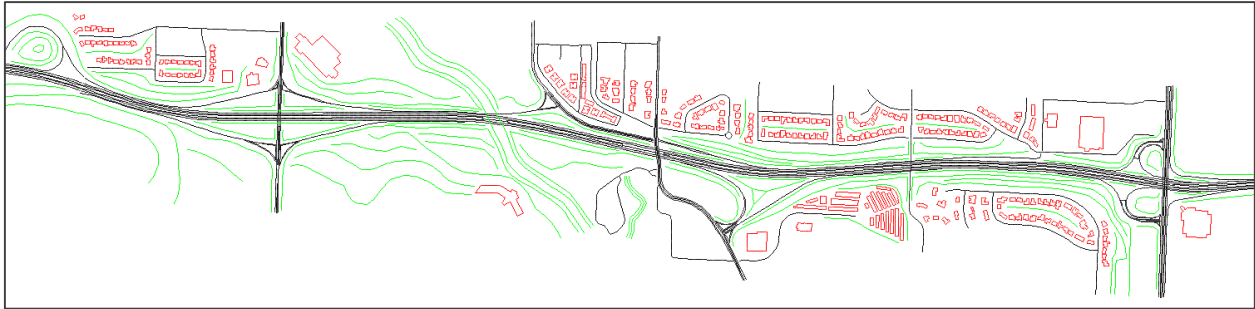
University Ave SB Between I-630 Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1550	Autos	1503	40
Direction	SB	MT	31	40
d	2	HT	16	40
t	1		1550	

University Ave SB North of I-630 WB Ramps				
Traffic Information		SB Traffic Volumes and Speed		
Peak Hr Vol	1400	Autos	1358	40
Direction	SB	MT	28	40
d	2	HT	14	40
t	1		1400	

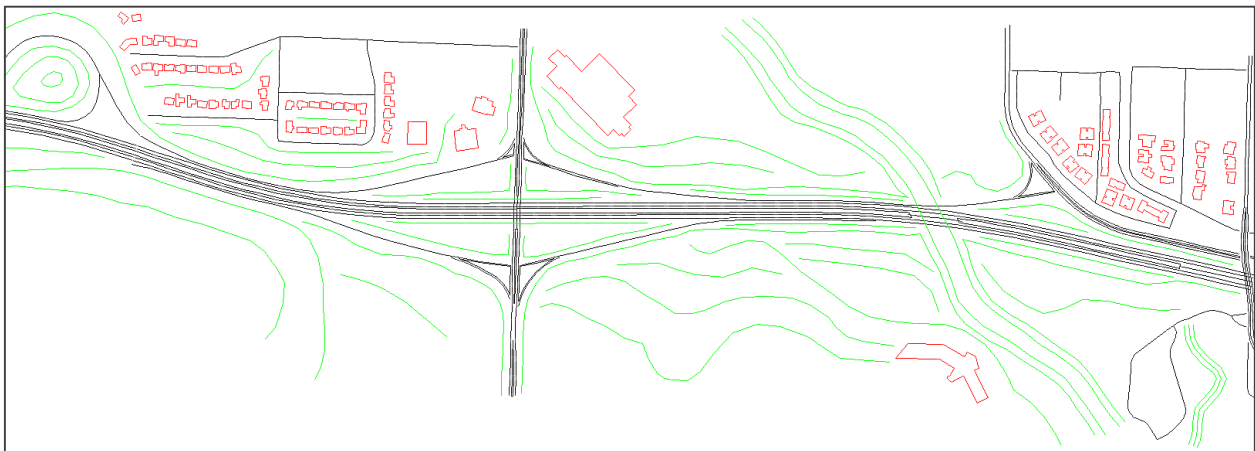
Appendix C – TNM 2.5 Plan Views

<i>TNM Run</i>	<i>Appendix Page</i>
Existing Models	C-2
Overall Existing Model	C-3
NSA 1 and 2	C-4
NSA 3	C-5
NSA 4	C-5
NSA 5	C-6
NSA 6	C-7
NSA 7	C-7
NSA 8	C-8
Build Models	C-9
NSA 1 and 2	C-10
NSA 3	C-11
NSA 4	C-12
NSA 5	C-12
NSA 6	C-13
NSA 7	C-13
NSA 8	C-14

