Agenda Item No: 25.C

STAFF REPORT

Report To: Board of Supervisors **Meeting Date:** November 3, 2022

Staff Contact: Heather Manzo, Associate Planner

Agenda Title: For Possible Action: Discussion and possible action regarding an application from Andersen-Colard Ranch Enterprises, LLC ("Applicant") concerning a tentative subdivision map (SUB-2022-0374) known as Andersen Ranch West, to create 61 single-family residential lots and a 50.33-acre remainder parcel with an existing residence on an ±80.53 acre site zoned Single Family 1 Acre ("SF1A") and Single Family 12,000 Square Feet ("SF12"), located west of Ormsby Boulevard and north of Kings Canyon Road, Assessor's Parcel Numbers ("APNs") 009-012-20 and -21. (Heather Manzo, hmanzo@carson.org)

Staff Summary: The Applicant is requesting to subdivide an ±80.53-acre site consisting of two parcels into 61 single-family residential lots with a minimum lot size of ±14,380 square feet, 3.82 acres of common open space, and a 50.33-acre remainder parcel with an existing residence, using the provisions of Carson City Municipal Code ("CCMC") Chapter 17.10 - Common Open Space Development. The Board of Supervisors ("Board") is authorized to approve, conditionally approve or deny a tentative subdivision map. The Planning Commission recommended denial of the tentative subdivision map.

Agenda Action: Formal Action / Motion **Time Requested:** 20 minutes

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Proposed Motion

I move to deny the tentative subdivision map, as discussed on the record.

Board's Strategic Goal

Quality of Life

Previous Action

September 28, 2022 (Item 6E) - The Planning Commission recommended denial of the request by a 6-1 vote based on their inability to make the required findings. The Commission stated that they were unable to make findings 6, 8 and 11.

Background/Issues & Analysis

The Board is authorized to approve, conditionally approve or deny tentative subdivision maps. The Planning Commission makes a recommendation to the Board. The Planning Commission recommended denial of the tentative subdivision map. Additional information is contained in the attached memo dated October 17, 2022.

Should the Board make all findings in the affirmative to approve the tentative subdivision map, Exhibit A attached to this report outlines the recommended conditions of approval as noted in the September 28, 2022 Planning Commission staff report and as modified by a staff memo to the Planning Commission dated September 27, 2022.

If the Board conditionally approves or denies the tentative subdivision map, the Board is required to state its reasons for that action on the record.

Applicable Statute, Code, Policy, Rule or Regulation
NRS 278.330 and 278.349; and CCMC Chapters 17.05, 17.07 and 17.10

Financial Information
Is there a fiscal impact? No

If yes, account name/number:

Is it currently budgeted? No

Explanation of Fiscal Impact:

Alternatives
Approve the tentative subdivision map; approve the tentative subdivision map with the conditions recommended by staff; approve the tentative subdivision map but modify the conditions recommended by staff; send this matter back to the Planning Commission for reconsideration (if agreed to by the Applicant); and/or provide alternative direction.

Attachments:
LU-2022-0374_-_Memo_to_BOS_-_11-3-2022.docx

Attachment 1 - Applicant Response to PC Recommendation

Exhibit A - Recommended Conditions of Approval for SUB-2022-0374.docx

10-19-2022 BOS Public Comment Foltz

9-28-2022 PC - Late Material & Staff Report

9-28-2022 PC - Public Comment

9-28-2022 PC - Supporting Material - Part 1

9-28-2022 PC - Supporting Material - Part 2

Board Action Taken:

Motion: _____	1) _____	Aye/Nay
	2) _____	_____
		_____
		_____
		_____
		_____

_____
(Vote Recorded By)

CARSON CITY
PLANNING DIVISION

108 E. Proctor Street
Carson City, Nevada 89701
(775) 887-2180
Hearing Impaired: 711

MEMORANDUM
Board of Supervisors Meeting of November 3, 2022

TO: Board of Supervisors

FROM: Heather Manzo
Associate Planner

DATE: October 17, 2022

SUBJECT: For Possible Action: Discussion and possible action regarding an application from Andersen-Colard Ranch Enterprises, LLC ("Applicant") for a tentative subdivision map (SUB-2022-0374) known as Andersen Ranch West, to create 61 single-family residential lots and a 50.33-acre remainder parcel with an existing residence on an ±80.53 acre site zoned Single Family 1 Acre ("SF1A") and Single Family 12,000 Square Feet ("SF12"), located west of Ormsby Boulevard and north of Kings Canyon Road, Assessor's Parcel Numbers ("APNs") 009-012-20 and -21.

At its meeting on September 28, 2022, the Planning Commission recommended denial of the request noting their inability to make tentative map findings 6, 8, and 11. The following summarizes the Planning Commission's discussion as it relates to these findings:

6. Conformity with the zoning ordinance and land use element of the City's Master Plan.

The Commission felt the proposal did not adhere to the purpose of Carson City Municipal Code ("CCMC") Chapter 17.10 (Common Open Space Development) as stated in CCMC 17.10.005 as the development was not a cluster subdivision that preserved or provided open space, the project does not offer any protections of natural, cultural or scenic resources, did not minimize road building, and did not offer a mix of housing types. The Commission noted that the development should include large usable open space. The Commission stated the multi-use pathways and detention basins were not sufficient usable common open space areas and that an opportunity was missed by utilizing Ash Canyon Creek as a project boundary rather than incorporating the creek into their common open space amenities.

8. The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.

Commissioners discussed the addition of four new streets between the Ash Canyon subdivision and this proposed project onto North Ormsby Boulevard appeared to create conflicts and did not seem to have enough spacing between existing and proposed intersections. It was suggested that the northern project roadway be shifted south to align with the Ash Canyon project and the southern roadway be shifted further south to make a through connection of West Washington

Street from the western project boundary to the North Ormsby Boulevard and West Washington Street intersection.

The Commission stated the proposed subdivision did not include an opportunity for a roadway connection from the proposed development to the 50-acre remainder parcel to the south. Because the remainder parcel abuts existing developments to the east and west, approval of the proposed project would result in Kings Canyon Road as the only access point, eliminating the possibility of secondary access with future development. It was noted that since the subject site encompassed the full 80 acres of land, considerations for access to the remainder parcel should be made with this project to make the required finding.

11. The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.

As discussed under Finding 8 above, the Commission was unable to make Finding 11 as the proposal takes into consideration emergency access for only the portion of the site currently proposed for development. By not providing alternative access for the remainder parcel accessibility of fire protection will be limited to only Kings Canyon Road.

Applicant Response to Planning Commission Action:

On October 17, 2022, the Applicant provided an updated tentative subdivision map along with a summary of changes the Applicant's team has incorporated into the plan to address the concerns the Planning Commission had noted during the September 28, 2022 public hearing **(Attachment 1)**.

The revised tentative subdivision map removes one of the two access roads on Ormsby Boulevard and aligns the roadway with the proposed roadway for the Ash Canyon development located on the east side of Ormsby Boulevard. The Applicant has stated that there is sufficient remainder parcel frontage on Ormsby Boulevard to accommodate secondary access at the time the remainder parcel is proposed for development.

The Applicant has noted in their response letter that the proposed common open space development adheres to all of the established standards contained in CCMC Chapter 17.10.

Heather Manzo

From: David Snelgrove <dsnelgrove@cfareno.com>
Sent: Monday, October 17, 2022 11:43 AM
To: Heather Manzo
Cc: Brian Moon, P.E.; Denny Colard; Mark Forsberg; Dustin Barker; Tim Scheideman; Justin Listar, P.E.
Subject: Re: Andersen Ranch West - Changes to Plan and Legal Findings that PC Could Not Make
Attachments: image001.jpg; image002.png; Andersen Ranch West - REV TM Sheets.pdf

Heather:

I took a look at these amendment sheets and would like to have these sheets included with the Staff report that you are in process of completing for final review prior to publication.

These sheets clearly identify the access adjustment on N. Ormsby to creat a 4-way intersection with the southern tentatively mapped access within the Ash Canyon Subdivision on the east side of N. Ormsby.

Additionally, there is a note for a future Emergency Vehicle Access noted on these amended plans. The point of access is where the existing gates ranch access is located on the western side of N. Ormsby at the intersection of Washington and Ormsby. This basically assures a reservation of an emergency access if/when development occurs on the 50+ acre remainder property. It should be noted that the 50+ acre remainder area is current operated and will continue to operate as a functioning ranch.

Thank you for your help and discussion regarding this case and your timing for the staff report.

Dave Snelgrove, AICP
(775) 737-8910

Sent from my iPhone

> On Oct 17, 2022, at 11:13 AM, Justin Listar, P.E. <jlistar@lumosinc.com> wrote:
>
> HI Heather – please see attached for the revised civil TM sheets reflecting the site plan change to have one connection to Ormsby, better aligning with the Ash Canyon subdivision to the east.
>
> The site plan does not have any bearings/distances, etc, but the lot areas are revised and are current. Once our surveyors have had the chance to update their TM sheets, we will revise are reissue the site plan sheet with all appropriate information.
>
> Let me know if there is anything else needed in preparation for the Board of Supervisor's meeting.
>
> Thanks,

Justin

Justin Listar, P.E.
Project Engineer
Engineering Division
9222 Prototype Drive
Reno, NV 89521
775.827.6111
jlistar@LumosInc.com

From: David Snelgrove <dsnelgrove@cfareno.com>
Sent: Monday, October 17, 2022 6:35 AM
To: Heather Manzo <HManzo@carson.org>
Cc: Brian Moon, P.E. <bmoon@lumosinc.com>; Justin Listar, P.E. <jlistar@LumosInc.com>; Denny Colard <dennis@colard.com>; Mark Forsberg <Mark@oshinskiforsberg.com>; Dustin Barker <Dustin.Barker@lennar.com>; Tim Scheideman <Tim.Scheideman@lennar.com>
Subject: Andersen Ranch West - Changes to Plan and Legal Findings that PC Could Not Make

Below are the findings that you had mentioned were not able to be made by the Planning Commission. Our team has been working on how or if we believe that there is any address that is necessary with each of these. Attached is a draft layout that Justin is continuing to work on as the amendment.

Finding 6 - Conformity with the zoning ordinance and land use element of the city's master plan.
We do not agree with Planning Commissions belief that we did not conform with CCC 17.10. We far exceed the open space requirements that are identified within the code and we do believe that the connection that is made from east to west to connect the mountain street trail connection to the Quill Ranch is a substantial improvement to the area benefiting not only the future residents in the Andersen

Ranch West project but also the entire community. This does not include the lineal pathway system and park amenity at the NW corner of the proposed subdivision.

Finding 8 - The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.
How we are addressing – We are finalizing site plan level information for a modification to the access such that we will only have 1 access point to N. Ormsby that will align with the southern access point of the Ash Canyon project. Justin at Lumos if finishing the modified sheets to show this. We will not have amended tentative map sheets at this time nor any amended grading and utility plans. We would like to get a general feel that this is a good modification from staff before we make additional time consuming and costly revisions all of the project plans.

Finding 11 - The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.
There is already an access where improvements were recently made at the NE corner of the 50+ acre remainder parcel. The remainder parcel will continue to function as a working ranch and any formalization of an emergency access at this point is not necessary, but we can put a place holder for future secondary access if/when future development occurs on the southern/remainder property.

I will be in Las Vegas until Wednesday at the Nevada APA conference but will be available on and off via cell phone and can review and respond via email, as time permits.

Please feel free to call me this morning if you have any questions.

R DAVID SNELGROVE, AICP, PLANNING AND RIGHT-OF-WAY MANAGER

CFA, INC.
LAND SURVEYORS
CIVIL ENGINEERS
LAND USE PLANNERS

1150 CORPORATE BOULEVARD ■ RENO, NEVADA 89502
MAIN 775-856-1160 ■ EXT 102 ■ DIRECT 775-856-7073 ■ CFARENO.COM

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

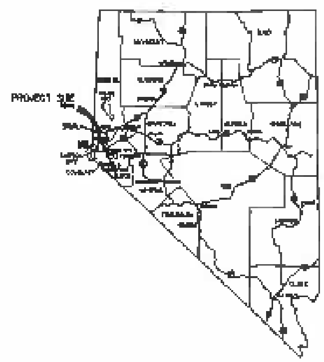
ANDERSEN RANCH WEST

COMMON OPEN SPACE TENTATIVE SUBDIVISION MAP

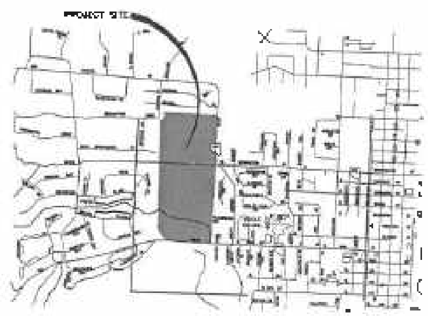
APN: 009-012-20, 009-012-21

OWNER/DEVELOPER

ANDERSEN-COLARD RANCH ENT., LLC
ATTN: MEG KALLEY
P.O. BOX 1746
CARSON CITY, NV 89702
TEL.: 775.721.3712



LOCATION MAP



VICINITY MAP

ENGINEER

LUMOS & ASSOCIATES
306 N. CURRY ST., STE. 200
CARSON CITY, NEVADA 89703
TEL: 775.883.7077
INFO@LUMOSINC.COM

811
Know what's below.
Call before you dig.

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS BASED ON THE NEVADA COORDINATE SYSTEM OF 1983, WEST ZONE, NAD [illegible], CARSON CITY DATUM. DISTANCES SHOWN ARE GROUND DISTANCES USING A PROJECT COMBINED GRID TO GROUND SCALE FACTOR OF [illegible] CARSON CITY [illegible]

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATE WITHIN A PORTION OF THE SOUTH ONE-HALF [illegible] OF SECTION [illegible] AND THE NORTH ONE-HALF [illegible] OF SECTION [illegible], TOWNSHIP FIFTEEN (15) NORTH, RANGE TWENTY (20) EAST, MOUNT DIABLO MERIDIAN, CARSON CITY, STATE OF NEVADA.

PARCEL 1 OF PM [illegible] FILE NO. [illegible]

BASIS OF ELEVATION

THE BASIS OF ELEVATION FOR CONSTRUCTION ON THIS PROJECT IS
DATUM: NAVD 88
PROJECT BENCHMARK = CARSON CITY CONTROL MONUMENT NO. [illegible] HAVING AN ELEVATION OF [illegible]

SITE INFORMATION

- ADDRESS: INTERSECTION OF KINGS CANYON ROAD & [illegible] BOULEVARD
- PARCEL SIZE: [illegible] ACRES
- MASTER PLAN DESIGNATION: LOW DENSITY RESIDENTIAL & MEDIUM DENSITY RESIDENTIAL
- ZONING: [illegible]

SHEET INDEX:

LUMOS & ASSOCIATES

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE DEVELOPMENT
TITLE SHEET

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

C1.0

ANDERSEN-COLORADO RANCH ENTERPRISES, LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
EXISTING ZONING AND SITE PLAN

PRELIMINARY
NOT FOR CONSTRUCTION

C2.0

LUMOS & ASSOCIATES

ANDERSEN-COLARD RANCH ENTERPRISES, LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
SITE PLAN

PRELIMINARY
NOT FOR CONSTRUCTION

C2.1

LUMOS & ASSOCIATES

LEGEND

ANDERSEN-COLARD RANCH ENTERPRISES, LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
TRAILS CONNECTIVITY MAP

CARSON CITY

PRELIMINARY
NOT FOR CONSTRUCTION

C6.0

LUMOS & ASSOCIATES

ANDERSEN-COLLARD RANCH ENTERPRISES, LLC

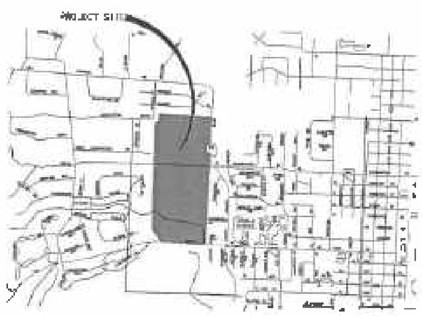
ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
OPEN SPACE SITE ANALYSIS

CARSON CITY

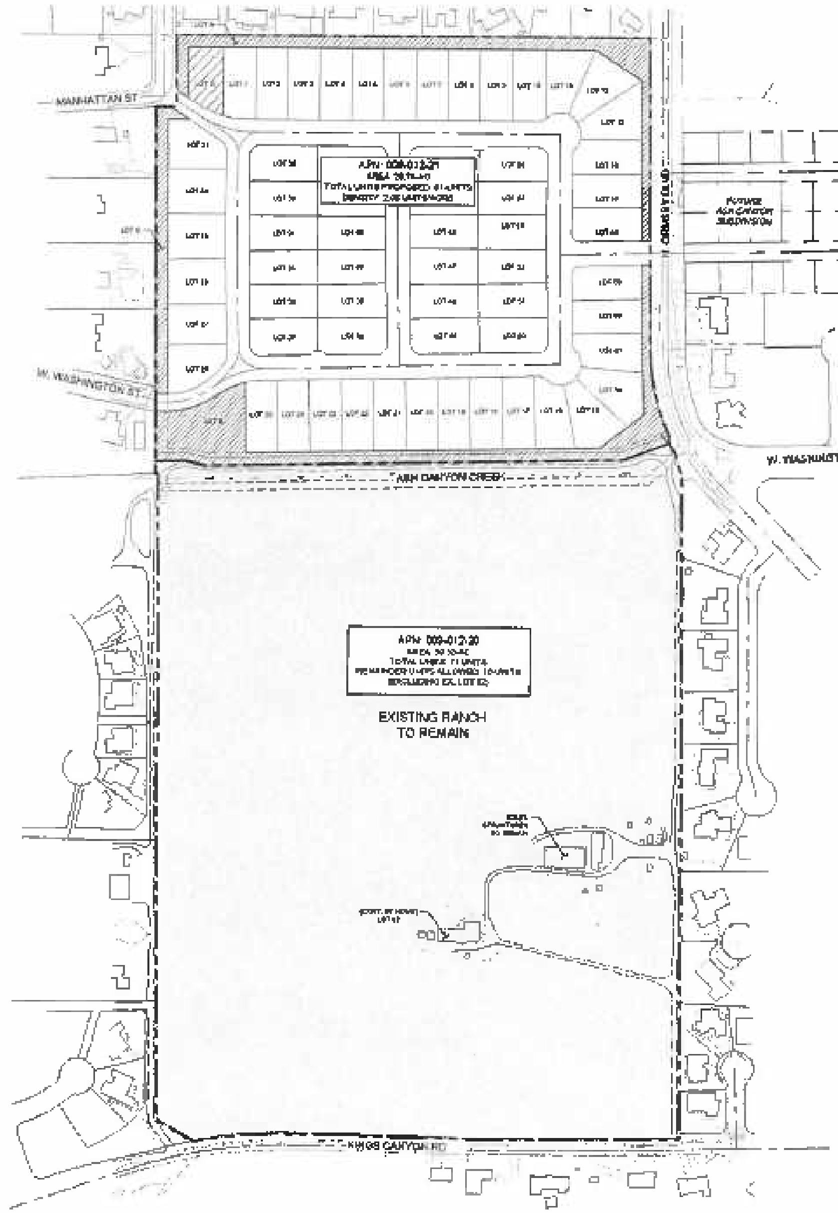
PRELIMINARY
NOT FOR CONSTRUCTION

C7.0

LUMOS & ASSOCIATES



VICINITY MAP



LEGEND

- COMMON OPEN SPACE AREA
- RECREATIONAL OPEN SPACE AREA
- REMAINDER LOT AREA

AREA DISTRIBUTION

	SQUARE FEET	ACRE	PERCENTAGE
ROW	281,228	6.51	5%
RESIDENTIAL LOTS	894,180	20.51	25%
COMMON & RECREATIONAL OPEN SPACE	143,384	3.29	5%
REMAINDER AREA (INCL. LOT 62)	2,[illegible]	56.33	65%
TOTAL	[illegible]	86.[illegible]	100%

REQUIRED OPEN SPACE AREA

CODE REQUIREMENT	TOTAL UNITS	REQUIRED OPEN SPACE AREA (SF)	PROVIDED OPEN SPACE AREA (SF)
COMMON OPEN SPACE 250 SQ FT. PER DWELLING UNIT	62	15,500	[illegible]
RECREATIONAL OPEN SPACE 100 SQ FT. PER DWELLING UNIT	42	4,200	15,[illegible]

OVERALL PROJECT DENSITY

	TOTAL ACRES	DENSITY BY ZONING	MAX UNITS
SF1A (APN 008-012-21)	28.70	1 DU/ACRE	28.70
SF1A (APN 008-012-20)	[illegible]	1 DU/ACRE	30.54
SF12 (APN 008-012-20)	18.76	1 DU/12,000 S.F.	21.[illegible]
TOTAL	[illegible]		1[illegible]

OVERALL PROJECT UNIT COUNT

	EXISTING UNITS	PROPOSED UNITS	REMAINDER UNITS
APN 008-012-21	0	61	0
APN 008-012-20	1	0	30
TOTAL	1	61	3[illegible]

LUMOS & ASSOCIATES

ANDERSEN-COLARD RANCH ENTERPRISES, LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
COMMON OPEN SPACE & DENSITY PLAN

CARSON CITY NV

PRELIMINARY
NOT FOR CONSTRUCTION

C8.0

EXHIBIT A

RECOMMENDED CONDITIONS OF APPROVAL:

The following are Tentative Map conditions of approval required per CCMC 18.02.105(5):

1. All final maps shall be in substantial accord with the approved tentative map.

2. Prior to submittal of any final map, the development engineering department shall approve all on-site and off-site improvements. The applicant shall provide construction plans to the development engineering department for all required on-site and off-site improvements, prior to any submittals for approval of a final map. The plan must adhere to the recommendations contained in the project soils and geotechnical report.

3. Lots not planned for immediate development shall be left undisturbed and mass grading and clearing of natural vegetation shall not be allowed. Any and all grading shall comply with city standards. A grading permit from the Nevada Division of Environmental Protection shall be obtained prior to any grading. Noncompliance with this provision shall cause a cease-and-desist order to halt all grading work.

4. All lot areas and lot widths shall meet the zoning requirements approved as part of this tentative map with the submittal of any parcel map or preferably final map.

5. With the submittal of any parcel map or preferably final maps, the applicant shall provide evidence to the planning and community development department from the health and fire departments indicating the agencies' concerns or requirements have been satisfied. Said correspondence shall be included in the submittal package for any final maps and shall include approval by the fire department of all hydrant locations.

6. The following note shall be placed on all final maps stating:

   "These parcels are subject to Carson City's growth management ordinance and all property owners shall comply with provisions of said ordinance."

7. Placement of all utilities, including AT&T Cablevision, shall be underground within the subdivision. Any existing overhead facilities shall be relocated prior to the submittal of final maps.

8. The applicant must sign and return the notice of decision for conditions for approval within 10 days of receipt of notification after the board of supervisors meeting. If the notice of decision is not signed and returned within 10 days, then the item will be rescheduled for the next planning commission meeting for further consideration.

9. Hours of construction will be limited to 7:00 a.m. to 7:00 p.m., Monday through Friday, and 7:00 a.m. to 5:00 p.m. on Saturday and Sunday. If the hours of construction are not adhered to, the Carson City building department will issue a warning for the first violation, and upon a second violation, will have the ability to cause work at the site to cease immediately.

10. The applicant shall adhere to all city standards and requirements for water and sewer systems, grading and drainage, and street improvements.

11. The applicant shall obtain a dust control permit from the Nevada Division of Environmental Protection. The site grading must incorporate proper dust control and erosion control measures.

12. A detailed storm drainage analysis, water system analysis, and sewer system analysis shall be submitted to the development engineering department prior to approval of a final map.

13. Prior to the recordation of the final map for any phase of the project, the improvements associated with the project must either be constructed and approved by Carson City, or the specific performance of said work secured, by providing the city with a proper surety in the amount of 150 percent of the engineer's estimate. In either case, upon acceptance of the improvements by the city, the developer shall provide the city with a proper surety in the amount of 10% of the engineer's estimate to secure the developer's obligation to repair defects in workmanship and materials which appear in the work within 1 year of acceptance by the city.

14. A "will serve" letter from the water and wastewater utilities shall be provided to the Nevada Health Division prior to approval of a final map.

15. The district attorney shall approve any CC&R's prior to recordation of the first final map.

The following conditions are required per CCMC 17.10.050

16. Three-Year Maintenance Plan. Provisions shall be made to monitor and maintain, for a period of three (3) years regardless of ownership, a maintenance plan for the common open space area. The maintenance plan for the common open space area shall, at a minimum, address the following:
    a. Vegetation management;
    b. Watershed management;
    c. Debris and litter removal;
    d. Fire access and suppression;
    e. Maintenance of public access and/or maintenance of limitations to public access; and
    f. Other factors deemed necessary by the commission or the board: vector control and noxious weed control.

    The maintenance plan shall be submitted prior to final map recordation, recorded at the time of final map recordation, and referenced on the final map.

17. Permanent Preservation and Maintenance. Provisions shall be made for the permanent preservation and ongoing maintenance of the common open space and other common areas using a legal instrument acceptable to the city. This shall be addressed prior to final map recordation. A homeowners association (“HOA”) or similar entity must be formed for maintenance of common open space and other common areas.

18. Screening and Buffering of Adjoining Development. Provisions shall be made to assure adequate screening and buffering of existing and potential developments adjoining the proposed common open space development. Prior to the approval of the first site improvement plan, the applicant shall have plans approved demonstrating that screening is provided through a mix of evergreen and deciduous trees within the common open space area and solid rear-yard fences for all lots which abut common open space.

19. Common Open Space Restrictions. Designated common open space shall not include areas devoted to public or private vehicular streets or any land which has been, or is to be, conveyed to a public agency via a purchase agreement for such uses as parks, schools or other public facilities. This shall be demonstrated at the time of final map.

Other Conditions of Approval:

20. Prior to the approval of any site improvement permit or final subdivision map, the applicant shall demonstrate that a deed restriction has been recorded limiting the density of the remainder parcel. Based on the current allowable density of the overall subject site, as determined by the zoning districts, the maximum allowable remaining density for the ±50.33 acre remainder parcel shall be limited to 71 residential units. This limitation and associated deed restriction shall be noted on the final map.

21. The minimum lot size shall be 14,380 square feet and the minimum setbacks shall be noted on the final map and shall be as follows:

Front	20 feet
Side	10 feet
Street Side	15 feet
Rear	20 feet

22. With the site improvement permit application, the applicant shall provide the following:
    a. A landscape and irrigation plan demonstrating compliance with the applicable sections of the Development Standards in Division 3 for the common area parcel and any other common area landscaping.
    b. An open space exhibit demonstrating both quantitatively and qualitatively, compliance with the requirements of CCMC 17.10.046.

23. Prior to the issuance of a site improvement permit, the traffic impact study shall be updated to adjust the trip distribution analysis to the approval of the City Engineer. Based on the updated trip distribution, a pro-rata share contribution shall be calculated for the future North Ormsby Boulevard extension. Prior to the recordation of a final map, the applicant shall submit the pro-rata contribution, not to exceed $118,895.13.

24. Prior to the issuance of a site improvement permit, the developer shall update the water, sewer and traffic impact study analyses to include the Ash Canyon Subdivision (SUB-2022-0375), should it be entitled. The traffic study shall be updated to analyze the turning movements at the North Ormsby Boulevard and Mulberry Way and North Ormsby Boulevard and Bardolino Drive to ensure there are no turning movement conflicts created between this subdivision and the Ash Canyon Subdivision. If updated studies recommend additional project mitigations, the developer shall incorporate the recommended mitigations, to the approval of the City Engineer.

25. Prior to the issuance of the site improvement permit and prior to the recordation of the final map, the applicant shall demonstrate that all internal streets will be constructed to meet the roadway section urban standard detail (C-5.1.8), including 5-foot-wide sidewalks on both sides of the street.

26. Prior to the issuance of a site improvement permit ,the applicant shall demonstrate that plans include the construction of a multi-use path, sidewalks, and bike lanes that are in compliance with the Unified Pathways Master Plan (UPMP). The plans shall provide a connection of the multi-use path into sidewalks with a crosswalk at the intersection of

Mulberry Way and North Ormsby Boulevard. A rectangular rapid flashing beacon (RRFB) shall be installed at the crosswalk. Prior to the recordation of the final map, the applicant shall demonstrate that the multi-use pathways and sidewalks within the project site have been constructed or bonded for and shall have a public access easement.

27. Prior to the issuance of a site improvement permit, the applicant shall have plans approved which include a water sampling tap is located within a common area parcel near one of the project entrances. The sampling tap must be a Kupferle Eclipse #88 or approved equivalent. Prior to the final inspection for the site improvement permit, the water sampling tap must be installed.

28. Prior to the issuance of a site improvement permit, the applicant shall evaluate the condition of the existing sewer manhole located at Mulberry Way and North Ormsby Boulevard. The applicant will be required to replace the manhole if condition warrants replacement as determined by the City Engineer.

29. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the developer, HOA, or similar entity. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the rights of way in perpetuity.

30. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City pollinator plant list and other plant selection resources can be found at www.carson.org/beecityusa.

31. The developer shall incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:
    - Educating workers about the importance of managing weeds on an ongoing basis;
    - Properly identifying weed species to determine most appropriate treatment strategies;
    - Avoiding or treating existing weed populations; and
    - Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

    For more information on "best management practices" please contact The Carson City Parks, Recreation and Open Space Department.

32. Where possible, deciduous trees must be planted a minimum of 5 feet from any city/public street, sidewalk or pathway and evergreen trees must be planted a minimum of 10 feet from any city/public street, sidewalk or pathway. Fruit bearing, "non-fruiting" flowering or any other trees that drop debris such as seed pods shall be prohibited near or placed where they will eventually hang over public sidewalks or pathways.

33. Prior to the issuance of a site improvement permit, the Applicant shall have plans approved to construct a multi-use path for public use. The applicant shall provide a 30 foot wide (minimum) easement for the path where the path does not abut the public right of way. The easement shall be for non-motorized public access. The easement document shall indicate that maintenance of the easement shall be the responsibility of the HOA, or similar entity in perpetuity. The multi-use path (off street/paved/shared) shall be at least 10 feet wide and designed to meet AASHTO standards for a concrete path with an adjacent 3 foot wide decomposed granite path, including interpretive/wayfinding signage, pet waste receptacles, trash receptacles, benches and related amenities. The path will be constructed from the City's Long Ranch Pathway system on the northeast corner of APN 007-392-39 to North Ormsby Boulevard.

October 19, 2022

Carson City Board of Supervisors
C/O Carson City Planning Division, Heather Manzo
108 E. Proctor Street
Carson City, NV 89701

RE: Tentative Subdivision Map for Anderson Ranch West

Dear Board Members,

As you know, the Planning Commission recommended denial of this tentative map on October 28 for several reasons. These included:

1. Parcel sizes
2. Floodplain impact
3. Emergency access
4. Quality and quantity of open space
5. Access to Ormsby Boulevard
6. CCMC 17.10 Common Open Space Development

As you may also know, the applicant was given the opportunity by Staff to submit a revised tentative map to address the PC's concerns. The applicant declined. Most of these issues were also raised by me in my February 23, 2022 letter to the Community Development Director in response to the conceptual plan for the subdivision. Staff provided that letter to the developer more than seven months ago. No changes were made to address these issues.

PARCEL SIZES
The parcel where the development is proposed, APN 009-012-21, is zoned SF1A, 1 acre per dwelling unit. The project, however, proposes lot sizes from 0.32 acres to 0.51 acres on this parcel. Many of us who live adjacent to the proposed development purchased our homes knowing that this parcel might someday be divided into one acre lots because of this zoning. We never anticipated the possible development of 1/3 acre lots on this parcel.

FLOODPLAIN IMPACT
The flood hazard information contained in the conceptual plan is incomplete and misleading. While the Anderson Ranch Conceptual Drainage Memo acknowledges that the project site contains two flood hazard areas, Zone AO and AE, the FEMA FIRMette map submitted as a part of the application covers only a small portion of APN 009-012-21. FEMA map 3200010091F, however, shows that virtually all of APN 009-012-21 is in flood zone AE. This map should have been submitted as part of the application but was not.

EMERGENCY ACCESS
The tentative map does not identify any access from Anderson Ranch West to the 50.33 acre remainder parcel with its potential 71 lots. Furthermore, the proposed layout would preclude

any access to the remainder parcel from West Washington Street. This means that, if and when the remainder parcel is developed, all access for those 71 lots would have to come from Kings Canyon Road. The lack of any northerly access/egress raises safety concerns relative to wildfire and emergency services for this area. If Anderson Ranch West is approved as proposed, a northerly access for the remainder parcel will not be possible.

QUALITY and QUANTITY of OPEN SPACE

The applicant uses CCMC 17.10 – Common Open Space Development as a justification for reducing the lot size from one acre to approximately 1/3 acre. The purpose of CCMC 17.10 is stated in section 17.10.05 which reads:

> *The purpose of this chapter is to set forth regulations to permit variation of lot size, including density transfer (cluster) subdivisions,* ***in order to preserve or provide open space, protect natural, cultural an scenic resources, achieve a more efficient use of land, minimize road building and encourage stable, cohesive neighborhoods offering a mix of housing types****.* (Emphasis added)

CCMC 17.10 was intended to benefit the COMMUNITY by providing substantial, usable open space throughout the development, beyond what would be provided through the standard approval process. The Long Ranch Estates subdivision, located adjacent to and west of the proposed remainder parcel, is a good example of what can be accomplished using CCMC 17.10. (PLEASE, if you are not familiar with this development, take an hour to explore its walking/running/biking paths, they are beautiful.) It provides spacious open spaces throughout the subdivision with widths far in excess of 100 feet in many locations. Anderson Ranch West, on the other hand, would provide open space only in narrow (30') corridors along the perimeter of the subdivision, and for its detention basins. And those open space areas would be required by the Master Plan (for the walking path connections) and by the CC Development Code (for the detention basins) under the normal application process WITHOUT invoking CCMC 17.10. In reality, the applicant has requested the benefits (transfer of density) of CCMC 17.10 without providing any open space above and beyond what is normally required for any other subdivision.

ACCESS to ORMSBY BOULEVARD

The conceptual map for the subdivision proposes two new intersections on North Ormsby Boulevard. The southerly intersection lies roughly 270' north of the Washington Street intersection on Ormsby. The northerly intersection is roughly 400' south of the existing Newman Place intersection.

