



December 12, 2019

Mike Railey
Christy Corporation, Ltd.
1000 Kiley Parkway
Sparks, NV 89436

Traffic Impact Study Supplement for Andersen Ranch – Washington Street/N. Richmond Avenue

Dear Mr. Railey,

This letter report summarizes traffic analyses conducted for the Andersen Ranch project assuming an additional access connection to Richmond Avenue. The *Traffic Impact Study for Andersen Ranch* (Headway Transportation, July 11, 2019) was performed based on a previous site plan that included six access connections to:

- ▶ Bolero Drive
- ▶ La Mirada Street
- ▶ Lexington Avenue
- ▶ W. Sunset Way
- ▶ N. Ormsby Boulevard
- ▶ Mountain Street

Figure 1, attached, shows the current project site plan with seven access connections, now including Richmond Avenue.

AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak hour intersection level of service analysis was performed for the Washington Street/Richmond Avenue intersection and is included in this supplement.

PROJECT CONDITIONS

Trip Distribution

The distribution of project trips to the surrounding roadway network would change with an additional access connection. Project traffic would be spread among all seven access connections, resulting in less traffic at the six access connections originally analyzed in the July traffic study.

It was assumed that approximately 15 percent of project traffic would use Richmond Avenue to access the surrounding roadway network, with approximately 10 percent of trips ultimately travelling to/from the south on Richmond Avenue.

INTERSECTION LEVEL OF SERVICE ANALYSIS

Peak hour intersection level of service analysis was performed for the Washington Street/Richmond Avenue intersection for the following scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- 2040 Background Conditions
- 2040 Background Plus Project Conditions

Existing AM (7:00 AM to 8:00 AM), Afternoon (2:00 PM to 3:00 PM – when school is dismissed), and PM (4:15 PM to 5:15 PM) peak hour traffic volumes were collected at the Washington Street/Richmond Avenue intersection on December 9 and 10, 2019 with school in regular session. Construction was underway on Washington Street when the counts were collected, therefore the volumes were adjusted upward and balanced between intersections to ensure peak volumes were analyzed. Additionally, the traffic volumes were compared to NDOT data at nearby locations to again ensure peak data was analyzed.

Table 1 shows the Existing and Existing Plus Project conditions intersection level of service results for the Washington Street/Richmond Avenue intersection. The AM and PM peak hour traffic volumes are shown on Figure 2. The Afternoon (2:00 PM to 3:00 PM) peak hour was found to have lower traffic volumes than the AM and PM peak periods and therefore was not analyzed.

Table 1: Existing Plus Project Intersection Level of Service

| Intersection | Control | Existing | | | | Existing Plus Project | | | |
|-------------------------------|------------------|--------------------|-----|--------------------|-----|-----------------------|-----|--------------------|-----|
| | | AM | | PM | | AM | | PM | |
| | | Delay ¹ | LOS | Delay ¹ | LOS | Delay ¹ | LOS | Delay ¹ | LOS |
| Washington St/N. Richmond Ave | Side Street Stop | | | | | | | | |
| Northbound Approach | | 10.3 | B | 9.2 | A | 10.9 | B | 9.9 | A |
| Southbound Approach | | 16.9 | C | 10.9 | B | 18.2 | C | 11.5 | B |
| Eastbound Left | | 7.5 | A | 7.5 | A | 7.5 | A | 7.5 | A |
| Westbound Left | | 8.0 | A | 7.5 | A | 8.0 | A | 7.5 | A |

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst approach/movement for side street stop controlled intersections.

Source: Headway Transportation, 2019

As shown in the table, the minor street approaches currently operate at LOS C or better during the AM and PM peak hours, and would continue to do so with the project.

Future year (2040) traffic volumes were developed for the Washington Street/Richmond Avenue intersection using a growth rate of approximately 3 percent per year for a period of 21 years (2019 to 2040), consistent with the July traffic study. Table 2 shows the 2040 and 2040 Plus Project conditions intersection level of service results. The peak hour traffic volumes are shown on Figure 2.



Table 2: 2040 Plus Project Intersection Level of Service

| Intersection | Control | 2040 No Project | | | | 2040 Plus Project | | | |
|-------------------------------|------------------|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|
| | | AM | | PM | | AM | | PM | |
| | | Delay ¹ | LOS | Delay ¹ | LOS | Delay ¹ | LOS | Delay ¹ | LOS |
| Washington St/N. Richmond Ave | Side Street Stop | | | | | | | | |
| Northbound Approach | | 12.2 | B | 9.8 | A | 13.0 | B | 11.0 | B |
| Southbound Approach | | 28.1 | D | 12.8 | B | 32.1 | D | 14.2 | B |
| Eastbound Left | | 7.6 | A | 7.6 | A | 7.6 | A | 7.7 | A |
| Westbound Left | | 8.7 | A | 7.7 | A | 8.6 | A | 7.7 | A |

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst approach/movement for side street stop controlled intersections.