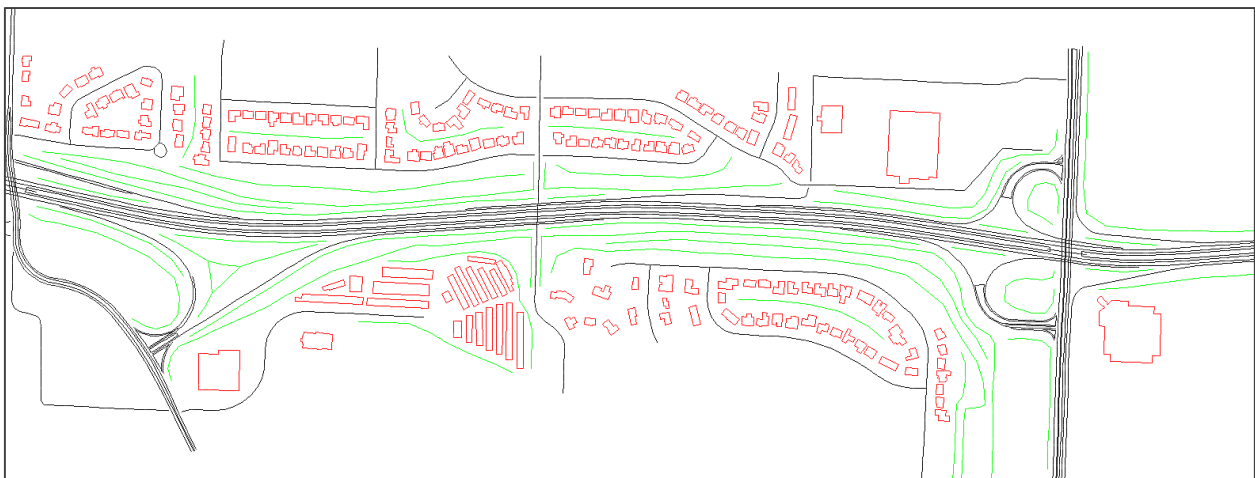
Existing Models



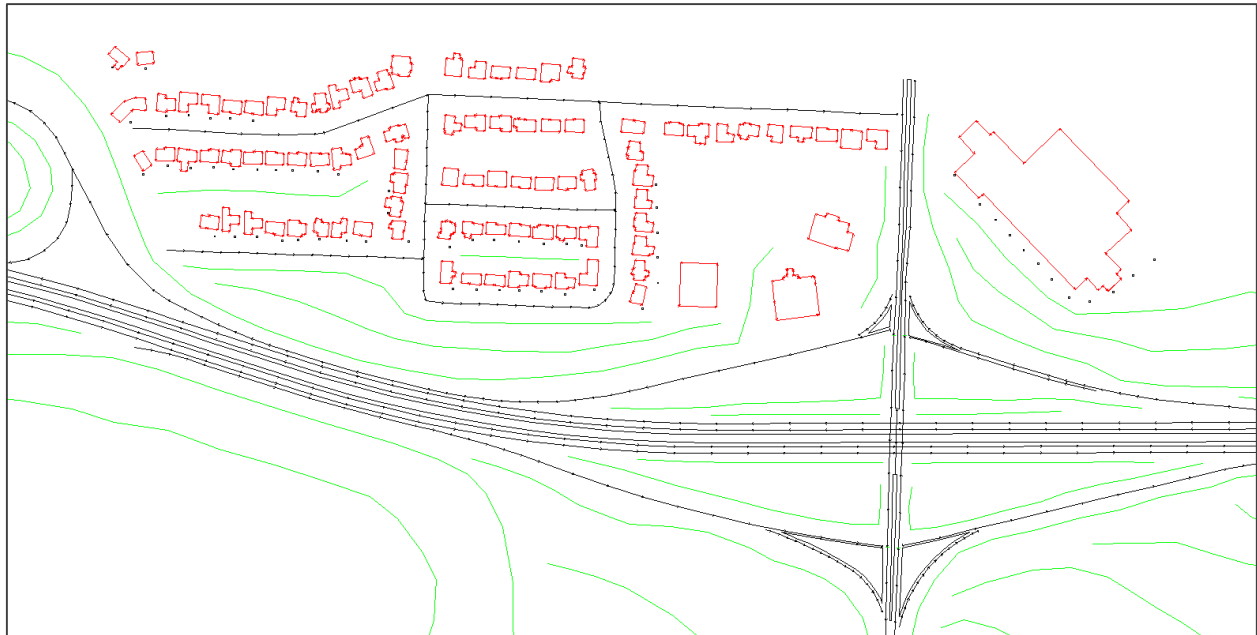
Overall Existing Model



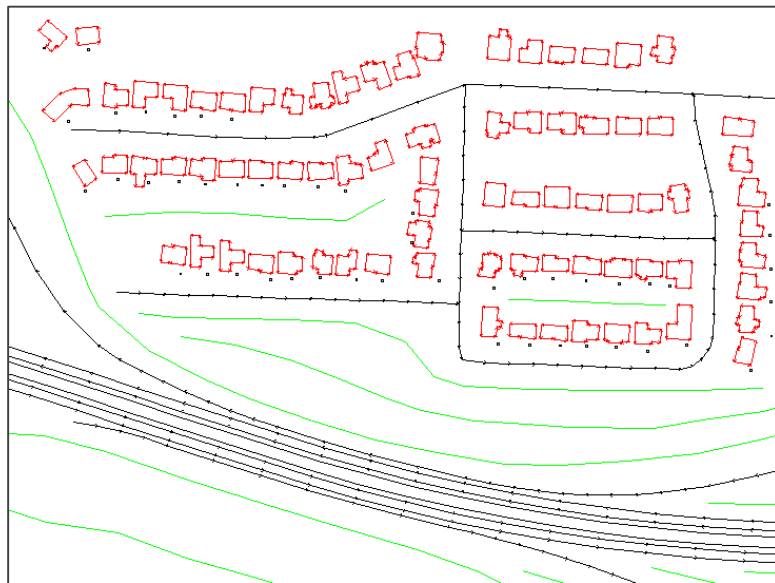
Existing Model Western Section



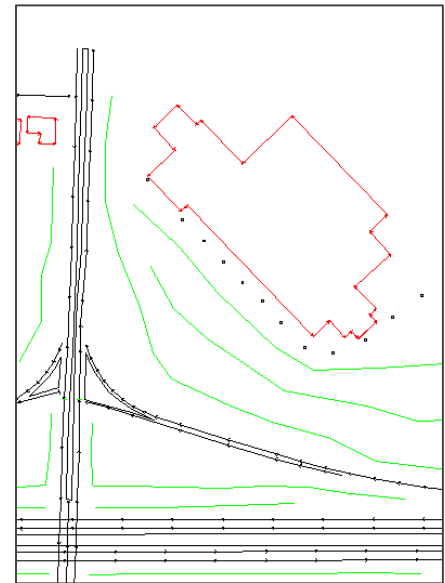
Existing Model Eastern Section



NSA 1 and 2



NSA 1



NSA 2



NSA 3



NSA 4



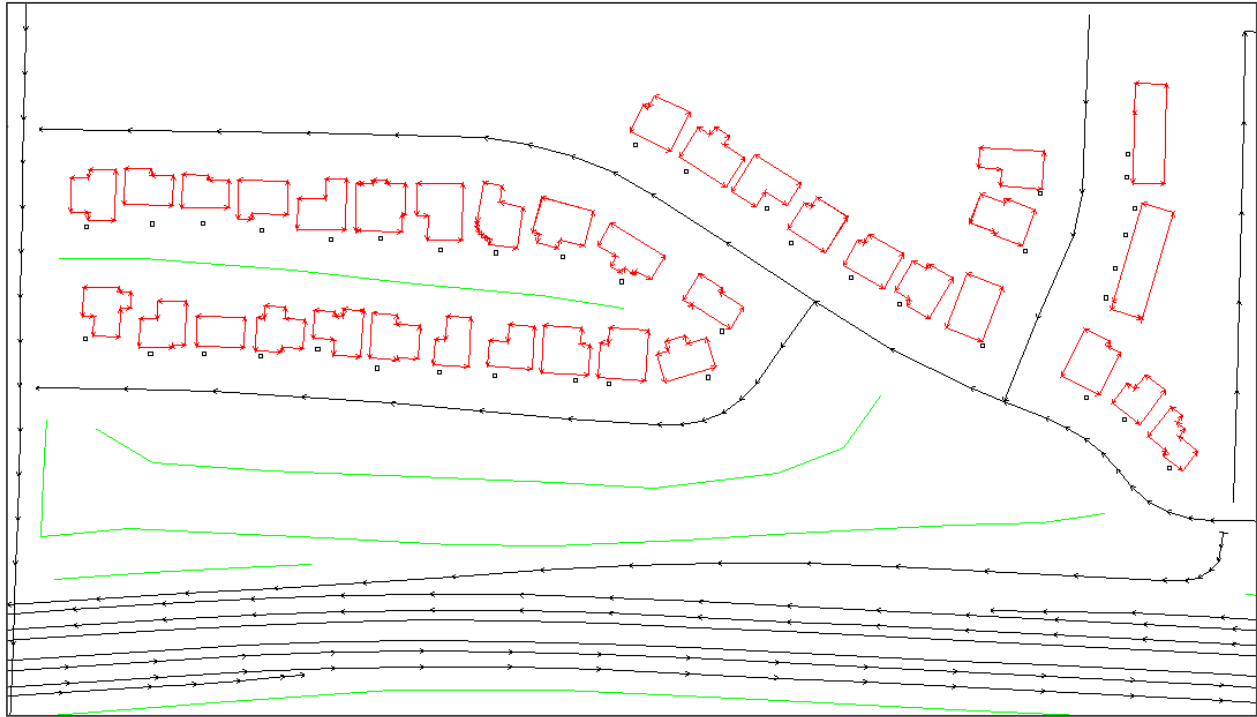
NSA 5



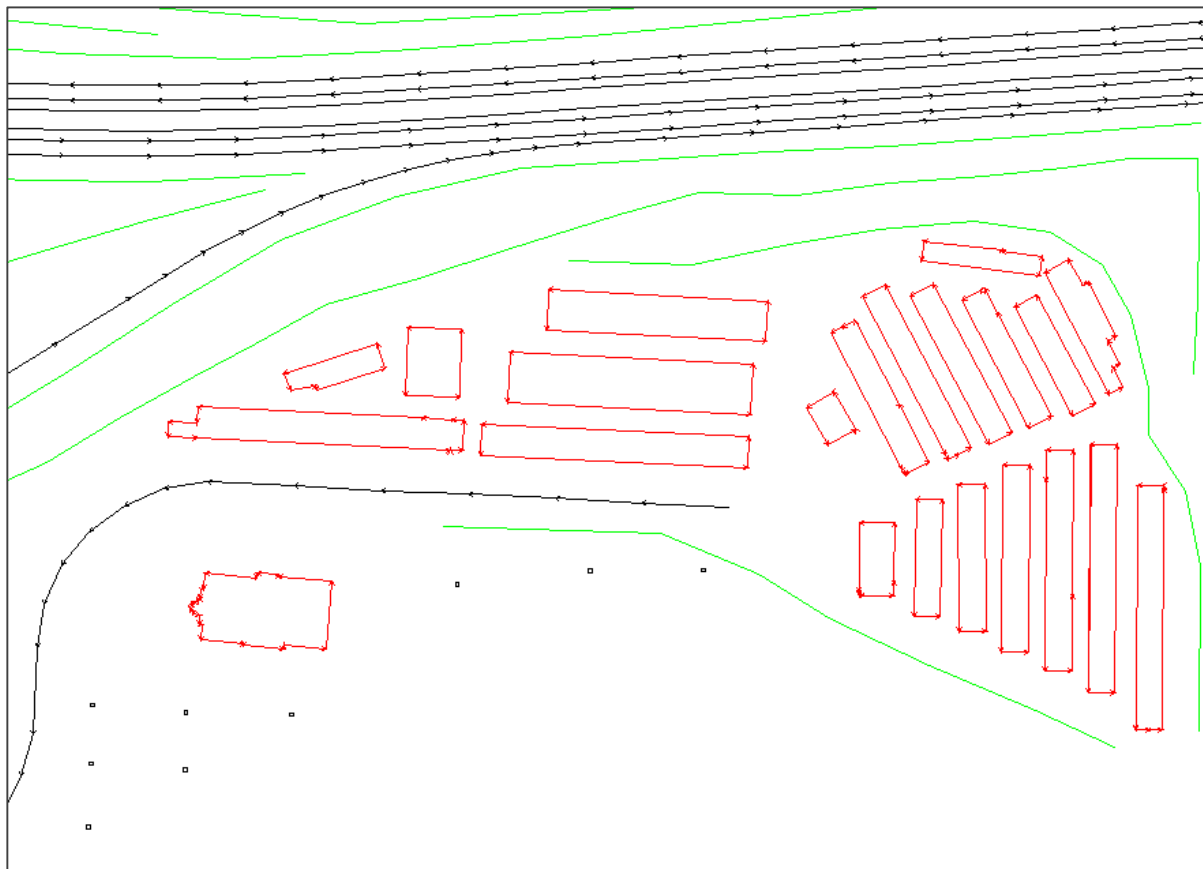
NSA 5 (Western Section)



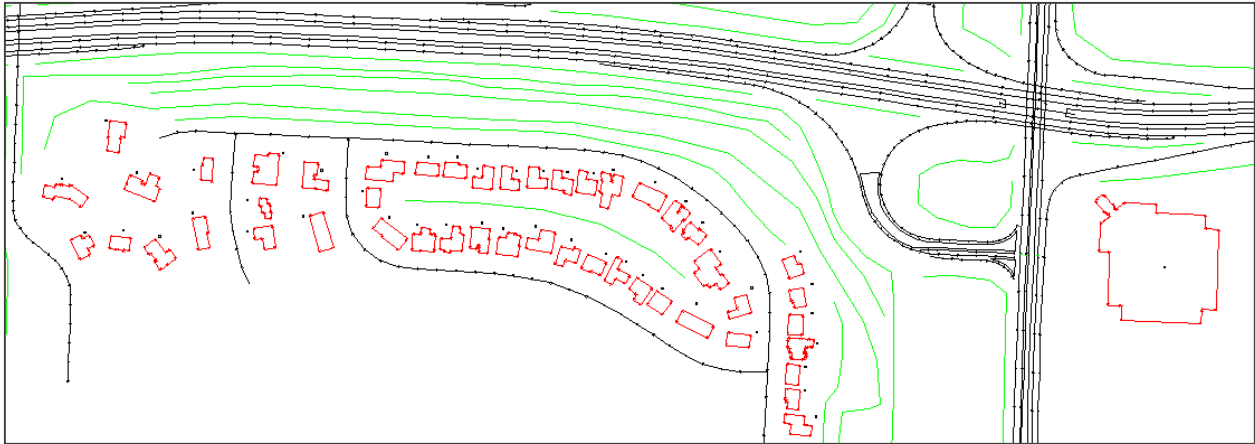
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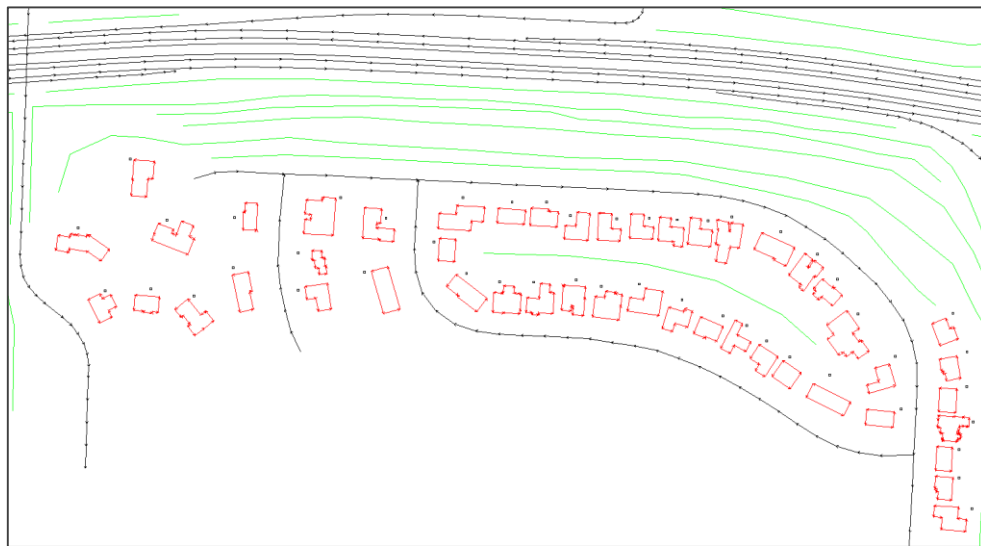
NSA 6



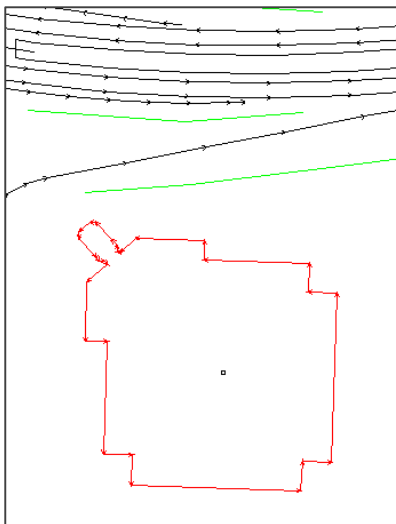
NSA 7



NSA 8

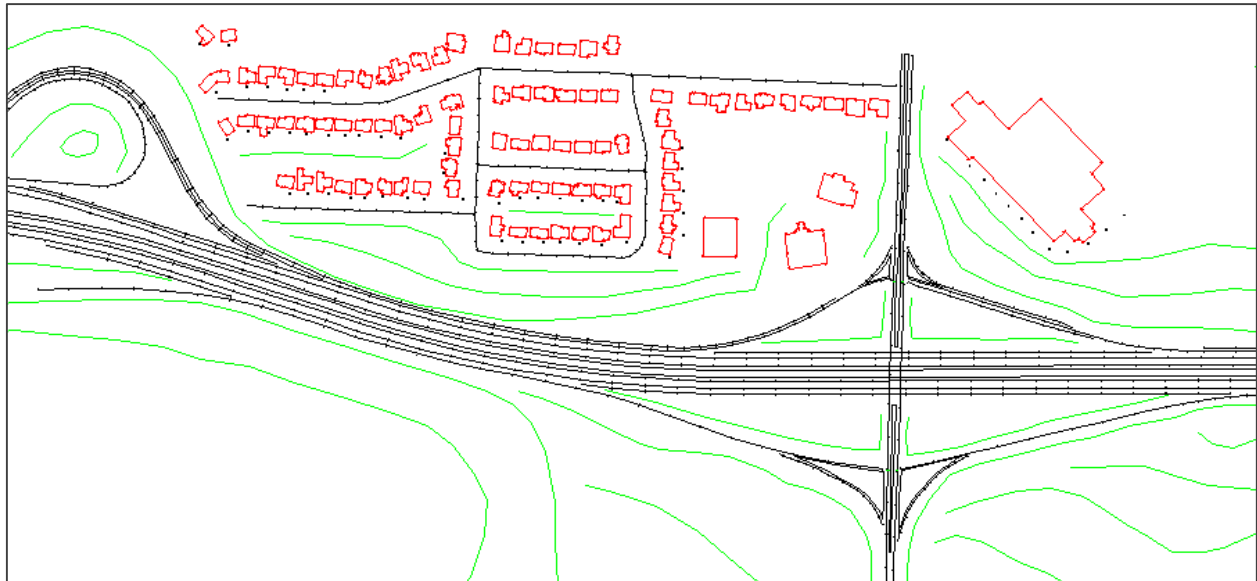


NSA 8 (University Park North)

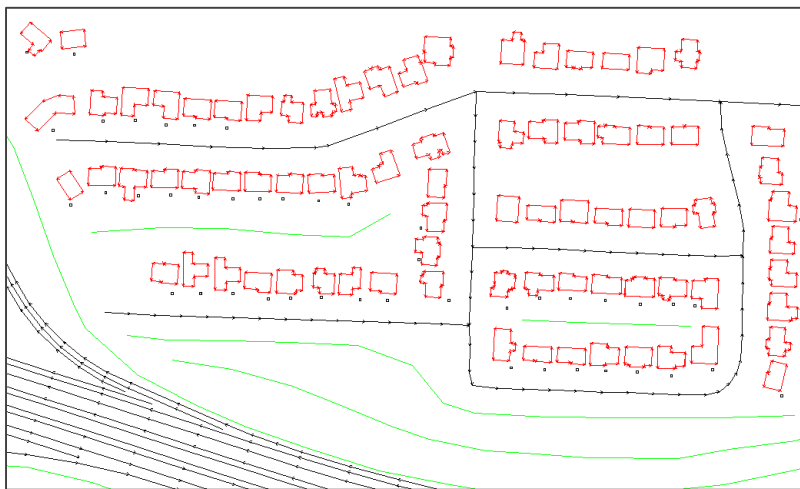


NSA 8 (Clarion Hotel)