Staff has an obligation to review all aspects of the tentative map, including access to Ormsby Boulevard. The fact that Carson City does not have a standard of its own for intersection spacing does not relieve staff of this obligation. If lacking a standard, staff should seek out a reasonable and accepted design standard and apply it to the project. As a retired Professional Civil Engineer with more than 30 years of experience in transportation, I have frequently applied the NDOT Access Management System and Design Standards in cases exactly like this one because it is a widely accepted design standard and it provides clear guidance. Alternatively, staff could choose to utilize access standards from another city or county if they feel those would be more appropriate, but staff needs to evaluate the proposed accesses.

The NDOT Access Management System and Design Standards require a minimum intersection spacing of 660' for full access to a road like Ormsby Boulevard, a minor collector with a posted speed limit of 35 mph. One way to achieve this spacing would be to shift the proposed development south approximately 270'. This would have multiple benefits including:

1. Improving the access to the development by aligning the southerly access with Washington Street. Not only would this provide more direct access to the subdivision, it would eliminate the conflicting turning movements associated with the four driveways located within 75' of the southerly access shown on the conceptual map.
2. Increasing the separation between the existing Newman Place intersection and the proposed new subdivision access to meet the NDOT minimum of 660 feet.
3. Providing a more direct alignment for the multi-purpose path at the north end of the project as it relates to the path that is currently under construction on the east side of Ormsby Boulevard.
4. Providing additional open space between the proposed new development and the existing development to the north. A similar open space area could also be provided along the western boundary adjacent to those existing homes. These changes could help to mitigate the fact that the proposed density in this area is three times the current zoning density.

Another way to address the intersection spacing without shifting the subdivision to the south would be to move the northerly access to align with the northerly access for the proposed Ash Canyon subdivision on the east side of Ormsby, and move the southerly access to align with Washington Street. This would require some changes to the layout of the streets within the subdivision.

The applicant's engineer is reluctant to relocate the southerly access to align with Washington Street because a small amount of right-of-way might be needed to do so. In the event that the applicant is unable to acquire the ROW, the City could acquire the land through condemnation or eminent domain, with the developer reimbursing the City for its costs. Accordingly, a potential need to acquire right-of-way should not be a factor when considering street layouts and their impact on public safety.

CCMC 17.10 COMMON OPEN SPACE DEVELOPMENT

The applicant proposes to transfer density from APN 009-0120-20 to APN 009-012-21 for the purpose of creating lots that are smaller than the current SF1A zoning allows. The application indicates that this process is in accordance with Carson City Municipal Code Chapter 17.10 - Common Open Space Development, and that "*the project will cluster develop in a manner that best utilizes the available land, while implementing common space and maintaining floodplain.*" As noted in the section above, CCMC 17.10 allows the use of clustering homes to preserve or provide open space. However, the layout of Anderson Ranch West is a simple grid. This grid does not constitute clustering, and the tentative map does not preserve or provide any open space beyond that which is required by the Carson City Master Plan and the Development Code. Furthermore, the tentative map does not provide ANY of the benefits listed in CCMC 17.10.05. The subdivision therefore does not meet the requirements of CCMC 17.10 and therefore the Board of Supervisors has no justification to approve the variations in lot size and transfer of density transfer requested under CCMC 17.10.

While I would prefer to see this property remain undeveloped, I respect the rights of the landowners to profit from the sale of their land. I do not, however, want to see the land developed in a way that negatively impacts safety, and which does not have a beneficial impact on the community. For these reasons I respectfully suggest that you deny this tentative map in its current form.

Thank you for the opportunity to provide these comments.

Yours truly,

Jeffrey L. Foltz
1701 Newman Place
CC, NV 89703

CARSON CITY
PLANNING DIVISION

108 E. Proctor Street
Carson City, Nevada 89701
(775) 887-2180
Hearing Impaired: 711

MEMORANDUM
Planning Commission Meeting of September 28, 2022

DATE: September 27, 2022

TO: Carson City Planning Commission

FROM: Heather Manzo, Associate Planner

SUBJECT: Item 6.E SUB-2022-0374 For Possible Action: Discussion and possible action regarding a request from Andersen-Colard Ranch Enterprises, LLC ("Applicant") for a recommendation to the Board of Supervisors ("Board") concerning a Tentative Subdivision Map (SUB-2022-0374) known as Andersen Ranch West, to create 61 single family residential lots and a 50.33-acre remainder parcel with an existing residence on an ±80.53 acre site zoned Single Family 1 Acre ("SF1A") and Single Family 12,000 Square Feet ("SF12"), located west of Ormsby Boulevard and north of Kings Canyon Road, Assessor's Parcel Numbers ("APNs") 009-012-20 and -21. (Heather Manzo hmanzo@carson.org)

Following a discussion with the Applicant, staff is recommending modifications to the conditions of approval as presented in the staff report. In summary, staff is recommending deleting Condition No. 23 as this is a requirement of the Carson City Municipal Code (CCMC) 12.09.070; Condition No. 24 is recommended to be modified to include a cap on the pro-rata contributions; Condition No. 25 is recommended to be modified to focus the updated studies on the two subdivisions under consideration at the September 28, 2022 Planning Commission meeting; and Condition Nos. 30 and 34 are recommended to be modified to specify the Homeowners Association or similar entity. Below are the specific changes to aforementioned conditions of approval:

~~23. Prior to the issuance of a site improvement permit, the applicant shall obtain a Federal Emergency Management Agency (FEMA) conditional letter of map revision (CLOMR). Prior to the issuance of the first building permit for vertical construction, the applicant shall demonstrate that a Letter of Map Revision (LOMR) has been issued for the project.~~

24. Prior to the issuance of a site improvement permit, the traffic impact study shall be updated to adjust the trip distribution analysis to the approval of the City Engineer. Based on the updated trip distribution, a pro-rata share contribution shall be calculated for the future North Ormsby Boulevard extension. Prior to the recordation of a final map, the applicant shall submit the pro-rata contribution, not to exceed $118,895.13.

25. Prior to the issuance of a site improvement permit, the developer shall update the water, sewer and traffic impact study analyses ~~shall be updated~~ to include the Ash Canyon Subdivision (SUB-2022-0375), should it be entitled. The traffic study shall be updated to analyze the turning movements at the North Ormsby Boulevard and Mulberry Way and North Ormsby Boulevard and Bardolino Drive to ensure there are no turning movement conflicts created between this subdivision and the Ash Canyon Subdivision ~~all entitlements approved within 3 months of the approval of this tentative map~~. If updated studies recommend additional project mitigations, the developer ~~applicant~~ shall incorporate the recommended mitigations, to the approval of the City Engineer.

30. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the ~~owner~~ developer, HOA, or similar entity. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the rights of way in perpetuity.

34. Prior to the issuance of a site improvement permit, the Applicant shall have plans approved to construct a multi-use path for public use. The applicant shall provide a 30 foot wide (minimum) easement for the path where the path does not abut the public right of way. The easement shall be for non-motorized public access. The easement document shall indicate that maintenance of the easement shall be the responsibility of the HOA, or similar entity in perpetuity. The multi-use path (off street/paved/shared) shall be at least 10 feet wide and designed to meet AASHTO standards for a concrete path with an adjacent 3 foot wide decomposed granite path, including interpretive/wayfinding signage, pet waste receptacles, trash receptacles, benches and related amenities. The path will be constructed from the City's Long Ranch Pathway system on the northeast corner of APN 007-392-39 to North Ormsby Boulevard.

Staff recommends the following motion:

“I move to recommend approval of Tentative Subdivision Map SUB-2022-0374 based on the ability to make the required findings and subject to the conditions of approval contained in the staff report and amended in staff’s memo dated September 27, 2022.”

September 26, 2022

Tim Russell, PE
Engineering Director
Lumos & Associates
308 N. Curry Street, Suite 200
Carson City, NV 89703

Traffic Impact Study Supplement to Andersen Ranch West – Addition of Ash Canyon (41 Single Family Lots)

Dear Mr. Russell,

This letter report summarizes the findings of a supplement analysis to the Traffic Impact Study (TIS) for Andersen Ranch West (Headway Transportation, July 27, 2022) to include an additional single family residential development (Ash Canyon) in the Future Plus Project scenario.

The Andersen Ranch West TIS was performed based on a site plan that included 61 single family lots and the previously approved 203 single-family lot Andersen Ranch (East) project. Ash Canyon would add an additional 41 single family lots on the east side of North Ormsby Boulevard, opposite the proposed Andersen Ranch West project. For the purposes of this supplemental study, "Plus Ash Canyon" refers to the addition of the Ash Canyon trips to the plus project scenario analyzed in the Andersen Ranch West Traffic Impact Study. In other words, this is a cumulative analysis including Andersen Ranch East, Andersen Ranch West, and Ash Canyon.

The location of the projects is shown on **Figure 1**.

Study Area and Evaluated Scenario

The study intersections analyzed were the same four (4) intersections identified by City staff for study in the Andersen Ranch West traffic impact study and include:

- North Ormsby Boulevard / North Project Road (with Manhattan Drive connection)
- North Ormsby Boulevard / South Project Road (with West Washington Street connection)
- North Ormsby Boulevard / West Washington Street (east of Ormsby)
- West Washington Street / Richmond Avenue

This supplement includes analysis of both the weekday AM and PM peak hours as these are the periods of time in which peak traffic is anticipated to occur. The evaluated development scenario is:

- Future Year (20-year horizon) Plus Project Conditions, Plus Ash Canyon

PROJECT CONDITIONS

Trip Generation

Trip generation rates from *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) were used to develop trip generation estimates for the Ash Canyon project based on the Single-Family Detached Housing rates (ITE Code 210). **Table 1** shows the Daily, AM peak hour, and PM peak hour trip generation estimates.

Table 1: Ash Canyon Trip Generation Estimates

Land Use (ITE Code)	Size[1]	Project Trips[2]				
		Daily	AM In/Out	AM Total	PM In/Out	PM Total
Single-Family Detached Housing (210)	41 du	387	8 / 21	29	25 / 14	39

Notes: 1. du = dwelling units; 2. Trips were calculated based on the following rates per du: Daily – 9.43; AM – 0.70 (26% in / 74% out); PM – 0.94 (63% in / 37% out)
Source: Headway Transportation, 2022

As shown in **Table 1** above, the 41 dwelling unit Ash Canyon project is expected to generate approximately 387 Daily, 29 AM peak hour, and 39 PM peak hour trips.

Trip Distribution

Ash Canyon trips were distributed to the adjacent roadway network based on existing traffic volumes, the locations of complimentary land uses, and anticipated travel patterns. Ash Canyon trips were distributed based on the following (same distribution used for Andersen Ranch West):

- 25% to/from the north via North Ormsby Boulevard
- 50% to/from the east via West Washington Street
- 25% to/from the south via North Ormsby Boulevard

FUTURE YEAR PLUS PROJECT CONDITIONS

Traffic Volumes

Ash Canyon trips were added to the future plus project traffic volumes from the Andersen Ranch West TIS (including the background Andersen Ranch East project trips) to develop the Future Year Plus Project Plus Ash Canyon condition traffic volumes, shown on **Figure 1.**

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Future Year Plus Project Plus Ash Canyon traffic volumes. **Table 2** shows the level of service results, and the technical calculations are provided in **Appendix A**.

Table 2: Future Year Plus Project Plus Ash Canyon Intersection Level of Service

Int. ID	Intersection	Control	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	N. Ormsby Boulevard/ W. Washington Street	Side-Street Stop				
	Southbound Approach		5.1	A	4.3	A
	Westbound Approach		13.2	B	10.3	B
2	W. Washington Street/ Richmond Avenue	Side-Street Stop				
	Eastbound Approach		0.1	A	0.1	A
	Westbound Approach		5.6	A	0.5	A
	Northbound Approach		13.5	B	10.5	B
	Southbound Approach		27.3	D	11.5	B
3	N. Ormsby Boulevard/ North Project Road	Side-Street Stop				
	Northbound Approach		0.3	A	1.1	A
	Eastbound Approach		9.6	A	9.3	A
4	N. Ormsby Boulevard/ South Project Road	Side-Street Stop				
	Northbound Approach		0.3	A	0.9	A
	Eastbound Approach		9.8	A	9.3	A

Notes: 1. Delay is reported in seconds per vehicle for the worst approach/movement for side-street stop-controlled intersections.
Source: Headway Transportation, 2022

As shown in **Table 2**, the study intersections are expected to operate within policy level of service thresholds (level of service "D" or better) under Future Year Plus Project Plus Ash Canyon Conditions.

CONCLUSIONS

The following is a list of our key findings and recommendations:

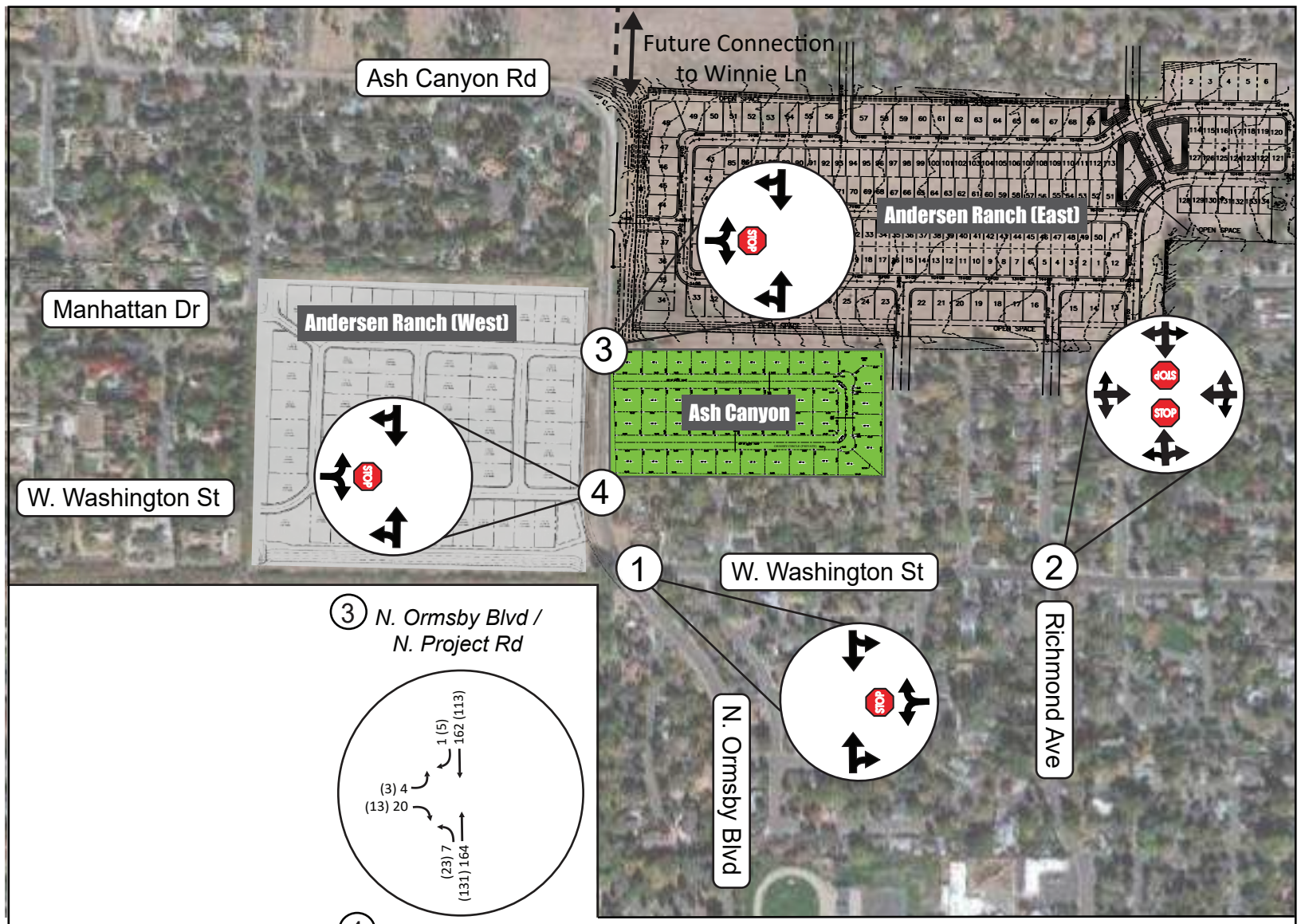
- The Ash Canyon project includes 41 Single-Family housing lots and is anticipated to generate approximately 387 Daily, 29 AM peak hour, and 39 PM peak hour trips on the external roadway network.
- Under Future Year Plus Project Plus Ash Canyon conditions, the study intersections are expected to operate within policy level of service thresholds (level of service "D" or better).

Sincerely,
HEADWAY TRANSPORTATION, LLC

Loren E. Chilson, PE
Principal

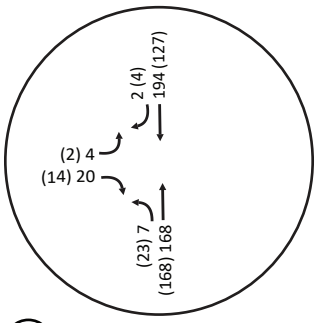
Attachments:

Figure 1 – Future Year Plus Project Plus Ash Canyon Traffic Volumes, Lane Configurations and Controls
Appendix A – LOS Worksheets

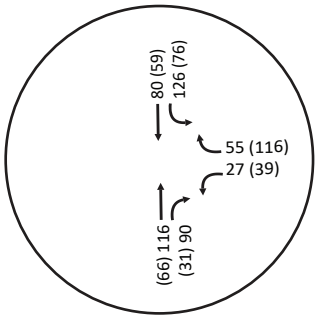


3 *N. Ormsby Blvd / N. Project Rd*

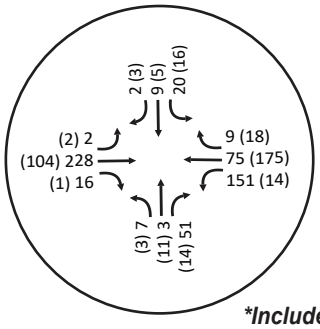
4 *N. Ormsby Blvd / S. Project Rd*



1 *N. Ormsby Blvd / W. Washington St*



2 *W. Washington St / Richmond Ave*



**Includes Andersen Ranch (East & West) and Ash Canyon*

HEADWAY TRANSPORTATION

NO SCALE

AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- (#) - Study Intersection
- STOP - Stop
- ···· - Future Connection

Figure 1

Ash 333 on Traffic Impact Study

Future Year Plus Project Plus Ash Canyon Traffic Volumes*, Lane Configurations, & Controls

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	55	116	90	126	80
Future Vol, veh/h	27	55	116	90	126	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	39	79	166	129	180	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	705	231	0	0	295	0
Stage 1	231	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	401	806	-	-	1261	-
Stage 1	805	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	340	806	-	-	1261	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	5.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	555	1261	-
HCM Lane V/C Ratio	-	-	0.211	0.143	-
HCM Control Delay (s)	-	-	13.2	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.5	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	228	16	151	75	9	7	3	51	20	9	2
Future Vol, veh/h	2	228	16	151	75	9	7	3	51	20	9	2
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	326	23	216	107	13	10	4	73	29	13	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	350	0	0	899	899	339	930	904	116
Stage 1	-	-	-	-	-	-	345	345	-	548	548	-
Stage 2	-	-	-	-	-	-	554	554	-	382	356	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1459	-	-	1203	-	-	259	278	701	247	276	934
Stage 1	-	-	-	-	-	-	668	634	-	519	515	-
Stage 2	-	-	-	-	-	-	515	512	-	638	627	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1456	-	-	1202	-	-	210	223	700	185	221	932
Mov Cap-2 Maneuver	-	-	-	-	-	-	210	223	-	185	221	-
Stage 1	-	-	-	-	-	-	665	631	-	516	415	-
Stage 2	-	-	-	-	-	-	401	412	-	566	624	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	5.6	13.5	27.3
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	510	1456	-	-	1202	-	-	205
HCM Lane V/C Ratio	0.171	0.002	-	-	0.179	-	-	0.216
HCM Control Delay (s)	13.5	7.5	0	-	8.6	0	-	27.3
HCM Lane LOS	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0	-	-	0.7	-	-	0.8

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	20	7	164	162	1
Future Vol, veh/h	4	20	7	164	162	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	22	8	178	176	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	371	177	177	0	-	0
Stage 1	177	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	630	866	1399	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	626	866	1399	-	-	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1399	-	814	-	-
HCM Lane V/C Ratio	0.005	-	0.032	-	-
HCM Control Delay (s)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	20	7	168	194	2
Future Vol, veh/h	4	20	7	168	194	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	22	8	183	211	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	411	212	213	0	-	0
Stage 1	212	-	-	-	-	-
Stage 2	199	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	597	828	1357	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	593	828	1357	-	-	-
Mov Cap-2 Maneuver	593	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1357	-	777	-	-
HCM Lane V/C Ratio	0.006	-	0.034	-	-
HCM Control Delay (s)	7.7	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	116	66	31	76	59
Future Vol, veh/h	39	116	66	31	76	59
Conflicting Peds, #/hr	3	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	43	129	73	34	84	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	327	90	0	0	107	0
Stage 1	90	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	669	971	-	-	1490	-
Stage 1	936	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	628	971	-	-	1490	-
Mov Cap-2 Maneuver	628	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	755	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	854	1490	-
HCM Lane V/C Ratio	-	-	0.202	0.057	-
HCM Control Delay (s)	-	-	10.3	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.2	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	104	1	14	175	18	3	11	14	16	5	3
Future Vol, veh/h	2	104	1	14	175	18	3	11	14	16	5	3
Conflicting Peds, #/hr	3	0	7	7	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	116	1	16	194	20	3	12	16	18	6	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	217	0	0	124	0	0	370	377	124	374	367	208
Stage 1	-	-	-	-	-	-	128	128	-	239	239	-
Stage 2	-	-	-	-	-	-	242	249	-	135	128	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1359	-	-	1469	-	-	588	556	929	585	563	835
Stage 1	-	-	-	-	-	-	878	792	-	767	709	-
Stage 2	-	-	-	-	-	-	764	702	-	871	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1355	-	-	1459	-	-	570	543	923	558	549	832
Mov Cap-2 Maneuver	-	-	-	-	-	-	570	543	-	558	549	-
Stage 1	-	-	-	-	-	-	870	785	-	763	698	-
Stage 2	-	-	-	-	-	-	745	691	-	841	785	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	10.5	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	688	1355	-	-	1459	-	-	580
HCM Lane V/C Ratio	0.045	0.002	-	-	0.011	-	-	0.046
HCM Control Delay (s)	10.5	7.7	0	-	7.5	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	23	131	113	5
Future Vol, veh/h	3	13	23	131	113	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	25	142	123	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	318	126	128	0	-	0
Stage 1	126	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	675	924	1458	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	662	924	1458	-	-	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	841	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1458	-	860	-	-
HCM Lane V/C Ratio	0.017	-	0.02	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	13	23	168	127	4
Future Vol, veh/h	2	13	23	168	127	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	25	183	138	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	373	140	142	0	-	0
Stage 1	140	-	-	-	-	-
Stage 2	233	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	628	908	1441	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	616	908	1441	-	-	-
Mov Cap-2 Maneuver	616	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	806	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1441	-	854	-	-
HCM Lane V/C Ratio	0.017	-	0.019	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF SEPTEMBER 28, 2022

FILE NO: SUB-2022-0374 **AGENDA ITEM: 6.E**

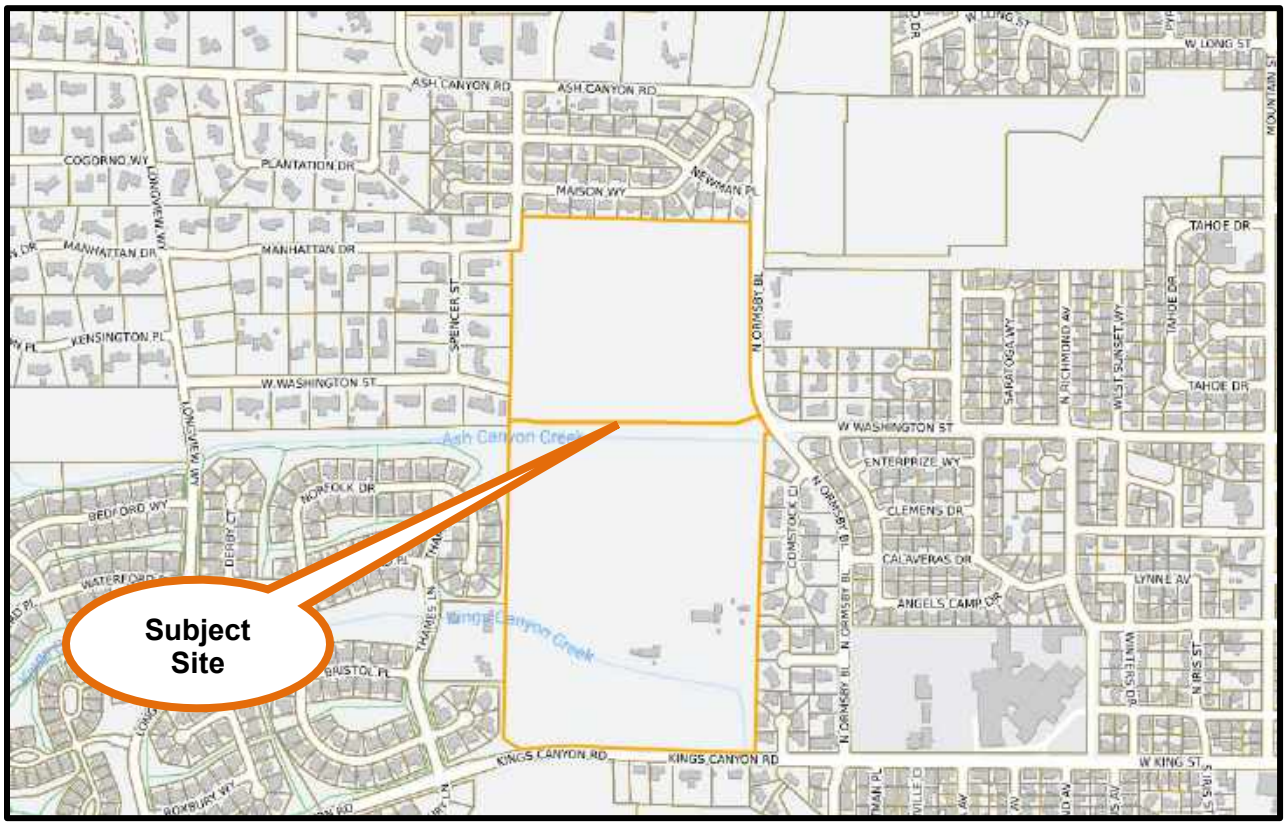
STAFF CONTACT: Heather Manzo, Associate Planner

AGENDA TITLE: For Possible Action: Discussion and possible action regarding a request from Andersen-Colard Ranch Enterprises, LLC ("Applicant") for a recommendation to the Board of Supervisors ("Board") concerning a Tentative Subdivision Map (SUB-2022-0374) known as Andersen Ranch West, to create 61 single family residential lots and a 50.33-acre remainder parcel with an existing residence on an ±80.53 acre site zoned Single Family 1 Acre ("SF1A") and Single Family 12,000 Square Feet ("SF12"), located west of Ormsby Boulevard and north of Kings Canyon Road, Assessor's Parcel Numbers ("APNs") 009-012-20 and -21. (Heather Manzo, hmanzo@carson.org)

Summary: The Applicant is requesting to subdivide an ±80.53-acre site consisting of 2 parcels into 61 single family residential lots with a minimum lot size of ±14,380 square feet, 3.82 acres of common open space, and a 50.33-acre remainder parcel with an existing residence, using the provisions of Carson City Municipal Code ("CCMC") Chapter 17.10 - Common Open Space Development. The Board is authorized to approve a Tentative Subdivision Map. The Planning Commission makes a recommendation to the Board.

RECOMMENDED MOTIONS:
"I move to recommend approval of tentative subdivision map SUB-2022-0374 to the Board of Supervisors based on the ability to make the required findings and subject to the conditions of approval included in the staff report."

VICINITY MAP:



RECOMMENDED CONDITIONS OF APPROVAL:

The following are Tentative Map conditions of approval required per CCMC 18.02.105(5):

1. All final maps shall be in substantial accord with the approved tentative map.

2. Prior to submittal of any final map, the development engineering department shall approve all on-site and off-site improvements. The applicant shall provide construction plans to the development engineering department for all required on-site and off-site improvements, prior to any submittals for approval of a final map. The plan must adhere to the recommendations contained in the project soils and geotechnical report.

3. Lots not planned for immediate development shall be left undisturbed and mass grading and clearing of natural vegetation shall not be allowed. Any and all grading shall comply with city standards. A grading permit from the Nevada Division of Environmental Protection shall be obtained prior to any grading. Noncompliance with this provision shall cause a cease-and-desist order to halt all grading work.

4. All lot areas and lot widths shall meet the zoning requirements approved as part of this tentative map with the submittal of any parcel map or preferably final map.

5. With the submittal of any parcel map or preferably final maps, the applicant shall provide evidence to the planning and community development department from the health and fire departments indicating the agencies' concerns or requirements have been satisfied. Said correspondence shall be included in the submittal package for any final maps and shall include approval by the fire department of all hydrant locations.

6. The following note shall be placed on all final maps stating:

   "These parcels are subject to Carson City's growth management ordinance and all property owners shall comply with provisions of said ordinance."

7. Placement of all utilities, including AT&T Cablevision, shall be underground within the subdivision. Any existing overhead facilities shall be relocated prior to the submittal of final maps.

8. The applicant must sign and return the notice of decision for conditions for approval within 10 days of receipt of notification after the board of supervisors meeting. If the notice of decision is not signed and returned within 10 days, then the item will be rescheduled for the next planning commission meeting for further consideration.

9. Hours of construction will be limited to 7:00 a.m. to 7:00 p.m., Monday through Friday, and 7:00 a.m. to 5:00 p.m. on Saturday and Sunday. If the hours of construction are not adhered to, the Carson City building department will issue a warning for the first violation, and upon a second violation, will have the ability to cause work at the site to cease immediately.

10. The applicant shall adhere to all city standards and requirements for water and sewer systems, grading and drainage, and street improvements.

11. The applicant shall obtain a dust control permit from the Nevada Division of Environmental Protection. The site grading must incorporate proper dust control and erosion control measures.

12. A detailed storm drainage analysis, water system analysis, and sewer system analysis shall be submitted to the development engineering department prior to approval of a final map.

13. Prior to the recordation of the final map for any phase of the project, the improvements associated with the project must either be constructed and approved by Carson City, or the specific performance of said work secured, by providing the city with a proper surety in the amount of 150 percent of the engineer's estimate. In either case, upon acceptance of the improvements by the city, the developer shall provide the city with a proper surety in the amount of 10% of the engineer's estimate to secure the developer's obligation to repair defects in workmanship and materials which appear in the work within 1 year of acceptance by the city.

14. A "will serve" letter from the water and wastewater utilities shall be provided to the Nevada Health Division prior to approval of a final map.

15. The district attorney shall approve any CC&R's prior to recordation of the first final map.

The following conditions are required per CCMC 17.10.050

16. Three-Year Maintenance Plan. Provisions shall be made to monitor and maintain, for a period of three (3) years regardless of ownership, a maintenance plan for the common open space area. The maintenance plan for the common open space area shall, at a minimum, address the following:
    a. Vegetation management;
    b. Watershed management;
    c. Debris and litter removal;
    d. Fire access and suppression;
    e. Maintenance of public access and/or maintenance of limitations to public access; and
    f. Other factors deemed necessary by the commission or the board: vector control and noxious weed control.

    The maintenance plan shall be submitted prior to final map recordation, recorded at the time of final map recordation, and referenced on the final map.

17. Permanent Preservation and Maintenance. Provisions shall be made for the permanent preservation and ongoing maintenance of the common open space and other common areas using a legal instrument acceptable to the city. This shall be addressed prior to final map recordation. A homeowners association (“HOA”) or similar entity must be formed for maintenance of common open space and other common areas.

18. Screening and Buffering of Adjoining Development. Provisions shall be made to assure adequate screening and buffering of existing and potential developments adjoining the proposed common open space development. Prior to the approval of the first site improvement plan, the applicant shall have plans approved demonstrating that screening is provided through a mix of evergreen and deciduous trees within the common open space area and solid rear-yard fences for all lots which abut common open space.

19. Common Open Space Restrictions. Designated common open space shall not include areas devoted to public or private vehicular streets or any land which has been, or is to be, conveyed to a public agency via a purchase agreement for such uses as parks, schools or other public facilities. This shall be demonstrated at the time of final map.

Other Conditions of Approval:

20. Prior to the approval of any site improvement permit or final subdivision map, the applicant shall demonstrate that a deed restriction has been recorded limiting the density of the remainder parcel. Based on the current allowable density of the overall subject site, as determined by the zoning districts, the maximum allowable remaining density for the ±50.33 acre remainder parcel shall be limited to 71 residential units. This limitation and associated deed restriction shall be noted on the final map.

21. The minimum lot size shall be 14,380 square feet and the minimum setbacks shall be noted on the final map and shall be as follows:

Front	20 feet
Side	10 feet
Street Side	15 feet
Rear	20 feet

22. With the site improvement permit application, the applicant shall provide the following:
    a. A landscape and irrigation plan demonstrating compliance with the applicable sections of the Development Standards in Division 3 for the common area parcel and any other common area landscaping.
    b. An open space exhibit demonstrating both quantitatively and qualitatively, compliance with the requirements of CCMC 17.10.046.

23. Prior to the issuance of a site improvement permit, the applicant shall obtain a Federal Emergency Management Agency (FEMA) conditional letter of map revision (CLOMR). Prior to the issuance of the first building permit for vertical construction, the applicant shall demonstrate that a Letter of Map Revision (LOMR) has been issued for the project.

24. Prior to the issuance of a site improvement permit, the traffic impact study shall be updated to adjust the trip distribution analysis to the approval of the City Engineer. Based on the updated trip distribution, a pro-rata share contribution shall be calculated for the future North Ormsby Boulevard extension. Prior to the recordation of a final map, the applicant shall submit the pro-rata contribution.