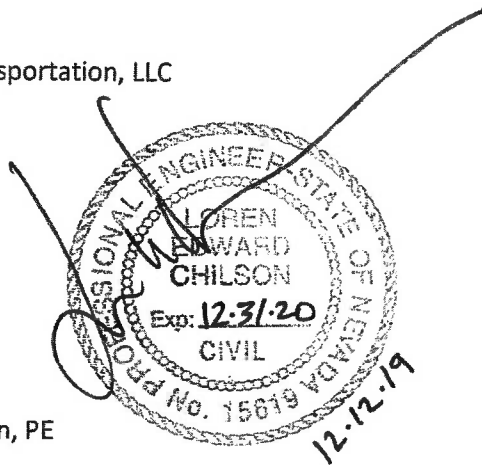
Source: Headway Transportation, 2019

As shown in the table, the minor street approaches are expected to operate at acceptable LOS D or better with or without the proposed project traffic.

CONCLUSIONS

As demonstrated by the analysis, the Washington Street/N. Richmond Avenue intersection is expected to operate acceptably, per City standards, with the addition of the project traffic. Additionally, the other study intersections, analyzed in the *Traffic Impact Study for Andersen Ranch*, July 2019, would operate better than originally reported since the project traffic would be dispersed among more access connections yielding lower volumes and less delay.

Sincerely,
Headway Transportation, LLC



Loren E. Chilson, PE
Principal

Attachments:

Figure 1 – Site Plan

Figure 2 – Washington Street/Richmond Avenue Volumes





69 ~ 70'x110' LOTS
 134 ~ 50'x100' LOTS
 TOTAL = 203 LOTS
 SEPTEMBER 2019

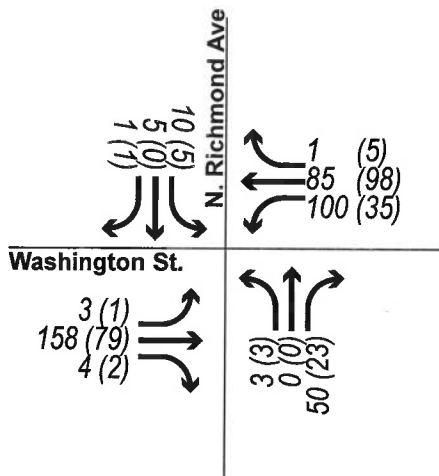
SCALE: 1" = 100'

CHRISTY
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 1300 Riley Pkwy | Sparks Nevada 89432
 775.822.8532 christyinc.com