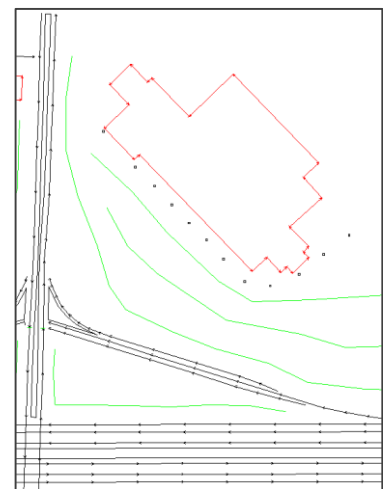
Build Models



NSA 1 and 2



NSA 1



NSA 2



NSA 3



NSA 4



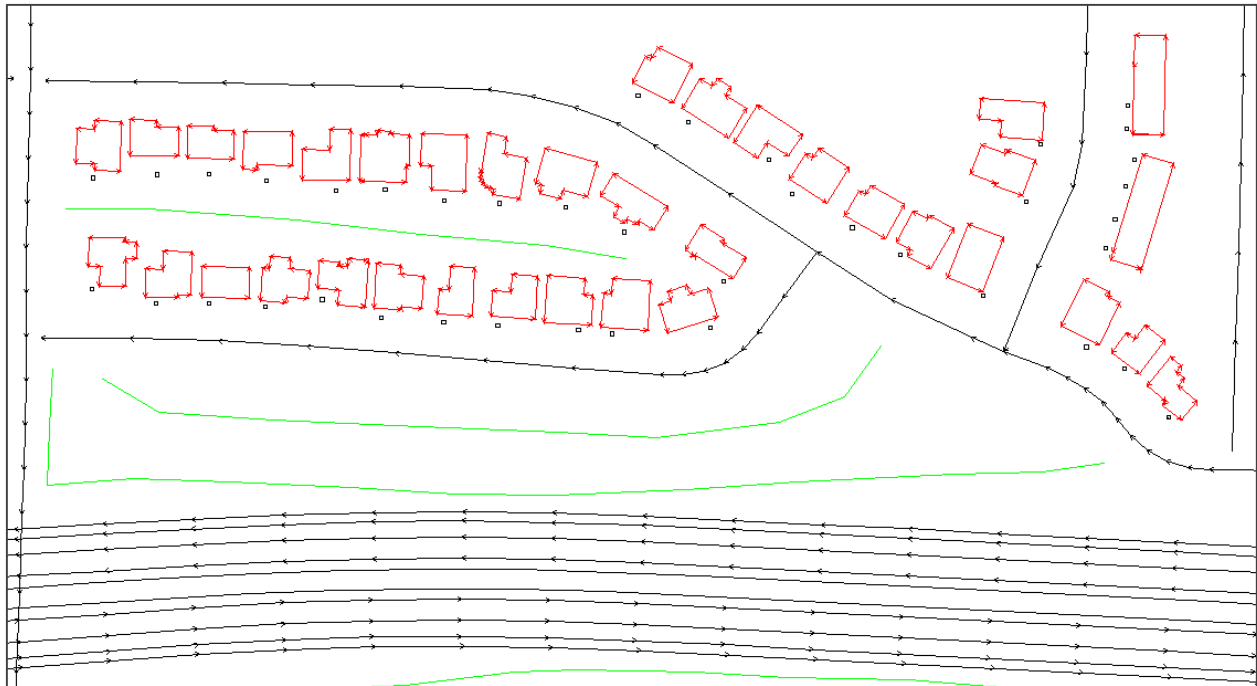
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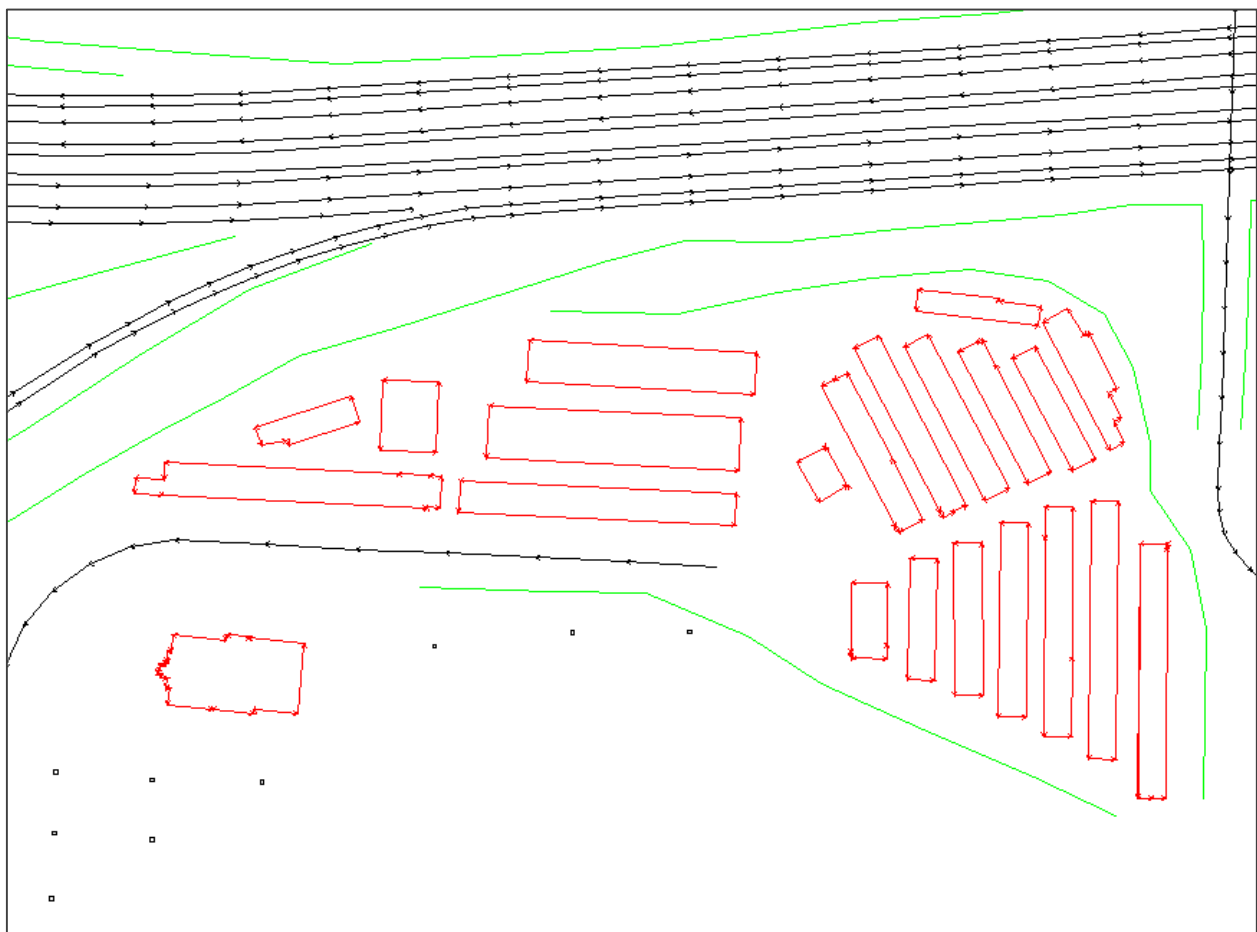
NSA 5 (Western Section)



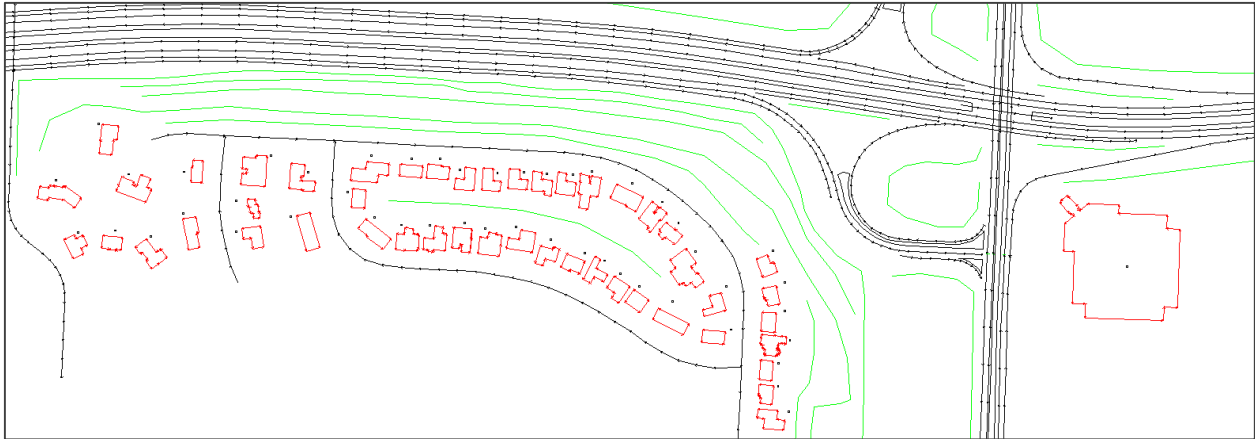
NSA 5 (Eastern Section)



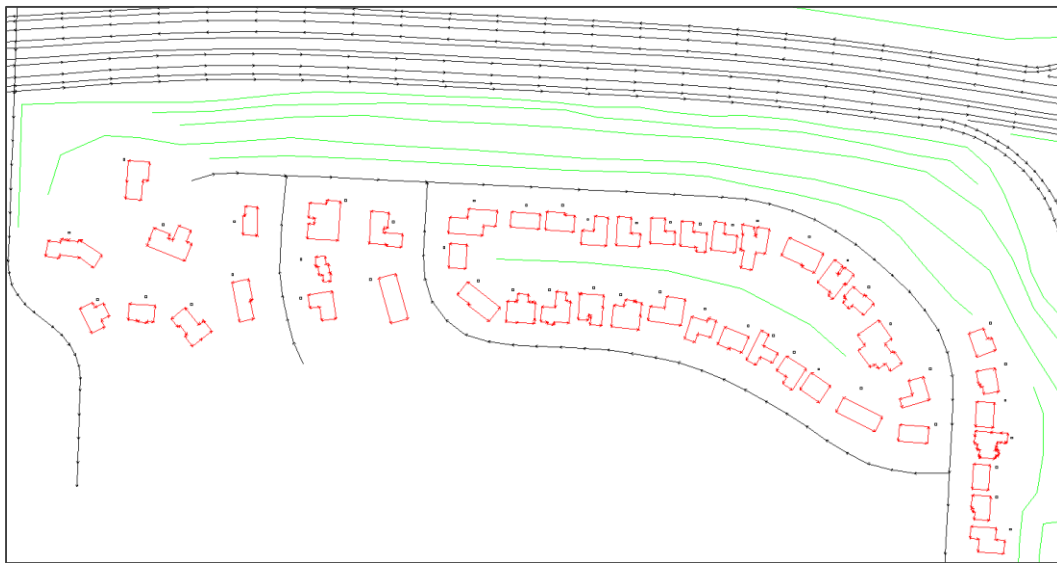
NSA 6



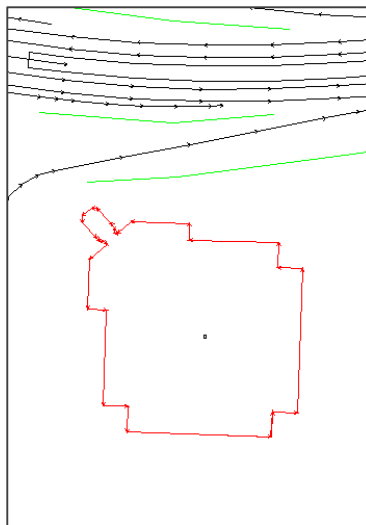
NSA 7



NSA 8



NSA 8 (University Park North)



NSA 8 (Clarion Hotel)

Appendix D – Noise Barrier Evaluation Results

<i>Barrier Design</i>	<i>Appendix Page</i>
Noise Barrier 2 and Noise Barrier 3 Combination	D-2
Noise Barrier 2 and Soil Noise Berm B Combination	D-9
Noise Barrier 4	D-15
Soil Noise Berm H	D-18
NSA 8 ROW Barrier	D-20

Project: I-630 Widening (CA0608)
Description: NSA 4 & 5 Barrier (NB 2 & 3 Combination)
Location: Edge of Pavement
Background Noise Levels dB(A): 50

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
801 S RODNEY PARHAM RD (R 76)	1	60.9	61.2	55.4	56.5	6	5	No	Yes
801 S RODNEY PARHAM RD (R 77)	1	65.3	65.4	62.6	62.8	3	3	No	No
801 S RODNEY PARHAM RD (R 78)	1	62.3	62.5	60.1	60.5	2	2	No	No
801 S RODNEY PARHAM RD (R 79)	1	63.2	63.4	61.4	61.7	2	2	No	No
801 S RODNEY PARHAM RD (R 80)	1	60.0	60.4	59.2	59.7	1	1	No	No
801 S RODNEY PARHAM RD (R 81)	1	65.3	65.4	62.3	62.5	3	3	No	No
801 S RODNEY PARHAM RD (R 82)	1	61.0	61.3	56.9	57.7	4	4	No	No
801 S RODNEY PARHAM RD (R 83)	1	62.0	62.3	60.3	60.7	2	2	No	No
801 S RODNEY PARHAM RD (R 84)	1	59.5	60.0	57.6	58.3	2	2	No	No
801 S RODNEY PARHAM RD (R 85)	1	65.9	66.0	62.5	62.7	3	3	Yes	No
801 S RODNEY PARHAM RD (R 86)	1	64.4	64.6	59.8	60.2	5	4	No	Yes
801 S RODNEY PARHAM RD (R 87)	1	68.7	68.8	65.0	65.1	4	4	Yes	No
801 S RODNEY PARHAM RD (R 88)	1	61.3	61.6	56.4	57.3	5	4	No	Yes
801 S RODNEY PARHAM RD (R 89)	1	67.5	67.6	62.9	63.1	5	4	Yes	Yes
801 S RODNEY PARHAM RD (R 90)	1	60.0	60.4	54.5	55.8	6	5	No	Yes
801 S RODNEY PARHAM RD (R 91)	1	66.6	66.7	62.8	63.0	4	4	Yes	No
801 S RODNEY PARHAM RD (R 92)	1	58.5	59.1	53.3	55.0	5	4	No	Yes
801 S RODNEY PARHAM RD (R 93)	1	59.1	59.6	53.6	55.2	6	4	No	Yes
801 S RODNEY PARHAM RD (R 94)	1	67.7	67.8	63.1	63.3	5	4	Yes	Yes
801 S RODNEY PARHAM RD (R 95)	1	66.0	66.1	61.2	61.5	5	5	Yes	Yes
801 S RODNEY PARHAM RD (R 96)	1	67.8	67.9	61.6	61.9	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 97)	1	64.1	64.3	56.6	57.5	7	7	No	Yes
801 S RODNEY PARHAM RD (R 98)	1	69.8	69.8	64.5	64.7	5	5	Yes	Yes
801 S RODNEY PARHAM RD (R 99)	1	57.9	58.6	53.7	55.2	4	3	No	No
801 S RODNEY PARHAM RD (R 100)	1	70.0	70.0	64.5	64.7	6	5	Yes	Yes
801 S RODNEY PARHAM RD (R 101)	1	57.7	58.4	53.3	55.0	4	3	No	No
801 S RODNEY PARHAM RD (R 102)	1	70.0	70.0	64.1	64.3	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 103)	1	59.3	59.8	55.3	56.4	4	3	No	No
801 S RODNEY PARHAM RD (R 104)	1	69.9	69.9	63.7	63.9	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 105)	1	58.7	59.2	54.4	55.7	4	4	No	No
801 S RODNEY PARHAM RD (R 106)	1	69.9	69.9	64.0	64.2	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 107)	1	58.6	59.2	53.5	55.1	5	4	No	Yes
801 S RODNEY PARHAM RD (R 108)	1	70.7	70.7	66.1	66.2	5	5	Yes	Yes
801 S RODNEY PARHAM RD (R 109)	1	63.4	63.6	60.1	60.5	3	3	No	No
801 S RODNEY PARHAM RD (R 110)	1	61.0	61.3	58.5	59.1	3	2	No	No
801 S RODNEY PARHAM RD (R 111)	1	57.4	58.1	53.7	55.2	4	3	No	No
801 S RODNEY PARHAM RD (R 112)	1	63.5	63.7	55.4	56.5	8	7	No	Yes
801 S RODNEY PARHAM RD (R 113)	1	56.5	57.4	52.9	54.7	4	3	No	No
801 S RODNEY PARHAM RD (R 114)	1	64.6	64.7	56.5	57.4	8	7	No	Yes
801 S RODNEY PARHAM RD (R 115)	1	64.9	65.0	56.0	57.0	9	8	No	Yes