25. Prior to the issuance of a site improvement permit, the water, sewer and traffic impact study analyses shall be updated to include all entitlements approved within 3 months of the approval of this tentative map. If updated studies recommend additional project mitigations, the applicant shall incorporate the recommended mitigations, to the approval of the City Engineer.

26. Prior to the issuance of the site improvement permit and prior to the recordation of the final map, the applicant shall demonstrate that all internal streets will be constructed to meet the roadway section urban standard detail (C-5.1.8), including 5-foot-wide sidewalks on both sides of the street.

27. Prior to the issuance of a site improvement permit ,the applicant shall demonstrate that plans include the construction of a multi-use path, sidewalks, and bike lanes that are in

compliance with the Unified Pathways Master Plan (UPMP). The plans shall provide a connection of the multi-use path into sidewalks with a crosswalk at the intersection of Mulberry Way and North Ormsby Boulevard. A rectangular rapid flashing beacon (RRFB) shall be installed at the crosswalk. Prior to the recordation of the final map, the applicant shall demonstrate that the multi-use pathways and sidewalks within the project site have been constructed or bonded for and shall have a public access easement.

28. Prior to the issuance of a site improvement permit, the applicant shall have plans approved which include a water sampling tap is located within a common area parcel near one of the project entrances. The sampling tap must be a Kupferle Eclipse #88 or approved equivalent. Prior to the final inspection for the site improvement permit, the water sampling tap must be installed.

29. Prior to the issuance of a site improvement permit, the applicant shall evaluate the condition of the existing sewer manhole located at Mulberry Way and North Ormsby Boulevard. The applicant will be required to replace the manhole if condition warrants replacement as determined by the City Engineer.

30. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the owner. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the rights of way in perpetuity.

31. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City pollinator plant list and other plant selection resources can be found at www.carson.org/beecityusa.

32. The developer shall incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:
    - Educating workers about the importance of managing weeds on an ongoing basis;
    - Properly identifying weed species to determine most appropriate treatment strategies;
    - Avoiding or treating existing weed populations; and
    - Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

    For more information on "best management practices" please contact The Carson City Parks, Recreation and Open Space Department.

33. Where possible, deciduous trees must be planted a minimum of 5 feet from any city/public street, sidewalk or pathway and evergreen trees must be planted a minimum of 10 feet from any city/public street, sidewalk or pathway. Fruit bearing, "non-fruiting" flowering or

any other trees that drop debris such as seed pods shall be prohibited near or placed where they will eventually hang over public sidewalks or pathways.

34. Prior to the issuance of a site improvement permit, the Applicant shall have plans approved to construct a multi-use path for public use. The applicant shall provide a 30 foot wide (minimum) easement for the path where the path does not abut the public right of way. The easement shall be for non-motorized public access. The easement document shall indicate that maintenance of the easement shall be the responsibility of the HOA in perpetuity. The multi-use path (off street/paved/shared) shall be at least 10 feet wide and designed to meet AASHTO standards for a concrete path with an adjacent 3 foot wide decomposed granite path, including interpretive/wayfinding signage, pet waste receptacles, trash receptacles, benches and related amenities. The path will be constructed from the City's Long Ranch Pathway system on the northeast corner of APN 007-392-39 to North Ormsby Boulevard.

LEGAL REQUIREMENTS: CCMC 17.05 (Tentative Maps); CCMC 17.07 (Findings); CCMC 17.10 (Common Open Space Development); and NRS 278.330

SITE DEVELOPMENT INFORMATION:
SUBJECT SITE AREA: 80.53 acres
EXISTING LAND USE: Single family with ranch and pasture

MASTER PLAN DESIGNATION: Medium Density Residential and Low Density Residential

ZONING: SF6 and SF12

KEY ISSUES: Is the Tentative Map consistent with the required findings? Does the proposal meet the Tentative Map requirements and other applicable requirements? Can the proposed reduced setbacks be supported by the required findings?

SURROUNDING ZONING AND LAND USE INFORMATION
NORTH: SF12 / Single family residences
SOUTH: SF12 & Public Community (“PC”) / residential and public open space
EAST: Single Family 12,000 / Single family residences & vacant land
WEST: Single Family 1 Acre and PC / single family residential and Carson City trails

ENVIRONMENTAL INFORMATION:
FLOOD ZONE: Zone X (shaded) and Zone AE
SEISMIC ZONE: Zone I (Greatest Severity) and II (Moderate Severity)
FAULT: Beyond 500 feet

DISCUSSION:
The project site is located on the west side of North Ormsby Boulevard ±660 feet south of its intersection with Ash Canyon Road. The site consists of two parcels totaling ±80.53 acres in size and is zoned SF1A and SF12. The site is currently developed with a single-family home, barns, and pasture.

The Applicant is seeking approval of a tentative subdivision map to subdivide the northern portion of the project site into 61 single family residential units as a common open space development utilizing the standards set forth in CCMC 17.10. A remainder parcel will encompass the existing ranch house and remaining agricultural land not proposed for further subdivision at this time.

The project proposes two points of access into the development from Ormsby Boulevard that will provide east to west connections through the project to Manhattan Drive and West Washington Street to the west. The continuation of the multi-use and pedestrian trail network that has been established by adjacent developments is proposed with this project. Connections will be made to existing pathways to the west and future connections to the east. Additionally, pedestrian improvements are proposed on Kings Canyon Road which will provide for safe pedestrian movement along the project frontage. To ensure pedestrian safety with the project, a condition is recommended to require the applicant to install a crosswalk with a rapid flashing beacon that will help to ensure safe movement of pedestrians across North Ormsby Boulevard.

The subject site consists of ±60.74 acres zoned SF1A and ±19.79 acres zoned SF12. Based on the zoning for the gross site area of the project, the site can be developed with a maximum of 132 single family dwelling units. CCMC 17.10 allows for modification to lot and yard standards through a common open space development, however the residential density shall not exceed the total number of dwelling units allowed by the underlying zoning districts. This proposal includes the development of 61 residential units and a remainder parcel that could be developed in the future with a total of 71 dwelling units. Staff has recommended a condition to require the applicant to place a note on the map and to record a deed restriction limiting the number of units that could be developed on the remainder parcel based on the current zoning.

CCMC 17.10 requires common open space development lots within the SF1A to meet a minimum lot size of 14,374.8 square feet and have minimum setbacks of: Front and Rear = 20 feet, Side = 10 feet, Street Side = 15 feet. CCMC 17.10 allows for modifications to lot dimensions and setbacks as described in Section 17.10.030. The overall design concept is single family detached with a minimum lot size of 14,380 square feet in compliance with the minimum lot standards.

The project proposes setbacks as follows:

Front Yard-	20 feet
Street Side Yard-	10 feet
Side Yard	15 feet
Rear Yard-	20 feet

The proposal includes approximately 3.82 acres of common open space throughout the project site. The project proposes landscaping and multi-use pathways along the project periphery that is a minimum 30 feet wide where the project abuts residences or areas that may be developed with residences. A minimum 20-foot project buffer is proposed along the North Ormsby Boulevard frontage. The common open space areas will include landscaping and trail connections that will be open to the public. Per the standard conditions for a Common Open Space Development, the project must provide for adequate screening and buffering of existing and potential development adjoining the proposed development. The proposal does not address proposed screening; therefore, staff has included a condition of approval requiring a privacy fence or wall to be installed along the rear yards of the project which abut the common open space areas.

Parking will be provided for each lot. There is on-street parking so guest parking is not required.

The Planning Commission conducts a public hearing and advises the Board if the proposed tentative map is consistent with the provisions of the CCMC and NRS 278.320.

PUBLIC COMMENTS: Public notices were mailed on September 15, 2022 to 300 property owners within 900 feet of the subject site pursuant to the provisions of NRS and CCMC for the Tentative Subdivision Map application. As of the completion of this staff report no public comments have been received. Any written comments that are received after this report is completed will be submitted prior to or at the Planning Commission meeting on September 28, 2022 depending upon their submittal date to the Planning Division.

OTHER CITY DEPARTMENT OR OUTSIDE AGENCY COMMENTS: The following comments were received from City departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable. These comments are based on the tentative map plans and reports submitted. All applicable code requirements will apply whether mentioned in this report or not.

Development Engineering

The Carson City Public Works Department Development Engineering Group ("Development Engineering") has no preference or objection to the tentative map request and offers the following conditions of approval:

- The project must obtain a Federal Emergency Management Agency ("FEMA") conditional letter of map revision ("CLOMR"), prior to issuance of the site improvement permit and funds must be provided to complete the letter of map revision ("LOMR") prior to building permit.

- A revised Traffic Impact Study shall be submitted with an updated trip distribution analysis amended to the satisfaction of the City Engineer and a Pro Rata share contribution for the North Ormsby Boulevard extension will be required prior to issuance of the site improvement permit based on the trip distribution.

- All analyses (water, sewer, and transportation) are to be updated to include all projects that have been entitled up to 3 months after this project has been entitled at the time of the site improvement permit. In the event that the updated reports show that mitigation is required to meet development standards, the project must provide mitigation to the satisfaction of the City Engineer.

- The site improvement permit, and final map shall demonstrate that all internal streets are within compliance with the Roadway Section Urban Standard detail (C-5.1.8) including 5-foot-wide sidewalks on both sides of the street.

- A multi-use path shall connect into existing sidewalks with a crosswalk at the intersection of Mulberry Way and North Ormsby Blvd. The multi-use path, sidewalks, and on-street bike lanes shall comply with the standards outlined in the Unified Pathways Master Plan ("UPMP"). The Rectangular Rapid Flashing Beacon ("RRFB") will need to be tied into at the most northern intersection on Ormsby Blvd. The public trail from Ormsby to the multi-use path must have a public access easement.

- A water sampling tap must be installed in a common area of the project near one of the entrances. The sampling tap must be a Kupferle Eclipse #88 or approved equal.

- The existing sewer manhole at Mulberry Way and North Ormsby Blvd that the development will be connecting to must be evaluated for replacement.

- A new geotechnical report will be required with the site improvement permit addressing the high groundwater table, possible corrosive soil, and liquefaction. In the event that the new report shows that mitigation is required to meet development standards, the project must provide mitigation to the satisfaction of the City Engineer.

The project must meet all Carson City Development Standards and Standard Details including but not limited to the following:

- Half-street improvements must be installed on North Ormsby Boulevard along the project frontage. This will include striping, sidewalk, curb, gutter, and paving to meet the city standard detail for a two-lane urban collector with bike lanes. Bike lane striping must be installed along the frontage.

- Half-street improvements must be installed on Kings Canyon Road along the project frontage. This will include striping, sidewalk, curb, gutter, and paving to meet the city standard detail for a two-lane urban collector with bike lanes.

- A multi-use path separated from the public right of way shall be installed along the north side of Kings Canyon Road per the Safe Routes to School ("SRTS") Master Plan and the Carson Area Metropolitan Planning Organization ("CAMPO") 2050 Regional Transportation Plan.

- All internal streets must meet the roadway section urban standard detail (C-5.1.8) including 5-foot-wide sidewalks on both sides of the street.

- The interior streets must have a minimum asphalt thickness of 4 inches, or per the geotechnical engineer's recommendations, whichever is thicker.

- ROW limits that connect to Washington Street and Manhattan Drive show a 43 foot width. The minimum acceptable ROW width is 50 feet for local streets per Division 12.6 Table 12.1 or to the City Engineers satisfaction.

- All intersections must meet MUTCD standards.

FINDINGS:

Development Engineering has reviewed the application within our areas of purview relative to adopted standards and practices and to the provisions of CCMC 17.07.005. The following Tentative Map Findings by Development Engineering are based on approval of the above conditions of approval:

1. *Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal.*

Water: The existing water main is 12-inch steel to the east (North Ormsby Blvd) and 6-inch asbestos concrete to the northwest (Manhattan Dr). This development will be looping the water

while connecting a higher-pressure zone with a lower pressure zone. This will allow the city to access water, if needed, between the two zones. This will allow the city to access water, if needed, between the two zones. The city has capacity to supply the required water and this development will help the overall system by connecting the two zones. There is sufficient water capacity to serve this subdivision.

Sewer: The existing sewer main is 8-inch asbestos concrete to the east (North Ormsby Blvd). This main is approximately 45% full (depth/diameter). A condition is recommended to require an evaluation of the existing sewer manhole the project will connect to determine if replacement is necessary to support the project. After construction, this main is expected to be approximately 49% full (depth/diameter). No additional mitigations have been identified and services are in place or will be constructed to serve the project.

2. The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision.

The City has sufficient system capacity and water rights to meet the required water allocation for the subdivision.

3. The availability and accessibility of utilities.

Water and sanitary sewer utilities are available and accessible.

4. The availability and accessibility of public services such as schools, police protection, transportation, recreation, and parks.

The road network necessary for the subdivision is available and accessible. According to the traffic impact study, the surrounding intersections are anticipated to operate at an acceptable level of service.

5. Access to public lands. Any proposed subdivision that is adjacent to public lands shall incorporate public access to those lands or provide an acceptable alternative.

There are public lands adjacent to this project. These lands are accessible via Kings Canyon Road and the proposed trails.

6. Conformity with the zoning ordinance and land use element of the city's master plan.

Development engineering has no comment on this finding.

7. General conformity with the city's master plan for streets and highways.

As proposed and with recommended conditions of approval, the development is in conformance with the city’s master plan for streets and highways.

8. *The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision*.

The project is anticipated to generate approximately 576 average daily trips (ADT) with ±43 a.m. peak hour trips (PHT) and ±58 p.m. PHT. Primary access to the project will be via North Ormsby Boulevard. The project will provide roadway connections between North Ormsby Boulevard and Manhattan Drive and West Washington Street to the west. North Ormsby Boulevard is a minor collector street while Manhattan Drive and West Washington Streets are classified as local

roadways. According to the traffic impact study, the surrounding intersections are anticipated to operate at an acceptable level of serve of a C or better.

It is recommended that the project contribute a pro-rata share toward the future North Ormsby Boulevard extension based upon anticipated trip distribution. The total estimated cost for the extension project is $1,380,000. The traffic study identifies a trip distribution breakdown that appears to need further evaluation. A condition is recommended to require the applicant to work with the City Engineer in determining an accepted project trip distribution. However, changes to the trip distribution will not result in a level of service change to a failing service.

There will be on-street parking on the internal streets. There is no on-street parking on North Ormsby Boulevard, West Washington Street, and Manhattan Drive.

The proposed rectangular rapid flashing beacon (RRFB) system and crosswalk has been provided by the Anderson Ranch project located to the east of the subject site across North Ormsby Boulevard. The RRFB will need to be tied into the North Ormsby Boulevard and Mulberry Way intersection with the construction of this development in order to provide safe connectivity of the Carson City multi-use pathway system.

9. The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.

Earthquake faults: The closest earthquake fault is over 500 feet away with a slip rate of less than 0.2 mm/yr.

FEMA flood zones: The current FEMA flood zone is Zone X (shaded) and Zone AE. House Moran has been in coordination with the Carson City Floodplain Manager on the Conditional Letter of Map Revision (CLOMR) and the City agrees with the preliminary flood design. A condition is recommended to ensure the CLOMR and Letter of Map Revision (LOMR) are completed at the appropriate time in the development process.

Site slope: The existing site slope is between 0 to 2 percent.

Soils: The soil is primarily coarse sandy loam with the depth to the water table between 10 to 12 inches. In the event that groundwater is encountered, construction must meet standard practices for mitigating groundwater. The geotechnical report did identify the liquefaction possibility but did not provide specific recommendations. The geotechnical report provided did not identify corrosive soils, however other projects near the subject site have identified corrosive soils within proximity to the project. If corrosive soils are identified, this condition is easily mitigated through geotechnical engineer recommendations. It is recommended that an updated geotechnical report be provided at the time of site improvement to ensure any necessary mitigations are in place with this development.

10. The recommendations and comments of those entities reviewing the subdivision request pursuant to NRS 278.330 thru 278.348, inclusive.

Development Engineering has no comment on this finding.

11. The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.

The subdivision has sufficient secondary access, and sufficient fire water flows.

12. *Recreation and trail easements*.

Recreational trails are proposed with the project which include connections to existing and planned multi-use pathways. A condition is recommended to ensure the proposed multi-use pathways within the project will include public easements.

Carson City Fire Department

1. The project shall meet or exceed the adopted International Fire Code and the International Fire Code Amendments.

2. Two means of access and egress from the subdivision shall meet the adopted International Fire Code and northern Nevada Fire Code amendments.

Carson City Assessor

The subject parcels are currently Agricultural Deferred parcels. Deferred taxes will need to be calculated. Please allowing 7-10 business days for the Assessor's Office to calculate the amounts. Request for Deferred tax amounts are required in writing.

Carson City Parks, Recreation and Open Space Department

1. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the owner. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the street(s) right of ways in perpetuity.

2. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Also, any remaining landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City Pollinator Plant list and other plant selection resources can be found at www.carson.org/beecityusa

3. The developer is required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:

   - Educating workers about the importance of managing weeds on an ongoing basis;
   - Properly identifying weed species to determine most appropriate treatment strategies;
   - Avoiding or treating existing weed populations; and
   - Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

For more information on “best management practices” please contact The Carson City Parks, Recreation and Open Space Department.

4. Deciduous trees must be planted a minimum of 5’ from any city/public street, sidewalk or pathway. Evergreen trees must be planted a minimum of 10’ from any city/public street, sidewalk or pathway. Fruit bearing, “non-fruiting” flowering or any other trees that drop debris such as seed pods will not be permitted near or placed where they will eventually hang over city/public sidewalks or pathways.

5. Carson City Municipal Code: Title 18, Division 3 should be reviewed by any/all parties involved in the proposed landscape design prior to landscape plans being submitted to the city for final approval of a building or site improvement permit. Note: Special care and consideration should be taken in the protection of existing trees on-site. https://library.municode.com/nv/carson_city/codes/code_of_ordinances?nodeId=TIT18_APPENDIXCADEST_DIV3LA

6. The project is subject to the collection of Residential Construction Tax (“RCT”), compliant with NRS Chapter 278 and Carson City Municipal Code (CCMC 15.60).

7. The applicant will construct a multi-use path for public use. This shall be coordinated through and agreed upon by the Parks, Recreation & Open Space Department. The applicant shall provide a 30' wide (minimum) easement for the path. Easement shall be a non-motorized public access trail easement. The easement document shall indicate that maintenance of the easement shall be the responsibility of the HOA in perpetuity. The applicant will design and construct a multi-use path (off street/paved/shared) at a 10' wide (minimum) AASHTO standard concrete path with an adjacent 3' wide decomposed granite path, including interpretive/wayfinding signage, pet waste receptacles, trash receptacles, benches and related amenities. The path will be constructed from the City's Long Ranch Pathway system on the northwest corner of APN 00739239 to Ormsby Blvd, and have an at grade pedestrian crossing with flashing lights on North Ormsby Boulevard. All other street crossings associated with the multi-use path must be reviewed and approved by Carson City Public Works and Parks, Recreation & Open Space Departments to ensure pedestrian safety. This trail must be constructed or bonded for prior to Board consideration of the first final map.

8. Paths, sidewalks and on-street bike lanes along the street frontage shall conform to the standards as outlined in the Carson City Unified Pathways Master Plan. The Unified Pathways Master Plan (“UPMP”) identifies on-street bike lanes along the street frontage of the proposed development on North Ormsby Boulevard. This UPMP requirement needs to be coordinated with Development Engineering's requirements for the development's street frontage design and improvements.

9. A multi-use path shall be constructed in the buffer area on all sides of the property to create a looped trail system. All trails will be owned and maintained by the HOA. All street crossings associated with these paths must be reviewed and approved by Carson City Public Works and PROS to ensure pedestrian safety.

10. The applicant shall demonstrate connectivity between the trailhead/multi-use path and the development's sidewalk/path system. Sidewalk connections to the trailhead and multi-use path will provide convenient and logical access to these facilities and the overall sidewalk network within the development.

TENTATIVE MAP FINDINGS: Staff recommends approval of the Tentative Subdivision Map based on the findings below and the information contained in the attached reports and documents, subject to the recommended conditions of approval, and further substantiated by the applicant's written justification pursuant to CCMC Chapters 17.05 (Tentative Maps); 17.07 (Findings) and NRS 278.349. In making findings for approval, the Planning Commission and Board of Supervisors must consider:

1. Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal.

The development is required to comply with all applicable environmental and health laws concerning water and air pollution and disposal of solid waste. A copy of the proposed tentative map was submitted to the Nevada Division of Water Resources and the Nevada Division of Environmental Protection. The Public Works Department has advised of adequate capacity to meet water and sewer demand, subject to the recommended conditions of approval. The utility design will need to meet all applicable development standards related to water and sewer design.

2. The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision.

Water supplied to the development will meet applicable health standards. The City has sufficient system capacity and water rights to meet the required water allocation for the subdivision.

3. The availability and accessibility of utilities.

All utilities are available in the area to serve this development.

4. The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks.

The project is located adjacent to existing single-family developments which are served by the existing public services including schools, sheriff, transportation facilities, and parks. As noted in the June 29, 2022 annual report to the Growth Management Commission, the School District has indicated that they do not have any concerns with the number of children resulting from the new construction. Development Engineering has reviewed the development for impacts to water, sewer, storm drainage, and roadway systems. As conditioned, the existing infrastructure has been found to be sufficient to supply water and sanitary sewer and the City has capacity to meet the demand. Based on the findings of the traffic study, the road network will be adequate to serve the project. The project will tie into existing public multi-use trails providing for recreational opportunities. Additionally, parks and public lands are within proximity to the proposed development. The Carson City Fire Department has also reviewed the development. As proposed, sufficient access is provided. As noted in the Fire Department comments, the project must comply with the currently adopted edition of the International Fire Code and the Northern Nevada Fire Code Amendments as adopted by Carson City.

5. Access to public lands. Any proposed subdivision that is adjacent to public lands shall incorporate public access to those lands or provide an acceptable alternative.

The project will provide for a connection between planned multi-use pathways to the east and existing pathways and public lands to the west of the project site. Frontage improvements will be completed along North Ormsby Boulevard and Kings Canyon Road frontages which include sidewalks. A condition of approval is recommended to install a rapid flashing beacon across

North Ormsby Boulevard to ensure safe pedestrian and bicycle access to the broader public trail system in the area.

6. Conformity with the zoning ordinance and land use element of the City's Master Plan.

The project has utilized standards contained in CCMC 17.10 to demonstrate the project complies with the allowable density for the site. The proposed common open space development must comply with the allowable density of the zoning district, but may have flexibility on lot size, lot width, and setbacks. Based on ±60.74 acres zoned SF1A and ±19.79 acres zoned SF12, the gross site area is limited to 132 residential units. The remainder parcel will have a deed restriction that ensures the project will comply with the density limitations for the site.

Per Division 2 of the Development Standards, the applicant must provide two parking spaces per dwelling unit provided the internal or abutting streets provide for on-street parking. The internal streets will provide for parking on both sides of the street and each lot will provide for a minimum of two parking spaces, typically via a two-car garage.

The periphery boundary adjacent to residences or residentially zoned property is separated from proposed residential lots by a 30-foot-wide common open space area. Where the periphery boundary abuts a right of way, a minimum 20-foot-wide common open space area is proposed. A condition is recommended to ensure that adequate screening for the project is provided through a combination of lot fencing and common open space landscaping.

The Master Plan land use designations for the project are Low Density Residential and Medium Density Residential. Both Master Plan land use designations are intended for primarily single family residential development. The Low Density Residential designation allows a range of densities between 0.2 and 3 dwelling units per acre (du/ac) while Medium Density Residential is densities are between 3 and 8 du/ac. While density is determined by the zoning districts, the allowable overall density of the site is 132 units which is equivalent to ±1.65 du/ac.

The proposed subdivision is compatible with the surrounding neighborhood and as proposed and with recommended conditions, the project conforms with CCMC and the land use element of the Master Plan.

7. General conformity with the City's Master plan for streets and highways.

The project will provide east to west street grid and multi-use pathway connectivity. As proposed and with recommended conditions of approval, the proposed subdivision is in conformance with the City's master plan for streets and highways.

8. The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.

As proposed and conditioned, the project will have little or no detrimental effect on vehicular or pedestrian traffic. The traffic study estimates the project will generate approximately 576 ADT with ±43 a.m. and ±58 PHT. The project will be required to install half street improvements along the Kings Canyon Road and North Ormsby Boulevard frontages. Sidewalk connections and a pedestrian safety beacon will be installed with the project. The proposal includes connectivity of the roadway and pedestrian network from east to west. Additionally, a condition is recommended to require the Applicant to make a pro-rata contribution toward the planned future extension of North Ormsby Boulevard.

9. The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.

Earthquake faults: The closest earthquake fault is over 500 feet away with a slip rate of less than 0.2 mm/yr.

FEMA flood zones: The current FEMA flood zone is Zone X (shaded) and Zone AE. House Moran has been in coordination with the Carson City Floodplain Manager on the Conditional Letter of Map Revision (CLOMR) and the City agrees with the preliminary flood design. A condition is recommended to ensure the CLOMR and Letter of Map Revision (LOMR) are completed at the appropriate time in the development process.

Site slope: The existing site slope is between 0 to 2 percent.

Soils: The soil is primarily coarse sandy loam with the depth to the water table between 10 to 12 inches. In the event that groundwater is encountered, construction must meet standard practices for mitigating groundwater. The geotechnical report did identify the liquefaction possibility but did not provide specific recommendations. The geotechnical report provided did not identify corrosive soils, however other projects near the subject site have identified corrosive soils within proximity to the project. If corrosive soils are identified, this condition is easily mitigated through geotechnical engineer recommendations. It is recommended that an updated geotechnical report be provided at the time of site improvement to ensure any necessary mitigations are in place with this development.

10. The recommendations and comments of those entities reviewing the subdivision request pursuant to NRS 278.330 thru 278.348, inclusive.

The proposed tentative map has been routed to the Nevada Department of Environmental Protection ("NDEP") and the Nevada Division of Water Resources. Public Works has indicated sufficient water and sewer capacity to meet the demands of this project, subject to the condition of approval requiring the developer to enter into a pro-rata share agreement for the future extension of Ormsby Boulevard.

11. The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.

The Public Works Department has reviewed the project in conjunction with the Fire Department. The subdivision has sufficient access, including connections into existing roadways to better connect the street grid. There are sufficient fire water flows to serve the development. The Fire Department will review the site improvement permit for compliance with the International Fire Code and Northern Nevada Fire Code amendments as adopted by Carson City.

12. Recreation and trail easements.

Recreational trails are proposed with the project which include connections to existing and planned multi-use pathways. A condition is recommended to ensure the proposed multi-use pathways within the project will include public easements.

Attachments

Application- SUB-2022-0374

From:	Brian Ferenz
To:	Planning Department
Cc:	Sean & Nanci Davison; pencelegaldefense@gmail.com; jim@nvfish.com; Shelley Ferenz
Subject:	Regarding Opposition to Proposed Zone Change for Anderson Ranch West from SF1A to SF12
Date:	Tuesday, September 27, 2022 2:47:47 PM

Hello

This is in regards to expressing opposition to the Request from Andersen Colard Ranch Enterprises to rezone the Anderson Ranch West from SF1A to SF12.

In general the rezoning jeopardizes the:

1) Loss of Neighborhood character defined by low traffic, abundance of wildlife, publicly available open space (roads, easements, creeks, trails) as exemplified in the Long View Estates, Kensington Estates, and The Highlands Neighborhood (Long Ranch Park).

3) Overloading traffic patterns that are already strained by new development particularly Washington St, Ormsby, and Kings Canyon particularly with the addition of the Anderson Ranch East Development in progress and new development off of Longview on Skyview Ct.

4) Loss of primary wildlife easement along the Ash Canyon Creek and Irrigation ditches encompassing the Anderson Ranch West. These are frequently used by Deer, Bobcats, Mountain Lions, Coyote's, and Bears to access the few remaining fruit and nut trees in the area.

2) Rezoning low density SF1A to high density SF12 resulting in a transfer of 3 buildings to the originally planned 1 building. The developers plan to maintain the current ranch house and 50 acres as open space and a justification for the high density housing SHOULD NOT BE CONSIDERED BY THE PLANNING COMMISSION. This is nothing more than a short term tactic to abuse the intent of Carson City Municipal Code 10.10 Common Open Space Development. The planning commission should require the developer to meet the intent of the Opens Space Development with the total plan for the 30 acres to be developed.

Thank you

Brian & Shelley Ferenz

2028 Manhattan Dr.

Carson City, NV, 89703

bferenz@mindspring.com

From: Roger Trott
To: Planning Department
Subject: Comments on Andersen Ranch West Subdivision Map
Date: Monday, September 26, 2022 9:29:15 AM

We live in the Longview Ranch area. Like many of our neighbors, we have concerns about this project and its impacts on the rural nature of our environment. Beyond that general concern, we have reviewed the staff reports for the Anderson Ranch West proposal being considered by the Planning Commission on September 28th. We offer the following specific comments for your consideration.

1. The traffic study did not assess potential impacts to Longview Way, including its intersections with Kings Canyon Road and Ash Canyon Road. Two of the new subdivision access routes will be entering/exiting from Longview Way. Traffic effects, including safety and congestion effects, on that roadway should be evaluated.
2. Ash Canyon Road is narrow and in poor condition, with crumbling shoulders. Any additional traffic on this road will result in adverse effects on safety and the condition of the road. Roadway improvements should be included as a condition of tentative map approval.
3. The Andersen Ranch West property is in a 100-year floodplain and partially floods during high rain events. As a result, wetlands may be present on this site. Has a wetland delineation been conducted on the site? If not, one should be conducted prior to tentative map approval. A Section 404 permit and wetland mitigation may be required by the Army Corps of Engineers prior to development of the site.
4. Conditions for tentative map approval should require the developer/contractor to undertake additional measures to control dust from onsite construction. Additionally, Carson City should commit to additional daily monitoring to enforce dust control. Although a dust permit was required for the development between Mountain and Ormsby, we understand that dust from that development was an ongoing and significant problem for nearby residents. Those of us living in the Longview Ranch area do not want to experience similar issues if the Andersen Ranch West project is approved.

Thank you for the opportunity to comment on this proposed project.

Roger Trott & Lisa Rea

SUB-2022-0374

361

February 23, 2022

Hope Sullivan, Community Development Director
Carson City Planning Division
108 E. Proctor Street
Carson City, NV 89701

RE: Conceptual Subdivision Map for Anderson Ranch Development

Hi Hope,

Thank you for sharing the application and Conceptual Subdivision Map for the proposed Anderson Ranch Development.

It is unfortunate that the conceptual plan is not subject to the same public noticing process as is a tentative map application. The owner/developer will no doubt at some point submit a tentative map for the subdivision based on input from the City regarding the conceptual plan. At that point, having invested a substantial amount of money in the design of the development, the owner will be reluctant to implement design changes that might be suggested by the public, regardless of merit.

As I had indicated previously, I have some concerns/comments/questions about the project. I'm hoping that you will consider this information when you provide the City's comments.

First, a few questions:

1. Why is the Vintage project still on the City's Planning Division website, when it has been superseded by the project that is currently under construction on the east side of Ormsby Boulevard? Shouldn't the new project be shown there?
2. The conceptual application indicates that the existing zoning allows for the construction of 131 lots within the project area, but the conceptual map shows construction of only 61 lots. Does the applicant intend to develop an additional 70 lots elsewhere within the project limits, and if so, how can this application be considered complete when it does not address the remainder of the project? If the applicant does not intend to develop any additional lots, will the remainder of the project area be restricted to prevent future development?

The application indicates that the proposed development is "Consistent with the Master Plan Land Use Map in location and density." The parcel where the development is proposed, APN 009-012-21, is currently Master Planned for Low Density Residential Use, 5 to 0.33 acres per dwelling unit. The project proposes lot sizes from 0.32 acres to 0.51 acres on this parcel. Accordingly, this portion of the project is mostly but not entirely consistent with the Master Plan. However, the current zoning on this parcel is SF1A, 1 acre per dwelling unit. Some of us who live adjacent to the proposed development purchased our homes with the knowledge that this parcel might someday be divided into one acre lots because of the zoning. Other long term residents were told directly by Andersen family members that the parcel would never be developed, and that if subsequent generations of the family desired to sell the land efforts would be made to transfer this to the city so the property could remain open space. (The project site is a Priority Open Space Area for acquisition by the City in its Master Plan for the Future Open Space System.) We never anticipated the possible development of 1/3 acre lots on this parcel. Will the owner need to request a zone change for this project?

The applicant proposes to transfer density from APN 009-0120-20 to APN 009-012-21 for the purpose of creating lots that are smaller than the current SF1A zoning allows. The application indicates that this process is in accordance with Carson City Municipal Code Chapter 17.10 - Common Open Space

Development, and that *"the project will cluster develop in a manner that best utilizes the available land, while implementing common space and maintaining floodplain."* The conceptual map indicates a total of 3.7 acres of common space north of Ash Creek. The proposed subdivision layout is nothing more than a simple grid. How can the owner anticipate approval of the requested "clustering" when such a small portion of the total project area (80 acres) is identified as future open space, and the traditional subdivision layout does nothing to promote usable open space other than what is associated with the multi-purpose path? If open space will be provided elsewhere on the project to offset the proposed increase in density, why is that open space not indicated on the conceptual map? Will the proposed transfer of density from APN 009-012-20 to APN 009-012-21 result in the prohibition of any future subdivision of APN 009-012-20? It appears to me that the application and the conceptual map are incomplete.

The conceptual map for the subdivision proposes two new intersections on North Ormsby Boulevard, which the NDOT roadway classification maps identify as a minor collector. The southerly intersection is located roughly 270' north of the Washington Street intersection on Ormsby. The northerly intersection appears to be roughly 400' south of the existing Newman Place intersection. Because the Carson City Municipal Code and design standards do not address intersection spacing, I am referencing the NDOT Access Management System and Design Standards, which specifies a minimum intersection spacing of 660' for full access to a minor collector. This spacing could be achieved by shifting the proposed development south approximately 270'. This would have multiple benefits including:

1. Improving the access to the development by aligning the southerly access with Washington Street. Not only would this provide more direct access to the subdivision, it would eliminate the conflicting turning movements associated with the four driveways located within 75' of the southerly access shown on the conceptual map.
2. Increasing the separation between the existing Newman Place intersection and the proposed new subdivision access to meet the NDOT Access Management standards.
3. Providing a more direct alignment for the multi-purpose path on the north side of the project as it relates to the path that is currently under construction on the east side of Ormsby Boulevard.
4. Providing additional open space between the proposed new development and the existing development to the north. A similar open space area should also be provided along the western boundary adjacent to those existing homes. These changes could help to mitigate the fact that the proposed density in this area is three times the current zoning density. It would also provide a more reasonable amount of open space in accordance with the provisions of CCMC 17.10 regarding the density transfer proposed by the project.

