August 26, 2021

Mr. Trent Sanson
DeNova Homes, Inc.
1500 Willow Pass Court
Concord, CA 94520

Focused Traffic Study for the 2008 Grant Street Residential Project

Dear Mr. Sanson;

As requested, W-Trans has prepared a focused analysis of the potential transportation issues associated with the proposed residential subdivision to be located at 2008 Grant Street in the City of Calistoga. The following analysis was completed in accordance with the criteria established by the City of Calistoga, reflects a scope of work requested by City staff, and is consistent with standard traffic engineering techniques.

Project Description

The proposed project includes 15 single-family homes that would be constructed on a vacant lot to be accessed from an extension of Redwood Avenue on the northeast side of Grant Street. The project site plan is enclosed for reference.

Trip Generation

The trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition, 2017 for "Single Family Detached Housing" (ITE LU #210). Because the site is currently vacant, no trip credits were given for any existing uses. As shown in Table 1, the proposed project would be expected to generate an average of 142 trips on a typical weekday, including 11 trips during the a.m. peak hour and 15 trips during the p.m. peak hour.

Table 1 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Single Family Detached Housing	15 du	9.44	142	0.74	11	3	8	0.99	15	9	6

Note: du = dwelling unit

Although no longer considered for assessing California Environmental Quality Act (CEQA) impacts, given the minimal number of new peak hour trips that would be generated by the project, it is reasonable to conclude that the project would have a nominal and therefore acceptable effect on operation of the surrounding roadway network.

Truck Trips

The proposed project is expected to require approximately 25,400 cubic yards of fill so consideration was given to the number of truck trips that would be associated with hauling fill to the site during construction. A typical dump truck can carry 10 to 12 cubic yards of fill so to provide a conversative estimate of the number of trucks required to haul 25,400 cubic yards of soil, it was assumed that the trucks used for the proposed project would average 10 cubic yards per delivery. This would result in the need for 2,540 trucks to deliver soil. Assuming that the soil work would occur over a three-month period with a six-day work week, this work would require approximately 35 deliveries per day, or 70 daily trips. Given that the project site is located at the terminus of

Redwood Avenue and is set back approximately 400 feet from Grant Street, construction vehicles are not anticipated to need to stage on Grant Street and therefore impacts to through traffic are not expected.

Vehicle Miles Traveled

Senate Bill (SB) 743 established a change in the metric to be applied to determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service (LOS) analysis, the change in Vehicle Miles Traveled (VMT) as a result of a project is now the basis for determining impacts with respect to transportation and traffic under CEQA. As of the date of this analysis, neither the City of Calistoga nor the County of Napa have adopted thresholds of significance related to VMT. As a result, project-related VMT impacts were assessed based on guidance published by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. Under this guidance, residential developments that have a VMT per capita that is 15 percent or more below the existing average countywide VMT per capita would have a less-than-significant transportation impact.

The Napa Valley Transportation Authority (NVTA) is in the process of conducting an extensive countywide VMT baseline analysis and updating the travel demand model to include readily available commercial and residential VMT information per capita along with screening maps that can be used to identify certain types of projects that can be presumed to have a less-than-significant impact. OPR encourages the use of screening maps to establish geographic areas for which the anticipated VMT would be 15 percent below regional average thresholds, allowing jurisdictions to "screen" projects in those areas from quantitative VMT analysis since impacts can be presumed to be less than significant. Through coordination with NVTA staff a preliminary screening map for the County of Napa was obtained. The project site is located within a screened area with a VMT per capita that is 50 to 85 percent of the Countywide average value of 17.30 vehicle miles per day per capita; therefore, it is reasonable to conclude that the project can be presumed to have a less-than-significant transportation impact on VMT. It should be noted that the screening map is not yet considered final, though it is unlikely that the geographic boundaries will change substantially between the current version and the final version. An output from the preliminary screening map that shows the City of Calistoga and surrounding area is enclosed for reference.

Finding – Based on OPR guidance and a preliminary screening map developed by NVTA, the project can be presumed to have a less-than-significant transportation impact on VMT.

Vehicle Access and Circulation

As part of the project, Redwood Avenue would be extended to the northeast where it would terminate in a cul-de-sac at the northern property boundary. The new section of Redwood Avenue would have a street width of 36 feet, consisting of a 10-foot travel lane and eight feet of on-street parking in both directions. A five-foot-wide sidewalk would be provided on both sides of the street. The City of Calistoga has adopted the City of Santa Rosa's *Street Design and Construction Standards* so the proposed cross section of Redwood Avenue was evaluated for consistency with these standards and it was determined that the proposed roadway design would exceed the design requirements for a neighborhood street and would meet those for a minor street. Further, the cul-de-sac would allow adequate space for emergency response vehicles to turn around. As a result, site access is expected to function acceptably for standard passenger vehicles as well as emergency response vehicles.

Finding – Site access and on-site circulation would be expected to function acceptably.