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
801 S RODNEY PARHAM RD (R 116)	1	60.6	61.0	55.3	56.4	5	5	No	Yes
801 S RODNEY PARHAM RD (R 117)	1	60.9	61.2	56.5	57.4	4	4	No	No
801 S RODNEY PARHAM RD (R 118)	1	63.5	63.7	55.1	56.3	8	7	No	Yes
801 S RODNEY PARHAM RD (R 119)	1	62.3	62.5	54.0	55.5	8	7	No	Yes
801 S RODNEY PARHAM RD (R 120)	1	61.9	62.2	56.4	57.3	6	5	No	Yes
801 S RODNEY PARHAM RD (R 121)	1	62.0	62.3	56.1	57.1	6	5	No	Yes
801 S RODNEY PARHAM RD (R 122)	1	62.3	62.5	56.6	57.5	6	5	No	Yes
801 S RODNEY PARHAM RD (R 123)	1	63.4	63.6	56.7	57.5	7	6	No	Yes
801 S RODNEY PARHAM RD (R 124)	1	53.7	55.2	50.4	53.2	3	2	No	No
801 S RODNEY PARHAM RD (R 125)	1	52.4	54.4	47.2	51.8	5	3	No	Yes
801 S RODNEY PARHAM RD (R 126)	1	55.3	56.4	51.3	53.7	4	3	No	No
801 S RODNEY PARHAM RD (R 127)	1	59.4	59.9	52.7	54.6	7	5	No	Yes
721 OUACHITA DR (R 128)	1	65.7	65.8	61.0	61.3	5	4	Yes	Yes
724 LEGATO DR (R 129)	1	65.9	66.0	60.8	61.1	5	5	Yes	Yes
715 OUACHITA DR (R 130)	1	61.9	62.2	56.9	57.7	5	4	No	Yes
718 LEGATO DR (R 131)	1	63.6	63.8	59.6	60.1	4	4	No	No
713 OUACHITA DR (R 132)	1	62.7	62.9	56.4	57.3	6	6	No	Yes
712 LEGATO DR (R 133)	1	63.7	63.9	59.3	59.8	4	4	No	No
812 LEGATO DR (R 134)	1	68.1	68.2	63.5	63.7	5	4	Yes	Yes
806 S MISSISSIPPI ST (R 135)	1	69.7	69.7	66.9	67.0	3	3	Yes	No
723 LEGATO DR (R 136)	1	66.5	66.6	63.3	63.5	3	3	Yes	No
724 S MISSISSIPPI ST (R 137)	1	68.7	68.8	66.5	66.6	2	2	Yes	No
717 LEGATO DR (R 138)	1	66.1	66.2	61.9	62.2	4	4	Yes	No
718 S MISSISSIPPI ST (R 139)	1	67.4	67.5	65.6	65.7	2	2	Yes	No
711 LEGATO DR (R 140)	1	65.1	65.2	60.5	60.9	5	4	No	Yes
712 S MISSISSIPPI ST (R 141)	1	66.1	66.2	64.1	64.3	2	2	Yes	No
717 S MISSISSIPPI ST (R 142)	1	69.1	69.2	68.2	68.3	1	1	Yes	No
723 S MISSISSIPPI ST (R 143)	1	69.4	69.4	67.8	67.9	2	2	Yes	No
805 MISSISSIPPI ST (R 144)	1	68.8	68.9	67.7	67.8	1	1	Yes	No
7526 OUACHITA DR (R 145)	1	70.5	70.5	68.0	68.1	3	2	Yes	No
7510 OUACHITA DR (R 146)	1	68.6	68.7	63.6	63.8	5	5	Yes	Yes
820 OUACHITA CIR (R 147)	1	65.8	65.9	59.7	60.1	6	6	Yes	Yes
816 OUACHITA CIR (R 148)	1	63.8	64.0	57.8	58.5	6	6	No	Yes
812 OUACHITA CIR (R 149)	1	63.4	63.6	58.4	59.0	5	5	No	Yes
808 OUACHITA CIR (R 150)	1	63.2	63.4	58.5	59.1	5	4	No	Yes
7424 OUACHITA DR (R 151)	1	69.1	69.2	63.8	64.0	5	5	Yes	Yes
7410 OUACHITA DR (R 152)	1	69.1	69.2	63.1	63.3	6	6	Yes	Yes
7402 OUACHITA DR (R 153)	1	68.2	68.3	61.9	62.2	6	6	Yes	Yes
7318 OUACHITA DR (R 154)	1	67.9	68.0	61.0	61.3	7	7	Yes	Yes
818 OUACHITA PL (R 155)	1	62.4	62.6	55.0	56.2	7	6	No	Yes
817 OUACHITA CIR (R 156)	1	64.6	64.7	59.7	60.1	5	5	No	Yes
815 OUACHITA CIR (R 157)	1	60.5	60.9	56.1	57.1	4	4	No	No
807 OUACHITA CIR (R 158)	1	61.2	61.5	56.7	57.5	5	4	No	Yes
803 OUACHITA CIR (R 159)	1	61.4	61.7	56.9	57.7	5	4	No	Yes
801 OUACHITA CIR (R 160)	1	59.2	59.7	53.6	55.2	6	5	No	Yes

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
812 OUACHITA PL (R 161)	1	60.6	61.0	54.6	55.9	6	5	No	Yes
805 OUACHITA PL (R 162)	1	62.2	62.5	56.6	57.5	6	5	No	Yes
811 OUACHITA PL (R 163)	1	64.6	64.7	57.8	58.5	7	6	No	Yes
817 OUACHITA PL (R 164)	1	66.3	66.4	58.5	59.1	8	7	Yes	Yes
823 OUACHITA PL (R 165)	1	67.7	67.8	59.9	60.3	8	7	Yes	Yes
66 FLAG RD (R 166)	1	68.1	68.2	60.1	60.5	8	8	Yes	Yes
64 FLAG RD (R 167)	1	64.2	64.4	56.2	57.1	8	7	No	Yes
62 FLAG RD (R 168)	1	62.4	62.6	54.8	56.0	8	7	No	Yes
60 FLAG RD (R 169)	1	62.8	63.0	54.0	55.5	9	8	No	Yes
58 FLAG RD (R 170)	1	64.0	64.2	56.4	57.3	8	7	No	Yes
65 FLAG RD (R 171)	1	68.2	68.3	59.5	60.0	9	8	Yes	Yes
7214 MARGUERITE LN (R 172)	1	69.8	69.8	59.7	60.1	10	10	Yes	Yes
7212 MARGUERITE LN (R 173)	1	70.5	70.5	59.7	60.1	11	10	Yes	Yes
7208 MARGUERITE LN (R 174)	1	70.5	70.5	59.9	60.3	11	10	Yes	Yes
7204 MARGUERTIE LN (R 175)	1	70.1	70.1	59.8	60.2	10	10	Yes	Yes
7200 MARGUERITE LN (R 176)	1	69.9	69.9	60.5	60.9	9	9	Yes	Yes
7116 MARGUERITE LN (R 177)	1	69.6	69.6	60.2	60.6	9	9	Yes	Yes
7112 MARGUERITE LN (R 178)	1	68.9	69.0	60.1	60.5	9	8	Yes	Yes
7108 MARGUERITE LN (R 179)	1	68.3	68.4	60.1	60.5	8	8	Yes	Yes
7104 MARGUERITE LN (R 180)	1	67.7	67.8	60.3	60.7	7	7	Yes	Yes
30 TEMPLIN TRL (R 181)	1	67.3	67.4	60.6	61.0	7	6	Yes	Yes
61 FLAG RD (R 182)	1	66.4	66.5	58.0	58.6	8	8	Yes	Yes
19 GREGORY LN (R 183)	1	66.6	66.7	57.7	58.4	9	8	Yes	Yes
17 GREGORY LN (R 184)	1	64.9	65.0	57.7	58.4	7	7	No	Yes
15 GREGORY LN (R 185)	1	57.8	58.5	53.2	54.9	5	4	No	Yes
13 GREGORY LN (R 186)	1	63.0	63.2	56.5	57.4	7	6	No	Yes
11 GREGORY LN (R 187)	1	62.5	62.7	56.5	57.4	6	5	No	Yes
9 GREGORY LN (R 188)	1	62.3	62.5	56.5	57.4	6	5	No	Yes
7 GREGORY LN (R 189)	1	61.8	62.1	56.5	57.4	5	5	No	Yes
5 GREGORY LN (R 190)	1	60.5	60.9	55.7	56.7	5	4	No	Yes
3 GREGORY LN (R 191)	1	59.4	59.9	55.0	56.2	4	4	No	No
1 GREGORY LN (R 192)	1	58.3	58.9	54.5	55.8	4	3	No	No
31 TEMPLIN TRL (R 193)	1	64.7	64.8	58.9	59.4	6	5	No	Yes
29 TEMPLIN TRL (R 194)	1	57.8	58.5	54.0	55.5	4	3	No	No
27 TEMPLIN TRL (R 195)	1	57.5	58.2	54.0	55.5	4	3	No	No
25 TEMPLIN TRL (R 196)	1	49.2	52.6	48.2	52.2	1	0	No	No
7000 MARGUERITE LN (R 197)	1	63.5	63.7	60.2	60.6	3	3	No	No
6920 MARGUERITE LN (R 198)	1	62.8	63.0	60.2	60.6	3	2	No	No
6912 MARGUERITE LN (R 199)	1	63.2	63.4	61.1	61.4	2	2	No	No
6908 MARGUERITE LN (R 200)	1	62.4	62.6	61.7	62.0	1	1	No	No
6900 MARGUERITE LN (R 201)	1	61.7	62.0	61.4	61.7	0	0	No	No
6822 MARGUERITE LN (R 202)	1	62.7	62.9	62.6	62.8	0	0	No	No
6816 MARGUERITE LN (R 203)	1	62.8	63.0	62.8	63.0	0	0	No	No
6808 MARGUERITE LN (R 204)	1	63.2	63.4	63.2	63.4	0	0	No	No
6800 MARGUERITE LN (R 205)	1	62.5	62.7	62.5	62.7	0	0	No	No

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
7 DOVE CIR (R 206)	1	51.9	54.1	50.8	53.4	1	1	No	No
9 DOVE CIR (R 207)	1	52.8	54.6	51.1	53.6	2	1	No	No
8 DOVE CIR (R 208)	1	54.8	56.0	52.5	54.4	2	2	No	No
6 DOVE CIR (R 209)	1	49.6	52.8	49.3	52.7	0	0	No	No
4 DOVE CIR (R 210)	1	50.1	53.1	50.1	53.1	0	0	No	No
2 DOVE CIR (R 211)	1	51.8	54.0	51.6	53.9	0	0	No	No
6807 BLUEBIRD DR (R 212)	1	52.3	54.3	52.3	54.3	0	0	No	No
6805 BLUEBIRD DR (R 213)	1	56.0	57.0	56.1	57.1	0	0	No	No
6803 BLUEBIRD DR (R 214)	1	57.2	58.0	57.2	58.0	0	0	No	No
6801 BLUEBIRD DR (R 215)	1	58.6	59.2	58.6	59.2	0	0	No	No

Project: I-630 Widening (CA0608)
Description: NSA 4 & 5 Barrier (NB 2 & 3 Combination)
Location: Edge of Pavement