Regarding the purpose of CCMC 17.10, Code section 17.10.05 reads as follows:

> *The purpose of this chapter is to set forth regulations to permit variation of lot size, including density transfer (cluster) subdivisions, **in order to preserve or provide open space**, protect natural, cultural and scenic resources, achieve **a more efficient use** of land, minimize road building **and** encourage stable, cohesive neighborhoods offering a mix of housing types.* (Emphasis added)

CCMC 17.10 was created to benefit BOTH the developer and the public as noted above. The conceptual map however shows only the benefits of increased density afforded to the developer. Where is the open space within the project that will be created by the transfer of density, beyond the 3.7 acres noted on the conceptual map for APN 009-012-21?

The project area as defined by the application includes APN 009-012-20. The conceptual map, however, shows only that APN 009-012-21 will be fully developed with little (3.7 acres) open space. Why does the conceptual map not include any plans or open space for APN 009-012-20? Again, the application and the conceptual map appear to be incomplete.

The flood hazard information contained in the conceptual plan is incomplete and misleading. While the Anderson Ranch Conceptual Drainage Memo acknowledges that the project site contains two flood hazard areas, Zone AO and AE, the FEMA FIRMette map submitted as a part of the application covers only a small portion of APN 009-012-21. FEMA map 3200010091F, however, shows that virtually all of APN 009-012-21 is in flood zone AE. Why was this map not submitted as part of the application?

As noted previously, the project site continues to be a Priority Open Space Area for acquisition by the City in its Master Plan for the Future Open Space System. The City has had opportunities to work with the landowner to acquire this land for open space purposes but chose not to do so. I believe that many of the landowners in this neighborhood would still like to see the City pursue acquisition of all or a portion of the project area. I would certainly contribute to such a cause if the land could be protected from development in perpetuity.

Thank you for the opportunity to comment on this potential project. Please feel free to contact us with any questions.

Yours truly,

Jeffrey L. Foltz
1701 Newman Place,
CC, NV 89703

Jim Pincock
1735 Newman Place
CC, NV 89703

Table 4-1: Access Spacing Standards (continued)

Roadway Class	Location/ Posted Speed Limit	Full Access		Limited Access	
		Signalized Intersection Uniform[1] Spacing	Unsignalized Intersection/Roundabout Minimum[2] Spacing	Left-in/Right-in/ Right-out only Minimum[2] Spacing	Right-in/Right-out only[3] Minimum[2] Spacing
6: Minor Collectors	≤ 30 mph	1,320'	660'	440'	200'
	≥ 35 mph				250' – 400'
7: Frontage/Service/ Local Roads	-	As necessary for the safe operation and proper design of adjacent accesses		330'	200'

Notes:

All dimensions above are measured from center-to-center of accesses.

The spacing standards provided above also apply to private, direct access. Restrictions may be placed on the access permit. Refer to the rest of the document for additional information.

[1] Uniform spacing refers to the exact spacing to be achieved. Any spacing either greater or smaller than these standards is considered a deviation.

[2] Minimum spacing refers to the minimum spacing to be achieved between two adjacent accesses. However, greater spacing may be needed, depending on other requirements. Refer to the rest of Chapter Four for these standards.

[3] Where applicable, the range of spacing values corresponds to a range of speeds. The greater spacing values will be required at higher speeds.

From: Kitty Flynn
To: Planning Department
Subject: SUB-2022-0374
Date: Tuesday, September 27, 2022 10:07:05 AM

Carson City Planning Commission,

We have lived on the west side for the past fourteen years and have been concerned about our safety in the event of a need to suddenly evacuate. It would take hours to get out of our neighborhood due to the lack of streets and the routes to safety. If you approve all these new homes with the increase in population, it may be near impossible to get to safety.

Recently on Ormsby I had to drive through a huge dust cloud that was impossible to see through for a few seconds from the other development you approved between Ormsby and Mountain. Due to the drought our front lawn was dying because we could not water it enough. We have since spent several thousand dollars to have a rock yard.

There should absolutely be a moratorium on new construction due to the lack of water, not to mention the housing recession. It is irresponsible for the homes to be approved at this time. We would be better off if you filled these acres with solar panels than flood this confined area with all these people using resources that are stressed already.

Please Use Some Common Sense!

Kitty Flynn
1322 Clemens Dr.
Carson City, Nv. 89703

Sent from my iPad

LUMOS
& ASSOCIATES

ANDERSON RANCH WEST COMMON OPEN SPACE

TENTATIVE SUBDIVISION MAP

August 18, 2022

(Amended per Staff Comments)

9222 Prototype Drive
Reno, Nevada 89521
T 775.827.6111
F 775.827.6122
www.LumosInc.com

Table of Contents

Carson City Planning Division
108 E. Proctor Street· Carson City NV 89701
Phone: (775) 887-2180 • E-mail: planning@carson.org

FOR OFFICE USE ONLY:

CCMC 17.06 and 17.07

TENTATIVE SUBDIVISION MAP

FILE

APPLICANT **PHONE #**
Andersen-Colard Ranch Enterprises, LLC

MAILING ADDRESS, CITY, STATE, ZIP
P.O. Box 1746, Carson City, NV 89702

EMAIL
dennis@colard.com

PROPERTY OWNER **PHONE #**
Andersen Family Associates & Andersen-Colard Ranch Enterprises, LLC

MAILING ADDRESS, CITY, STATE, ZIP
Same as Applicant

EMAIL

APPLICANT AGENT/REPRESENTATIVE **PHONE #**
Lumos & Associates 775-883-7077

MAILING ADDRESS, CITY, STATE, ZIP
308 N. Curry St., Suite 200, Carson City, NV 89703

EMAIL
bmoon@lumosinc.com

Project's Assessor Parcel Number(s)
009-012-20 & 21

Project's Street Address
1800 Kings Canyon Road and 0 N. Ormsby Blvd.

Nearest Major Cross Street(s)
Kings Canyon Road and Ormsby Blvd.

Project's Master Plan Designation
Low Density Residential

Project's Current Zoning
SF1A and SF12

FEE*: $3,500.00 + noticing fee
*Due after application is deemed complete by staff

- ☐ **SUBMITTAL PACKET – 5 Complete Packets (1 Unbound Original and 4 Copies) including:**
  - ☐ Application Form including Applicant's Acknowledgment
  - ☐ Property Owner Affidavit
  - ☐ Copy of Conceptual Subdivision Map Letter
  - ☐ Detailed Written Project Description
  - ☐ Proposed Street Names
  - ☐ Master Plan Policy Checklist
  - ☐ Wet Stamped Tentative Map (24" x 36")
  - ☐ Reduced Tentative Map (11" x 17")
  - ☐ Conceptual Drainage Study
  - ☐ Geotechnical Report
  - ☐ Traffic Study (if applicable)
  - ☐ Documentation of Taxes Paid to Date
- ☐ **CD or USB DRIVE with complete application in PDF**
- ☐ **STATE AGENCY SUBMITTAL including:**
  - ☐ 2 Wet-stamped copies of Tentative Map (24" x 36")
  - ☐ Check made out to NDEP for $400.00 + $3/lot
  - ☐ Check made out to Division of Water Resources for $180.00 + $1/lot

Application Reviewed and Received By:

Submittal Deadline: Planning Commission application submittal schedule.

Note: Submittals must be of sufficient clarify and detail for all departments to adequately review the request. Additional information may be required.

Project Name
Andersen Ranch West Common Open Space Tentative Subdivision Map

Total Project Area	Number of Lots	Smallest Parcel Size
80.03+/- AC	61 Lots	14,360+/- SF

Please provide a brief description of your proposed project below. Provide additional pages to describe your request in more detail.

The Andersen Ranch West Common Open Space Tentative Subdivision Map proposes 61 single family residential lots on the subject parcels with common open space around the subdivision per CCMC 17.10. Please see the Project Description for additional information

NOTE: If your project is located within the Historic District or airport area, it may need to be scheduled before the Historic Resources Commission or the Airport Authority in addition to being scheduled for review by the Planning Commission. Planning staff can help you make this determination.

ACKNOWLEDGMENT OF APPLICANT: (a) I certify that the foregoing statements are true and correct to the best of my knowledge and belief; (b) I agree to fulfill all conditions established by the Board of Supervisors.

Applicant's Signature — Date: 8/15/2022

Meagen Colard-Kalley

PROPERTY OWNER'S AFFIDAVIT

I, Meagen Colard-Kalley, being duly deposed, do hereby affirm that I am the record owner of the
(Print Name)
subject property located at 1800 Kings Canyon Road and 0 N. Ormsby Blvd. APN 009-012-20 & 21, and that I have knowledge of, and I agree to, the
(Property Address and APN)

filing of this Tentative Subdivision Map application.

Signature | 208 Winters CC 89703 Address | 8/15/2022 Date

Use additional page(s) if necessary for other names.

STATE OF NEVADA)
~~COUNTY~~ Carson City)

On August 15, 2022, personally appeared before me, a notary public, Meagen Colard-Kalley, personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that ~~he/~~she executed the foregoing document.

Linda Gilbertson
Notary Public

LINDA GILBERTSON
NOTARY PUBLIC
STATE OF NEVADA
APPT. No. 08-6390-3
MY APPT. EXPIRES MARCH 2, 2024

ANDERSEN-COLARD RANCH ENTERPRISES LLC

MEMBERS' RESOLUTION ADOPTED BY UNANIMOUS WRITTEN CONSENT

The undersigned, being all of the Members and Managers of Andersen-Colard Ranch Enterprises LLC, a Nevada limited liability company ("ACRE") hereby consent to take the following actions and adopt the following resolution.

RESOLVED that Meagen Kalley is appointed General Manager of the Company, with the power to take all necessary or reasonably convenient actions and to execute, acknowledge, and deliver any and all documents necessary or reasonably convenient to cause ACRE to enter into and consummate any sale of real property owned by ACRE. Such documents shall include, but not be limited to contracts, reports, deeds, escrow instructions and agreements with brokers; and

RESOLVED that Meagen Kalley is authorized and directed to receive any notice allowed or required to be given to ACRE under any purchase and sale agreement for the sale of ACRE real property.

This resolution shall be filed with the minutes of the Members' meetings and is executed pursuant to Section 5.03 of Article V of the Company's Operating Agreement.

IN WITNESS WHEREOF, the undersigned hereby certifies the adoption of this Resolution this 21 day of January, 2022.

ANDERSEN-COLARD RANCH ENTERPRISES LLC

By _____
DENNIS C. COLARD, Member

By _____
KIM L. COLARD, Member

ENTITY INFORMATION

ENTITY INFORMATION

Entity Name:

ANDERSEN FAMILY ASSOCIATES, A NEVADA LIMITED PARTNERSHIP

Entity Number:

LP805-1994

Entity Type:

Domestic Limited Partnership (88)

Entity Status:

Active

Formation Date:

06/22/1994

NV Business ID:

NV19941019775

Termination Date:

6/22/2028

Annual Report Due Date:

6/30/2023

REGISTERED AGENT INFORMATION

Name of Individual or Legal Entity:

CORPORATE SERVICE CENTER, INC.

Status:

Active

CRA Agent Entity Type:

Registered Agent Type:

Commercial Registered Agent

NV Business ID:

Office or Position:

Jurisdiction:

NEVADA

Street Address:

1450 Vassar Street, Reno, NV, 89502, USA

Mailing Address:

Individual with Authority to Act:

Trevor C. Rowley

Fictitious Website or Domain Name:

OFFICER INFORMATION

☐ **VIEW HISTORICAL DATA**

Title	Name	Address	Last Updated	Status
General Partner	Dennis Colard	PO Box 1746, Carson City, NV, 89702, USA	04/01/2020	Active
General Partner	ANDERSEN-COLARD RANCH ENTERPRISES	PO BOX 1746, CARSON CITY, NV, 89703, USA	04/01/2019	Active

Page 1 of 1, records 1 to 2 of 2

CURRENT SHARES

Class/Series	Type	Share Number	Value
No records to view.			

Number of No Par Value Shares:

0

Total Authorized Capital:

Filing History Name History Mergers/Conversions

Return to Search Return to Results

Carson City Planning Division
108 E. Proctor St.
Carson City, Nevada 89701
(775) 887-2180
Planning@carson.org
www.carson.org

Carson City Road Name Reservation/Approval Application

Request Date:	**Requested By:**
August 17, 2022	Brian Moon, PE
Phone Number:	**Email:**
(775) 827-6111	bmoon@LumosInc.com
Total Number of Roads:	**Subdivision Name:**
5	Andersen Ranch West

Road #	Proposed Road Name	Public or Private	Accepted or Denied	Reason for Denial	Comments
1	Mulberry (ST)	Public			
2	Chianti (Ave)	Public			
3	Zinfandel (Lane)	Public			
4	Honeysuckle (Lane)	Public			
5	Bardolino (Drive)	Public			

This application is not complete without the road layout map with the proposed street names shown.

LEGEND

OPEN SPACE AREA

(EX) PARDINI ST

(EX) MANHATTAN DR

(1) MULBERRY WAY

(2) CHIANTI AVENUE

(3) ZINFANDEL LANE

(4) HONEYSUCKLE LANE

(5) BARDOLINO DRIVE

(EX) N. ORMSBY BLVD

(EX) W. WASHINGTON ST

TRANSITION TO EXISTING CONDITIONS

LOT A
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LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
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LOT C
LOT D

007-234-01 SF12 JOHNSON
007-234-02 SF12 TIPTON
007-234-03 SF12 PAPEZ
007-234-04 SF12 WIEVEG
007-234-05 SF12 GALLAGHER TRUST
007-234-06 SF12 NOTAR TRUST
007-234-07 SF12 VLCAN
007-234-08 SF12 HAVIR
007-234-09 SF12 SULLIVAN FAMILY
007-234-12 SF12 PINCOCK
007-234-13 SF12 FOLTZ
007-281-01 SF1A FERENZ
007-283-01 SF1A PRYOR
007-283-02 SF1A MILLER
007-283-03 SF1A KNIGHT TR
007-283-04 SF1A SCHNASER
007-284-01 SF1A KONRAD
001-241-14 SF12 LATZY
001-241-13 SF6 SMITH
001-241-12 SF6 LUCCA
001-241-11 SF6 BARBARIGOS
007-392-39 SF21-P CARSON CITY
009-012-20 SF1A&SF12 ANDERSON FAMILY ASSOC.

N

0 60' 120'

LUMOS & ASSOCIATES

9222 PROTOTYPE DRIVE
RENO, NV 89521
TEL: 775.827.6111

WWW.LUMOSINC.COM
INFO@LUMOSINC.COM

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
ROAD NAME RESERVATION EXHIBIT

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

EXH

DRAWN BY:	JRL
DESIGNED BY:	JRL
CHECKED BY:	TS
JOB NO.:	8947.004

\\lo.lumosengineering.net\Shared\LAPro\8947.004 - Andersen Ranch Development Tentative Map\DWG\Exhibits\8947004 tm street names.dwg,C21, 08/16/2022 12:04 pm jlistor

TAB A

108 E. Proctor
Street Carson City,
Nevada 89701
(775) 887-2180
Hearing Impaired: 711

February 18, 2022

Lumos & Associates Attn:
Tim Russell
308 North Curry Street, Ste 200
Carson City, NV 89702

Conceptual Map: SUB-2022-0005

Project Description: Request to develop a +30 acre portion of an overall +80.03 acre site with a 61 unit single family residential common open space subdivision. The development is proposed primarily on the north parcel, however there are improvements proposed on a portion of the southern parcel to facilitate drainage and other required improvements. Based on materials provided, the scope of review is solely based on APN 009-012-21. If the subject site is expanded to include additional parcels, a subsequent review may result in additional comments.

Review Date: February 1, 2022

Conceptual Map Comments

The Conceptual Map Committee has reviewed the proposed plans for the subdivision of a +30 acre portion of an overall site that is 80 acres in size. The following requirements and comments are provided for your use in preparing final plans and submittals for the project. Please be advised that the comments presented in this letter are based on the plans submitted with the Conceptual Map application and may not include all the requirements or conditions which may be placed on the project at the time of submittal of tentative map. It is hoped, however, that this review will expedite the completion of your project.

Some of the requirements noted below may have already been shown or otherwise indicated in the plans and need only be submitted in the final improvement plan form. Final on- and off-site improvement plans shall be submitted to the Permit Center, (108 E. Proctor Street). These plans must contain all appropriate requirements of Development Engineering, Health, Utilities, Fire, and Planning Divisions/Departments.

SITE INFORMATION:

Address: northwest of the intersection of Kings Canyon Road and Ormsby Boulevard APN: 009-012-20 & 009-012-21
Parcel Size: +30 acres
Master Plan Designation: Low Density Residential & Medium Density Residential Zoning: Single Family 1 Acre (SF1A) & Single Family 12,000 (SF12)

PLANNING DIVISION
Heather Manzo, Associate Planner

1. The proposed development is located within the SF1A zoning district. As such, the request does not appear to conform to the density limitations for the zone. To achieve the requested density, a zoning map amendment or other acceptable process will be required.

   Response: The project is proposing to deed restrict an area of 31.3-acres in order to achieve the 1 DU/Acre density the development is currently zoned for. Civil sheet C2.0 provides clarification for the deed restricted areas proposed.

2. The application states this subdivision would be a common open space development and lot sizes would be adjusted as allowed per CCMC 17.10. As such, map sheets and application documents should note that the project is a "Common Open Space Subdivision" and the standards contained in CCMC 17.10 apply. Application materials for a subdivision map should include a summary as to how the project complies with the requirements of CCMC 17.10. Additionally, a color open space and common area map should be provided as a sheet with the application for staff reference and to determine requirements are met by the proposal.

   Response: Per CCMC 17.10, the minimum required open space is 250 sq. ft. per dwelling unit. The project proposes a total of 61-units and a total of 166, 239 sq. ft. of open space no narrower than 30-ft. The proposed open space areas have been colored green on Civil sheets C2.0 and C2.1.

3. The common open space development application should establish the proposed minimum lot size, setbacks, and any other development characteristics allowed by CCMC 17.10.

   Response: The minimum lot width for Lot Size less than 1-acre, per CCMC 17.10.030, of 80-ft has been provided on the proposed 61 lots. Minimum setbacks per CMCC 17.10.030 are shown on the detail provided on Civil sheet C2.1.

4. A Tentative Map requires recommendation by the Planning Commission and approval of the Board of Supervisors.

   Response: Comment noted.

5. The project proposes improvements to the drainage channel to the south of the subject site. This area will need to be included as part of the subject site, total acreage, and improvements will need to have appropriate easements for access etc.

   Response: The proposed channel improvement areas are included in the total area and all proposed improvements and easements will be incorporated into the final engineering plans.

Development Engineering
Stephen Pottey, Senior Project Manager

Transportation:

1. A sealed traffic impact study must be provided with the tentative map application, meeting the requirements of CCDS 12.13. Please contact Chris Martinovich for traffic impact study scoping at 775-283-7367.

Response: A Traffic Impact Study will be included within the projects initial Tentative Map application.

2. The City's transportation master plan includes extending North Ormsby Boulevard north to West Winnie Lane. This subdivision will be required to contribute its pro rata share to the extension of North Ormsby Boulevard.

Response: Comment noted.

3. Half-street improvements must be installed on North Ormsby Boulevard along the project frontage. This will include striping, curb, gutter, and paving to meet the City standard detail for a two-lane urban collector with bike lanes. Bike lane striping must be installed on both sides of the street. Right-of-way must be dedicated as necessary to contain the required improvements with the final map. The proposed path will not replace the need for a sidewalk.

Response: Half street improvements have been shown on Civil sheet C2.1. Due to minimum street width and the pedestrian shared use path width requirements, there will be no path along the project frontage and only the proposed sidewalk along North Ormsby.

4. The sidewalk on North Ormsby must be extended south of the property frontage to where the sidewalk currently ends.

Response: The proposed sidewalk for the half street improvements have been extended to where the sidewalk currently ends to the south of the project.

5. The streets must be connected to both Manhattan Drive and West Washington Street on the west side of the development for proper circulation and connectivity.

Response: The Conceptual Parcel Map site plan has been revised to include connections to Manhattan Drive and West Washington Street.

6. If APN 009-012-20 is part of the application, frontage improvements will be required along Kings Canyon Road.

Response: APN 009-012-20 will be included within this application as it will be part of the deed restricted area that is being proposed. A note has been added to the left plan view on sheet C2.0 for the proposed half street improvements along Kings Canyon Road.

Water:

7. Water mains must be connected to the existing mains west of the project in Manhattan Drive and West Washington Street. These mains are in a separate pressure zone, so pressure reducing valve vaults and/or check valve vaults may need to be installed at these connection points.

Response: The water main connection has been proposed to existing 6" water main within Manhattan Drive, a PRV has been shown within the Manhattan Drive street connection due to the separate pressure zones.

8. A wet stamped water main analysis must be submitted in accordance with CCDS 15.3.1(a) to show that adequate pressure will be delivered to the meter and fire flows meet the minimum requirements of the Carson City Fire Department. Please contact the Michael Friend at (775) 283-7713 or mfriend@carson.org to schedule a fire hydrant flow test.

    a. For the tentative map application please provide at least a preliminary analysis showing the existing available pressure and flow compared to the fire flow demand.

Response: Comment noted, a preliminary analysis will be provided with the initial TM submittal package.

Sewer:

9. A wet stamped sewer main analysis must be submitted with the tentative map application. The analysis must address the effect of flows on the existing City system. See section 15.3.2 of CCDS. Please reach out to Darren Anderson for current sewer main capacities at 775-283-7584.

Response: Comment noted, a preliminary analysis will be provided with the initial TM submittal package.

Storm Drainage and Flooding:

10. The storm drain system has a capacity of roughly 100 cfs downstream of the site. Any flow above that amount will need to be handled.

Response: Comment noted, we are coordinating with House Moran for initial drainage and flood zones, any proposed retention or detention will be included with the final engineering plans.

11. The site contains AE and AO flood zones. A FEMA CLOMR must be obtained prior to any site improvement permits being issued.

Response: Comment noted, a FEMA CLOMR initial draft will be included with the TM submittal package for the City's review prior to FEMA submittal.

12. The detention basin must be privately owned and maintained. Access must be provided to the detention basin other than North Ormsby Boulevard.

Response: The proposed basin will be privately owned and maintained. Access will be provided from within the project site and not off of N. Ormsby Boulevard.

13. A conceptual design for flood water mitigation must be included with the Recently, Carson City has adopted changes to the detention design storm requirements from a 5-

year, 24-hour event to a 10-year 24-hour event and includes Low Impact Development (LID) design requirements. The drainage manual is available here:

https://www.carson.ors/home/showpublisheddocument/76280/63762469190320000 0

Response: Comment noted, a conceptual design for flood water mitigation will be provided with the initial TM submittal package.

Citv Lands:

14. Connections to existing City trails must be provided. Public access easements must be provided over the project trails that connect to City trails.

Response: A looping mixed use trail has been incorporated to the project site connecting to the existing City trails.

General Comments:

15. A wetland delineation report must be provided with the tentative map application.

Response: A wetland delineation map, based off Sheet C2.0, has been included with this submittal package.

16. Water and sewer connection fees must be paid. If these fees were paid in the past, then the difference between the old and new amounts of water/sewer usages must be paid for. Please see CCMC 12.01.030 for the water connection fee schedule and 12.03.020 for the sewer connection fee schedule.

Response: Comment noted, fees will be paid prior to issuance of final engineering permits.

17. Any engineering work done on this project must be wet stamped and signed by an engineer licensed in Nevada. This will include site, grading, utility and erosion control plans as well as standard details.

Response: Comment noted, the final engineering plans are to be stamped and signed by a licensed engineer in the state of Nevada.

18. All construction work must be to Carson City Development Standards (CCDS) and meet the requirements of the Carson City Standard Details.

Response: Comment noted, final engineering plans are to incorporate CCDS requirements.

19. Fresh water must be used for Dust control. Contact the Water Operations Supervisor Public Works at 283-7382 for more information.

Response: Comment noted.

20. A private testing agreement will be necessary for the compaction and material testing in the street right of way. The form can be obtained through Carson City Permit Engineering.

Response: Comment noted, the private testing agreement will be included with the final engineering plans submittal.

21. An erosion control plan meeting section 13 of CCDS will be required in the plan set.

Response: Comment noted, the erosion control plan (per Sec. 13 of CCDS) will be incorporated into the final engineering plan set.

22. New electrical service must be underground.

Response: Comment noted, final electrical plans to underground any and all electrical services.

23. Any work performed in the street right of way will require a traffic control plan and a timeline type schedule to be submitted before the work can begin. A minimum of one week notice must be given before any work can begin in the street right of way.

Response: Comment noted, traffic control plans will be included for the N. Ormsby and Kings Canyon Road improvements.

24. Please show any easements on the construction drawings.

Response: All easements are to be included on the final engineering documents.

25. A Construction Stormwater Permit from the Nevada Division of Environmental Protection (NDEP) will be required for the construction of projects 1 acre or greater.

Response: An NDEP CSP will be obtained with the final engineering plans.

26. A Dust Control Permit from NDEP will be required for any project 5 acres or greater.

Response: An NDEP DCP will be obtained with the final engineering plans.

27. A FEMA elevation certificate must be included with the construction plan submittal for any house that is submitted prior to finalization of the LOMR.

Response: Comment noted, an elevation certificate to be included for any house that is submitted prior to the finalization for the LOMR.

Fire Department
Jenny Williamson, Fire Inspector

1. Project shall comply with the currently adopted fire code and Northern Nevada Fire amendments.

   Response: Comment noted, project to comply with current fire code and NNF amendments.

2. The project as presented doesn't meet the remoteness requirement in IFC Appendix D D107.2. If additional roads are opened on the west side of the project as discussed at the MPR, the remoteness requirement should be met.

   Response: By adding two points of connection on the west side of the project, to Manhattan Drive and West Washington Street, the project satisfies the remoteness requirement in IFC.

Parks, Recreation and Open Space
Nick Wentworth, Project Manager

1. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the owner. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the street(s) right of ways in perpetuity.

   Response: Comment noted, all future landscape and irrigation to be privately owned and maintained.

2. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Also, any remaining landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City Pollinator Plant list and other plant selection resources can be found at www.carson.ors/beecitvusa

   Response: Comment noted, final landscape plants to incorporate at least 50% pollinator friendly and the rest per the City's approved plant and tree species list.

3. The developer is required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:

   • Educating workers about the importance of managing weeds on an ongoing basis;
   • Properly identifying weed species to determine most appropriate treatment strategies;
   • Avoiding or treating existing weed populations; and

• Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

Response: Comment noted, final engineering plans to incorporate site BMPs and erosion control details to help eliminate the spread of weeds.

4. Where possible, deciduous trees must be planted a minimum of 5' from any city/public street, sidewalk or pathway. Evergreen trees must be planted a minimum of 10' from any city/public street, sidewalk or pathway. Fruit bearing, "non-fruiting" flowering or any other trees that drop debris such as seed pods will not be permitted near or placed where they will eventually hang over city/public sidewalks or pathways.

   Response: Minimum tree separation from city/public streets, sidewalk and pathways to be incorporated into final landscape design.

5. Carson City Municipal Code: Title 18, Division 3 should be reviewed by any/all parties involved in the proposed landscape design prior to landscape plans being submitted to the city for final approval of a building or site improvement permit. Note: Special care and consideration should be taken in the protection of existing trees on-site. https://library.municode.com/nv/carson citv/codes/code of ordinances?nodeId=TIT 18 APPENDIXCADEST DIV3LA

   Response: Comment noted, final landscape design to be reviewed by any/all parties prior to plans being submitted for final approval.

6. The project is subject to the collection of Residential Construction Tax (RCT), compliant with NRS Chapter 278 and Carson City Municipal Code (CCMC 15.60).

   Response: Comment noted.

7. The project will need to include a multi-use path for public use. This shall be coordinated through and agreed upon by the Parks, Recreation & Open Space Department. The path will require a 30 foot wide (minimum) easement for the path. Easement shall be a non-motorized public access trail easement. The easement document should indicate that maintenance of the easement shall be the responsibility of the HOA in perpetuity. The applicant will design and construct a multi-use path (off street/paved/shared) at a 10 foot minimum width using the AASHTO standard concrete path with an adjacent 3 foot wide decomposed granite path, including interpretive/wayfinding signage,—pet waste receptacles, trash receptacles, benches and related amenities. The path will be should provide connectivity from the City's Long Ranch Pathway system on the southwest corner of APN 009-012-21 to Ormsby Blvd, and have an at grade pedestrian crossing with flashing lights on North Ormsby Boulevard. All other street crossings associated with the multi-use path must be reviewed and approved by Carson City Public Works and Parks, Recreation & Open Space Departments to ensure pedestrian safety. This trail must be constructed or bonded for prior to Board consideration of the first final map for the development.

   Response: The proposed site plan has been revised to incorporate a 30-lf wide easement for the proposed multi-use path. The path provides connectivity to the existing City pathway system.

8. Paths, sidewalks and on-street bike lanes along the street frontage shall conform to the standards as outlined in the Carson City Unified Pathways Master Plan. The Unified Pathways Master Plan (UPMP) identifies on-street bike lanes along the street frontage of the proposed development on North Ormsby Boulevard. This UPMP requirement needs to be coordinated with Development Engineering's requirements for the development's street frontage design and improvements.

Response: The proposed pathway and half street improvements along N. Ormsby meet the City's UPMP requirements.

9. A multi-use path shall be constructed in the buffer area on all sides of the property to create a looped trail system. All trails will be owned and maintained by the HOA. All street crossings associated with these paths must be reviewed and approved by Carson City Public Works and PROS to ensure pedestrian safety.

   Response: Due to the minimum street width requirements and the proposed 30-lf easement for the mixed use path, the trail has been proposed on the north, south and west sides of the project with the N. Ormsby sidewalk closing the loops on the east side.

10. The applicant shall demonstrate connectivity between the trailhead/multi-use path and the development's sidewalk/path system. Sidewalk connections to the trailhead and multi-use path will provide convenient and logical access to these facilities and the overall sidewalk network within the development

    Response: The proposed mixed-use trail will intercept and connect to the projects proposed streets for the connection to Manhattan Drive and West Washington Street as well as the two points of connection to North Ormsby Boulevard.

Conclusion:
Based on questions related to project boundaries and process, a new conceptual subdivision map application will be necessary prior to the submittal of a tentative subdivision map application.

These comments are based on a very general site plan and do not indicate a complete review. All pertinent requirements of Nevada State Law, Carson City Code, and Carson City Development Standards will still apply whether mentioned in this letter or not.

Sincerely,
Community Development Department, Planning Division

Heather Manzo, Associate Planner

cc: CSM-2022-0005

108 E. Proctor Street
Carson City, Nevada
89701
(775) 887-2180
Hearing Impaired: 711

July 26, 2022

Lumos & Associates Attn:
Tim Russell
308 North Curry Street, Ste 200
Carson City, NV 89702

Conceptual Map: SUB-2022-0009
(REVISED)

Project Description: Request to develop a portion of an overall +80.53 acre site with a 61 unit single family residential common open space subdivision. The development is proposed primarily on the north parcel, however there are improvements proposed on a portion of the southern parcel to facilitate drainage and other required improvements. Based on materials provided, the scope of review includes APN Nos. 009-012-20 and 21. A conceptual subdivision map was previously submitted and comments provided on February 18, 2022, CSM-2022-0005, where recommendations were made and changes would necessitate an updated conceptual subdivision map.

Review Date: June 7, 2022

Conceptual Map Comments

The Conceptual Map Committee has reviewed the proposed plans for the subdivision of a portion of an overall site that is 80.53 acres in size. The following requirements and comments are provided for your use in preparing final plans and submittals for the project. Please be advised that the comments presented in this letter are based on the plans submitted with the Conceptual Map application and may not include all the requirements or conditions which may be placed on the project at the time of submittal of tentative map. It is hoped, however, that this review will expedite the completion of your project.

Some of the requirements noted below may have already been shown or otherwise indicated in the plans and need only be submitted in the final improvement plan form. Final on- and off-site improvement plans shall be submitted to the Permit Center, (108 E. Proctor Street). These plans must contain all appropriate requirements of Development Engineering, Health, Utilities, Fire, and Planning Divisions/Departments.

SITE INFORMATION:

Address: northwest of the intersection of Kings Canyon Road and Ormsby Boulevard APN: 009-012-20 & 009-012-21
Parcel Size: +80.53 acres
Master Plan Designation: Low Density Residential & Medium Density Residential Zoning: Single Family 1 Acre (SF1A) & Single Family 12,000 (SF12)

PLANNING DIVISION
Heather Manzo, Associate Planner

1. The proposed development is located within the SF1A and SF12 zoning district. A table will need to be provided that includes the acreage and density breakdown to demonstrate that there is sufficient density available to develop the 61-acre project while retaining the ranch residence located on the southeast side of the site, which as presented will equal 62 residences.

   Response: The table on sheet C2.0 has been revised to show the total unit count for the whole project, APN 009-012-20 & -21, and total units remaining after the Andersen Ranch West subdivision.

2. Parcels need to be drawn so as not to create a non-conforming use situation. The barn structures must remain accessory to a single-family residence.

   Response: The southern parcel will remain unchanged, any future development will propose lots as to not create a non-conforming use situation.

3. Proposed lot configurations will need to demonstrate that all existing structures will meet the required setback from all proposed lot lines.

   Response: No proposed lot lines for the southern parcel are proposed within this submittal, any future development will show the required setbacks from proposed lot lines.

4. It is recommended that a zoning map amendment or other acceptable mapping process be pursued that would not result in an increase of the overall number of allowable units on the 80-acre site. If you wish to pursue the plan as presented, staff will need additional information as to the concept and how the project will conform with CCMC as there is not a mechanism in code for density transfers. Prior to the submittal of any entitlement for this project, please coordinate with staff.

   Response: No zoning map amendment will be proposed as part of this Open Space TM package. Based on our conversations with CC Planning on 8/10, the table shown on Sheet C2.0 will reflect overall project unit counts and remaining units available for any future development.