Sight Distance

Sight distances along Grant Street at the intersection with Redwood Avenue were evaluated using sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for

minor street approaches at intersections of public streets are based on corner sight distance with approach travel speed used as the basis for determining the recommended sight distance.

For the posted speed limit of 25 mph on Grant Street, the minimum corner sight distance needed is 275 feet. Based on a review of field conditions, sight lines were measured to extend more than 300 feet in both directions, which is adequate for the posted speed limit. Additionally, adequate stopping sight distances are available for a following driver to notice and react to a preceding motorist slowing to turn right or stopped to turn left from Grant Street onto Redwood Avenue.

Finding – Existing sight lines are adequate to accommodate all turning movements between Grant Street and Redwood Avenue.

Conclusions

- The proposed project would be expected to generate an average of 142 trips on a typical weekday, including 11 trips during the a.m. peak hour and 15 trips during the p.m. peak hour. Given the minimal number of new peak hour trips that would be generated by the project, it is reasonable to conclude that the project would have an imperceptible and therefore acceptable effect on operation of the surrounding roadway network.

- Construction of the project would be expected to require 35 truckloads of fill soil per day, or 70 one-way trips. Given that the project site is located at the terminus of Redwood Avenue and is set back approximately 400 feet from Grant Street, construction vehicles would not be expected to stage on Grant Street and therefore impacts to through traffic are not anticipated as a result of construction.

- Based on OPR guidance and a preliminary screening map developed by NVTA, the project can be presumed to have a less-than-significant transportation impact on VMT.

- The proposed design for the extension of Redwood Avenue meets applicable design standards and therefore site access and circulation are expected to function acceptably for standard passenger vehicles and emergency response vehicles.

- Existing sight lines are adequate to accommodate all turning movements between Grant Street and Redwood Avenue.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