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
1	1112+30	1112+80	50	FA	334.0	350.0	16	800	\$32,000
2	1112+80	1113+30	50	FA	334.0	352.0	18	900	\$36,000
3	1113+30	1113+80	50	FA	334.0	354.0	20	1000	\$40,000
4	1113+80	1114+30	50	FA	334.0	354.0	20	1000	\$40,000
5	1114+30	1114+80	50	FA	334.0	354.0	20	1000	\$40,000
6	1114+80	1115+30	50	FA	335.0	355.0	20	1000	\$40,000
7	1115+30	1115+80	50	FA	336.0	356.0	20	1000	\$40,000
8	1115+80	1116+30	50	FA	336.0	356.0	20	1000	\$40,000
9	1116+30	1116+80	50	FA	336.0	356.0	20	1000	\$40,000
10	1116+80	1117+30	50	FA	336.0	356.0	20	1000	\$40,000
11	1117+30	1117+80	50	FA	336.0	356.0	20	1000	\$40,000
12	1117+80	1118+30	50	FA	336.0	356.0	20	1000	\$40,000
13	1118+30	1118+80	50	FA	336.0	356.0	20	1000	\$40,000
14	1118+80	1119+30	50	FA	336.3	356.3	20	1000	\$40,000
15	1119+30	1119+80	50	FA	336.5	356.5	20	1000	\$40,000
16	1119+80	1120+30	50	FA	337.3	357.3	20	1000	\$40,000
17	1120+30	1120+80	50	FA	338.0	358.0	20	1000	\$40,000
18	1120+80	1121+30	50	FA	338.0	358.0	20	1000	\$40,000
19	1121+30	1121+80	50	FA	338.0	358.0	20	1000	\$40,000
20	1121+80	1122+30	50	FA	338.0	358.0	20	1000	\$40,000
21	1122+30	1122+80	50	FA	338.0	358.0	20	1000	\$40,000
22	1122+80	1123+30	50	FA	338.0	358.0	20	1000	\$40,000
23	1123+30	1123+80	50	FA	338.0	358.0	20	1000	\$40,000
24	1123+80	1124+30	50	S	338.0	358.0	20	1000	\$50,000
25	1124+30	1124+80	50	S	338.8	358.8	20	1000	\$50,000
26	1124+80	1125+30	50	S	339.2	359.2	20	1000	\$50,000
27	1125+30	1125+80	50	S	339.6	359.6	20	1000	\$50,000
28	1125+80	1126+30	50	S	340.0	360.0	20	1000	\$50,000
29	1126+30	1126+80	50	S	340.4	360.4	20	1000	\$50,000
30	1126+80	1127+30	50	S	340.8	360.8	20	1000	\$50,000
31	1127+30	1127+80	50	S	341.2	361.2	20	1000	\$50,000
32	1127+80	1128+30	50	S	341.6	361.6	20	1000	\$50,000
33	1128+30	1128+80	50	S	342.0	362.0	20	1000	\$50,000
34	1128+80	1129+30	50	FA	342.0	362.0	20	1000	\$40,000
35	1129+30	1129+80	50	FA	342.5	362.5	20	1000	\$40,000
36	1129+80	1130+30	50	FA	343.1	363.1	20	1000	\$40,000
37	1130+30	1130+80	50	FA	343.7	363.7	20	1000	\$40,000

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
38	1130+80	1131+30	50	FA	343.9	363.9	20	1000	\$40,000
39	1131+30	1131+80	50	FA	344.0	364.0	20	1000	\$40,000
40	1131+80	1132+30	50	FA	344.5	364.5	20	1000	\$40,000
41	1132+30	1132+80	50	FA	345.0	365.0	20	1000	\$40,000
42	1132+80	1133+30	50	FA	345.6	363.6	18	900	\$36,000
43	1133+30	1133+80	50	FA	346.2	362.2	16	800	\$32,000
44	1133+80	1134+30	50	FA	347.0	361.0	14	700	\$28,000

Barrier 2 Length (ft): 2,200
Barrier 2 Area (sf): 43,100
Barrier 2 Average Height: 19.6
Barrier 2 Cost: \$1,824,000

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
1	1132+00	1132+50	50	FA	333.5	343.5	10	500	\$20,000
2	1132+50	1133+00	50	FA	336.2	348.2	12	600	\$24,000
3	1133+00	1133+50	50	FA	338.8	352.8	14	700	\$28,000
4	1133+50	1134+00	50	FA	341.0	357.0	16	800	\$32,000
5	1134+00	1134+50	50	FA	343.1	359.1	16	800	\$32,000
6	1134+50	1135+00	50	FA	344.9	360.9	16	800	\$32,000
7	1135+00	1135+50	50	FA	346.6	362.6	16	800	\$32,000
8	1135+50	1136+00	50	FA	348.0	364.0	16	800	\$32,000
9	1136+00	1136+50	50	FA	349.1	365.1	16	800	\$32,000
10	1136+50	1137+00	50	FA	350.5	366.5	16	800	\$32,000
11	1137+00	1137+50	50	FA	351.8	367.8	16	800	\$32,000
12	1137+50	1138+00	50	FA	353.3	369.3	16	800	\$32,000
13	1138+00	1138+50	50	FA	354.7	370.7	16	800	\$32,000
14	1138+50	1139+00	50	FA	357.0	373.0	16	800	\$32,000
15	1139+00	1139+50	50	FA	359.3	375.3	16	800	\$32,000
16	1139+50	1140+00	50	FA	361.6	377.6	16	800	\$32,000
17	1140+00	1140+50	50	FA	363.9	379.9	16	800	\$32,000
18	1140+50	1141+00	50	FA	365.3	381.3	16	800	\$32,000
19	1141+00	1141+50	50	FA	366.6	382.6	16	800	\$32,000
20	1141+50	1142+00	50	FA	363.6	379.6	16	800	\$32,000
21	1142+00	1142+50	50	FA	368.9	384.9	16	800	\$32,000
22	1142+50	1143+00	50	FA	370.2	386.2	16	800	\$32,000
23	1143+00	1143+50	50	FA	371.5	387.5	16	800	\$32,000
24	1143+50	1144+00	50	FA	375.1	391.1	16	800	\$32,000
25	1144+00	1144+50	50	FA	377.2	393.2	16	800	\$32,000
26	1144+50	1145+00	50	FA	377.8	391.8	14	700	\$28,000

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
27	1145+00	1145+50	50	FA	378.1	392.1	14	700	\$28,000
28	1145+50	1146+00	50	FA	378.3	392.3	14	700	\$28,000
29	1146+00	1146+50	50	FA	379.8	391.8	12	600	\$24,000
30	1146+50	1147+00	50	FA	381.5	391.5	10	500	\$20,000
31	1147+00	1147+50	50	FA	383.0	391.0	8	400	\$16,000
32	1147+50	1148+00	50	FA	384.6	390.6	6	300	\$12,000
33	1148+00	1148+50	50	FA	386.1	390.1	4	200	\$8,000

Barrier 3 Length (ft): 1,650

Barrier 3 Area (sf): 23,500

Barrier 3 Average Height: 14.2

Barrier 3 Cost: \$940,000

Barrier 2 & 3 Combined Length (ft): 3,850

Barrier 2 & 3 Combined Area (sf): 66,600

Barrier 2 & 3 Combined Average Height: 16.9

Barrier 2 & 3 Combined Cost: \$2,764,000

Total receptors receiving 5 dB IL: 81

Cost per Benefitted Receptor: \$34,123

Allowable Cost per Benefitted Receptor: \$36,000

Reasonable? Yes

Project: I-630 Widening (CA0608)
Description: NSA 4 & 5 Barrier (NB 2 & BERM B Combination)
Location: Noise Wall at Edge of Pavement and Soil Berm in Existing Right-of-Way
Background Noise Levels dB(A): 50

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
801 S RODNEY PARHAM RD (R 76)	1	60.9	61.2	55.9	56.9	5	4	No	Yes
801 S RODNEY PARHAM RD (R 77)	1	65.3	65.4	62.8	63.0	3	2	No	No
801 S RODNEY PARHAM RD (R 78)	1	62.3	62.5	60.2	60.6	2	2	No	No
801 S RODNEY PARHAM RD (R 79)	1	63.2	63.4	61.6	61.9	2	2	No	No
801 S RODNEY PARHAM RD (R 80)	1	60.0	60.4	59.3	59.8	1	1	No	No
801 S RODNEY PARHAM RD (R 81)	1	65.3	65.4	62.5	62.7	3	3	No	No
801 S RODNEY PARHAM RD (R 82)	1	61.0	61.3	57.2	58.0	4	3	No	No
801 S RODNEY PARHAM RD (R 83)	1	62.0	62.3	60.4	60.8	2	1	No	No
801 S RODNEY PARHAM RD (R 84)	1	59.5	60.0	57.7	58.4	2	2	No	No
801 S RODNEY PARHAM RD (R 85)	1	65.9	66.0	62.6	62.8	3	3	Yes	No
801 S RODNEY PARHAM RD (R 86)	1	64.4	64.6	60.0	60.4	4	4	No	No
801 S RODNEY PARHAM RD (R 87)	1	68.7	68.8	65.1	65.2	4	4	Yes	No
801 S RODNEY PARHAM RD (R 88)	1	61.3	61.6	56.9	57.7	4	4	No	No
801 S RODNEY PARHAM RD (R 89)	1	67.5	67.6	63.1	63.3	4	4	Yes	No
801 S RODNEY PARHAM RD (R 90)	1	60.0	60.4	55.3	56.4	5	4	No	Yes
801 S RODNEY PARHAM RD (R 91)	1	66.6	66.7	63.0	63.2	4	3	Yes	No
801 S RODNEY PARHAM RD (R 92)	1	58.5	59.1	54.3	55.7	4	3	No	No
801 S RODNEY PARHAM RD (R 93)	1	59.1	59.6	54.2	55.6	5	4	No	Yes
801 S RODNEY PARHAM RD (R 94)	1	67.7	67.8	63.3	63.5	4	4	Yes	No
801 S RODNEY PARHAM RD (R 95)	1	66.0	66.1	61.4	61.7	5	4	Yes	Yes
801 S RODNEY PARHAM RD (R 96)	1	67.8	67.9	61.9	62.2	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 97)	1	64.1	64.3	57.1	57.9	7	6	No	Yes
801 S RODNEY PARHAM RD (R 98)	1	69.8	69.8	64.8	64.9	5	5	Yes	Yes
801 S RODNEY PARHAM RD (R 99)	1	57.9	58.6	54.0	55.5	4	3	No	No
801 S RODNEY PARHAM RD (R 100)	1	70.0	70.0	64.8	64.9	5	5	Yes	Yes
801 S RODNEY PARHAM RD (R 101)	1	57.7	58.4	53.6	55.2	4	3	No	No
801 S RODNEY PARHAM RD (R 102)	1	70.0	70.0	64.4	64.6	6	5	Yes	Yes
801 S RODNEY PARHAM RD (R 103)	1	59.3	59.8	55.6	56.7	4	3	No	No
801 S RODNEY PARHAM RD (R 104)	1	69.9	69.9	64.0	64.2	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 105)	1	58.7	59.2	54.7	56.0	4	3	No	No
801 S RODNEY PARHAM RD (R 106)	1	69.9	69.9	64.2	64.4	6	6	Yes	Yes
801 S RODNEY PARHAM RD (R 107)	1	58.6	59.2	53.9	55.4	5	4	No	Yes
801 S RODNEY PARHAM RD (R 108)	1	70.7	70.7	66.3	66.4	4	4	Yes	No
801 S RODNEY PARHAM RD (R 109)	1	63.4	63.6	60.3	60.7	3	3	No	No
801 S RODNEY PARHAM RD (R 110)	1	61.0	61.3	58.7	59.2	2	2	No	No
801 S RODNEY PARHAM RD (R 111)	1	57.4	58.1	53.9	55.4	4	3	No	No
801 S RODNEY PARHAM RD (R 112)	1	63.5	63.7	55.9	56.9	8	7	No	Yes
801 S RODNEY PARHAM RD (R 113)	1	56.5	57.4	53.2	54.9	3	2	No	No
801 S RODNEY PARHAM RD (R 114)	1	64.6	64.7	57.0	57.8	8	7	No	Yes
801 S RODNEY PARHAM RD (R 115)	1	64.9	65.0	56.6	57.5	8	8	No	Yes
801 S RODNEY PARHAM RD (R 116)	1	60.6	61.0	55.7	56.7	5	4	No	Yes
801 S RODNEY PARHAM RD (R 117)	1	60.9	61.2	56.6	57.5	4	4	No	No
801 S RODNEY PARHAM RD (R 118)	1	63.5	63.7	55.7	56.7	8	7	No	Yes
801 S RODNEY PARHAM RD (R 119)	1	62.3	62.5	54.6	55.9	8	7	No	Yes