5. The application states this subdivision would be a common open space development and lot sizes would be adjusted as allowed per CCMC 17.10. As such, map sheets and application documents should note that the project is a “Common Open Space Subdivision” and the standards contained in CCMC 17.10 apply. Application materials for a subdivision map should include a summary as to how the project complies with the requirements of CCMC 17.10. Additionally, a colored open space and common area map should be provided as a sheet within the application for staff reference and to determine requirements are met by the proposal.

   Response: The title for the project has been revised to “Common Open Space Subdivision”. A colored open space/common area map has been included on sheet C2.0

6. The common open space development application should establish the proposed minimum lot size, setbacks, and any other development characteristics allowed by CCMC 17.10.

Response: Minimum lot size, setbacks, etc per CCMC 17.10 are shown on the projects Tentative Map.

7. If the project is intended to be constructed in multiple phases, please provide a colored phasing plan that demonstrates improvements will be constructed for each phase so the phase can stand alone and not depend on future phases to meet requirements and standards.

   Response: Project phasing is not anticipated at this time; however, if the project is proposed to be phased at final map due to market conditions, each phase will be designed to be standalone and not reliant on future phases to meet requirements and standards.

8. A Tentative Map requires recommendation by the Planning Commission and approval of the Board of Supervisors.

   Response: Comment noted.

Development Engineering
Chris Gonzales

Transportation:

1. A sealed traffic impact study must be provided with the tentative map application, meeting the requirements of CCDS 12.13. Please contact Chris Martinovich for traffic impact study scoping at 775-283-7367.

   Response: A Traffic Impact Study prepared by Headway has been included within the projects initial Tentative Map application.

2. The City's transportation master plan includes extending North Ormsby Boulevard north to West Winnie Lane. This subdivision will be required to contribute its pro rata share to the extension of NorthOrmsby Boulevard.

   Response: Comment noted.

3. Half-street improvements must be installed on North Ormsby Boulevard along the project frontage. This will include striping, curb, gutter, and paving to meet the City standard detail for a two-lane urban collector with bike lanes. Bike lane striping must be installed on both sides of the street. Right-of-way must be dedicated as necessary to contain the required improvements with the final map. The proposed path will not replace the need for a sidewalk.

   Response: Half street improvements have been shown on Civil sheet C2.1 and C2.2. Due to minimum street width and the pedestrian shared use path width requirements, there will be no path along the project frontage and only the proposed sidewalk along North Ormsby.

4. Sidewalks to meet ADA standards with curb ramps at all proposed intersections.

   Response: Curb ramps to be designed and details on final engineering plans.

5. There is a proposed rectangular rapid flashing beacon (RRFB) system and crosswalk that has been provided by the Andersen Ranch project to the east that will continue the Carson

City multiuse pathway and will need to be tied into at the most northern intersection on Ormsby Boulevard.

Response: The multiuse path has been revised to be in line with the Andersen Ranch East path.

Water:

6. A water main analysis signed by a professional engineer must be submitted in accordance with CCDS 15.3.1(a) to show that adequate pressure will be delivered to the meter and fire flows meet the minimum requirements of the Carson City Fire Department. Please contact the Michael Friend at (775) 283-7713 or mfriend@carson.org to schedule a fire hydrant flow test.

Response: A water main analysis has been provided and a recent CCFD fire hydrant flow test has been included in the utility letter.

7. The PRV must be provided and cannot be installed within the roadway or sidewalk.

Response: The PRV has been shown out of the roadway and sidewalk within Lot A.

8. Please contact and work with Carson City Public Works for the design of the PRV Vault.

Response: The design of the vault will be coordinated with CCPW for the improvement plans.

9. All water services shall be perpendicular to water mains.

Response: Comment noted, water services will be shown perpendicular to water mains.

10. The system will need to be looped and valved so that no more than 15 customers can be taken out of service at any one time. See CCMC Development Standards Division 15.3

Response: The water main has been looped throughout the site, connecting to the 8" main in Ormsby and the 6" main in Manhattan drive. Preliminary valves are shown on the Utility Plan.

11. Due to minimal water information proved in the MPR application, additional requirements may apply. Project shall comply with all City and State codes and standards.

Response: Comment noted.

Sewer:

12. There is an 8" PCV line that splits between the properties. The main is approximately 25% fill (d/D). There is an 8" AC line in Ormsby Blvd to the east of 009-012-21. This main is approximately 45% full (d/D). There is an existing 8" PVC line in Kings Canyon to the

south of 009-012-20. This main is approximately 5% full (d/D).

Response: Thank you for the existing sewer information, these d/D values have been included within our preliminary utility letter to show the proposed development will not have any adverse effects on the City's main.

13. A sewer main analysis signed by a professional engineer must be submitted that includes addressing the effect of flows on the existing City system. See section 15.3.2 of CCDS.

Response: A sewer main analysis has been included within the project's submittal package.

Storm Drainage and Flooding:

14. In July 2021 the Carson City Drainage Manual became effective and is required for all news and redeveloped parcels. The detention design storm requirements changed from a 5-year, 24-hour to a 10-year 24-hour event. The Drainage Manual includes Low Impact Development (LID) design requirements.

Response: Comment noted, future detention basins will be developed to the 10-year, 24-hour event (minimum).

15. Confirm Army Corps sign-off for work related to Ash Canyon Creek.

Response: Ash Canyon Creek is not being disturbed from construction activities of this development and therefore, in conjunction with meetings with Robb Fellows, Army Corps permitting is not required.

16. A FEMA CLOMR will be required for this project.

Response: Comment noted. A FEMA CLOMR will shortly follow this submittal package.

17. Other comments included in previous CSM submittals shall be incorporated.

Response: Comment noted, other comments have been incorporated in this submittal plan package.

18. The conceptual drainage memo provided includes limited modeling figures and description for impact to the existing floodplain and infrastructure. The intended concept is understood, but consultant shall discuss details with the City Floodplain Manager further.

Response: Existing and proposed drainage exhibits have been included within the Conceptual Drainage Report, the FEMA CLOMR letter will be included at a later date to help provide details on the impact to the existing floodplain and infrastructure.

19. The downstream storm drain system has a total capacity of about 100 cfs. This shall be

reflected in the design of the channel upstream

Response: Comment noted, the project will incorporate detention basins to ensure that the downstream capacity is not exceeded.

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Citv Lands:

20. The parcels adjoin property to the west and across Kings Canyon Road to the south managed and maintained by the Carson Parks, Recreation & Open Space.

Response: Comment noted.

21. Need a big picture exhibit showing how the Carson City Unified Pathways Master Plan is being addressed, especially the connectivity along Kings Canyon Road.

Response: A Trails Connectivity Exhibit has been included within the submittal package to help show the bigger picture of the CC Unified Pathways Master Plan.

General Comments:

22. Erosion control. Permanent erosion control efforts will need to be provided once the property has been graded.

Response: Comment noted, BMP plan has been included in the TM submittal plan set for reference.

23. Easements: Parcel Map #2913 recorded on May 25, 2017 as document #475227, granted a 20-foot wide Public Utility Easement, including a waterline, along the south property line of APN 009-012-21. A 20-foot wide sewer easement setback from the north property line of APN 009-012-20 was recorded on January 7, 1994 as document #155099. A 10-foot wide storm drain easement was also granted per Parcel Map #2913 along the east property line of APN 009-012-20. Additional easements for water and stormwater may need to be granted through APN 009-012-20.

Response: Easements listed above have been shown on the TM plans.

24. A Wetland delineation report must be provided.

Response: A Wetland delineation report has been included in the Tentative Map Application.

25. A Technical Drainage Study meeting the requirements of section 14 of the Carson City Development Standards must be submitted with the permit and plans.

Response: A Conceptual Drainage Study has been included with the Tentative Map Application, a Technical Drainage Study will be included with the construction documents.

26. A reduced pressure principle assembly backflow preventer will be required for the domestic water line. The fire line must have a double check valve backflow preventer if it is Class 1-3, or a reduced pressure principle assembly if it is Class 4-6. These backflow preventers must be above ground in a hot box, and must be located as close to the property line as possible. The irrigation service will need a reduced pressure backflow preventer if a vacuum breaker system cannot be designed to operate properly. If a backflow preventer is not required, it is advisable to provide space and an electrical conduit in the event that a backflow preventer is needed in the future.

Response: Comment noted, RPPA's will be provided on the domestic water line on the construction documents.

27. Water and sewer connection fees must be paid. If these fees were paid in the past, then the difference between the old and new amounts of water/sewer usages must be paid for. Please see CCMC 12.01.030 for the water connection fee schedule and 12.03.020 for the sewer connection fee schedule.

Response: Comment noted, water and sewer connection fees to be paid at time of permit.

28. Any engineering work done on this project must be wet stamped and signed by an engineer licensed in Nevada. This will include site, grading, utility and erosion control plans as well as standard details.

Response: Comment noted, all engineering plans will be wet stamped and signed by a licensed engineer.

29. All construction work must be to Carson City Development Standards (CCDS) and meet the requirements of the Carson City Standard Details.

Response: Comment noted, all construction work to be per CCDS and CC Standard details.

30. Addresses for units will be provided during the building permit review process.

Response: Comment noted, addresses to be provided with the initial grading and improvement plans.

31. Fresh water must be used for Dust control. Contact the Water Operations Supervisor Public Works at 283-7382 for more information.

Response: Comment noted, fresh water to be used for Dust Control.

32. A private testing agreement will be necessary for the compaction and material testing in the street right of way. The form can be obtained through Carson City Permit Engineering.

Response: Comment noted, a form will be obtain from CC Permit Engineering for all compaction and material testing within the ROW.

33. An erosion control plan meeting section 13 of CCDS will be required in the plan set.

Response: Comment noted, an erosion control plan has been included with the TM plans.

34. If an existing water service is to be re-used, it must be checked for condition. It may need to be replaced. Any existing water and sewer services not being used must be abandoned at the main.

Response: Comment noted, no existing water services are to be re-used for these 61-units or for irrigation.

35. New electrical service must be underground.

Response: Comment noted, all electrical services will be underground.

36. Please show sufficient utility information to ensure that minimum spacing is met between water meters and dry utilities.

Response: Comment noted, water and sewer lateral separation to be shown on the improvement plans.

37. Any work performed in the street right of way will require a traffic control plan and a time line type schedule to be submitted before the work can begin. A minimum of one week notice must be given before any work can begin in the street right of way.

Response: Comment noted, one week notice will be given before any ROW work will be performed.

38. Please show any easements on the construction drawings.

Response: All easements are shown on the TM plans and will be included on the construction drawings.

39. A Construction Stormwater Permit from the Nevada Division of Environmental Protection (NDEP) will be required for the construction of projects 1 acre or greater.

Response: Comment noted, a CSP from NDEP will be obtained.

40. A Dust Control Permit from NDEP will be required for any project 5 acres or greater.

Response: Comment noted, a DCP from NDEP will be obtained.

41. A FEMA elevation certificate must be included with the construction plan submittal. All FEMA requirements for this flood zone must be met.

Response: Comment noted, a CLOMR will be submitted to the City after this TM submittal package.

42. These comments are based on a very general site plan and do not indicate a complete review. All pertinent requirements of Nevada State Law, Carson City Code, and Carson City Development Standards will still apply whether mentioned in this letter or not.

Response: Comment noted,

Fire Department
Michael Wilkinson, Fire Marshal

1. The project shall meet or exceed the 2018 International Fire Code and 2018 Northern Nevada Amendments.

Response: Comment noted, project to meet or exceed the 2018 IFC and 2018 NNA.

2. The project shall meet the minimum road widths and two points of access per the 2018 international Fire Code.

Response: Comment noted, the project has 4 project access points and road widths exceed the minimum per 2018 IFC.

3. The project shall meet the minimum fire flow requirements and hydrant spacing per the 2018 International Fire Code.

Response: Comment noted, fire hydrant flow and spacing will meet the 2018 IFC on the construction drawings. Preliminary fire hydrant locations shown on the TM plans and a FH Flow Test has been included in the Utility Letter.

4. You are welcome to contact Fire at 283-7153 or by email at mwilkinson@carson.org should you wish to speak with Fire about specific elements of this project.

Response: Comment noted, we will coordinate the final construction drawings prior to initial submittal to ensure plans meet the CCFD standards.

Building Division
Corey Coleman, Building Official

1. Designs to the 2018 Code Series and Northern Nevada Amendments (Building and Fire), Please verify plans follow the Nevada Blue Book guidelines

Response: Comment noted, project to meet 2018 IBC, IFC and the 2018 NNA.

2. Following the entitlement process, permit applications shall be submitted through the Carson City permit center at permitcenter.carson.org.

Response: Comment noted, construction drawings to be submitted through the online permit center.

3. Provide design criteria on cover pages along with complete set of plans.

Response: Comment noted, design criteria to be included on the cover page of the construction drawings.

4. Permits will require a Nevada Licensed contractor.

Response: Comment noted, permits will have the contact information for the projects Contractor.

5. Please note that building code requires drainage 6" in 10' an exception allows for swales, in that case please note no mechanical and/or utilization equipment may be installed in that area (ie: AC units shall be placed in back yard) R401.3 2018 IRC

Response: Comment noted, proper drainage will be identified on the construction drawings.

Parks, Recreation and Open Space
Nick Wentworth, Project Manager

1. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the owner. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the street(s) right of ways in perpetuity.

Response: Comment noted, all irrigation systems to be owned and maintained by the projects HOA.

2. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Also, any remaining landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City Pollinator Plant list and other plant selection resources can be found at www.carson.oro/beecityusa

Response: Comment noted, landscaping to meet pollinator requirements.

3. The developer is required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:

- Educating workers about the importance of managing weeds on an ongoing basis;

- Properly identifying weed species to determine most appropriate treatment strategies;
- Avoiding or treating existing weed populations; and
- Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

Response: Comment noted

4. Where possible, deciduous trees must be planted a minimum of 5' from any city/public street, sidewalk or pathway. Evergreen trees must be planted a minimum of 10' from any city/public street, sidewalk or pathway. Fruit bearing, "non-fruiting" flowering or any other trees that drop debris such as seed pods will not be permitted near or placed where they will eventually hang over city/public sidewalks or pathways.

Response: Comment noted, landscape construction drawings will incorporate minimum street tree setbacks.

5. Carson City Municipal Code: Title 18, Division 3 should be reviewed by any/all parties involved in the proposed landscape design prior to landscape plans being submitted to the city for final approval of a building or site improvement permit. Note: Special care and consideration should be taken in the protection of existing trees on-site. https://library.municode.com/nv/carsoncity/codes/codeofordinances?nodeId=TIT18 APPENDIXCADEST DIV3LA

Response: Comment noted.

6. The project is subject to the collection of Residential Construction Tax (RCT), compliant with NRS Chapter 278 and Carson City Municipal Code (CCMC 15.60).

Response: Comment noted.

7. The applicant will construct a multi-use path for public use. This shall be coordinated through and agreed upon by the Parks, Recreation & Open Space Department. The applicant shall provide a 30' wide (minimum) easement for the path. Easement shall be a non-motorized public access trail easement. The easement document shall indicate that maintenance of the easement shall be the responsibility of the HOA in perpetuity. The applicant will design and construct a multi-use path (off street/paved/shared) at a 10' wide (minimum) AASHTO standard concrete path with an adjacent 3' wide decomposed granite path, including interpretive/wayfinding signage, pet waste receptacles, trash receptacles, benches and related amenities. The path will be constructed from the City's Long Ranch Pathway system on the northwest corner of APN 00739239 to Ormsby Blvd, and have an at grade pedestrian crossing with flashing lights on North Ormsby Boulevard. All other street crossings associated with the multi-use path must be reviewed and approved by Carson City Public Works and Parks, Recreation & Open Space Departments to ensure pedestrian safety. This trail must be constructed or bonded for prior to Board consideration of the first final map.

Response: Comment noted, a preliminary multi-use path has been shown on the TM submittal plan. Construction documents will provide details for the path,

interpretive/wayfinding signage, pet waste receptacles, trash receptacles, benches and related amenities.

8. Paths, sidewalks and on-street bike lanes along the street frontage shall conform to the standards as outlined in the Carson City Unified Pathways Master Plan. The Unified Pathways Master Plan (UPMP) identifies on-street bike lanes along the street frontage of the proposed development on North Ormsby Boulevard. This UPMP requirement needs to be coordinated with Development Engineering's requirements for the development's street frontage design and improvements.

Response: Comment noted, bike lanes have been added to N. Ormsby Blvd and Kings Canyon Road along the project frontage.

9. A multi-use path shall be constructed in the buffer area on all sides of the property to create a looped trail system. All trails will be owned and maintained by the HOA. All street crossings associated with these paths must be reviewed and approved by Carson City Public Works and PROS to ensure pedestrian safety.

Response: Comment noted, CCPW and PROS will review the proposed multi-use path street crossings to ensure pedestrian safety.

10. The applicant shall demonstrate connectivity between the trailhead/multi-use path and the development's sidewalk/path system. Sidewalk connections to the trailhead and multi-use path will provide convenient and logical access to these facilities and the overall sidewalk network within the development.

Response: Comment noted, a trails connectivity map has been included in the planset.

Conclusion:

Based on questions related to project boundaries and process, a new conceptual subdivision map application will be necessary prior to the submittal of a tentative subdivision map application.

These comments are based on a very general site plan and do not indicate a complete review. All pertinent requirements of Nevada State Law, Carson City Code, and Carson City Development Standards will still apply whether mentioned in this letter or not.

Sincerely,
Community Development Department, Planning Division

Heather Manzo, Associate Planner

cc: CSM-2022-0005

TAB B

Andersen Ranch West Project Narrative

Property Location

The “Subject Property” is located in Carson City on two parcels totaling 80.03+/- acre (APN’s 009-012-20 & 21). The currently proposed development, Andersen Ranch West, is proposed for development on the northern 29.7+/- acres of the subject parcels (Development Area) and will use 61 units of the overall development allowance (per zoning designation on the 80.03+/- acres) using the common open space development requirements.

The subject property is an infill site, surrounded by existing single-family residential development and neighborhoods and roadways. The property gently slopes from west to east and there are two creeks that run from west to east through the property (Ash Canyon Creek and Kings Canyon Creek). The currently proposed 29.7+/- acres within the Andersen Ranch West development Area lies north of Ash Canyon Creek.

An aerial based vicinity map is provided on page 2 of this project narrative

Project Request

Requested is a Common Open Space Tentative Subdivision Map to create a total of 61 single-family lots on the northern 29.7+/- acres of the 80.03+/- acre subject property. It is assumed that there is one lot already existing on the southern 50.33+/- acre “remainder property” south of the “development area” with the ranch house near the southeastern corner of the subject property, closer to Kings Canyon Road. The total number of developable lots on the 80.03+/- acre subject property, per the existing property zoning (SF-1A and SF-12), is 132 lots. The 61 proposed lots, along with the existing residence on the southern portion of the property, which is not currently proposed for development, are a portion of the approved density of the site. Any additional proposed development will be restricted to a total of 70 lots, not including the one lot assumed for the existing ranch house.

The proposed lot sizes within the Andersen Ranch West project range in size from 14,380.4 SF to 16,359.2+ SF. This lot size conforms to the SF-12 zoning designation and is very similar to the existing lots to the north of the proposed development, within the Winter Meadows Unit 2 Subdivision.

Setbacks for the proposed Andersen Ranch West subdivision will be 20’ for front yards, 10’ for side yards and 15’ for exterior or street side yards and 20’ rear yards.

Use of the common open space development standards for this project will allow for the proposed 61 lots to be established on the northern end of the property while restricting future development on the remaining

acreage of the site to 70 lots (with one existing lot for the ranch house at the southeastern side of the subject property. No future development plan for the remainder property is known at this time.

Vicinity Map

Existing Site Condition Photos

Following are photos of the project site that show the existing site conditions of the project development site. The site presents gentle grades and developable land, similar to the lands surrounding the site, which area all developed.

View of the subject property (80.03 acres) near the southeastern property corner along Kings Canyon Road.

View of the subject property (80.03 acres) near the southwestern property corner along Kings Canyon Road.

View to the west of the development area (29.7+/- acres) from N. Ormsby Blvd.

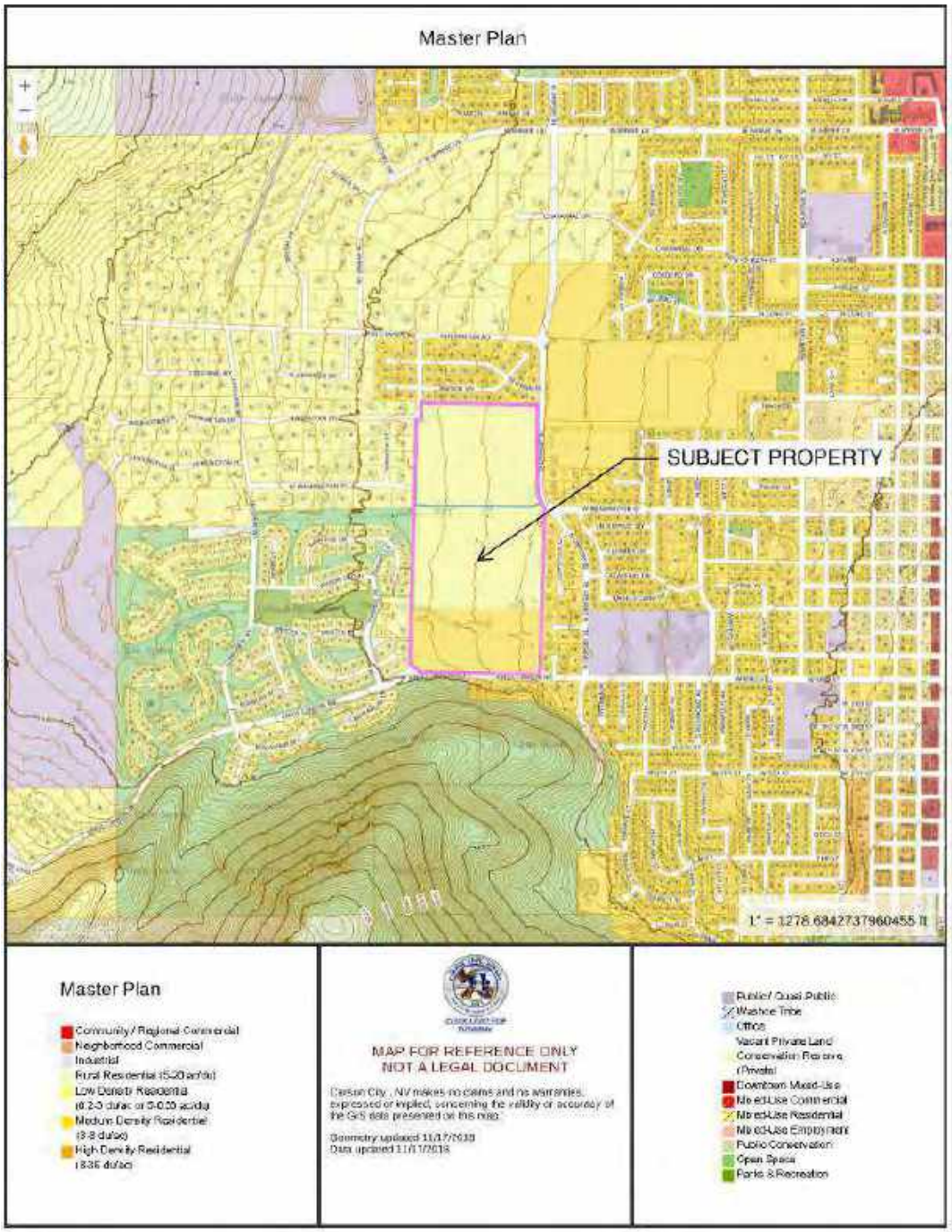
View toward the northwest of the northeastern corner of the 29.7+/- acre development site. Existing homes north of the development side and existing vegetation along property line can be seen in photo.

View toward the southwest of the southeastern corner of the 29.7+/- acre development site. The row of vegetation in the field is the existing alignment of the Ash Canyon Creek drainage, which parallels the southern property line of the proposed development site.

Master Plan and Zoning Conformance

The subject property is split master planned with all of 009-012-21 and a portion 009-012-20 master planned Low Density Residential. The southern remainder area of 009-012-20 is master planned Medium Density Residential.

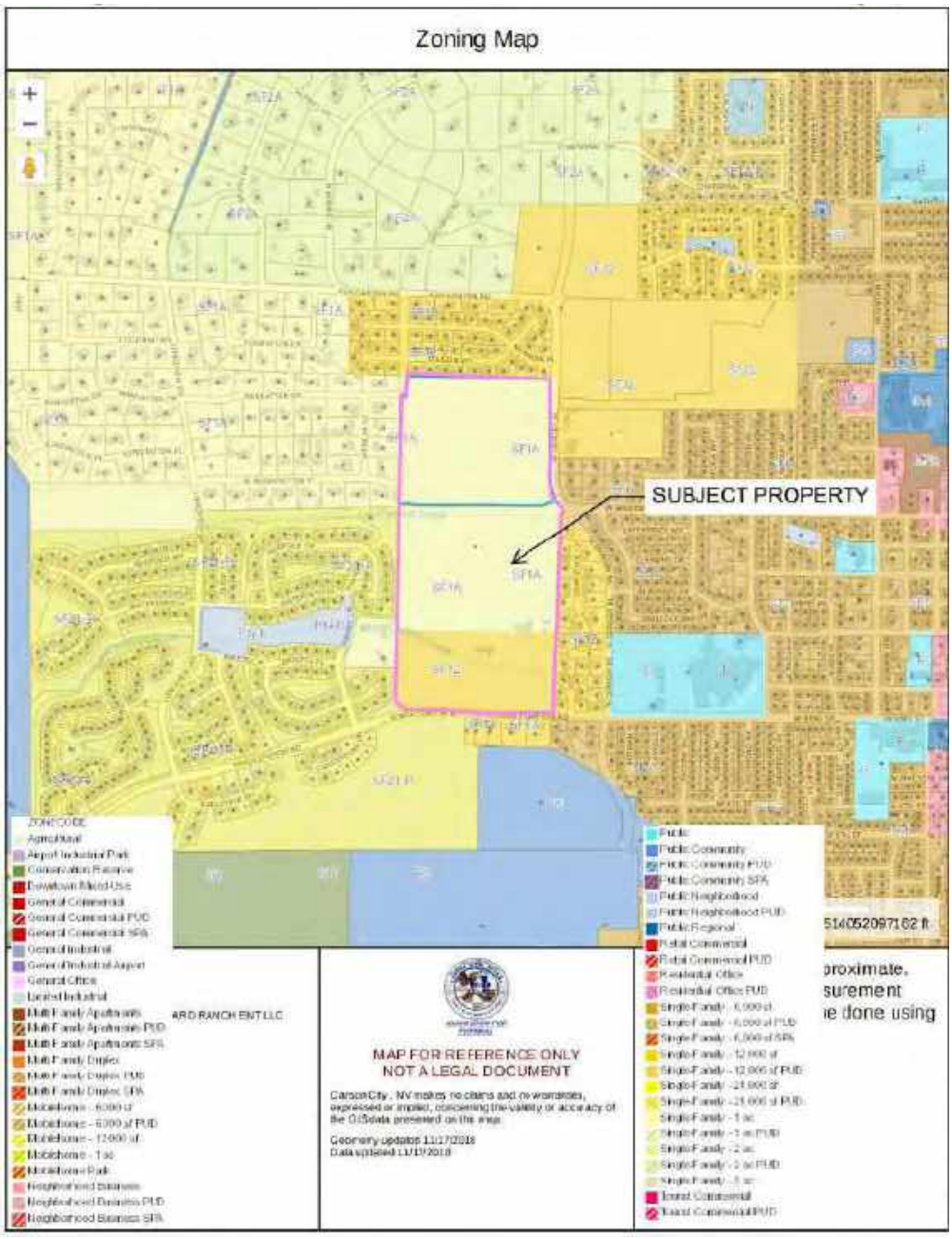
Existing Master Plan Exhibit



The subject properties have different zoning classifications. 009-012-21 is entirely zoned SF1A while 009-012-20 is split zoned SF1A and SF12. Per Carson City's GIS department, 009-012-20 is broken up into SF1A (30.54 +/- AC) and SF12 (19.79+/- AC).

The proposed single-family use is allowed within the zoning designations on the subject property and through the use of the common open space development standards, the proposed lot sizes are allowed within the proposed development area.

Existing Zoning Exhibit



Project Summary

Requested is a tentative map to create a total of 61 single family dwellings on 80.03+/- acres. The project will utilize the common open space development standards to create lot sizes that are appropriate on the development area of the property (29.7+/- acres at the northern end of the subject property). The project will provide common open space as part of the development and will set forth limitations on the remainder property (50.33+/- acres, south of the development area) where no more than 70 additional lots will be allowed for future development. The development is proposed to provide. The subdivision lot patterning and lot layout can be viewed on Sheets C2.0 and C2.1 in Tab B with this application.

Project Benefits

The proposed Andersen Ranch West will present multiple benefits to the area with the proposed new development. Such benefits include Improvements to vehicular and pedestrian access and improvements to stormwater management. Each is described, below.

Improved Vehicular Access - The project is designed on an infill site that is surrounded by existing development and will not expand the urban footprint of Carson City. Being an infill site, the property is already within the Carson City Sheriff and fire department service areas. The improved vehicular connectivity through the site will improve Sheriff and fire response time by utilizing the direct connections that will be provided between N. Ormsby Blvd. and properties west of the proposed development.

Improved Pedestrian Access - In addition to the improved vehicular connectivity, pedestrian access will also be improved within the area through the sidewalk and trail system that will be provided within the proposed subdivision. The proposed trail network within the Andersen Ranch West project (seen on Sheet 6.0 with the Tentative Map Set in Tab C) will provide connection to the Ash Canyon Trail System.

Improved Stormwater Management - The project will also provide improvements to stormwater management and decrease the chance of downstream flooding in association with the Ash Canyon drainage. Improvements in collection and detention of existing stormwaters that currently cross the property in an uncontrolled fashion will benefit the downstream properties.

Project Density

Per the zoning designations on the subject property (80.03 acres), the total number of units that would be allowed is 132 for a overall density of 1.65+/- DU/AC. On the development area of the Andersen Ranch West (29.7+/- acres) the 61 lots equates to a density of 2.05+/- DU/AC. This is within the allowed range of density under the Carson City Master Plan for Low Density Residential, which allows for 2-3 DU/AC.

As noted previously in this project narrative. The remaining 50.33 acres of the site that is outside of the current development area would have a remaining allowed number of dwelling units of 70. The number of allowed units will be limited with the approval of the proposed 61 units at the northern end of the subject property (within the development area). Limiting the total number of units on the subject property follows the regulations contained in the Common Open Space Development standards section 17.10.025 that states for residential developments “the total number of dwelling units in the proposed common open space

development shall not exceed the total number of dwelling units allowed by the underlying zoning district(s)."

Future Property Development

The 50.33+/- acre "remainder area," of this subject property will be limited to 70 lots, per the remaining density allowance under the common open space standards of the Carson City Municipal Code (17.10.025). There is currently no plan for development of this remainder property as it currently contains one residential dwelling and agricultural structures. The limitation on future development is proposed to be part of the overall review and approval process for this Andersen Ranch West Common Open Space Tentative Subdivision application.

Access, Traffic and Circulation

Four points of access will be provided to serve the proposed Andersen Ranch West subdivision. Two access points will be provided on N. Ormsby Blvd and connections to W. Washington Street and Manhattan Drive will be made on the east side of the site. A Traffic Impact Study was prepared for the project and estimates the total average daily trips (ADT) to be 576 trips and the AM and PM peak hour trips are estimated to be 43 and 58, respectively.

The findings of the study indicate that the existing development/traffic, plus the proposed project traffic will not unduly burden the area streets to have them operate outside of the policy level of service thresholds. As such, no improvements are recommended to mitigate traffic impacts. The study recommends that the project will be required to construct standard frontage improvements including curb, gutter and sidewalk along the N. Ormsby Blvd. frontage. Class 2 bike lanes are recommended in both directions along N. Ormsby Blvd. adjacent to the project site.

Landscaping/Open Space

A preliminary landscape plan is provided in Tab C with this application. The plan shows that common area landscaping will be provided along all drainage, trail, detention and common areas near project entries. An open space/recreation lot is provided in Lot E at the northwestern corner of the site. This lot is 13,820+ SF in size and is provided to meet the requirement for such area per CCMC 17.10.046. Code requires that 100 SF of common open space be provided for recreational use which may include but not be limited to picnic areas, sports courts, softscape surfaces covered with turf, sand or similar materials for play areas for young children. The 13,820+ SF of open space/recreation exceeds the required 6,200 SF (accounting for the 61 proposed lots in Andersen Ranch West, plus the one existing home on the remainder parcel). Residential lot landscaping on the 61 new lots within the proposed Andersen Ranch West project shall conform with Carson City Development Codes.

Water & Sewer Demand and Service

Water - The water demand for the proposed project will be analyzed based off two components - on being the single family (SF) residences and the other being the open space irrigation. The SF demand per State Standards is 0.6 ac-ft/yr per unit under 12,000 square feet or 535 gallons per day. That translates into an average demand of 0.37 gpm per SF unit or 22.57 gpm for all 61 SF units. This flow is in accordance with

historical demand for similar facility types in the area. Lastly, the landscaping demand can be estimated at 4 ac-ft/yr per acre. Current estimates for the landscaped areas that will be irrigated are approximately 3.8 acres. This results in a demand of 13,570 gallons per day or 9.42 gpm. Based on discussions with Tom Grundy at Carson City Public Works, the existing water system has the capacity to serve this development. Looping the water will be required per the conceptual map review letter prepared by Carson City Staff.

Sewer – The proposed project will connect to the City's sewer system for collection and treatment. The developer is proposing a gravity system that will include expanded use of the existing connections to the existing gravity mains in N. Ormsby Boulevard.

The proposed 61 SF residences will connect to the existing main in N. Ormsby Boulevard which is an 8" ACP which runs south and then turns east into Washington Street. The City has provided existing sewer capacity for the existing sewer system:

> The northernmost pipe adjacent to the property along N. Ormsby Boulevard has a d/D of 25% at a slope of 1.8%, approximately 0.26 cfs.
>
> The southernmost pipe adjacent to the property along N. Ormsby Boulevard before turning down Washington Street has a d/D of 45% at a slope of 2.8%, approximately 1.0 cfs.