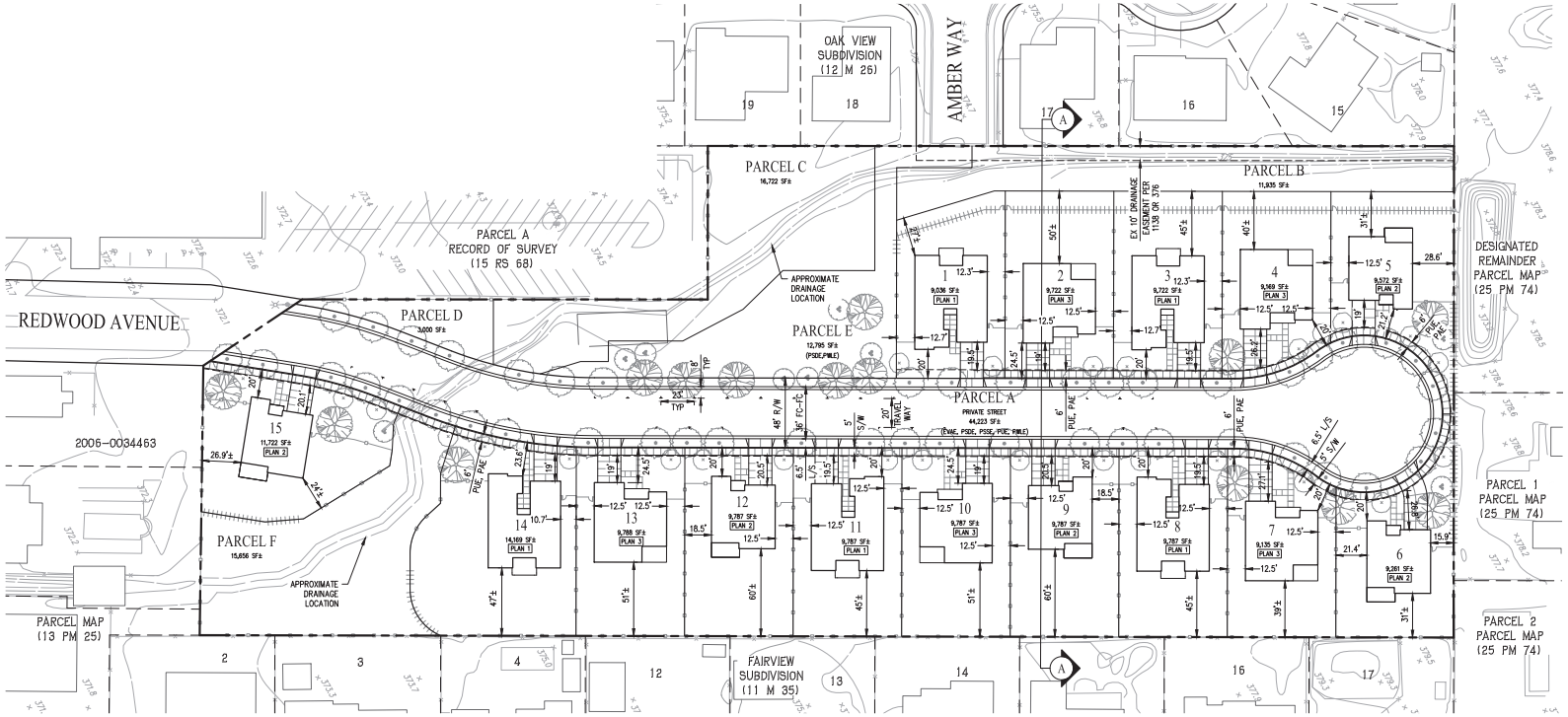
Sincerely,

Cameron Nye, EIT
Associate Engineer

Dalene J. Whitlock, PE, PTOE
Senior Principal

DJW/cn/CAL057.L1

Enclosures: Site Plan, Preliminary VMT Screening Map

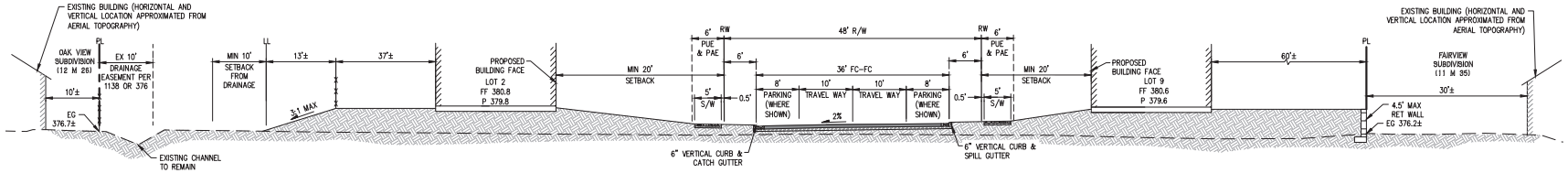


ABBREVIATIONS

BLDG	BUILDING
BC	BACK OF CURB
BW	BACK OF WALK
DWY	DRIVEWAY
FC	FACE OF CURB
MIN	MINIMUM
L/S	LANDSCAPE
PAE	PUBLIC ACCESS EASEMENT
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT OF WAY
S/W	SIDEWALK
TYP	TYPICAL

LEGEND

- SUBDIVISION BOUNDARY
- SIDEWALK
- LOT LINE
- EASEMENT LINE
- ADJACENT PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED TREE
- PROPOSED FENCE
- 1 — LOT NUMBER
- 10,000 SF± — LOT AREA (SQUARE FEET)
- PLAN 1 — PLAN TYPE



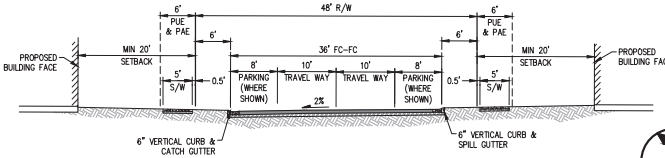
SECTION A-A

NOT TO SCALE

R1-1 DISTRICT DEVELOPMENT STANDARDS PER ZONING CODE		PROJECT	COMPLIANT
SITE AREA		5.84 AC	
DEVELOPABLE AREA		4.83 AC	
NET DEVELOPABLE AREA (LESS PARCEL A)		3.82 AC	
MIN FRONT YARD SETBACK	20'	20'	YES
SIDE YARD SHALL NOT BE LESS THAN ONE-HALF THE HEIGHT OF THE BUILDING		10.75'	YES
REAR YARD	20'	20'	YES

PROVIDED PARKING	
STALL TYPE	TOTAL
GARAGE	30
ON STREET PARKING	22
TOTAL	52

PROPOSED LOT COVERAGE		
LOT	PLAN TYPE	LOT COVERAGE (%)
1	1	33.7
2	3	26.8
3	1	31.4
4	3	28.4
5	2	22.6
6	2	23.4
7	3	28.5
8	1	31.2
9	2	22.1
10	3	26.6
11	1	31.2
12	2	22.1
13	3	26.6
14	1	21.5
15	2	18.5



PRIVATE STREET SECTION

NOT TO SCALE

PRELIMINARY SITE PLAN
2008 GRANT STREET

CITY OF CALISTOGA NAPA COUNTY CALIFORNIA

SCALE: 1" = 40' DATE: APRIL 9, 2021

REGISTERED PROFESSIONAL ENGINEER BRIAN T. HANSEN 80557 CIVIL STATE OF CALIFORNIA

0 40 80 120

cbg CIVIL ENGINEERS ▪ SURVEYORS ▪ PLANNERS
SAN RAMON ▪ (925) 866-0322
ROSEVILLE ▪ (916) 788-4456
WWW.CBANDG.COM

JOB NO.: 3302-000

SHEET NO. C-3 OF 10 SHEETS

SNABM TAZ VMT 2015

Napa County Jurisdictional Boundaries

SNABM_TAZ_VMT_2015 (VMT Per Capita)

VMT per Capita (Mean = 17.30)

- Over 125% of Napa County Mean
- 100% - 125% of Napa County Mean
- 85% - 100% of Napa County Mean
- 50% - 85% of Napa County Mean
- Under 50% of Napa County Mean