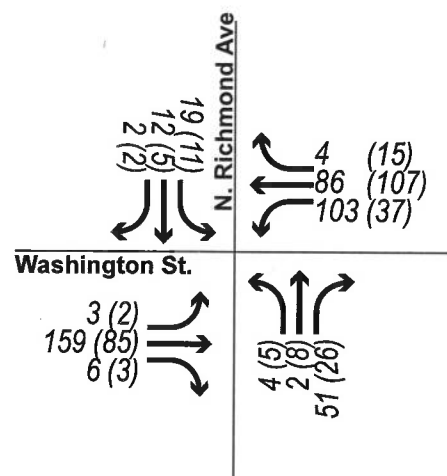
ANDERSEN RANCH



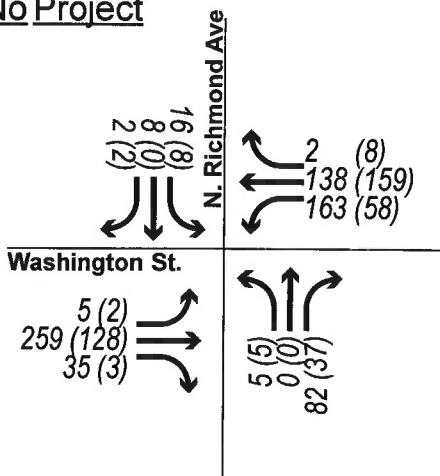
Existing



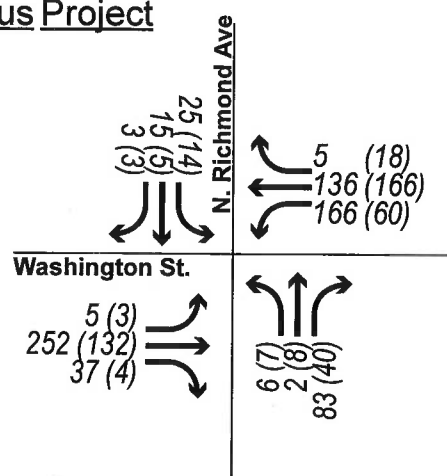
Existing Plus Project



2040 No Project



2040 Plus Project



LEGEND

AM(PM) - Peak Hour Traffic Volumes

Figure 2

ANDERSEN RANCH
TRAFFIC IMPACT STUDY SUPPLEMENT
Washington St / Richmond Ave Traffic Volumes

Planning Department

From: Sarah Lemire <mslemire@gmail.com>
Sent: Monday, December 16, 2019 2:14 PM
To: Planning Department
Subject: Fwd: Anderson Ranch Traffic

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

Hope, here is my letter. I do have an addition/clarification in the second line. It should say "Oddly this traffic study company" is the same.....

----- Forwarded message -----

From: Sarah Lemire <mslemire@gmail.com>
Date: Mon, Dec 16, 2019 at 2:10 PM
Subject: Re: Anderson Ranch Traffic
To: Sarah Lemire <mslemire@gmail.com>

On Tue, Dec 10, 2019 at 4:31 PM Sarah Lemire <mslemire@gmail.com> wrote:

This is a very large project with 203 homes and probably 406 cars with possibly RV's and Trailers.

It complies in density with the zoning regulations but the Traffic Plan they submitted is very faulty. Oddly enough this company is the same company that was involved in the Vintage project. Headway should have known these neighborhoods and it's streets very well. That they left off the widest street Richmond which connects directly to the Junior High and a grade school on King St plus barely acknowledging the school traffic shocks me.

Ideally we all wish this project had just 2 streets (East/West) in and out - Ormsby and Mountain. The adjoining property to the North of this project has only Long St and Winnie. The adjoining property to the South has 3 streets that dead end or 2 others that are not through streets. There are many neighborhoods and projects in Carson City with only 2 entrances. The Fire Department does not seem to have issues with these neighborhoods and many of the newer ones.

All the existing neighborhoods would love to have Lexington, Richmond, W. Sunset Way, Bolaro and Mirada as dead ends with passage for walking, strollers, bikes and emergency vehicles only.

If you do decide to have all 5 of these streets go through then make them straight through so both of these existing communities to the north and south can use them if we want to go to the 2 parks to the north or to Winnie or Long and south to the Junior High through Richmond and the Governor's Mansion and the small park from W. Sunset Way and to King St and Ormsby from Lexington.

As it is now configured we all have to suffer from the huge influx of traffic from these 203 homes and we have ZERO BENEFIT. Not fair.

W. Sunset Way is very narrow (38ft 6inches). It was built in 1963. It does not comply with your 40' minimum. The speed on these streets should be no faster than 15mph. There are sightline issues at the intersection of W. Sunset Way and Washington because the East corner extends southward into Washington St and the West corner is set back. There is considerable foot traffic to the heavily used small children's playground and to the Governor's Mansion.

Richmond is a very wide street and though it has a turn around at the north end it was definitely intended as a pass through to Mirada to the North. Because of the School Buses and all the children using Washington and Richmond I very very strongly think you must put in a 4 way stop at that intersection. Adults and school children walk/ run /bike on Washington St and not on the sidewalks but in the street. Washington is a major thoroughfare with heavy trucking at all hours of the day. No one obeys the speed limit of 25mph between Mountain St and Ormsby St. I fear for the children and the increase of children with these 203 new homes. Please put in a 4 way stop NOW. Next week they will have finished the repavement on Washington and it will be a speedway for sure.

I wish 50 McMansions were going in the Anderson Ranch property as a gated community with only Ormsby and Mountain as the streets. Everyone would be happy. Even more I wish it was an open playground/field that the Parks Department only had to mow with a small playground and building to hold soccer nets and perhaps bathrooms and extended parking at Mountain St.

Please try to make all of us happy in this very walkable/bikeable community. Your master plan wants Carson City to be a walkable/bikeable town. Don't let vehicles rule. And be fair if you make ALL 5 of the north and south streets as through streets - let us all use them and have them connect straight through.

Sarah Lemire
801 W. Sunset Way
435-729-9317