The average daily residential EDU rate is 250 gallons per day, which equates to 0.004 cfs average. Using a peaking factor of 3.0, the peak flow per household would be 0.0012 cfs. With 61 homes planned, the increase in flow is 0.07 cfs, putting the 8" main in N. Ormsby Boulevard at a d/D of 0.49, approximately 1.07 cfs.

The proposed project's overall usage is in accordance with the master plan for which the sewer main was analyzed. Since the proposed project is within these tolerances, it is assumed that the existing sewer system has the available capacity to convey the sewage for proposed project.

Solid Waste

Residents within the Andersen Ranch West Subdivision will be required to have solid waste collection to the meet the requirements of the Carson City Code. Pickup of solid waste will be per the requirements of the solid waste management purveyor.

Common Open Space Maintenance

The common areas within the Andersen Ranch West project will be maintained via an HOA, LMA or other appropriate and acceptable mechanism to ensure long-run maintenance of the common portions of the development.

Development Statistics

Following are development statistics for the proposed Andersen Ranch West Common Open Space Subdivision.

Total Subject Property (APN's 009-012-20 & 21):	80.03+/- AC
Total Development Area (Andersen Ranch West)	29.7+/- AC
Total Residential Lot Area	20.48+/- AC (+/-69%)
Common Area (Included Common Area/Rec Parcel)	3.82+/- AC (+/-13%)
Right-of-Way Area/Dedication Area	5.40+/- AC (+/-18%)
Remainder Property (No Current Development Proposed	50.33+/- AC
(1 existing lot assumed and 70 additional units allowed)	
Maximum Lots on Subject Parcels (80.03+/- AC, per Zoning SF-1A and SF-12)	132 Lots
Andersen Ranch West Proposed Lots	61 Lots
Remainder Property Existing Assumed Lots (Existing Ranch House)	1 Lot
Remainder Property Lots (after Andersen Ranch West Development)	70 Lots
Gross Density Proposed (Andersen Ranch West Development Area Only)	2.05+/- DU/AC

Lot Sizes

Minimum Lot Size Required, Per 17.10.030(1)(a)	14,374.8 SF
Minimum Lot Size Provided:	14,380.2 +/- SF
Maximum Lot Size Provided:	16,359.2 +/- SF
Average Lot Size Provided:	14,627.7+/- SF
Minimum Lot Width Provided:	80 feet

Proposed Setbacks – Following the standards containing in CCMC 17.10.030 (Lot and Yard Standards)

Front Yard	20 feet
Side Yard	10 feet
Street Side Yard	15 feet
Rear Yard	20 feet

Legal Findings Review

NRS 278.349(3) Findings

The NRS requires certain findings be considered when approving a tentative map.

Action on tentative map by governing body; considerations in determining action on tentative map; final disposition.

3. The governing body, or planning commission if it is authorized to take final action on a tentative map, shall consider:

(a) Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal;

Environmental and health laws and regulations concerning water and air pollution will be satisfied by connecting to existing municipal services adjacent to the site. Air Pollution will be addressed by a dust control permit that minimizes impacts until the development is completed.

(b) The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision;

The project will connect to the City water system, which has sufficient quantity for the foreseeable needs of the proposed development and its lots based on discussions with the Carson City Public Works Department. Sufficient water quality is the responsibility of the municipal provider, and resources meeting the quality requirements are available to accommodate the needs of this development.

(c) The availability and accessibility of utilities;

The proposed project is an infill site and all public utilities are adjacent to the site and available for connection. Any upgrades necessary that are solely associated with added project demands will be the responsibility of the developer.

(d) The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks;

The proposed lots are within an infill area with existing service from police, transportation, recreation and parks. Schools are provided by the Carson City School District and the students will attend Fritsch and Bordewich Bray elementary schools, Carson Middle School, and Carson High School.

(e) Conformity with the zoning ordinances and master plan, except that if any existing zoning ordinance is inconsistent with the master plan, the zoning ordinance takes precedence;

The proposed development is in conformity with the zoning ordinance and the land use element of ***the City's Master Plan. No conflicts wi****th existing standards contained in approved codes and/or plans are proposed with this development.*

Guiding Principle 1: A Compact and Efficient Pattern of Growth Carson City will have a compact pattern that makes efficient use of the limited land area and water resources it has available for urban growth, that fosters the provision of infrastructure and services in a cost-effective manner, and that balances development with conservation of the natural environment—particularly where public lands abut the urban interface.

The proposed development ***is in conformance with the principle's stated goal of a compact and*** *efficient pattern of growth. The two parcels of land are surrounded by existing residential development on all sides and the necessary infrastructure -sewer, water, electricity, and gas - to service the site. Public services exist to service the proposed project and the surrounding area.*

Guiding Principle 6: Quality Design and Development Carson City will project a positive image for the community by promoting a high standard of design and the use of durable long-lasting materials for all development, and by ensuring that infill and redevelopment is of a scale and character that is compatible with and enhances surrounding development context.

1.1b—Urban Service Area Discourage growth in locations not currently served by urban services or not planned to be served by the city's water and wastewater infrastructure by prohibiting the rezoning of lands for urban development intensities in locations not served or planned to be served by urban services, as identified in the City's Water and Wastewater Master Plan.

The proposed development is in conformance with the principle's stated goal of an urban service *area that is intended to promote compact and efficient patterns of growth. The two parcels of land are surrounded by existing residential development on all sides and the necessary infrastructure - sewer, water, electricity, and gas - to service the site. Urban services exist to service the surrounding area.*

1.4b—Cluster Development Encourage the use of cluster development techniques at the Urban Interface to maintain views, preserve steep slopes, and maximize the preservation of open space. Update current cluster practices to ensure that the resulting density of the clustered development is consistent with the parcel's land use designation, the surrounding development pattern, and the level of roadway improvements that currently exist or will be required to be provided to the site. Cluster developments that result in urban levels of density in an area with an otherwise rural character and that do not represent progressive expansion of existing urban densities should be prohibited.

The proposed development is not at a point of an urban interface as defined in code. The lands surrounding the project are developed with single family residences. The proposed development is

consistent with the zoning designation, the corresponding density allowed, the surrounding pattern development, and the traffic report has shown that the level of roadway improvements in the area are adequate to service the proposed development.

1.4c—Protection of Existing Site Features Ensure that development at the Urban Interface is designed to minimize disturbances to existing stands of mature trees, distinctive topographic features (hillsides/ridgelines), and other character defining features, particularly those that are visible from other locations in the community. Require a detailed site analysis for any development at the Urban Interface to identify unique features to be protected.

There are existing mature trees along the perimeter of the development area. Any trees that can be saved will be saved. The existing Ash Canyon Creek drainage will be modified to assist in overall detention and stormwater control. There are no hillsides or ridgelines on this property. A site analysis map is provided as sheet C7.0 in Tab C with this application.

1.5d—Coordination of Services The City shall coordinate with internal service departments as well as other governmental organizations, such as the School District, that provide services to residents, to ensure that existing and new neighborhoods have adequate services and school sites.

*The proposed development is surrounded by approved existing developments that are currently served by existing city services. Adequate sheriff and fire services exist to adequately serve the proposed development. Additional fire infrastructure – hydrants – will be constructed as required by fire flow testing**. In addition, the proposed development's street network will provide more** efficient connectivity with the streets to the west, particularly Manhattan Drive and Washington Street. Conversation with the Carson City school district, we were informed that the school zones the project is zoned for - Fritsch Elementary School, Bordewich Bray Elementary School, Carson Middle School, and Carson High School - have adequate capacity to service the potential increase in school children.*

3.1b—Environmentally Sensitive Areas Environmentally Sensitive Areas within the community should be protected using available tools, such as development setbacks, dedication, or other mechanisms.

Ash Canyon Creek will be enhanced for stormwater flow and protection from flooding and incorporated into the project open space. A wetlands delineation was prepared as part of the development project site review and the design team is awaiting review of the delineation from the ACOE.

(f) General conformity with the governing body's master plan of streets and highways;

***The proposed development meets the City's Master plan for streets and highways as described in** Chapter 7 of the Master Plan by creating a development that supports an integrated transportation system that does not unduly burden the existing infrastructure. A traffic impact study was prepared*

by Headway Transportation as part of the development planning effort and is provided in Tab D with this application.

(g) The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision;

The proposed development is an infill project, this Common Open Space subdivision is adding internal streets to the development area only. The existing public streets surrounding this infill site are adequate to accommodate the traffic generated by the proposed subdivision, and service levels on existing streets will be minimally impacted. This is based on the traffic study submitted and general street capacity standards. The study has determined that the additional trips can be accommodated with minimal impacts to the level of service at nearby intersections. A copy of the traffic study is provided in Tab D with this application.

(h) Physical characteristics of the land such as floodplain, slope and soil;

The project site present only a gentle slope and does not contain, nor is near, an earthquake fault. Soils condition on the site were seen be comprised of clayey sands, clays and silts, which is typical in development in this region. The subdivision will be required to make drainage improvements to minimize onsite flood hazard zones. A CLOMR will be filed with FEMA to document changes.

(i) The recommendations and comments of those entities and persons reviewing the tentative map pursuant to NRS 278.330 to 278.3485, inclusive;

The recommendations of reviewing departments and other entities will be fulfilled through conditions of approval or other appropriate methods acceptable to the City and the applicant

(j) The availability and accessibility of fire protection, including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires, including fires in wild lands;

The project is located in an area with adequate water services and capacity available, adjacent to the development area. Fire hydrants will be required to be located within the subdivision to meet Carson City Fire Department standards. The site is an infill side and not adjacent to wild areas for consideration or requirements relative to the wildland/urban interface standards.

(k) The potential impacts to wildlife and wildlife habitat; and

The subject property is within an infill development area that is surrounded by existing development on all four sides. Open space corridors are provided as part of the Common Open Space Development. Homes have been centered in the development area of the property with trail and open space corridors along the perimeter.

(l) The submission by the subdivider of an affidavit stating that the subdivider will make provision for payment of the tax imposed by chapter 375 of NRS and for compliance with the disclosure and recording requirements of paragraph (f) of subsection 1 of NRS 598.0923, if applicable, by the subdivider or any successor in interest.

This is understood and will be completed at the appropriate time. The submission by the subdivider of an affidavit stating that the subdivider will make provision for payment of the tax imposed by Chapter 375 of NRS, and for compliance with the disclosure and recording requirements of NRS 598 by the subdivider or any successor in interest.

17.07.005 - Findings.

In considering parcel maps, planned unit developments and tentative subdivision maps the director shall consider the following:

1. Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal.

The environmental health laws and regulations are being addressed through ongoing and temporary measures. Development proposed with this subdivision will be required to obtain a dust control and stormwater pollution prevention permit from the Nevada Division of Environmental Protection (NDEP), and the site grading must incorporate proper dust control and erosion control measures. The new lots will also be required to connect to the City water and sewer system.

2. The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision.

The project will connect to the City water system, which has sufficient quantity for the foreseeable needs of the additional lots. Based on conversation with the Carson City Public Works Department, sufficient water quality and resources are available to accommodate the needs of this development.

3. The availability and accessibility of utilities.

The proposed lots are designed within an infill development area and all public utilities available adjacent to the property.

4. The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks.

The proposed lots are within an infill development area that has existing service from schools, police, transportation, recreation and parks. Open space areas have been designed within this project as part of the Common Open Space Development requirements.

5. Access to public lands. Any proposed subdivision that is adjacent to public lands shall incorporate public access to those lands or provide an acceptable alternative.

The proposed trail system within the Andersen Ranch West project connects to the Ash Canyon Creek trail system at the southwest corner of the development area.

6. Conformity with the zoning ordinance and land use element of the city's master plan.

The proposed development is consistent with the zoning ordinance and the land use element of the ***City's Master Plan.***

7. General conformity with the city's master plan for streets and highways.

The proposed development meets the City's Master plan for streets and highways as described in *Chapter 7 of the Master Plan by creating a development that supports an integrated transportation system that does not unduly burden the existing infrastructure. A traffic impact study was prepared by Headway Transportation as part of the development planning effort and is provided in Tab D with this application.*

8. The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.

The proposed development meets the City's Master plan for streets and highways. As an infill project, this Common Open Space subdivision is adding internal streets to the development area only. The existing public streets surrounding this infill site are adequate to accommodate the traffic generated by the proposed subdivision, and service levels on existing streets will be minimally impacted. This is based on the traffic study submitted and general street capacity standards. The study has determined that the additional trips can be accommodated with minimal impacts to the level of service at nearby intersections.

9. The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.

The project site presents only a gentle slope and does not contain, nor is near, an earthquake fault. Soils condition on the site were seen be comprised of clayey sands, clays and silts, which is typical of sites in this region. The subdivision will be required to make drainage improvements to minimize onsite flood hazard zones. A CLOMR will be filed with FEMA to document changes.

10. The recommendations and comments of those entities reviewing the subdivision request pursuant to NRS 278.330 thru 278.348, inclusive.

The recommendations of reviewing departments and other entities will be fulfilled through conditions of approval or other appropriate methods acceptable to the City and the applicant

11. The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.

The project is located in an area with adequate water services and capacity available, adjacent to the development area. Fire hydrants will be required to be located within the subdivision to meet

Carson City Fire Department standards. The site is an infill side and not adjacent to wild lands for consideration or requirements relative to the wildland/urban interface standards.

12. Recreation and trail easements.

The Andersen Ranch West Subdivision provides open space corridors to appropriately accommodate drainage and trail connections. Connection to the Ash Canyon Creek trail system located at the SW corner of the development area is proposed as part of the overall connectivity for pedestrians.

Master Plan Policy Checklist

Conceptual & Tentative Subdivisions, PUD's & Parcel Maps

PURPOSE

The purpose of a development checklist is to provide a list of questions that address whether a development proposal is in conformance with the goals and objectives of the 2006 Carson City Master Plan that are related to subdivisions of property. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: Andersen Ranch West - Common Open Space Tentative Subdivision Map

Reviewed By: _____

Date of Review: _____

DEVELOPMENT CHECKLIST

The following five themes are those themes that appear in the Carson City Master Plan and which reflect the community's vision at a broad policy level. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. A check mark indicates that the proposed development meets the applicable Master Plan policy. The Policy Number is indicated at the end of each policy statement summary. Refer to the Comprehensive Master Plan for complete policy language.

CHAPTER 3: A BALANCED LAND USE PATTERN

The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreational opportunities, and retail services.

Is or does the proposed development:

☑ Consistent with the Master Plan Land Use Map in location and density?

Response: The proposed development is consistent with the existing Master Plan Land Use plan as we are not requesting any amendments with this submittal. The proposed development is surrounded by existing single family home subdivisions with adequate existing services and infrastructure to serve the proposed 61 lots. The requested density is consistent with the surrounding areas.

☑ Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?

Response: The proposed development meets the provisions and ultimate purpose of the Growth Management Ordinance to ensure that adequate water and wastewater facilities exist to service this project. Adequate water resources will be dedicated with this project, and existing sanitary sewer capacity exists to serve the proposed development. Please see the Utility Impact letter included in Tab D for specific details.

☑ Encourage the use of sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?

Response: The proposed development will make use of appropriate building materials and construction techniques to promote water and energy conservation, ***including, but limited to, low impact development BMP's as contained in Carson City's design manual.***

☐ Located in a priority infill development area (1.2a)?

Response: The proposed development is not located in a Carson City Master Plan priority infill development area as defined in Goal 1.2 of the Master Plan. The site is neither in a high priority area such as the downtown area nor a moderate priority area such as the gateway corridors. It is by definition, an infill site, as the proposed development is surrounded by existing development.

☑ Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

Response: ***The proposed development does not have an "urban interface"*** *with surrounding open space. Existing trailways and pathways will be maintained and access to areas surrounding the site, primarily to the west, will not be impacted by the proposed development. Additional trail paths are incorporated into the site, with an additional connection to existing trails in the area located in the southwest corner. See civil drawings sheet C2.1 in Tab C for details.*

☑ Encourage cluster development techniques, particularly at the urban interface with surrounding public lands, as appropriate, and protect distinctive site features (1.4b, c, 3.2a)?

Response: The proposed development is proposed to limit the buildable number of units on both parcels to a specific number tied to the current allowed density of the existing zoning designations (132). The project is proposing 61 units, there is an existing structure on site that will remain in place, which allows for 70 additional units on the site in a future proposed development.

☐ At adjacent county boundaries, coordinated with adjacent existing or planned development with regards to compatibility, access and amenities (1.5a)?

Response: The proposed development is not adjacent to county boundaries to necessitate coordination with adjacent projects. However, the proposed development was designed to be compatible in size, density, and product type. Access points and amenities are maintained and enhance to complement existing surrounding development.

☑ Located to be adequately served by city services including fire and sheriff services and coordinated with the School District to ensure the adequate provision of schools (1.5d)?

Response: The proposed development is surrounded by approved existing developments that are currently served by existing city services. Adequate sheriff and fire services exist to adequately serve the proposed development. Additional fire infrastructure – hydrants – will be constructed as required by fire flow testing. In addition, ***the proposed development's street network will provide*** *more efficient connectivity with the streets to the west, particularly Manhattan Drive and W. Washington Street. Conversation with the Carson City school district, we were informed that the school zones the project is zoned for - Fritsch Elementary School, Bordewich Bray Elementary School, Carson Middle School, and Carson High School have adequate capacity to service the potential increase in school children.*

☐ In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?

Response: The proposed development is not within a mixed-use zoning designation, and as such this policy is not applicable.

☑ Provide a variety of housing models and densities within the urbanized

area appropriate to the development size, location and surrounding neighborhood context (2.2a, 9.1a)?

Response: The proposed development is provides a type of housing and corresponding density that is compatible with surrounding home types and densities that ranging from 1 acre to 12,000 SF lots. The 61 proposed lots are typically 1 acre in size and are an appropriate size for the area.

☑ Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?

Response: The proposed development has provided an open space corridor and detention areas in association with the existing Ash Canyon Creek drainage. The channel currently exists but will be improved and landscaped to create a functional channel that will carry the necessary creek water and will also provide necessary detention.

☐ If at the urban interface, provide multiple access points, maintain defensible space (for fires) and are constructed of fire resistant materials (3.3b)?

Response: The proposed development area ***does not have an "urban interface" with surrounding o****pen space.*

☑ Sited outside the primary floodplain and away from geologic hazard areas or follow the required setbacks or other mitigation measures (3.3d, e)?

Response: Drainage improvement will be made with the development of the property and a CLOMR will be submitted to the ACOE. The current floodplain fans across the development area in an uncontrolled fashion and makes the control of flood issues difficult to handle. The improvements to the drainage will provide a more manageable situation relative to addressing flooding, downstream. No geologic hazard areas are recognized on the development area.

☑ Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?

Response: Conversation with Carson City Public Works has indicated that sufficient capacity and facilities exist for this site's development. The traffic impact study identifies that the traffic generation will not overly-burden areas

streets and required levels of service will be maintained. Sidewalks and a trail system that will connect to the Ash Canyon Creek trail system will be provided with the development of the project. Pedestrian and vehicular access will be improved in the general area with the connections that will be made across the site from east to west.

☐ If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

Response: The proposed development area is not located in an identified Specific Plan Area (SPA),

CHAPTER 4: EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES

The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

Is or does the proposed development:

☑ Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b, c)?

Response: the project will have to meet the requirements for common open space per CCMC 17.10.046 (Open Space), which requires recreational areas be provided at a minimum rate of 100 SF per residential unit. Additionally, the project will provide a trail network that will run along the perimeter of the site and will connect to the Ash Canyon Creek trail system.

☑ Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

Response: The proposed development area conforms to the long-range guidance that the Master Plan provides The proposed development is consistent with the Open Space Master plan by developing a project that provides access to existing public open space/trails network in the area.

CHAPTER 5: ECONOMIC VITALITY

The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

Is or does the proposed development:

☐ Incorporating public facilities and amenities that will improve residents' quality of life (5.5e)?

Response: The proposed development area is providing infrastructure improvements that help to maintain or improve the surrounding area through recreational facilities and improvements to storm water containment.

☐ Promote revitalization of the Downtown core (5.6a)?

Response: The proposed development will not directly affect or promote the revitalization of the downtown core. However, the potential exists that the new residents of the development will either directly or indirectly contribute to this revitalization through visits to the area, or creation of jobs through a business located here.

☐ Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

Response: The proposed development is providing additional housing stock for the entire area to assist in alleviating the housing crisis in the area.

CHAPTER 6: LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS

The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

Is or does the proposed development:

☑ Promote variety and visual interest through the incorporation of varied lot sizes, building styles and colors, garage orientation and other features (6.1b)?

Response: there are three different general lot shape, presenting varied widths and depths that will be incorporated in to the development plan. This will allow for more variation than is typical within subdivisions all of standard or similar lot dimensions.

☑ Provide variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and

pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?

Response: Building treatments for the residential units will be part of the final plan submittal for the project and will be required to meet articulation and variation standards set forth in the CCMC.

- ☑ Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b 9.4a)?

Response: The nearest neighborhood, to the north presents similar lotting sizes and is developed in the SF-12 zoning designation. Lots to the east and west The nearest 1 acre lots are along the western property line and there are four lots that will back up to the proposed subdivision. Each of those existing homes will be additionally buffered by an open space corridor and trail between residential lot lines.

- ☐ If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a, b)?

Response: The proposed development area is not located in an identified Mixed-Use Activity Center area,

- ☐ If located Downtown:
  - ☐ Integrate an appropriate mix and density of uses (8.1a, e)?
  - ☐ Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?
  - ☐ Incorporate appropriate public spaces, plazas and other amenities (8.1d)?

Response: The proposed development area is not located in the Downtown area,

CHAPTER 7: A CONNECTED CITY

The Carson City Master Plan seeks promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

Is or does the proposed development:

- ☐ Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?

Response: The proposed development project is not located along any identified major travel corridors. The proposed development with its new linkages from east to west for both pedestrians and vehicles will benefit the area by providing alternative routes for travel.

☑ Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?

Response: The proposed development, with its associated road network, will benefit the area by providing alternative routes for travel, enhancing roadway connections or completing them where appropriate.

☑ Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan (12.1a, c)?

Response: The proposed development will enhance and link existing trailways and pathways around the site. Additional trail paths are incorporated into the site, with an additional connection to existing trails in the area located in the southwest corner. See civil drawings sheet C2.1 in Tab C for details.

TAB C

PLANT LEGEND

- ORNAMENTAL TREES
- DECIDUOUS SHADE TREES
- EVERGREEN TREES
- COMMON AREA LANDSCAPE
- RE-VEGETATION AREAS

LANDSCAPE DATA

SITE AREA: 1,272,388 SQ FT 29.21 ACRES)
JURISDICTION: CARSON CITY
ZONING: SF1A (SINGLE FAMILY 1 ACRE)

REQUIRED LANDSCAPE AREA = 6,200 SQ FT
- (100 SQ FT OF COMMON AREA PER UNIT (62 UNITS))
- FRONT AND SIDE YARDS

PROVIDED LANDSCAPE AREA = 6,200 SQ FT MIN.

REQUIRED TREES = 101 MIN.
- (1 TREE PER 50 LN FT OF COMMON AREA PATH) = 71
- (1 TREE PER 30 LN FT ALONG N. ORMSBY BLVD. (886 LN FT)) = 30

REQUIRED SHRUBS = 606 MIN.
- (6 SHRUBS PER REQUIRED TREE)

GENERAL NOTES

1) ALL PLANTING AND IRRIGATION SHALL BE INSTALLED PER LOCAL GOVERNING CODES.

2) TREES
- DECIDUOUS TREES SHALL HAVE A MINIMUM CALIPER OF 2 INCHES.
- EVERGREEN TREES SHALL HAVE A MINIMUM HEIGHT OF 6 FEET.
- ADDITIONAL TREES, BEYOND THOSE REQUIRED BY CODE, MAY BE REDUCED IN SIZE AT INSTALLATION.

3) FINAL PLANT SELECTION AND LAYOUT WILL BE BASED ON SOUND HORTICULTURAL PRACTICES RELATING TO MICRO-CLIMATE, SOIL, AND WATER REGIMES. ALL TREES WILL BE STAKED SO AS TO REMAIN UPRIGHT AND PLUMB FOLLOWING INSTALLATION. PLANT SIZE AND QUALITY AT TIME OF PLANTING WILL BE PER THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1990).

4) ALL SHRUB BEDS WILL RECEIVE 3" DEPTH MULCH WITH WEED CONTROL.

5) ALL LANDSCAPING WILL BE AUTOMATICALLY IRRIGATED. CONTAINER PLANTINGS WILL BE DRIP IRRIGATED BASED ON THE SPECIFIC HORTICULTURAL REQUIREMENTS OF EACH SPECIES. A REDUCED-PRESSURE-TYPE BACKFLOW PREVENTER WILL BE PROVIDED ON THE IRRIGATION SYSTEM AS REQUIRED PER CODE.

6) PLAN IS CONCEPTUAL. PLANT QUANTITIES INDICATED ARE PER CARSON CITY CODE REQUIREMENTS. PLANT LOCATIONS, FINAL SPECIES SELECTION, AND SIZE AT PLANTING SHALL BE DETERMINED DURING DEVELOPMENT OF THE FINAL CONSTRUCTION DOCUMENTS.

L.A. Studio Nevada
the landscape architecture studio
1552 C Street Sparks, NV 89431 (775) 323-2223 NV RLA #440
www.lastudionevada.com

REGISTERED LANDSCAPE ARCHITECT
MARC CHAPELLE
622
Expires: 6/30/23
8/18/22
STATE OF NEVADA

Nevada

Preliminary Landscape Plan
ANDERSEN RANCH
Lumos & Associates
Carson City

No.	Revision Date

LA No:	874-504-06-22
Designed:	KRD
Drawn:	KRD
Checked:	RMH
Date:	8/18/22

Sheet: L1 of 1

AREA

APN - 009-012-21

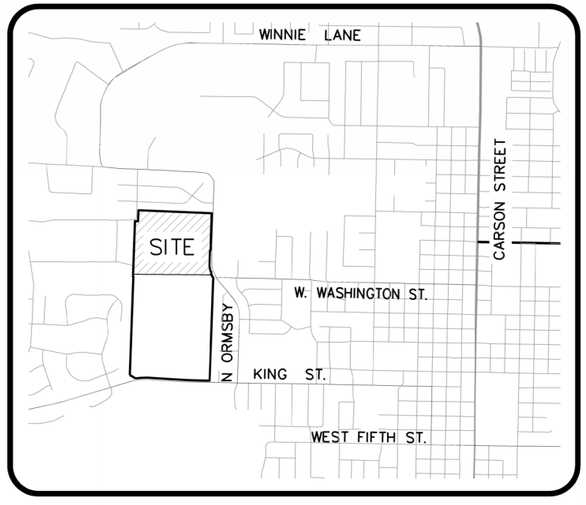
TOTAL NUMBER OF LOTS:	61 LOTS	
TOTAL LOT AREA:	LOTS 1 THRU 61	892,289.7± SQUARE FEET
TOTAL COMMON AREA:	LOTS A THRU E	166,353.2± SQUARE FEET
DEDICATION AREA:		235,380.4± SQUARE FEET
TOTAL AREA:	29.707± ACRES	1,294,023.30± SQUARE FEET
	2.053 UNITS PER ACRE	

APN - 009-012-20

TOTAL NUMBER OF LOTS:	1 LOT
TOTAL AREA:	50.32± ACRES

BASIS OF BEARINGS

THE BASIS OF BEARING FOR THIS SURVEY IS BASED ON THE NEVADA COORDINATE SYSTEM OF 1983, WEST ZONE, NAD 83/94, CARSON CITY DATUM. DISTANCES SHOWN ARE GROUND DISTANCES USING A PROJECT COMBINED GRID TO GROUND SCALE FACTOR OF 1.000200. CARSON CITY MAP No. 2749.



VICINITY MAP

NOT TO SCALE

PROPERTY OWNER:

ANDERSEN-COLARD RANCH ENTERPRISES, LLC
PO BOX 1746
CARSON CITY, NV 89702

REFERENCES

R1) PARCEL MAP RECORDED AUGUST 18, 1999 UNDER FILE NO. 475227 AND MAP NO. 2913, OFFICIAL RECORDS OF CARSON CITY, STATE OF NEVADA.
R2) DEED RECORDED JANUARY 27, 2021 UNDER DOCUMENT NO. 515748, OFFICIAL RECORDS OF CARSON CITY, STATE OF NEVADA.

50' 25' 0 50' 100'
SCALE: 1"= 50'

DEAN NEUBAUER
Exp 12-31-23
08-26-2022

TENTATIVE MAP

COMMON OPEN SPACE DEVELOPMENT
ANDERSEN RANCH WEST SUBDIVISION
TM-2022-____
FOR
ANDERSEN-COLARD RANCH ENTERPRISES, LLC
BEING A SUBDIVISION OF PARCEL 1 AS SHOWN ON SHOWN ON PARCEL MAP NO. 2913
WITHIN A PORTION OF THE WEST HALF OF SECTION 18, TOWNSHIP 15 NORTH, RANGE 20 EAST, M.D.M.
CARSON CITY STATE OF NEVADA

LUMOS & ASSOCIATES
308 N. CURRY ST., SUITE 200
CARSON CITY, NV 89703
TEL (775) 883-7077
LUMOSINC.COM

Drawn By: DGN
Sheet : 1 of 3
Job No. : 3947.004
Drawing No.: 8947004TM

JOINS SHEET 1
LOT D
22,166.9 SF
LOT 29
16,359.2 SF
LOT 28
16,229.9 SF
LOT 27
14,481.0 SF
LOT 26
14,391.5 SF
LOT 34
14,911.8 SF
LOT 35
14,406.2 SF
LOT 36
14,381.5 SF
LOT 37
15,090.8 SF
LOT 41
14,380.4 SF
LOT 40
14,409.2 SF
LOT 39
14,382.5 SF
LOT 38
15,091.2 SF
LOT 46
14,382.0 SF
LOT 47
14,967.6 SF
LOT 48
14,456.7 SF
LOT 49
14,592.2 SF
LOT 53
14,382.0 SF
LOT 52
14,390.8 SF
LOT 51
14,443.3 SF
LOT 50
14,587.6 SF
LOT 58
14,505.7 SF
LOT 59
14,781.0 SF
LOT 60
14,425.9 SF
LOT 61
15,127.4 SF
LOT B
10,121.7 SF
DEDICATION AREA
235,380.4 SF
5.403 ACRES
CHIANTI AVENUE
ZINFANDEL LANE
HONEYSUCKLE LANE
N ORMSBY BLVD.
BARDOLINO DRIVE
WEST WASHINGTON STREET
007-283-03 SF1A KNECHT TR
007-283-04 SF1A SCHNASER
007-284-01 SF1A KONRAD
LOT 25
14,383.5 SF
LOT 24
14,400.0 SF
LOT 23
14,400.0 SF
LOT 22
14,400.0 SF
LOT 21
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LOT 20
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LOT 19
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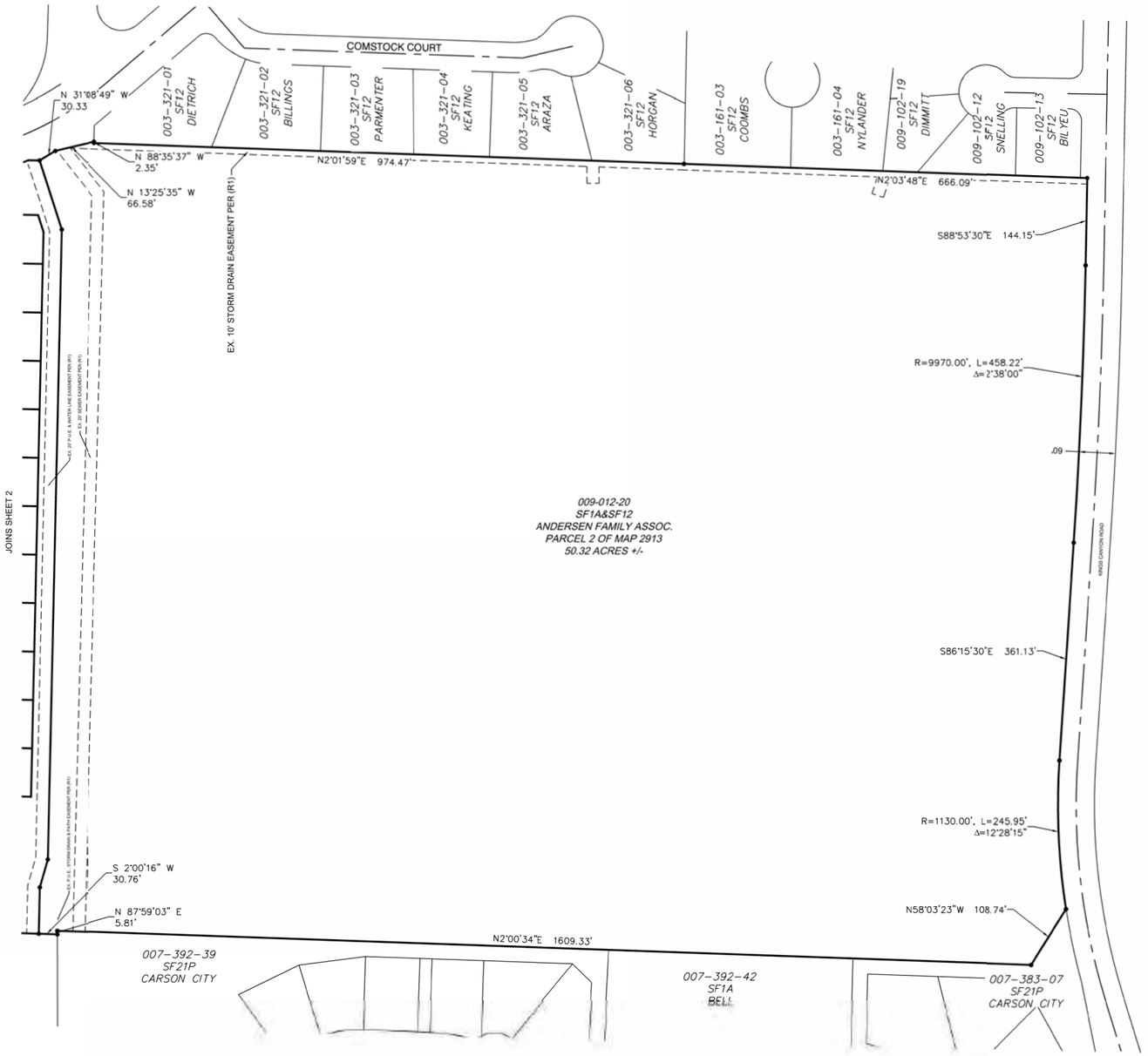
LOT 18
14,400.0 SF
LOT 17
14,400.0 SF
LOT 16
14,400.0 SF
LOT 15
14,558.4 SF
LOT 14
14,376.6 SF
LOT C
77,767.5 SF
EX. P.U.E., STORM DRAIN & PATH EASEMENT PER (R1)
EX. 20' P.U.E. & WATER LINE EASEMENT PER (R1)
EX. 20' SEWER EASEMENT PER (R1)
JOINS SHEET 3
LOT TYP.
SETBACK & P.U.E.
SIDE
REAR
FRONT
STREET SIDE
P.U.E.
SETBACK
SCALE: 1" = 50'
N
TENTATIVE MAP
COMMON OPEN SPACE DEVELOPMENT
ANDERSEN RANCH WEST SUBDIVISION
TM-2022-____
FOR
ANDERSEN-COLARD RANCH ENTERPRISES, LLC
BEING A SUBDIVISION OF PARCEL 1 AS SHOWN ON SHOWN ON PARCEL MAP NO. 2913 WITHIN A PORTION OF THE WEST HALF OF SECTION 18, TOWNSHIP 15 NORTH, RANGE 20 EAST, M.D.M.
CARSON CITY
STATE OF NEVADA
LUMOS & ASSOCIATES
308 N. CURRY ST., SUITE 200
CARSON CITY, NV 89703
TEL (775) 883-7077
LUMOSINC.COM
Drawn By : DGN
Sheet : 2 of 3
Job No. : 8947.004
Drawing No.: 8947004TM



DEAN NEUBAUER Exp. 12-31-23

10-26-2022

TENTATIVE MAP

COMMON OPEN SPACE DEVELOPMENT
ANDERSEN RANCH WEST SUBDIVISION
TM-2022-____
FOR
ANDERSEN-COLARD RANCH ENTERPRISES, LLC

BEING A SUBDIVISION OF PARCEL 1 AS SHOWN ON SHOWN ON PARCEL MAP NO. 2913
WITHIN A PORTION OF THE WEST HALF OF SECTION 18, TOWNSHIP 15 NORTH, RANGE 20 EAST, M.D.M.