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
801 S RODNEY PARHAM RD (R 120)	1	61.9	62.2	56.9	57.7	5	4	No	Yes
801 S RODNEY PARHAM RD (R 121)	1	62.0	62.3	56.6	57.5	5	5	No	Yes
801 S RODNEY PARHAM RD (R 122)	1	62.3	62.5	57.4	58.1	5	4	No	Yes
801 S RODNEY PARHAM RD (R 123)	1	63.4	63.6	57.4	58.1	6	5	No	Yes
801 S RODNEY PARHAM RD (R 124)	1	53.7	55.2	50.6	53.3	3	2	No	No
801 S RODNEY PARHAM RD (R 125)	1	52.4	54.4	47.4	51.9	5	2	No	Yes
801 S RODNEY PARHAM RD (R 126)	1	55.3	56.4	51.6	53.9	4	3	No	No
801 S RODNEY PARHAM RD (R 127)	1	59.4	59.9	53.1	54.8	6	5	No	Yes
721 OUACHITA DR (R 128)	1	65.7	65.8	61.3	61.6	4	4	Yes	No
724 LEGATO DR (R 129)	1	65.9	66.0	61.1	61.4	5	5	Yes	Yes
715 OUACHITA DR (R 130)	1	61.9	62.2	57.3	58.0	5	4	No	Yes
718 LEGATO DR (R 131)	1	63.6	63.8	59.7	60.1	4	4	No	No
713 OUACHITA DR (R 132)	1	62.7	62.9	56.8	57.6	6	5	No	Yes
712 LEGATO DR (R 133)	1	63.7	63.9	59.4	59.9	4	4	No	No
812 LEGATO DR (R 134)	1	68.1	68.2	63.6	63.8	4	4	Yes	No
806 S MISSISSIPPI ST (R 135)	1	69.7	69.7	66.9	67.0	3	3	Yes	No
723 LEGATO DR (R 136)	1	66.5	66.6	63.4	63.6	3	3	Yes	No
724 S MISSISSIPPI ST (R 137)	1	68.7	68.8	66.6	66.7	2	2	Yes	No
717 LEGATO DR (R 138)	1	66.1	66.2	62.1	62.4	4	4	Yes	No
718 S MISSISSIPPI ST (R 139)	1	67.4	67.5	65.7	65.8	2	2	Yes	No
711 LEGATO DR (R 140)	1	65.1	65.2	60.7	61.1	4	4	No	No
712 S MISSISSIPPI ST (R 141)	1	66.1	66.2	64.3	64.5	2	2	Yes	No
717 S MISSISSIPPI ST (R 142)	1	69.1	69.2	68.2	68.3	1	1	Yes	No
723 S MISSISSIPPI ST (R 143)	1	69.4	69.4	67.8	67.9	2	2	Yes	No
805 MISSISSIPPI ST (R 144)	1	68.8	68.9	67.7	67.8	1	1	Yes	No
7526 OUACHITA DR (R 145)	1	70.5	70.5	67.9	68.0	3	3	Yes	No
7510 OUACHITA DR (R 146)	1	68.6	68.7	60.2	60.6	8	8	Yes	Yes
820 OUACHITA CIR (R 147)	1	65.8	65.9	59.1	59.6	7	6	Yes	Yes
816 OUACHITA CIR (R 148)	1	63.8	64.0	57.5	58.2	6	6	No	Yes
812 OUACHITA CIR (R 149)	1	63.4	63.6	58.2	58.8	5	5	No	Yes
808 OUACHITA CIR (R 150)	1	63.2	63.4	58.6	59.2	5	4	No	Yes
7424 OUACHITA DR (R 151)	1	69.1	69.2	59.3	59.8	10	9	Yes	Yes
7410 OUACHITA DR (R 152)	1	69.1	69.2	59.6	60.1	9	9	Yes	Yes
7402 OUACHITA DR (R 153)	1	68.2	68.3	59.4	59.9	9	8	Yes	Yes
7318 OUACHITA DR (R 154)	1	67.9	68.0	58.6	59.2	9	9	Yes	Yes
818 OUACHITA PL (R 155)	1	62.4	62.6	54.4	55.7	8	7	No	Yes
817 OUACHITA CIR (R 156)	1	64.6	64.7	58.3	58.9	6	6	No	Yes
815 OUACHITA CIR (R 157)	1	60.5	60.9	55.6	56.7	5	4	No	Yes
807 OUACHITA CIR (R 158)	1	61.2	61.5	56.5	57.4	5	4	No	Yes
803 OUACHITA CIR (R 159)	1	61.4	61.7	56.9	57.7	5	4	No	Yes
801 OUACHITA CIR (R 160)	1	59.2	59.7	54.0	55.5	5	4	No	Yes
812 OUACHITA PL (R 161)	1	60.6	61.0	53.9	55.4	7	6	No	Yes
805 OUACHITA PL (R 162)	1	62.2	62.5	56.7	57.5	6	5	No	Yes
811 OUACHITA PL (R 163)	1	64.6	64.7	57.9	58.6	7	6	No	Yes
817 OUACHITA PL (R 164)	1	66.3	66.4	58.2	58.8	8	8	Yes	Yes
823 OUACHITA PL (R 165)	1	67.7	67.8	57.6	58.3	10	9	Yes	Yes
66 FLAG RD (R 166)	1	68.1	68.2	56.1	57.1	12	11	Yes	Yes
64 FLAG RD (R 167)	1	64.2	64.4	53.5	55.1	11	9	No	Yes
62 FLAG RD (R 168)	1	62.4	62.6	51.8	54.0	11	9	No	Yes

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
60 FLAG RD (R 169)	1	62.8	63.0	52.4	54.4	10	9	No	Yes
58 FLAG RD (R 170)	1	64.0	64.2	55.9	56.9	8	7	No	Yes
65 FLAG RD (R 171)	1	68.2	68.3	57.1	57.9	11	10	Yes	Yes
7214 MARGUERITE LN (R 172)	1	69.8	69.8	58.5	59.1	11	11	Yes	Yes
7212 MARGUERITE LN (R 173)	1	70.5	70.5	58.7	59.2	12	11	Yes	Yes
7208 MARGUERITE LN (R 174)	1	70.5	70.5	58.7	59.2	12	11	Yes	Yes
7204 MARGUERTIE LN (R 175)	1	70.1	70.1	59.0	59.5	11	11	Yes	Yes
7200 MARGUERITE LN (R 176)	1	69.9	69.9	59.2	59.7	11	10	Yes	Yes
7116 MARGUERITE LN (R 177)	1	69.6	69.6	59.5	60.0	10	10	Yes	Yes
7112 MARGUERITE LN (R 178)	1	68.9	69.0	59.5	60.0	9	9	Yes	Yes
7108 MARGUERITE LN (R 179)	1	68.3	68.4	59.7	60.1	9	8	Yes	Yes
7104 MARGUERITE LN (R 180)	1	67.7	67.8	59.7	60.1	8	8	Yes	Yes
30 TEMPLIN TRL (R 181)	1	67.3	67.4	60.3	60.7	7	7	Yes	Yes
61 FLAG RD (R 182)	1	66.4	66.5	57.3	58.0	9	8	Yes	Yes
19 GREGORY LN (R 183)	1	66.6	66.7	59.1	59.6	7	7	Yes	Yes
17 GREGORY LN (R 184)	1	64.9	65.0	58.8	59.3	6	6	No	Yes
15 GREGORY LN (R 185)	1	57.8	58.5	52.5	54.4	5	4	No	Yes
13 GREGORY LN (R 186)	1	63.0	63.2	57.5	58.2	6	5	No	Yes
11 GREGORY LN (R 187)	1	62.5	62.7	56.8	57.6	6	5	No	Yes
9 GREGORY LN (R 188)	1	62.3	62.5	57.7	58.4	5	4	No	Yes
7 GREGORY LN (R 189)	1	61.8	62.1	56.8	57.6	5	4	No	Yes
5 GREGORY LN (R 190)	1	60.5	60.9	56.2	57.1	4	4	No	No
3 GREGORY LN (R 191)	1	59.4	59.9	55.5	56.6	4	3	No	No
1 GREGORY LN (R 192)	1	58.3	58.9	55.1	56.3	3	3	No	No
31 TEMPLIN TRL (R 193)	1	64.7	64.8	59.1	59.6	6	5	No	Yes
29 TEMPLIN TRL (R 194)	1	57.8	58.5	54.2	55.6	4	3	No	No
27 TEMPLIN TRL (R 195)	1	57.5	58.2	54.8	56.0	3	2	No	No
25 TEMPLIN TRL (R 196)	1	49.2	52.6	49.1	52.6	0	0	No	No
7000 MARGUERITE LN (R 197)	1	63.5	63.7	60.3	60.7	3	3	No	No
6920 MARGUERITE LN (R 198)	1	62.8	63.0	60.4	60.8	2	2	No	No
6912 MARGUERITE LN (R 199)	1	63.2	63.4	60.5	60.9	3	3	No	No
6908 MARGUERITE LN (R 200)	1	62.4	62.6	60.6	61.0	2	2	No	No
6900 MARGUERITE LN (R 201)	1	61.7	62.0	61.4	61.7	0	0	No	No
6822 MARGUERITE LN (R 202)	1	62.7	62.9	62.3	62.5	0	0	No	No
6816 MARGUERITE LN (R 203)	1	62.8	63.0	62.5	62.7	0	0	No	No
6808 MARGUERITE LN (R 204)	1	63.2	63.4	62.8	63.0	0	0	No	No
6800 MARGUERITE LN (R 205)	1	62.5	62.7	62.2	62.5	0	0	No	No
7 DOVE CIR (R 206)	1	51.9	54.1	50.9	53.5	1	1	No	No
9 DOVE CIR (R 207)	1	52.8	54.6	51.2	53.7	2	1	No	No
8 DOVE CIR (R 208)	1	54.8	56.0	52.7	54.6	2	1	No	No
6 DOVE CIR (R 209)	1	49.6	52.8	49.0	52.5	1	0	No	No
4 DOVE CIR (R 210)	1	50.1	53.1	49.5	52.8	1	0	No	No
2 DOVE CIR (R 211)	1	51.8	54.0	51.5	53.8	0	0	No	No
6807 BLUEBIRD DR (R 212)	1	52.3	54.3	52.3	54.3	0	0	No	No
6805 BLUEBIRD DR (R 213)	1	56.0	57.0	56.0	57.0	0	0	No	No
6803 BLUEBIRD DR (R 214)	1	57.2	58.0	57.1	57.9	0	0	No	No
6801 BLUEBIRD DR (R 215)	1	58.6	59.2	58.5	59.1	0	0	No	No

Project: I-630 Widening (CA0608)
Description: NSA 4 & 5 Barrier (NB 2)
Location: Edge of Pavement

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
1	1112+30	1112+80	50	FA	334.0	344.0	10	500	\$20,000
2	1112+80	1113+30	50	FA	334.0	346.0	12	600	\$24,000
3	1113+30	1113+80	50	FA	334.0	348.0	14	700	\$28,000
4	1113+80	1114+30	50	FA	334.0	350.0	16	800	\$32,000
5	1114+30	1114+80	50	FA	334.0	350.0	16	800	\$32,000
6	1114+80	1115+30	50	FA	335.0	351.0	16	800	\$32,000
7	1115+30	1115+80	50	FA	336.0	352.0	16	800	\$32,000
8	1115+80	1116+30	50	FA	336.0	352.0	16	800	\$32,000
9	1116+30	1116+80	50	FA	336.0	352.0	16	800	\$32,000
10	1116+80	1117+30	50	FA	336.0	352.0	16	800	\$32,000
11	1117+30	1117+80	50	FA	336.0	352.0	16	800	\$32,000
12	1117+80	1118+30	50	FA	336.0	352.0	16	800	\$32,000
13	1118+30	1118+80	50	FA	336.0	352.0	16	800	\$32,000
14	1118+80	1119+30	50	FA	336.3	352.3	16	800	\$32,000
15	1119+30	1119+80	50	FA	336.5	352.5	16	800	\$32,000
16	1119+80	1120+30	50	FA	337.3	353.3	16	800	\$32,000
17	1120+30	1120+80	50	FA	338.0	354.0	16	800	\$32,000
18	1120+80	1121+30	50	FA	338.0	354.0	16	800	\$32,000
19	1121+30	1121+80	50	FA	338.0	354.0	16	800	\$32,000
20	1121+80	1122+30	50	FA	338.0	354.0	16	800	\$32,000
21	1122+30	1122+80	50	FA	338.0	354.0	16	800	\$32,000
22	1122+80	1123+30	50	FA	338.0	354.0	16	800	\$32,000
23	1123+30	1123+80	50	FA	338.0	354.0	16	800	\$32,000
24	1123+80	1124+30	50	S	338.0	354.0	16	800	\$40,000
25	1124+30	1124+80	50	S	338.8	354.8	16	800	\$40,000
26	1124+80	1125+30	50	S	339.2	355.2	16	800	\$40,000
27	1125+30	1125+80	50	S	339.6	355.6	16	800	\$40,000
28	1125+80	1126+30	50	S	340.0	356.0	16	800	\$40,000
29	1126+30	1126+80	50	S	340.4	356.4	16	800	\$40,000
30	1126+80	1127+30	50	S	340.8	356.8	16	800	\$40,000
31	1127+30	1127+80	50	S	341.2	357.2	16	800	\$40,000
32	1127+80	1128+30	50	S	341.6	357.6	16	800	\$40,000
33	1128+30	1128+80	50	S	342.0	358.0	16	800	\$40,000
34	1128+80	1129+30	50	FA	342.0	358.0	16	800	\$32,000
35	1129+30	1129+80	50	FA	342.5	358.5	16	800	\$32,000
36	1129+80	1130+30	50	FA	343.1	359.1	16	800	\$32,000
37	1130+30	1130+80	50	FA	343.7	359.7	16	800	\$32,000