CARSON CITY STATE OF NEVADA

LUMOS & ASSOCIATES
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CARSON CITY, NV 89703
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Drawn By: DGN
Sheet : 3 of 3
Job No. : 3947.004
Drawing No.: 8947004TM

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

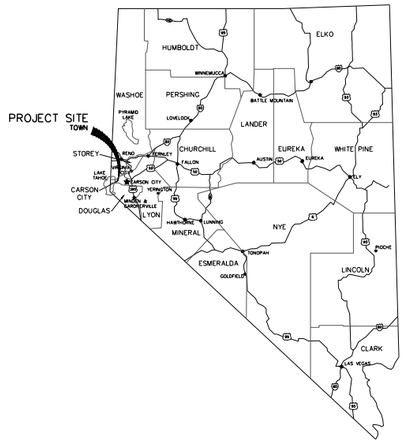
ANDERSEN RANCH WEST

COMMON OPEN SPACE TENTATIVE SUBDIVISION MAP

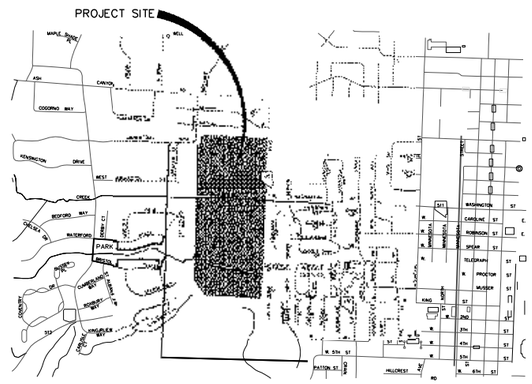
APN: 009-012-20, 009-012-21

OWNER/DEVELOPER

ANDERSEN-COLARD RANCH ENT., LLC
ATTN: MEG KALLEY
P.O. BOX 1746
CARSON CITY, NV 89702
TEL.: 775.721.3712



LOCATION MAP



VICINITY MAP

ENGINEER

LUMOS & ASSOCIATES
308 N. CURRY ST., STE. 200
CARSON CITY, NEVADA 89703
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INFO@LUMOSINC.COM

811
Know what's below.
Call before you dig.

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS BASED ON THE NEVADA COORDINATE SYSTEM OF 1983, WEST ZONE, NAD 83/94, CARSON CITY DATUM, DISTANCES SHOWN ARE GROUND DISTANCES USING A PROJECT COMBINED GRID TO GROUND SCALE FACTOR OF 1.000200. CARSON CITY MAP No. 2749.

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATE WITHIN A PORTION OF THE SOUTH ONE-HALF (S ½) OF SECTION SEVEN (7) AND THE NORTH ONE-HALF (N ½) OF SECTION EIGHTEEN (18), TOWNSHIP FIFTEEN (15) NORTH, RANGE TWENTY (20) EAST, MOUNT DIABLO MERIDIAN, CARSON CITY, STATE OF NEVADA

PARCEL 1 OF PM 2913, FILE NO 475227

BASIS OF ELEVATION

THE BASIS OF ELEVATION FOR CONSTRUCTION ON THIS PROJECT IS:
DATUM: NAVD 88
PROJECT BENCHMARK = CARSON CITY CONTROL MONUMENT NO. CC079 HAVING AN ELEVATION OF 4763.20'

SITE INFORMATION

- ADDRESS: NW INTERSECTION OF KINGS CANYON ROAD & ORMSBY BOULEVARD
- PARCEL SIZE: 80.5± ACRES
- MASTER PLAN DESIGNATION: LOW DENSITY RESIDENTIAL & MEDIUM DENSITY RESIDENTIAL
- ZONING: SF-1A & SF12

SHEET INDEX:

LUMOS & ASSOCIATES
9222 PROTOTYPE DRIVE
RENO, NV 89521
TEL: 775.827.6111

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INFO@LUMOSINC.COM

PROFESSIONAL ENGINEER–STATE OF NEVADA
BRIAN M. MOON
Exp: 12-31-23
CIVIL
No. 20940
08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC
ANDERSEN RANCH WEST
COMMON OPEN SPACE DEVELOPMENT
TITLE SHEET
CARSON CITY
NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

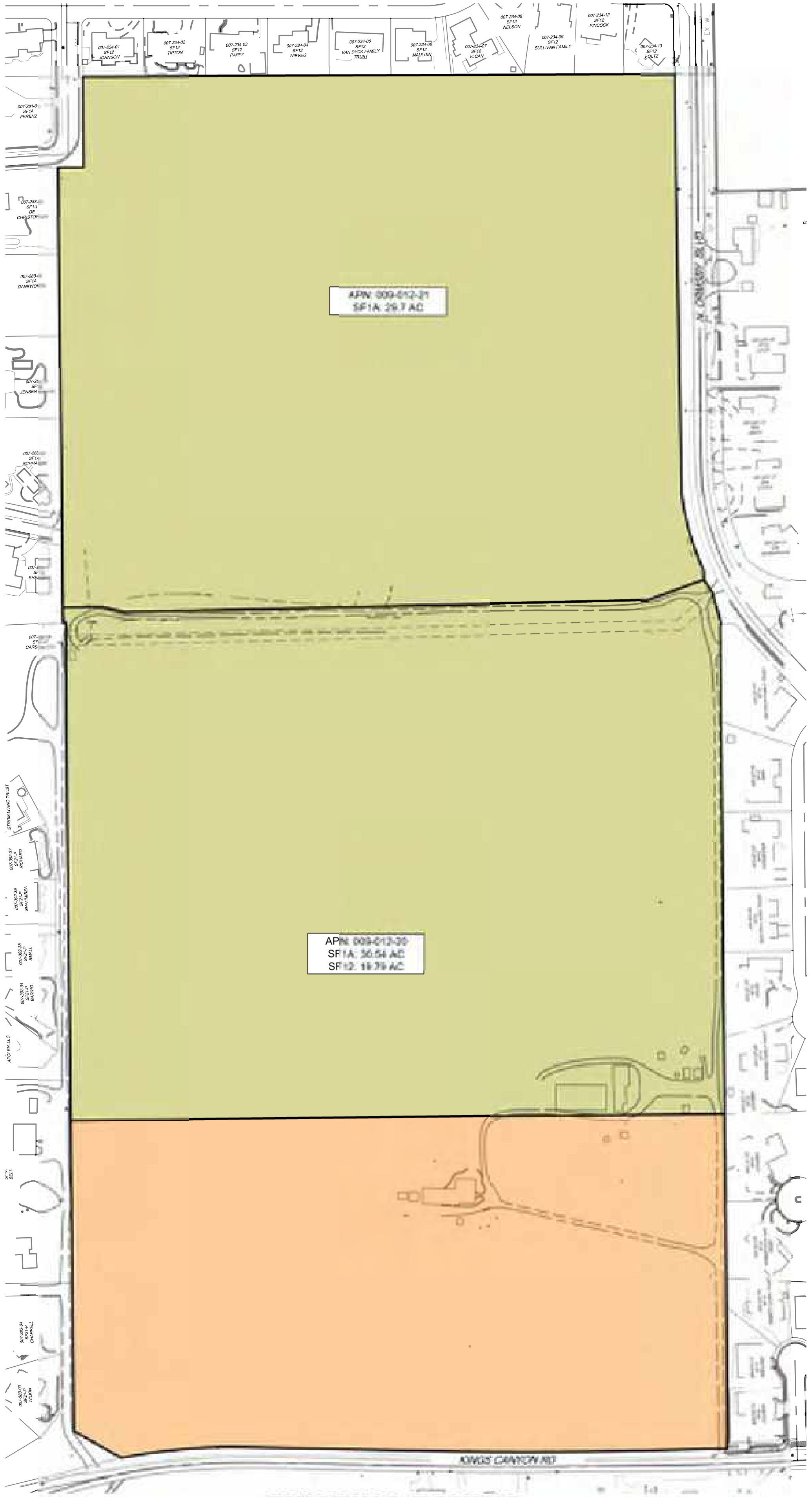
C1.0

DRAWN BY:	JRL
DESIGNED BY:	JRL
CHECKED BY:	TR
JOB NO.:	8947.004

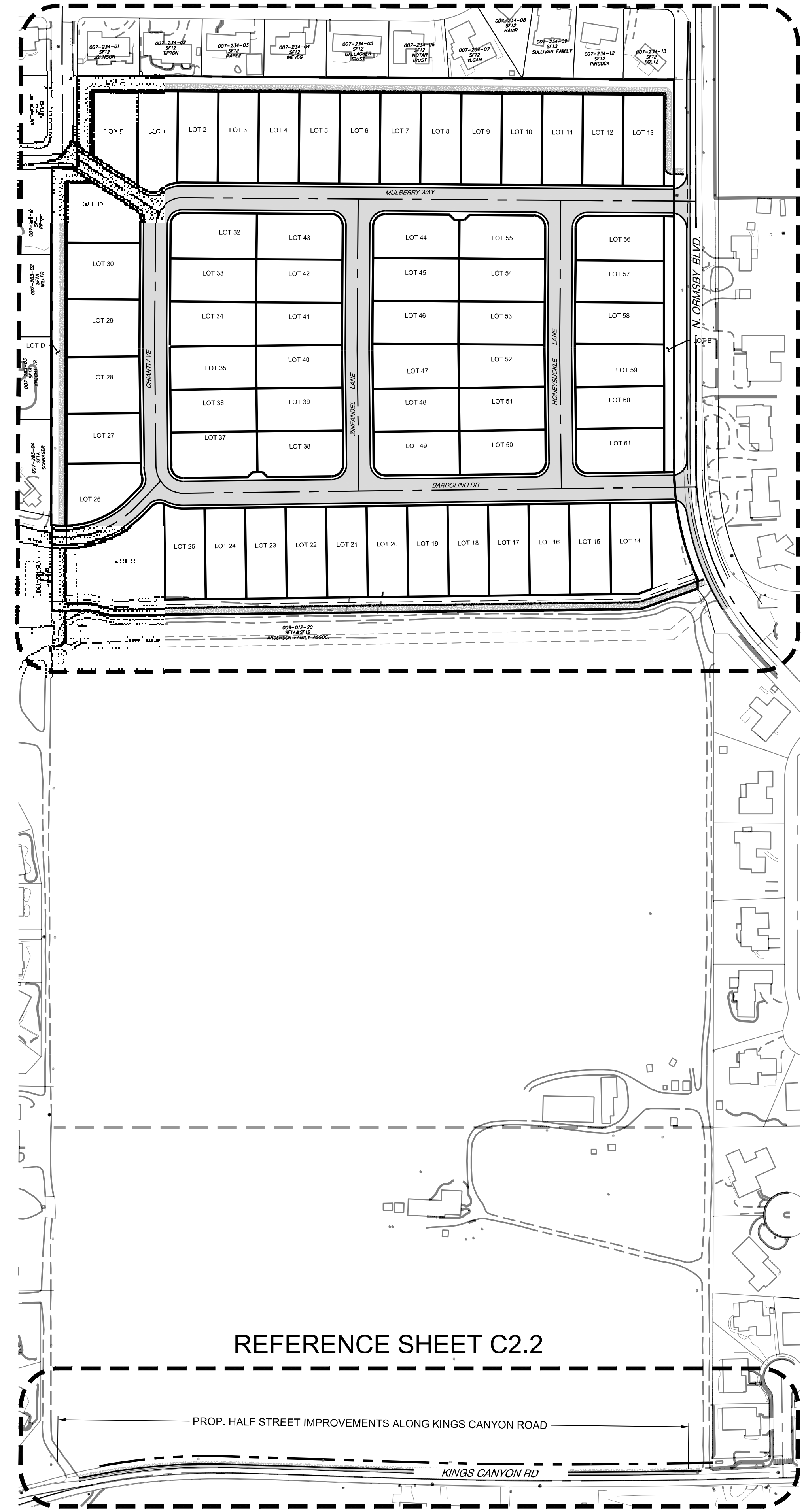
LEGEND

SINGLE FAMILY 1 ACRE ZONING

SINGLE FAMILY 12,000 S.F. ZONING



EXISTING ZONING



PROPOSED PROJECT SITE

N

0 150' 300'

LUMOS & ASSOCIATES

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PROFESSIONAL ENGINEER - STATE OF NEVADA
BRIAN M. MOON
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CIVIL
No. 20940

08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
EXISTING ZONING AND SITE PLAN

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
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BAR IS 1 INCH ON ORIGINAL DRAWING
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DESIGNED BY:	JRL
CHECKED BY:	BMM
JOB NO.:	8947.004

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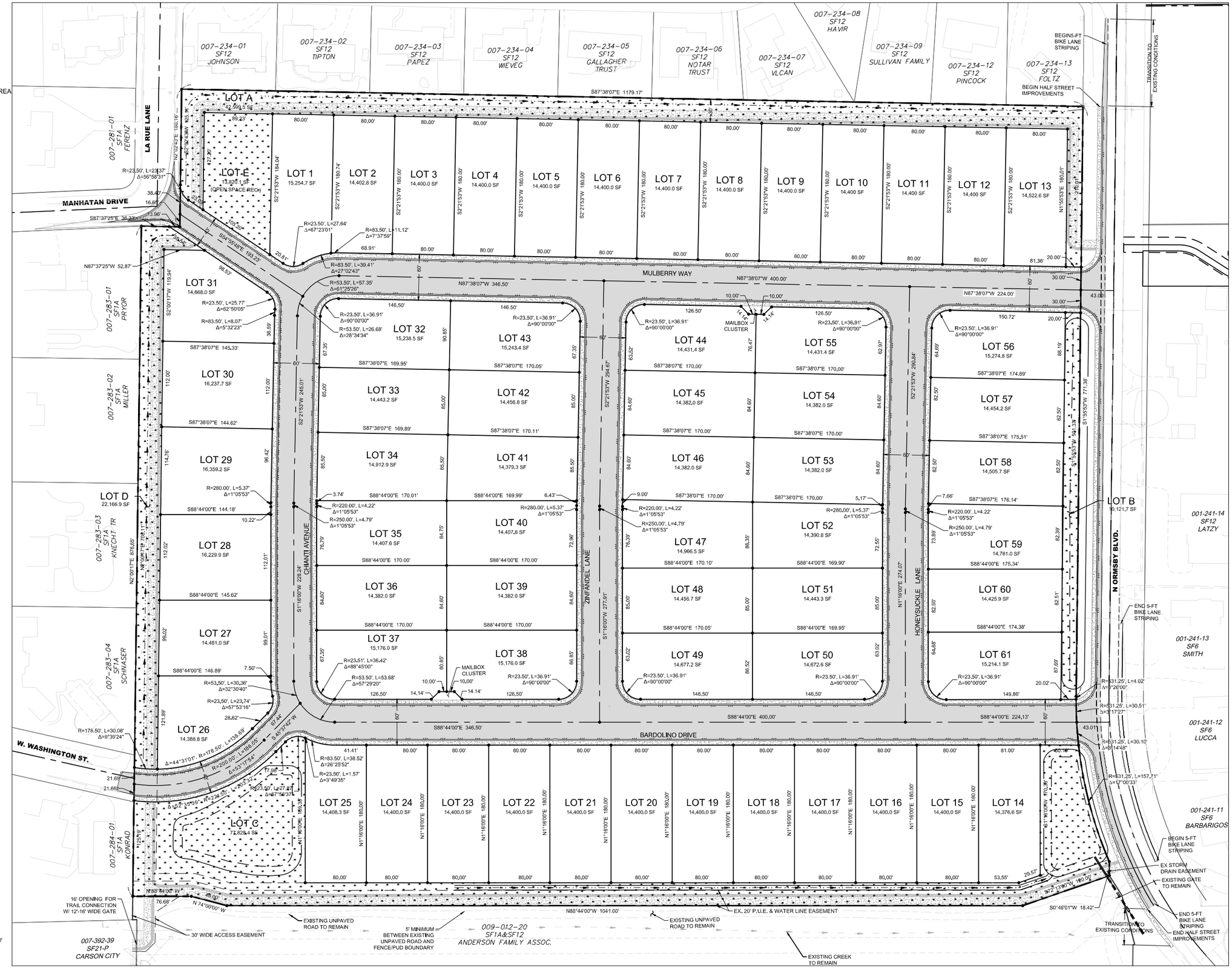
LEGEND

OPEN SPACE AREA



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CIVIL
No. 20940

08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
SITE PLAN

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

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DESIGNED BY: JRL
CHECKED BY: TS
JOB NO.: 8947.004

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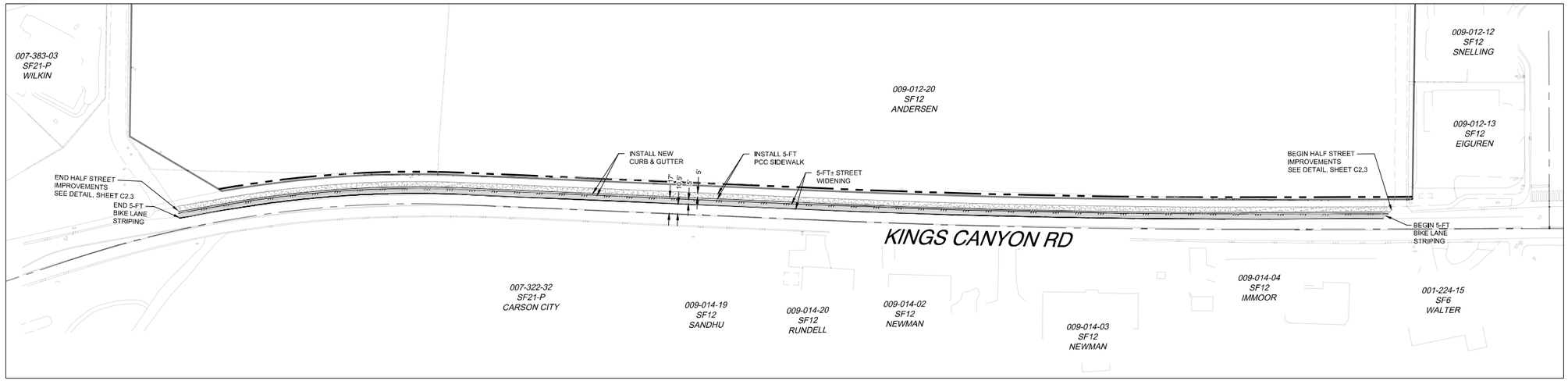

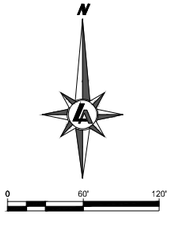

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PROFESSIONAL ENGINEER–STATE OF NEVADA
BRIAN M. MOON
Exp: 12-31-23
CIVIL
No. 20940

08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
KINGS CANYON RD IMPROVEMENTS

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

BAR IS 1 INCH ON ORIGINAL DRAWING
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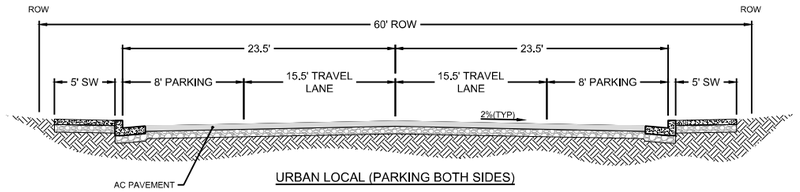
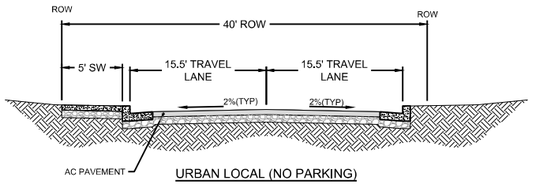
C2.2

DRAWN BY:	JRL
DESIGNED BY:	JRL
CHECKED BY:	TS
JOB NO.:	8947.004

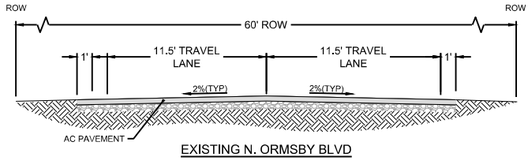


URBAN LOCAL (PARKING BOTH SIDES)

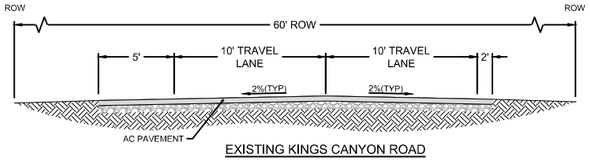


URBAN LOCAL (NO PARKING)

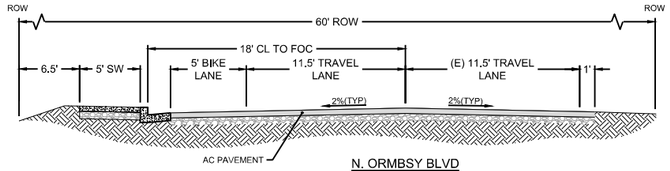
MINIMUM STRUCTURAL SECTION
ARTERIAL (MIN. 5" A.C. W/ MIN. 12" AGG. BASE)
COLLECTOR (MIN. 4" A.C. W/ 8" AGG. BASE)
LOCAL (MIN. 3" A.C. W/6" AGG. BASE)



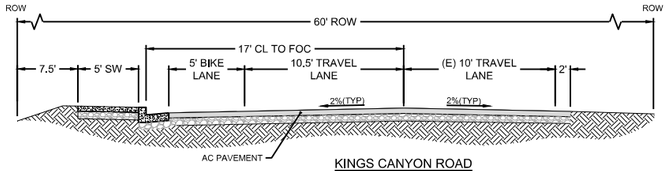
EXISTING N. ORMSBY BLVD



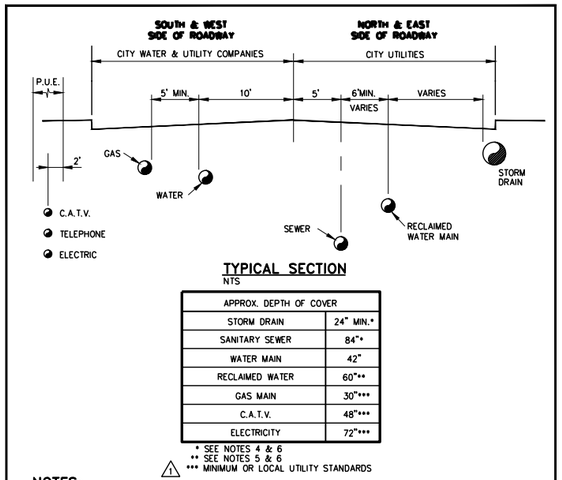
EXISTING KINGS CANYON ROAD



N. ORMSBY BLVD
HALF STREET IMPROVMENTS



KINGS CANYON ROAD
HALF STREET IMPROVMENTS



TYPICAL SECTION

NTS

APPROX. DEPTH OF COVER	
STORM DRAIN	24" MIN.*
SANITARY SEWER	84"*
WATER MAIN	42"
RECLAIMED WATER	60"**
GAS MAIN	30"***
C.A.T.V.	48"***
ELECTRICITY	72"***

* SEE NOTES 4 & 6
** SEE NOTES 5 & 6
*** MINIMUM OR LOCAL UTILITY STANDARDS

NOTES:

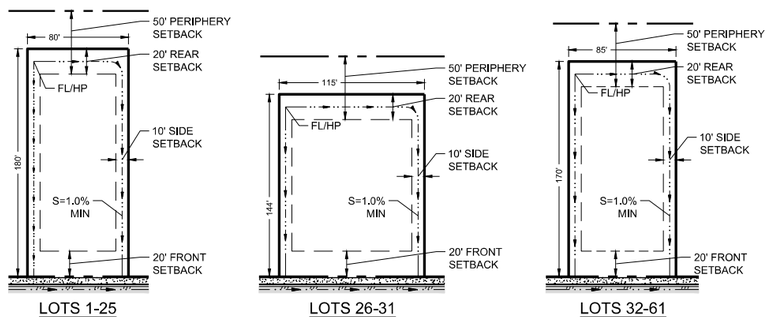
1. FOR COMMON TRENCH SECTION, SEE DETAIL, DWG. C-1.2.1. COMMON TRENCH WITH OTHER UTILITIES IS NOT ALLOWED FOR WATER, SEWER OR RECLAIMED WATER.
2. P.U.E. INDICATES PUBLIC UTILITY EASEMENT.
3. DEPTHS OF COVER AND LOCATION OTHER THAN THOSE PROVIDED HEREIN ARE SUBJECT TO CARSON CITY DEVELOPMENT ENGINEERING & PUBLIC WORKS APPROVAL.
4. DEPTH SHALL BE AS REQUIRED TO PROVIDE ADEQUATE CLEARANCE FROM OTHER UTILITIES AND TO SERVE UPSTREAM TRIBUTARY AREAS, AND TO MEET PROPER DESIGN REQUIREMENTS FOR DOWNSTREAM CONNECTIONS.
5. RECLAIMED WATER PIPE SHALL BE PURPLE IN COLOR. DEPTH MAY BE LESS THAN 60 INCHES IN LOCATIONS WHERE WATER MAINS ARE NEVER EXPECTED TO OCCUR.
6. LOCATION AND DEPTH SHALL BE AS REQUIRED TO MEET THE REQUIREMENTS OF NAC CHAPTER 445A AND THE NDEP BUREAU OF SAFE DRINKING WATER VERTICAL CROSSING CONFLICTS SUMMARY.

NO.	REVISION	DATE
1	*** NOTE	9/17
APPROVED BY:		9/17

STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION

TYPICAL UTILITY MAIN LOCATIONS

SECTION: CARSON CITY
DRAWING NO.: C-1.2.4
DATE: SEP. 2017



LOTS 1-25 LOTS 26-31 LOTS 32-61

TYPICAL LOT LAYOUT

LUMOS & ASSOCIATES
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WWW.LUMOSINC.COM
INFO@LUMOSINC.COM

PROFESSIONAL ENGINEER-STATE OF NEVADA
BRIAN M. MOON
Exp: 12-31-23
CIVIL
No. 20940

08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
SITE PLAN DETAILS

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A
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C2.3

DRAWN BY: JRL
DESIGNED BY: JRL
CHECKED BY: TS
JOB NO.: 8947.004

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No. 20940

08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
PRELIMINARY UTILITY PLAN

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

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FEMA LEGEND

- FLOOD ZONE BOUNDARY
- ZONE AE
- ZONE A0 (DEPTH 1-FT)
- ZONE X SHADED

PRELIM EW QTY's

CUT: 38,275 CY
FILL: 51,245 CY
NET: 12,970 CY (FILL)

N

0 100' 200'

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BRIAN M. MOON
Exp: 12-31-23
CIVIL
No. 20940

08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSON RANCH WEST
COMMON OPEN SPACE SUBDIVISION
PRELIMINARY GRADING PLAN

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
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C4.0

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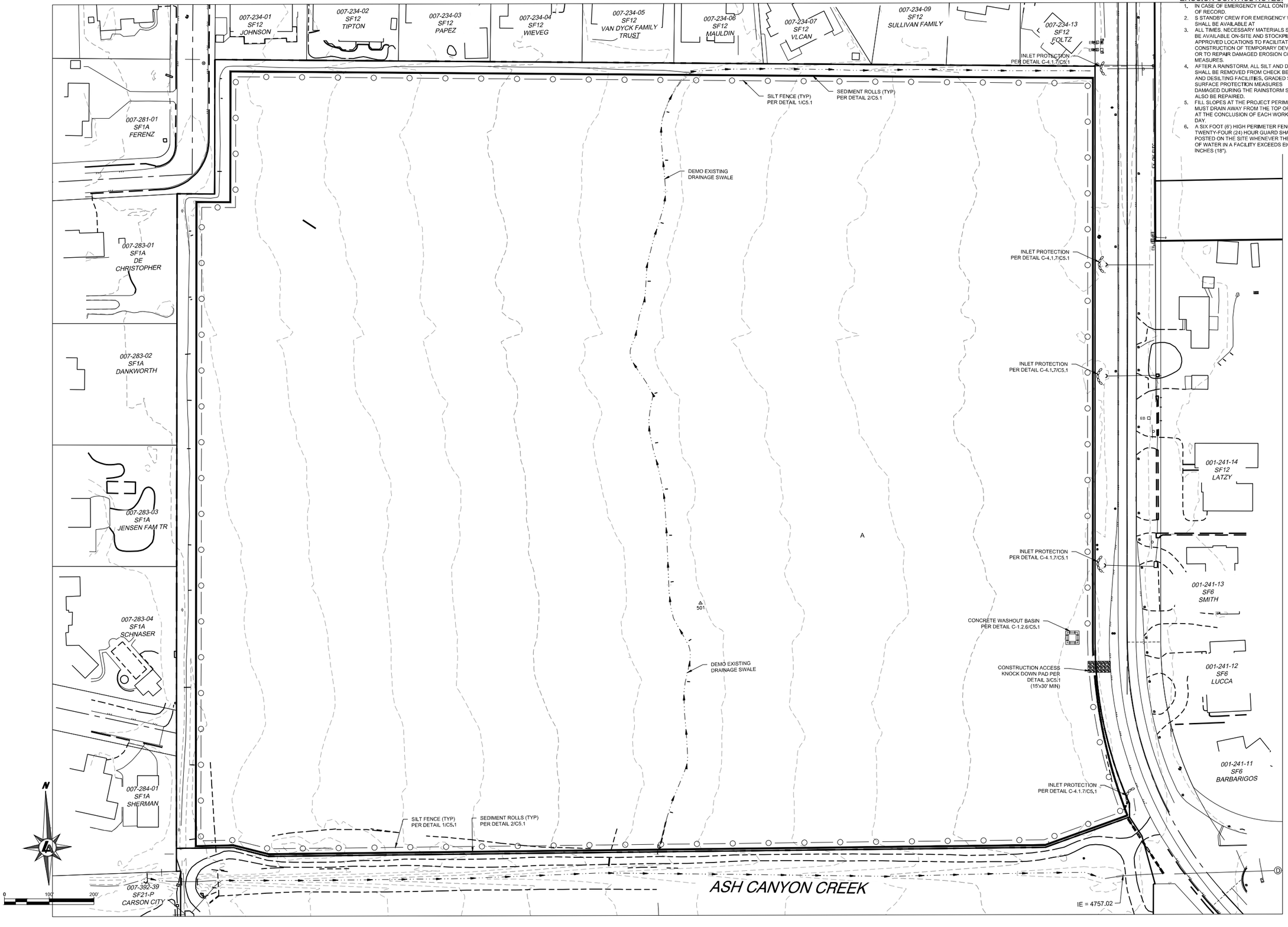

EROSION CONTROL NOTES:

1. IN CASE OF EMERGENCY CALL CONTRACTOR OF RECORD.
2. S STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT
3. ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILES AT APPROVED LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES.
4. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES, GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
5. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
6. A SIX FOOT (6') HIGH PERIMETER FENCE OR TWENTY-FOUR (24) HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN A FACILITY EXCEEDS EIGHTEEN INCHES (18").

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08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSON RANCH WEST
COMMON OPEN SPACE SUBDIVISION
EROSION CONTROL PLAN

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
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C5.0

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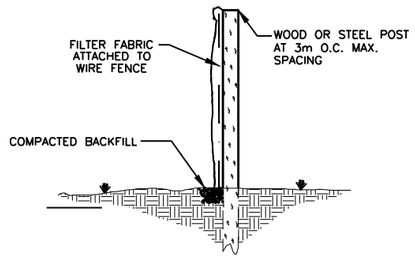


SILT FENCE DETAIL

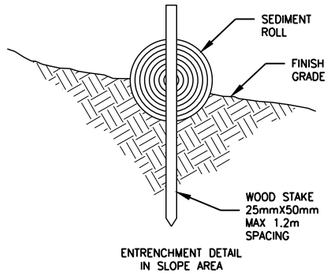
NOTES:

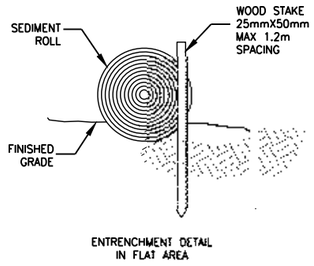
1. TEMPORARY EROSION CONTROL (TEMPORARY SEDIMENT BARRIERS) SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE PROJECT SITE TO INTERCEPT AND RETAIN SMALL SEDIMENT FROM DISTURBED OR UNPROTECTED AREAS DURING CONSTRUCTION. INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS. THE TEMPORARY SEDIMENT BARRIERS SHALL BE LOCATED AS INDICATED BELOW AND AS DIRECTED BY THE ENGINEER:

A. ALONG THE TOE OF SLOPES ON THE DOWNSTREAM SIDE OF THE LOWER CHIPMUNK TREATMENT BASIN.
B. FOLLOWING THE CONTOURS ACROSS EXCAVATED SWALES AND DITCHES, SPACED APPROX. 30 METERS APART
C. IN A SQUARE OR RECTANGULAR SHAPE AROUND ALL DROP INLETS & SEDIMENT TRAPS.