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
38	1130+80	1131+30	50	FA	343.9	359.9	16	800	\$32,000
39	1131+30	1131+80	50	FA	344.0	360.0	16	800	\$32,000
40	1131+80	1132+30	50	FA	344.5	360.5	16	800	\$32,000
41	1132+30	1132+80	50	FA	345.0	361.0	16	800	\$32,000
42	1132+80	1133+30	50	FA	345.6	359.6	14	700	\$28,000
43	1133+30	1133+80	50	FA	346.2	358.2	12	600	\$24,000
44	1133+80	1134+30	50	FA	347.0	357.0	10	500	\$20,000

Barrier 2 Length (ft): 2,200
Barrier 2 Area (sf): 34,000
Barrier 2 Average Height: 15.5
Barrier 2 Cost: \$1,440,000

Project: I-630 Widening (CA0608)
Description: NSA 4 & 5 Barrier (BERM B)
Location: Existing ROW

Station	Berm Slope		End Area (Sq. Ft.)		Volume (Cu. Yds.)		Barrier Area (Sq. Ft.)	
	Foreslope	Backslope	Cut	Fill	Cut	Fill	Height	Area
1128+00.0	3:1	3:1	34.9	0.0	27.3	0.0	15	316
1129+00.0	3:1	3:1	55.6	97.4	167.6	180.4	14	1450
1130+00.0	3:1	3:1	36.3	207.6	170.2	564.8	12	1300
1131+00.0	3:1	3:1	12.9	483.9	91.1	1280.6	10	1100
1132+00.0	3:1	3:1	6.8	1140.5	36.4	3008.1	8	900
1133+00.0	3:1	3:1	6.8	1358.2	25.1	4627.2	3	550
1134+00.0	3:1	3:1	2.7	1291.9	16.4	4590.8	2	228
1135+00.0	3:1	2:1	11.9	2657.8	26.2	7098.1	0	91
1136+00.0	3:1	2:1	13.2	1914.9	43.7	7967.0	0	0
1137+00.0	3:1	2:1	30.1	1748.0	72.5	6129.9	0	0
1138+00.0	3:1	2:1	9.5	1994.1	67.7	6398.8	0	0
1139+00.0	3:1	2:1	7.5	2452.1	29.3	7658.5	0	0
1140+00.0	3:1	2:1	8.6	2821.6	28.0	9188.3	0	0
1141+00.0	3:1	3:1	7.0	1335.7	26.5	7082.4	0	0
1142+00.0	3:1	3:1	4.9	1371.6	20.5	4681.4	0	0
1143+00.0	3:1	3:1	6.2	947.6	19.4	4040.6	0	0
1144+00.0	3:1	3:1	8.0	628.8	24.8	2746.4	0	0
1145+00.0	3:1	3:1	9.2	632.2	29.4	2151.9	0	0
1146+00.0	3:1	3:1	6.5	566.9	29.2	2220.6	0	0
1147+00.0	3:1	3:1	7.8	517.0	26.5	2007.3	0	0
1147+52.8	3:1	3:1	0.0	0.0	7.6	505.6	0	0

Berm Costs	Item	Cost per Unit		Quantity		Cost	Total
	Bikeway ACHM	\$82.00	Per Ton	243.83	Tons	\$19,994.43	
	Bikeway Agg. Bs. Crse.	\$19.89	Per Ton	83.13	Tons	\$1,653.36	
	Excavation	\$5.36	Per Cu Yd	985.42	Cu Yds	\$5,281.86	
	Embankment	\$6.82	Per Cu Yd	84128.62	Cu Yds	\$573,757.22	\$828,446.88
	Utility Pole Relocation	\$20,000.00	Per L.S.	1.00	L.S.	\$20,000.00	
	Noise Barrier	\$35.00	Per Sq Ft	5936	Sq Ft	\$207,760.00	

Barrier 2 & Soil Berm B Combined Cost: \$2,268,447
Total receptors receiving 5 dB IL: 72
Cost per Benefitted Receptor: \$31,506
Allowable Cost per Benefitted Receptor: \$36,000
Reasonable? Yes

Project: I-630 Widening (CA0608)
Description: NSA 6 Barrier (NB 4)
Location: Top of Cut Slope
Background Noise Levels dB(A): 50

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
701 S HUGHES ST (R 216)	1	60.2	60.6	56.5	57.4	4	3	No	No
6712 MARGUERITE LN (R 217)	1	61.8	62.1	57.2	58.0	5	4	No	Yes
6708 MARGUERITE LN (R 218)	1	61.7	62.0	57.2	58.0	5	4	No	Yes
6704 MARGUERITE LN (R 219)	1	62.8	63.0	57.4	58.1	5	5	No	Yes
6700 MARGUERITE LN (R 220)	1	62.6	62.8	56.7	57.5	6	5	No	Yes
6612 MARGUERITE LN (R 221)	1	64.9	65.0	58.1	58.7	7	6	No	Yes
6608 MARGUERITE LN (R 222)	1	65.2	65.3	58.5	59.1	7	6	No	Yes
6604 MARGUERITE LN (R 223)	1	65.3	65.4	58.6	59.2	7	6	No	Yes
6600 MARGUERITE LN (R 224)	1	66.5	66.6	59.1	59.6	7	7	Yes	Yes
6512 MARGUERITE LN (R 225)	1	66.1	66.2	59.3	59.8	7	6	Yes	Yes
6506 MARGUERITE LN (R 226)	1	70	70.0	60.8	61.1	9	9	Yes	Yes
6723 BLUEBIRD DR (R 227)	1	54.1	55.5	52.8	54.6	1	1	No	No
6715 BLUEBIRD DR (R 228)	1	53.8	55.3	52.2	54.2	2	1	No	No
6709 BLUEBIRD DR (R 229)	1	54.4	55.7	52.4	54.4	2	1	No	No
6705 BLUEBIRD DR (R 230)	1	55.6	56.7	53.3	55.0	2	2	No	No
6701 BLUEBIRD DR (R 231)	1	57	57.8	54.4	55.7	3	2	No	No
6615 BLUEBIRD DR (R 232)	1	57.6	58.3	55.4	56.5	2	2	No	No
6609 BLUEBIRD DR (R 233)	1	58.2	58.8	55.8	56.8	2	2	No	No
6605 BLUEBIRD DR (R 234)	1	57.8	58.5	54.2	55.6	4	3	No	No
6601 BLUEBIRD DR (R 235)	1	57.5	58.2	52.7	54.6	5	4	No	Yes
6515 BLUEBIRD DR (R 236)	1	58	58.6	52.5	54.4	6	4	No	Yes
6500 MARGUERITE LN (R 237)	1	67.4	67.5	59.5	60.0	8	8	Yes	Yes
6516 BLUEBIRD DR (R 238)	1	58.7	59.2	54.2	55.6	5	4	No	Yes
6512 BLUEBIRD DR (R 239)	1	59.3	59.8	54.6	55.9	5	4	No	Yes
6508 BLUEBIRD DR (R 240)	1	60.6	61.0	55.5	56.6	5	4	No	Yes
6504 BLUEBIRD DR (R 241)	1	63.6	63.8	57.4	58.1	6	6	No	Yes
6500 BLUEBIRD DR (R 242)	1	64.9	65.0	58.6	59.2	6	6	No	Yes
6420 BLUEBIRD DR (R 243)	1	65.5	65.6	58.8	59.3	7	6	Yes	Yes
616 CHICKADEE DR (R 244)	1	65.9	66.0	59.4	59.9	7	6	Yes	Yes
612 CHICKADEE DR (R 245)	1	63	63.2	56.4	57.3	7	6	No	Yes
608 CHICKADEE DR (R 246)	1	61.5	61.8	55.1	56.3	6	6	No	Yes
6412 BLUEBIRD DR (R 247)	1	67.1	67.2	59.8	60.2	7	7	Yes	Yes
6408 BLUEBIRD DR (R 248)	1	67.8	67.9	60.0	60.4	8	7	Yes	Yes
6400/6402 BLUEBIRD DR (R 249)	2	69	69.1	62.2	62.5	7	7	Yes	Yes
615 CHICKADEE DR (R 250)	2	60.2	60.6	53.8	55.3	6	5	No	Yes
615 CHICKADEE DR (R 251)	2	60	60.4	53.2	54.9	7	6	No	Yes
615 CHICKADEE DR (R 252)	2	59.9	60.3	53.3	55.0	7	5	No	Yes
615 CHICKADEE DR (R 253)	2	59.8	60.2	53.0	54.8	7	5	No	Yes
607 CHICKADEE DR (R 254)	2	60.7	61.1	53.4	55.0	7	6	No	Yes
607 CHICKADEE DR (R 255)	2	60.3	60.7	52.9	54.7	7	6	No	Yes

Project: I-630 Widening (CA0608)

Description: NSA 6 Barrier (NB 4)

Location: Top of Cut Slope

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
1	1154+70	1155+20	50	FA	406.0	418.0	12	600	\$24,000
2	1155+20	1155+70	50	FA	404.5	418.5	14	700	\$28,000
3	1155+70	1156+20	50	FA	402.3	416.3	14	700	\$28,000
4	1156+20	1156+70	50	FA	402.0	416.0	14	700	\$28,000
5	1156+70	1157+20	50	FA	400.0	414.0	14	700	\$28,000
6	1157+20	1157+70	50	FA	398.0	412.0	14	700	\$28,000
7	1157+70	1158+20	50	FA	396.5	410.5	14	700	\$28,000
8	1158+20	1158+70	50	FA	396.0	410.0	14	700	\$28,000
9	1158+70	1159+20	50	FA	394.0	408.0	14	700	\$28,000
10	1159+20	1159+70	50	FA	392.0	406.0	14	700	\$28,000
11	1159+70	1160+20	50	FA	389.7	403.7	14	700	\$28,000
12	1160+20	1160+70	50	FA	388.0	402.0	14	700	\$28,000
13	1160+70	1161+20	50	FA	387.6	401.6	14	700	\$28,000
14	1161+20	1161+70	50	FA	386.6	400.6	14	700	\$28,000
15	1161+70	1162+20	50	FA	386.0	400.0	14	700	\$28,000
16	1162+20	1162+70	50	FA	384.5	398.5	14	700	\$28,000
17	1162+70	1163+20	50	FA	384.0	398.0	14	700	\$28,000
18	1163+20	1163+70	50	FA	382.0	396.0	14	700	\$28,000
19	1163+70	1164+20	50	FA	382.0	396.0	14	700	\$28,000
20	1164+20	1164+70	50	FA	380.2	394.2	14	700	\$28,000
21	1164+70	1165+20	50	FA	379.7	393.7	14	700	\$28,000
22	1165+20	1165+70	50	FA	378.1	392.1	14	700	\$28,000
23	1165+70	1166+20	50	FA	377.5	391.5	14	700	\$28,000
24	1166+20	1166+70	50	FA	375.9	389.9	14	700	\$28,000
25	1166+70	1167+20	50	FA	373.9	387.9	14	700	\$28,000
26	1167+20	1167+70	50	FA	371.2	385.2	14	700	\$28,000
27	1167+70	1168+20	50	FA	369.7	383.7	14	700	\$28,000
28	1168+20	1168+70	50	FA	373.6	387.6	14	700	\$28,000
29	1168+70	1169+20	50	FA	373.8	387.8	14	700	\$28,000
30	1169+20	1169+70	50	FA	373.0	387.0	14	700	\$28,000
31	1169+70	1170+20	50	FA	372.2	386.2	14	700	\$28,000
32	1170+20	1170+70	50	FA	371.0	385.0	14	700	\$28,000
33	1170+70	1171+20	50	FA	370.3	382.3	12	600	\$24,000

Barrier Length (ft):	1,650
Barrier Area (sf):	22,900
Average Height:	13.9
Barrier Cost:	\$916,000
Total receptors receiving 5 dB IL:	38
Cost per Benefitted Receptor:	\$24,105
Allowable Cost per Benefitted Receptor:	\$36,000
Cost Reasonable?	Yes

Project: I-630 Widening (CA0608)
Description: NSA 6 Barrier (BERM H)
Location: Soil Noise Berm in Existing Right-of-Way
Background Noise Levels dB(A): 50

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
701 S HUGHES ST (R 216)	1	59.7	60.1	55.6	56.7	4	3	No	No
6712 MARGUERITE LN (R 217)	1	61.5	61.8	56.0	57.0	6	5	No	Yes
6708 MARGUERITE LN (R 218)	1	61.5	61.8	56.4	57.3	5	5	No	Yes
6704 MARGUERITE LN (R 219)	1	62.4	62.6	56.9	57.7	6	5	No	Yes
6700 MARGUERITE LN (R 220)	1	62.8	63.0	54.0	55.5	9	8	No	Yes
6612 MARGUERITE LN (R 221)	1	64.8	64.9	58.2	58.8	7	6	No	Yes
6608 MARGUERITE LN (R 222)	1	64.8	64.9	58.9	59.4	6	6	No	Yes
6604 MARGUERITE LN (R 223)	1	64.9	65.0	59.4	59.9	6	5	No	Yes
6600 MARGUERITE LN (R 224)	1	65.9	66.0	60.2	60.6	6	5	Yes	Yes
6512 MARGUERITE LN (R 225)	1	65.7	65.8	60.6	61.0	5	5	Yes	Yes
6506 MARGUERITE LN (R 226)	1	70.8	70.8	63.7	63.9	7	7	Yes	Yes
6723 BLUEBIRD DR (R 227)	1	54	55.5	52.8	54.6	1	1	No	No
6715 BLUEBIRD DR (R 228)	1	53.8	55.3	52.0	54.1	2	1	No	No
6709 BLUEBIRD DR (R 229)	1	54.6	55.9	52.3	54.3	2	2	No	No
6705 BLUEBIRD DR (R 230)	1	55.5	56.6	53.2	54.9	2	2	No	No
6701 BLUEBIRD DR (R 231)	1	56.9	57.7	54.5	55.8	2	2	No	No
6615 BLUEBIRD DR (R 232)	1	57.4	58.1	55.1	56.3	2	2	No	No
6609 BLUEBIRD DR (R 233)	1	58.1	58.7	55.5	56.6	3	2	No	No
6605 BLUEBIRD DR (R 234)	1	57.6	58.3	55.0	56.2	3	2	No	No
6601 BLUEBIRD DR (R 235)	1	57.2	58.0	55.5	56.6	2	1	No	No
6515 BLUEBIRD DR (R 236)	1	57.7	58.4	57.5	58.2	0	0	No	No
6500 MARGUERITE LN (R 237)	1	67.6	67.7	63.3	63.5	4	4	Yes	No
6516 BLUEBIRD DR (R 238)	1	58.9	59.4	58.3	58.9	1	1	No	No
6512 BLUEBIRD DR (R 239)	1	59.2	59.7	58.2	58.8	1	1	No	No
6508 BLUEBIRD DR (R 240)	1	60.7	61.1	59.1	59.6	2	1	No	No
6504 BLUEBIRD DR (R 241)	1	63.9	64.1	62.3	62.5	2	2	No	No
6500 BLUEBIRD DR (R 242)	1	65.3	65.4	63.1	63.3	2	2	No	No
6420 BLUEBIRD DR (R 243)	1	65.5	65.6	63.4	63.6	2	2	Yes	No
616 CHICKADEE DR (R 244)	1	65.9	66.0	64.5	64.7	1	1	Yes	No
612 CHICKADEE DR (R 245)	1	63	63.2	61.5	61.8	2	1	No	No
608 CHICKADEE DR (R 246)	1	61.6	61.9	60.7	61.1	1	1	No	No
6412 BLUEBIRD DR (R 247)	1	66.8	66.9	66.2	66.3	1	1	Yes	No
6408 BLUEBIRD DR (R 248)	1	67.4	67.5	66.9	67.0	1	0	Yes	No
6400/6402 BLUEBIRD DR (R 249)	2	68.8	68.9	68.6	68.7	0	0	Yes	No
615 CHICKADEE DR (R 250)	2	60	60.4	56.9	57.7	3	3	No	No
615 CHICKADEE DR (R 251)	2	59.9	60.3	55.6	56.7	4	4	No	No
615 CHICKADEE DR (R 252)	2	59.9	60.3	56.2	57.1	4	3	No	No
615 CHICKADEE DR (R 253)	2	59.8	60.2	56.5	57.4	3	3	No	No
607 CHICKADEE DR (R 254)	2	60.6	61.0	58.5	59.1	2	2	No	No
607 CHICKADEE DR (R 255)	2	60.3	60.7	58.2	58.8	2	2	No	No

Project: I-630 Widening (CA0608)
Description: NSA 6 Barrier (BERM H)
Location: Existing ROW

Station	Berm Slope		End Area (Sq. Ft.)		Volume (Cu. Yds.)		Barrier Area (Sq. Ft.)	
	Foreslope	Backslope	Cut	Fill	Cut	Fill	Height	Area
1154+25.0	3:1	3:1	0.0	0.0	-	-	0	0
1155+00.0	3:1	3:1	41.7	746.1	57.8	1036.3	0	0
1156+00.0	3:1	3:1	9.2	697.4	94.1	2673.1	0	0
1157+00.0	3:1	3:1	13.2	820.1	41.5	2810.2	0	0
1158+00.0	3:1	3:1	6.3	951.6	36.2	3281.0	0	0
1159+00.0	3:1	3:1	14.1	841.4	37.9	3320.4	0	0
1160+00.0	3:1	3:1	20.1	712.5	63.4	2877.7	0	0
1161+00.0	3:1	3:1	27.8	504.8	88.6	2254.4	0	0
1162+00.0	3:1	3:1	101.2	310.2	238.8	1509.2	0	0
1163+00.0	3:1	3:1	5.6	772.9	197.7	2005.6	0	0
1164+00.0	3:1	3:1	4.7	609.0	19.0	2559.0	0	0
1165+00.0	3:1	3:1	3.1	565.9	16.2	2479.1	0	0
1166+00.0	3:1	3:1	0.0	0.0	8.6	1127.8	0	0

Berm Costs	Item	Cost per Unit		Quantity		Cost	Total
	Bikeway ACHM	\$82.00	Per Ton	143.61	Tons	\$11,776.02	
	Bikeway Agg. Bs. Crse.	\$19.89	Per Ton	48.96	Tons	\$973.81	
	Excavation	\$5.36	Per Cu Yd	899.74	Cu Yds	\$4,822.59	\$208,080.66
	Embankment	\$6.82	Per Cu Yd	27933.76	Cu Yds	\$190,508.24	
	Noise Barrier	\$40.00	Per Sq Ft	0.00	Sq Ft	\$0.00	

Soil Berm H Total Cost: \$208,081
Total receptors receiving 5 dB IL: 10
Cost per Benefitted Receptor: \$20,808
Allowable Cost per Benefitted Receptor: \$36,000
Reasonable? Yes

Project: I-630 Widening (CA0608)
Description: NSA 8 ROW Barrier
Location: Edge of Right-of-Way, Adjacent to Arthur Drive
Background Noise Levels dB(A): 50

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
913 S HUGHES ST (R242)	1	56.2	57.1	56.2	57.1	0	0	No	No
917 HUGHES CT (R243)	1	53.8	55.3	53.7	55.2	0	0	No	No
8 HUGHES CT (R244)	1	56.5	57.4	56.5	57.4	0	0	No	No
10 HUGHES CT (R245)	1	54.7	56.0	54.7	56.0	0	0	No	No
306 ARTHUR DR (R246)	1	60.1	60.5	60.1	60.5	0	0	No	No
303 ARTHUR DR (R247)	1	62.8	63.0	62.8	63.0	0	0	No	No
6615 SHERRY DR (R248)	1	57.7	58.4	57.7	58.4	0	0	No	No
6609 SHERRY DR (R249)	1	54.9	56.1	54.9	56.1	0	0	No	No
6520 SHERRY DR (R250)	1	63.6	63.8	63.4	63.6	0	0	No	No
6518 SHERRY DR (R251)	1	54.3	55.7	54.3	55.7	0	0	No	No
6516 SHERRY DR (R252)	1	56.4	57.3	56.4	57.3	0	0	No	No
6513 SHIRLEY DR (R253)	1	63.6	63.8	61.9	62.2	2	2	No	No
6507 SHIRLEY DR (R254)	1	55.8	56.8	55.4	56.5	0	0	No	No
510 ARTHUR DR (R255)	1	65.9	66.0	61.4	61.7	5	4	Yes	Yes
516 ARTHUR DR (R256)	1	66.4	66.5	61.9	62.2	5	4	Yes	Yes
610 ARTHUR DR (R257)	1	67	67.1	61.9	62.2	5	5	Yes	Yes
616 ARTHUR DR (R258)	1	69.9	69.9	65.1	65.2	5	5	Yes	Yes
620 ARTHUR DR (R259)	1	71.4	71.4	65.9	66.0	6	5	Yes	Yes
704 ARTHUR DR (R260)	1	71.6	71.6	65.4	65.5	6	6	Yes	Yes
710 ARTHUR DR (R261)	1	71.2	71.2	65.0	65.1	6	6	Yes	Yes
714 ARTHUR DR (R262)	1	71.1	71.1	64.9	65.0	6	6	Yes	Yes
718 ARTHUR DR (R263)	1	70.8	70.8	63.6	63.8	7	7	Yes	Yes
802 ARTHUR DR (R264)	1	70.4	70.4	62.8	63.0	8	7	Yes	Yes
810 ARTHUR DR (R265)	1	69.7	69.7	63.6	63.8	6	6	Yes	Yes
818 ARTHUR DR (R266)	1	68.3	68.4	63.6	63.8	5	5	Yes	Yes
824 ARTHUR DR (R267)	1	67.8	67.9	65.9	66.0	2	2	Yes	No
910 ARTHUR DR (R268)	1	67.3	67.4	67.1	67.2	0	0	Yes	No
6200 SHIRLEY DR (R269)	1	66.3	66.4	66.2	66.3	0	0	Yes	No
6412 SHIRLEY DR (R270)	1	60.7	61.1	59.1	59.6	2	1	No	No
6410 SHIRLEY DR (R271)	1	55.6	56.7	55.2	56.3	0	0	No	No
6408 SHIRLEY DR (R272)	1	58.4	59.0	57.3	58.0	1	1	No	No
6406 SHIRLEY DR (R273)	1	60.4	60.8	59.3	59.8	1	1	No	No
6402 SHIRLEY DR (R274)	1	61.2	61.5	60.3	60.7	1	1	No	No
6400 SHIRLEY DR (R275)	1	61.7	62.0	60.7	61.1	1	1	No	No
6312 SHIRLEY DR (R276)	1	61.8	62.1	60.5	60.9	1	1	No	No
6310 SHIRLEY DR (R277)	1	62.2	62.5	61.3	61.6	1	1	No	No
6308 SHIRLEY DR (R278)	1	63.7	63.9	62.8	63.0	1	1	No	No

Receiver	Dwelling Units	No Barrier Leq [dB(A)]		With Barrier Leq [dB(A)]		Insertion Loss [dB(A)]		Impacted?	Benefitted?
		w/o background	w/background	w/o background	w/background	w/o background	w/background		
6302 SHIRLEY DR (R279)	1	64.5	64.7	63.6	63.8	1	1	No	No
6214 SHIRLEY DR (R280)	1	64.9	65.0	64.3	64.5	1	1	No	No
6212 SHIRLEY DR (R281)	1	64.7	64.8	64.4	64.6	0	0	No	No
6210 SHIRLEY DR (R282)	1	63.6	63.8	63.4	63.6	0	0	No	No
905 ARTHUR DR (R283)	1	66.3	66.4	66.3	66.4	0	0	Yes	No
909 ARTHUR DR (R284)	1	67.8	67.9	67.8	67.9	0	0	Yes	No
915 ARTHUR DR (R285)	1	67.5	67.6	67.5	67.6	0	0	Yes	No
923 ARTHUR DR (R286)	1	67.1	67.2	67.1	67.2	0	0	Yes	No
1001 ARTHUR DR (R287)	1	63.7	63.9	63.7	63.9	0	0	No	No
1005 ARTHUR DR (R288)	1	63.9	64.1	63.9	64.1	0	0	No	No
1011 ARTHUR DR (R289)	1	63.9	64.1	63.9	64.1	0	0	No	No

Project: I-630 Widening (CA0608)
Description: NSA 8 ROW Barrier
Location: Edge of ROW, Adjacent to Arthur Drive

Noise Barrier Panel No.	From	To	Segment Length	Wall Type	Barrier Base Elevation (ft)	Barrier Top Elevation (ft)	Barrier Height (ft)	Barrier Area (sf)	Segment Cost
1	1162+40	1162+90	50	FR	392.1	400.1	8	400	\$14,000
2	1162+90	1163+40	50	FR	391.3	401.3	10	500	\$17,500
3	1163+40	1163+90	50	FR	391.3	401.3	10	500	\$17,500
4	1163+90	1164+40	50	FR	391.5	401.5	10	500	\$17,500
5	1164+40	1164+90	50	FR	392.0	402.0	10	500	\$17,500
6	1164+90	1165+40	50	FR	391.9	401.9	10	500	\$17,500
7	1165+40	1165+90	50	FR	392.0	402.0	10	500	\$17,500
8	1165+90	1166+40	50	FR	392.1	402.1	10	500	\$17,500
9	1166+40	1166+90	50	FR	393.9	403.9	10	500	\$17,500
10	1166+90	1167+40	50	FR	396.2	406.2	10	500	\$17,500
11	1167+40	1167+90	50	FR	398.1	408.1	10	500	\$17,500
12	1167+90	1168+40	50	FR	398.7	408.7	10	500	\$17,500
13	1168+40	1168+90	54	FR	398.0	408.0	10	540	\$18,900
14	1168+90	1169+40	65	FR	394.6	404.6	10	650	\$22,750
15	1169+40	1169+90	65	FR	392.0	402.0	10	650	\$22,750
16	1169+90	1170+40	64	FR	390.6	400.6	10	640	\$22,400
17	1170+40	1170+90	63	FR	388.3	400.3	12	756	\$26,460
18	1170+90	1171+40	89	FR	385.8	397.8	12	1068	\$37,380
19	1171+40	1171+90	78	FR	382.8	394.8	12	936	\$32,760
20	1171+90	1172+40	100	FR	377.5	389.5	12	1200	\$42,000

Barrier Length (ft): 1,178
Barrier Area (sf): 12,340
Average Height: 10.3
Barrier Cost: \$431,900
Total receptors receiving 5 dB IL: 12
Cost per Benefitted Receptor: \$35,992
Allowable Cost per Benefitted Receptor: \$36,000
Cost Reasonable? Yes