SILT FENCE ①

N.T.S



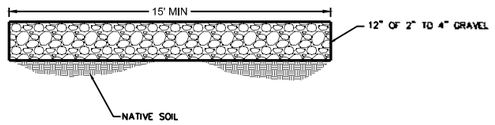


NOTES:

1. SEDIMENT ROLLS MAY BE FIBER ROLL LOGS OR RICE STRAW WATTLES. THEY SHALL BE A MINIMUM OF 400mm IN DIAMETER WHEN PLACED ON SOIL. SEDIMENT ROLLS PLACED ON AC PAVING SHALL BE WEIGHTED AND SHALL BE A MINIMUM OF 200mm IN DIAMETER.
2. ROLLS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS, THESE DETAILS AND THE SPECIAL PROVISIONS.
3. WHEN MORE THAN ONE FIBER ROLL IS PLACED IN A ROW, THE ROLLS SHALL BE TIGHTLY ABUTTED AND STAKED, NOT OVERLAPPED.

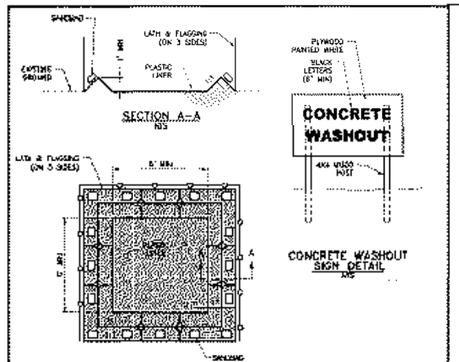
SEDIMENT ROLL ②

N.T.S



KNOCK DOWN/WASH DOWN PAD ③

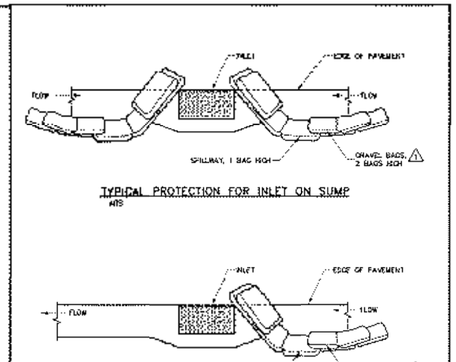
N.T.S



NOTES:

1. WHERE POSSIBLE, CONCRETE SUPPLIERS SHALL CONDUCT WASHOUT ACTIVITIES AT THEIR OWN PLANTS OR BATCH FACILITIES.
2. AN EFFICIENT MEANS OF ELIMINATING THE DISCHARGE OF WATER FROM THE WASHOUT CONCRETE SHALL BE PROVIDED.
3. CONCRETE WASHOUT FACILITIES SHALL NOT BE USED FOR THE DISPOSAL OF EXCESS CONCRETE AND CURING TRUCKS SHALL NOT BE ALLOWED TO BACK FLUSH AND DISPOSE OF RESIDUAL LOADS.
4. LOCATE WASHOUT AREAS A MINIMUM OF 50 FEET FROM WATER WAYS AND STORM DRAIN SYSTEM INLETS.
5. WHEN THE WASHOUT IS 75 PERCENT FULL IT MUST BE CLEANED OR A NEW WASHOUT MUST BE CONSTRUCTED. DISPOSE OF WASTE AT LEAST ONCE A WEEK.
6. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 15 FEET OF THE TEMPORARY CONCRETE WASHOUT BASIN.

NO	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: CARSON CITY
			CONCRETE WASHOUT BASIN	DRAWING NO: C-1.28
APPROVED BY:		9/17		DATE: SEP 2017



NOTES:

1. INTENDED FOR TEMPORARY SHORT-TERM USE.
2. USE TO MANAGE SHEET WATER FLOW.
3. SEDIMENT CONTAINED WITHIN GRAVEL BAGS SHALL BE REMOVED WEEKLY DURING CONSTRUCTION.
4. INLET PROTECTION MUST BE PROPERLY MAINTAINED WHILE IN PLACE AND REMOVED WHEN REQUIREMENTS OF MUTCD PERMIT HAVE BEEN MET.
5. ⚠ GRAVEL BAGS SHALL BE FILLED WITH 3/8" - 3/4" WASHED ROCK.

NO	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: CARSON CITY
⚠1	GRAVEL BAG	9/17	STORM DRAIN INLET PROTECTION	DRAWING NO: C-4.17
⚠2	ROCK SIZE	9/17		DATE: SEP 2017
APPROVED BY:		9/17		

A

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PROFESSIONAL ENGINEER-STATE OF NEVADA
BRIAN M. MOON
Exp: 12-31-23
CIVIL
No. 20940
08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSON RANCH WEST
COMMON OPEN SPACE SUBDIVISION
EROSION CONTROL NOTES

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

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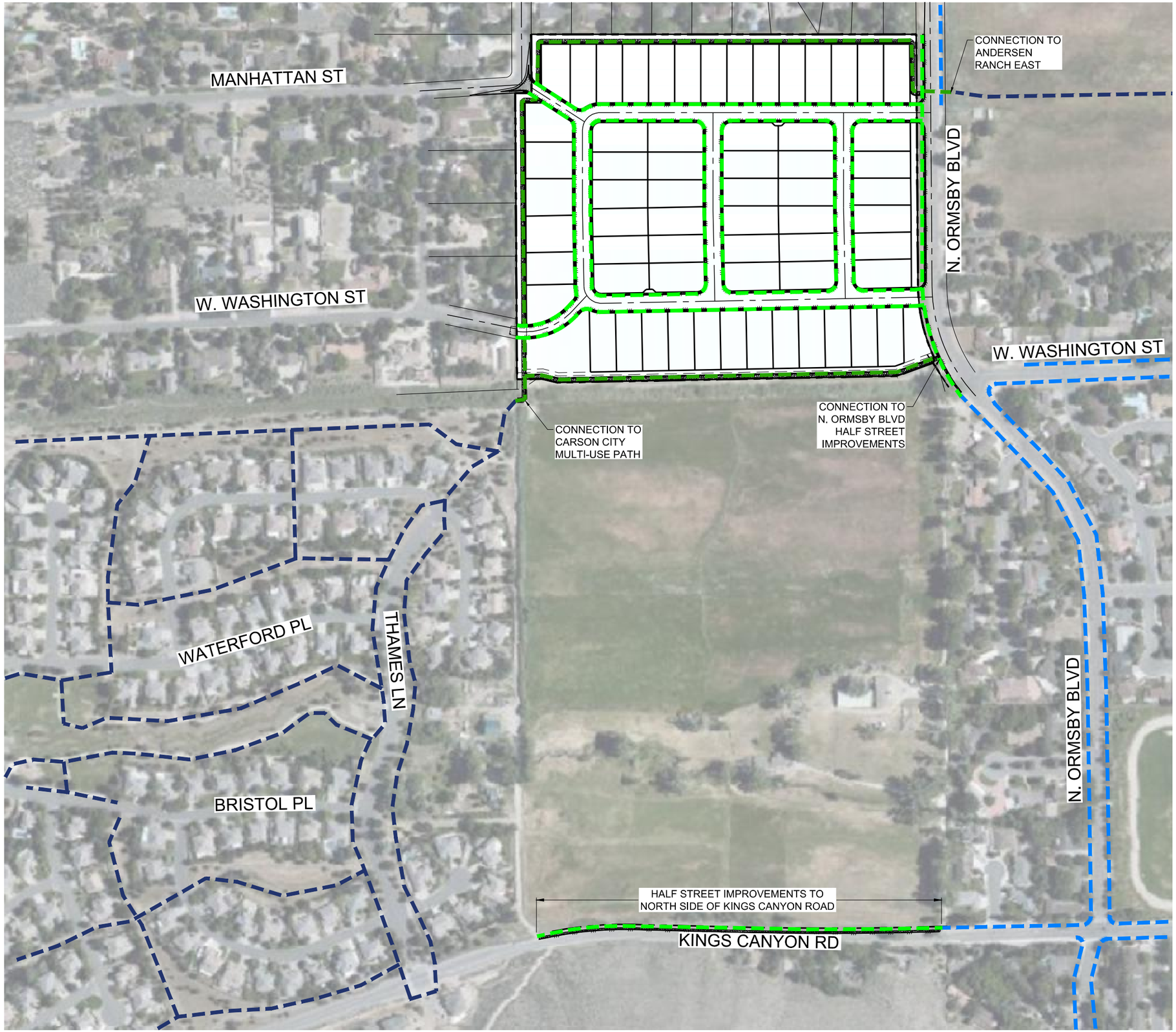

LEGEND:

- EXISTING TRAILS (APPROX).
- EXISTING R/W SIDEWALK
- PROPOSED TRAILS
- PROPOSED SIDEWALK

N

0 150' 300'

22x34 SHEETS: 1" = 150'
11x17 SHEETS: 1" = 300'

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08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
TRAILS CONNECTIVITY MAP

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
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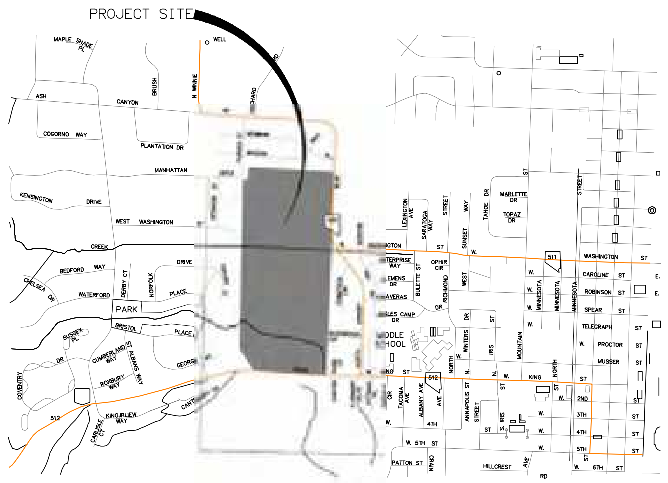
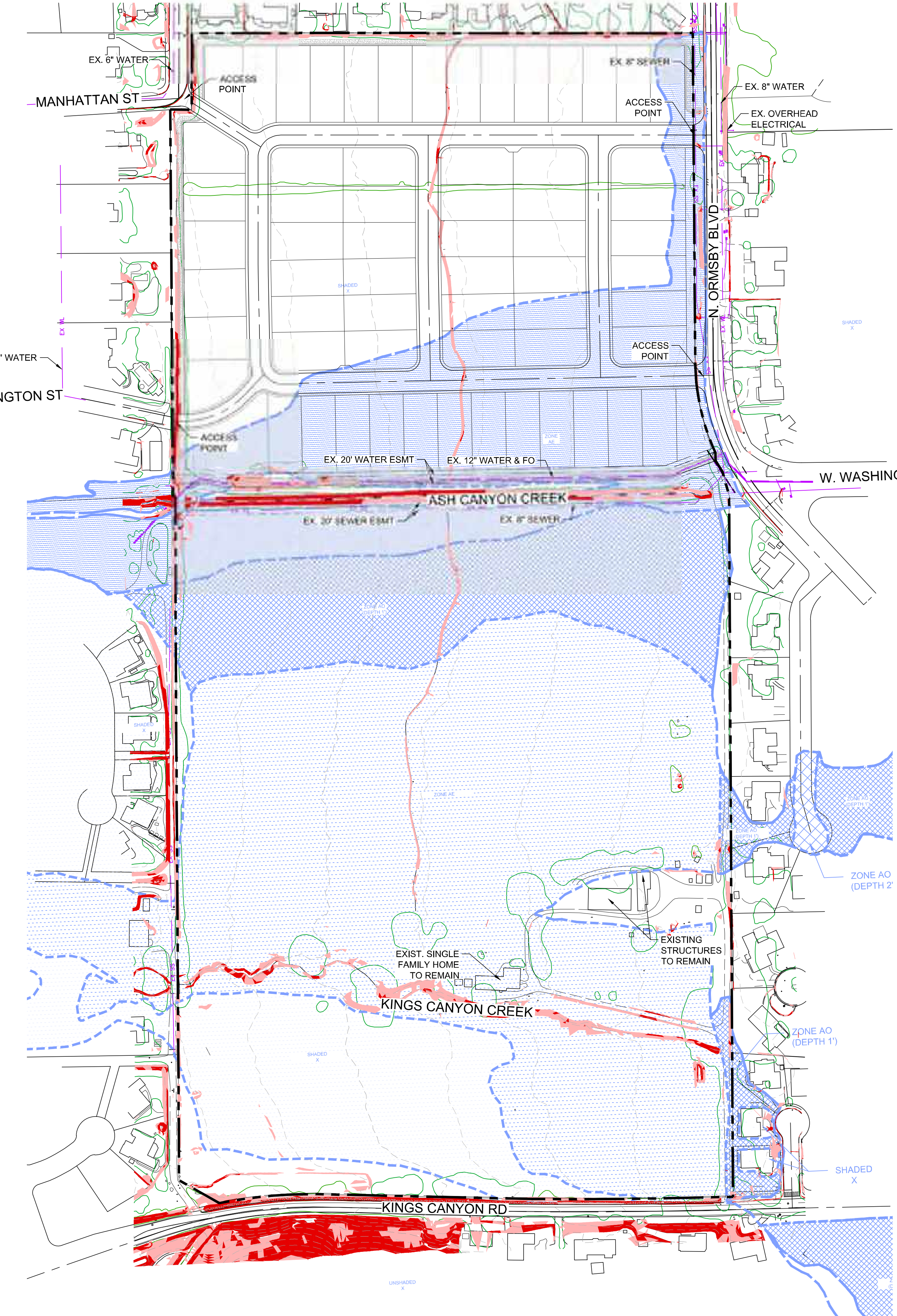


VICINITY MAP



SITE INFORMATION

- ADDRESS: NW INTERSECTION OF KINGS CANYON ROAD & ORMSBY BOULEVARD
- PARCEL SIZE: 80.0± ACRES
- MASTER PLAN DESIGNATION: LOW DENSITY RESIDENTIAL & MEDIUM DENSITY RESIDENTIAL
- ZONING: SF-1A & SF12
- SEISMIC PARAMETERS: SITE CLASS D
- SCS SOIL CLASSIFICATION: JUBILEE COARSE SANDY LOAM

LEGEND:

- EX. VEGETATION
- EX. SEWER
- EX. WATER
- FLOOD ZONE BOUNDARY
- ZONE AE
- ZONE A0 (DEPTH 1-FT)
- ZONE A0 (DEPTH 2-FT)
- ZONE X SHADED
- SLOPES: 15%-33%
- SLOPES: > 33%

N

0 150' 300'

22x34 SHEETS: 1" = 150'
11x17 SHEETS: 1" = 300'

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PROFESSIONAL ENGINEER - STATE OF NEVADA
BRIAN M. MOON
Exp: 12-31-23
CIVIL
No. 20940
08/29/2022

ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
OPEN SPACE SITE ANALYSIS

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
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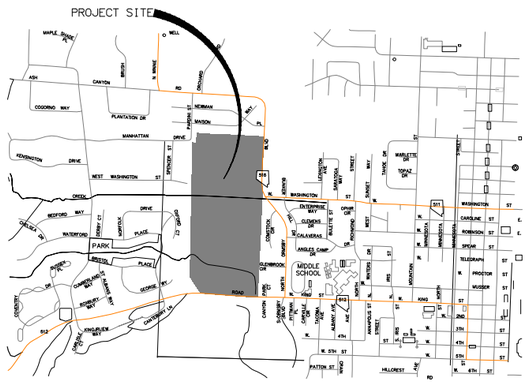
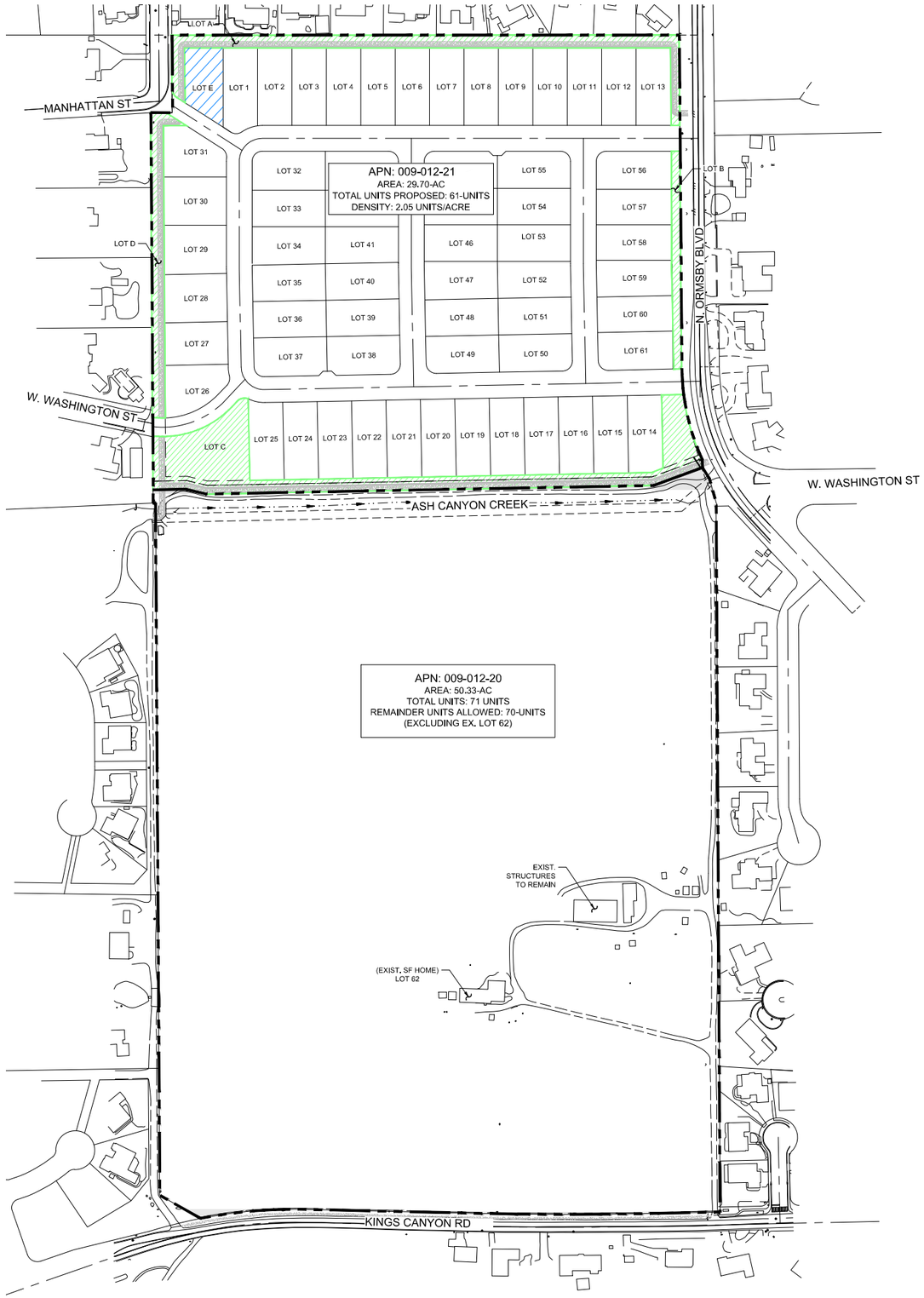


VICINITY MAP



LEGEND

- COMMON OPEN SPACE AREA
- RECREATIONAL OPEN SPACE AREA
- REMAINDER LOT AREA

AREA DISTRIBUTION

	SQUARE FEET	ACRE	PERCENTAGE
ROW	235,374	5.40	7%
RESIDENTIAL LOTS	892,346	20.49	25%
COMMON & RECREATIONAL OPEN SPACE	166,304	3.81	5%
REMAINDER AREA (INCL. LOT 62)	2,192,375	50.33	63%
TOTAL	3,486,399	80.03	100%

REQUIRED OPEN SPACE AREA

CODE REQUIREMENT	TOTAL UNITS	REQUIRED OPEN SPACE AREA	PROVIDED OPEN SPACE AREA
COMMON OPEN SPACE 250 SQ. FT. PER DWELLING UNIT	62	15,500 SQ. FT.	152,483.8
RECREATIONAL OPEN SPACE 100 SQ. FT. PER DWELLING UNIT	62	6,200 SQ. FT.	13,820.1

OVERALL PROJECT DENSITY

	TOTAL ACRES	DENSITY BY ZONING	MAX UNITS
SF1A (APN 009-012-21)	29.70	1 DU/ACRE	29.70
SF1A (APN 009-012-20)	30.54	1 DU/ACRE	30.54
SF12 (APN 009-012-20)	19.79	1DU/12,OOO S.F.	71.84
TOTAL	**80.03**		**132**

OVERALL PROJECT UNIT COUNT

	EXISTING UNITS	PROPOSED UNITS	REMAINDER UNITS
APN 009-012-21	0	61	0
APN 009-012-20	1	0	70
TOTAL	**1**	**61**	**70**

N

0 150' 300'

22x34 SHEETS: 1" = 150'
11x17 SHEETS: 1" = 300'

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ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE SUBDIVISION
COMMON OPEN SPACE & DENSITY PLAN

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

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CHECKED BY: TR
JOB NO.: 8947.004

TAB D

Carson City Property Inquiry

Property Information

Parcel ID	009-012-20	**Parcel Acreage**	51.3200
Tax Year	2022		
Land Use Group	FARM	**Assessed Value**	113,483
Land Use	692 - Agricultural Deferred with Residence	**Tax Rate**	0.0000
		Total Tax	$0.00
		Fiscal Year (2022 - 2023)	
Zoning	SF1A/SF12	**Total Unpaid All Years**	$0.00
Tax District	024		
Site Address	1800 KINGS CANYON RD		

Pay Taxes

Sketches & Photos

Assessments

Taxable Value	Land	Building	Per. Property	Totals
Residential	144,000	161,397	0	**305,397**
Com / Ind.	0	0	3,993	**3,993**
Agricultural	14,846	0	0	**14,846**
Exempt	0	0	0	**0**
Pers. Exempt				**0**
Total	**158,846**	**161,397**	**3,993**	**324,236**

Assessed Value	Land	Building	Per. Property	Totals
Residential	50,400	56,489	0	**106,889**
Com / Ind.	0	0	1,398	**1,398**
Agricultural	5,196	0	0	**5,196**
Exempt	0	0	0	**0**
Pers. Exempt				**0**
Total	**55,596**	**56,489**	**1,398**	**113,483**

	New Land	New Const.	New P.P.	Omit Bldg
Residential	0	0	0	0
Com / Ind.	0	0	0	0
Agricultural	0	0	0	0
Exempt	0	0	0	0
Totals	0	0	0	0

Assessor Descriptions

Assessor Descriptions	Subdivision Name	Section	Township	Range	Block & Lot
PARCEL 2, PM 2913		18	15N	20E	

No Personal Exemptions

No Billing Information

Payment History

	Fiscal Year	Total Due	Total Paid	Amount Unpaid
⊖	(2021 - 2022)	$2,834.32	$2,834.32	$0.00

⊕ Installment 1

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
8/16/2021	$703.02	$0.00	$28.12	$731.14	$731.14	$0.00

⊕ Installment 2

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
10/4/2021	$701.06	$0.00	$0.00	$701.06	$701.06	$0.00

⊕ Installment 3

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
1/3/2022	$701.06	$0.00	$0.00	$701.06	$701.06	$0.00

⊕ Installment 4

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
3/7/2022	$701.06	$0.00	$0.00	$701.06	$701.06	$0.00

⊕	(2020 - 2021)	$2,750.15	$2,750.15	$0.00
⊕	(2019 - 2020)	$2,729.94	$2,729.94	$0.00
⊕	(2018 - 2019)	$2,623.15	$2,623.15	$0.00
⊕	(2017 - 2018)	$2,509.94	$2,509.94	$0.00
⊕	(2016 - 2017)	$2,482.96	$2,482.96	$0.00
⊕	(2015 - 2016)	$2,442.49	$2,442.49	$0.00
⊕	(2014 - 2015)	$2,370.69	$2,370.69	$0.00
⊕	(2013 - 2014)	$2,254.70	$2,254.70	$0.00
⊕	(2012 - 2013)	$2,219.77	$2,219.77	$0.00
⊕	(2011 - 2012)	$2,084.43	$2,084.43	$0.00
⊕	(2010 - 2011)	$2,077.59	$2,077.59	$0.00
⊕	(2009 - 2010)	$1,581.17	$1,581.17	$0.00
⊕	(2008 - 2009)	$1,504.44	$1,504.44	$0.00
⊕	(2007 - 2008)	$1,430.07	$1,430.07	$0.00
⊕	(2006 - 2007)	$1,414.42	$1,414.42	$0.00
⊕	(2005 - 2006)	$1,328.77	$1,328.77	$0.00
⊕	(2004 - 2005)	$1,262.90	$1,262.90	$0.00
⊕	(2003 - 2004)	$1,236.33	$1,236.33	$0.00
⊕	(2002 - 2003)	$1,198.46	$1,198.46	$0.00
⊕	(2001 - 2002)	$1,196.43	$1,196.43	$0.00
⊕	(2000 - 2001)	$1,195.53	$1,195.53	$0.00
⊕	(1999 - 2000)	$1,065.13	$1,065.13	$0.00

⊕	(1998 - 1999)	$1,014.08	$1,014.08	$0.00
⊕	(1997 - 1998)	$1,041.10	$1,041.10	$0.00
⊕	(1996 - 1997)	$1,031.23	$1,031.23	$0.00

Collapse

Related Names

CURRENT MAIL TO FOR 2022 (2022 - 2023)

Name	ANDERSEN FAMILY ASSOCIATES
Mailing Address	PO BOX 1746 CARSON CITY, NV, 89702-0000
Status	Current
Account	FE000109

CURRENT OWNER FOR 2022 (2022 - 2023)

Name	ANDERSEN FAMILY ASSOCIATES
Mailing Address	
Status	Current
Account	FE000109

⊕ Structure 1 of 2

⊕ Structure 2 of 2

Sales History

DISCLAIMER: SOME DOCUMENTS MAY NOT BE SHOWN

Year	Document #	Document Type	Sale Date	Sold By	Sold To	Price
2022	523430	AMENDED MAP OR PARCEL MAP	8/5/2021			$0

Parcel Genealogy

Relationship	Parcel Number	Action	Year	Change Effective Year	Completed
Parent Parcel	00901202	Split	2018	2018	Yes

No Taxing Entity Information

Carson City Property Inquiry

Property Information

Parcel ID	009-012-21	**Parcel Acreage**	29.2100
Tax Year	2022	**Assessed Value**	3,016
Land Use Group	FARM	**Tax Rate**	0.0000
Land Use	600 - Agricultural Qualified per NRS 361A - Vacant	**Total Tax**	$0.00
Zoning	SF1A/SF12	**Fiscal Year (2022 - 2023)**	
Tax District	024	**Total Unpaid All Years**	$0.00
Site Address	N ORMSBY BLVD		

Pay Taxes

No Sketches or Photos

Assessments

Taxable Value	Land	Building	Per. Property	Totals
Residential	0	0	0	**0**
Com / Ind.	0	0	0	**0**
Agricultural	8,617	0	0	**8,617**
Exempt	0	0	0	**0**
Pers. Exempt				**0**
Total	**8,617**	**0**	**0**	**8,617**

Assessed Value	Land	Building	Per. Property	Totals
Residential	0	0	0	**0**
Com / Ind.	0	0	0	**0**
Agricultural	3,016	0	0	**3,016**
Exempt	0	0	0	**0**
Pers. Exempt				**0**
Total	**3,016**	**0**	**0**	**3,016**

	New Land	New Const.	New P.P.	Omit Bldg
Residential	0	0	0	0
Com / Ind.	0	0	0	0
Agricultural	0	0	0	0
Exempt	0	0	0	0
Totals	0	0	0	0

Assessor Descriptions

Assessor Descriptions	Subdivision Name	Section	Township	Range	Block & Lot
PARCEL 1, PM 2913		18	15N	20E	

No Personal Exemptions

No Billing Information

Payment History

	Fiscal Year	Total Due	Total Paid	Amount Unpaid
⊖	(2021 - 2022)	$107.12	$107.12	$0.00

⊕ Installment 1

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
8/16/2021	$27.97	$0.00	$1.12	$29.09	$29.09	$0.00

⊕ Installment 2

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
10/4/2021	$26.01	$0.00	$0.00	$26.01	$26.01	$0.00

⊕ Installment 3

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
1/3/2022	$26.01	$0.00	$0.00	$26.01	$26.01	$0.00

⊕ Installment 4

Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Total Paid	Total Unpaid
3/7/2022	$26.01	$0.00	$0.00	$26.01	$26.01	$0.00

⊕	(2020 - 2021)	$103.85	$103.85	$0.00
⊕	(2019 - 2020)	$107.79	$107.79	$0.00
⊕	(2018 - 2019)	$97.85	$97.85	$0.00
⊕	(2017 - 2018)	$93.92	$93.92	$0.00

Collapse

Related Names

CURRENT OWNER FOR 2022 (2022 - 2023)
Name ANDERSEN-COLARD RANCH ENT LLC
Mailing Address
Status Current
Account

CURRENT MAIL TO FOR 2022 (2022 - 2023)
Name ANDERSEN-COLARD RANCH ENT LLC
Mailing Address PO BOX 1746 CARSON CITY, NV, 89702
Status Current
Account

No Structure Information

Sales History

DISCLAIMER: SOME DOCUMENTS MAY NOT BE SHOWN

Year	Document #	Document Type	Sale Date	Sold By	Sold To	Price
2022	523430	AMENDED MAP OR PARCEL MAP	8/5/2021			$0
2021	516893	CORRECTION DEED/DOCUMENT	2/23/2021			$0
2021	515748	DEED	1/27/2021	ANDERSEN FAMILY ASSOCIATES	ANDERSEN-COLARD RANCH ENT LLC	$0

Parcel Genealogy

Relationship	Parcel Number	Action	Year	Change Effective Year	Completed
Parent Parcel	00901202	Split	2018	2018	Yes

No Taxing Entity Information

TRAFFIC IMPACT STUDY

FOR

Andersen Ranch West

June 27, 2022

PREPARED FOR:

Lumos and Associates

PREPARED BY:

HEADWAY TRANSPORTATION

Headway Transportation, LLC
5482 Longley Lane, Suite B, Reno, Nevada 89511
775.322.4300
www.HeadwayTransportation.com

YOUR QUESTIONS ANSWERED QUICKLY

Why did you perform this study?

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed Andersen Ranch West project located west of North Ormsby Boulevard and north of West Washington Street in Carson City, Nevada. This study of potential transportation impacts was undertaken for planning purposes and to assist in determining what traffic controls or mitigations may be needed to reduce potential traffic impacts, if any are found.

What does the project consist of?

The project consists of 61 single-family residential lots.

How much traffic will the project generate?

The project is anticipated to generate approximately 576 Daily, 43 AM peak hour, and 58 PM peak hour trips to the external roadway network.

How will project traffic affect the roadway network?

Under Existing Plus Project conditions, the study intersections are expected to operate within policy level of service thresholds.

Under Future Year Plus Project conditions, the study intersections are expected to operate within policy level of service thresholds.

Are any improvements recommended?

No improvements are recommended to mitigate traffic impacts as the roadway network will function within acceptable level of service thresholds with the addition of project traffic. The project will construct standard frontage improvements (curb, gutter, and sidewalk) along North Ormsby Boulevard adjacent to the project frontage. These frontage improvements will connect to the existing improvements located along the west side of North Ormsby Boulevard that end just south of the N. Ormsby Blvd./W. Washington St. intersection. In addition, Class 2 bike lanes are recommended in both directions along North Ormsby Boulevard adjacent to the project site.

It is anticipated the project will be required to pay its pro rata share of approximately $81,420 (5.9%) for the North Ormsby Boulevard extension to Winnie Lane based on a total cost estimate of $1,380,000 for the future extension project.

LIST OF FIGURES

LIST OF APPENDICES

INTRODUCTION

This report presents the findings of a Traffic Impact Study completed to assess the potential traffic impacts on local intersections associated with the Andersen Ranch West Project in Carson City, Nevada. This traffic impact study has been prepared to document existing traffic conditions, quantify traffic volumes generated by the proposed project, quantify traffic volumes that would reroute through the proposed project, identify potential impacts, document findings, and make recommendations to mitigate impacts, if any are found. The location of the project is shown on **Figure 1** and the preliminary project site plan is shown on **Figure 2**.

Study Area and Evaluated Scenarios

The project consists of 61 single-family residential lots. The project is located west of North Ormsby Boulevard, north of West Washington Street (and Ash Canyon Creek), and south of Ash Canyon Road. The study intersections were identified based on communications with Carson City staff and are shown on **Figure 1**. The following intersections are included in this study:

- North Ormsby Boulevard / North Project Road (with Manhattan Drive connection - plus project scenarios only)
- North Ormsby Boulevard / South Project Road (with West Washington Street connection - plus project scenarios only)
- North Ormsby Boulevard / West Washington Street (east of Ormsby)
- West Washington Street / Richmond Street

This study includes analysis of both the weekday AM and PM peak hours as these are the periods of time in which peak traffic is anticipated to occur. The evaluated development scenarios are:

- Existing Conditions
- Existing Plus Project Conditions
- Future Year (20-year horizon) Conditions (including trips generated from the Andersen Ranch "East" development)
- Future Year (20-year horizon) Plus Project Conditions

ANALYSIS METHODOLOGY

Level of service (LOS) is a term commonly used by transportation practitioners to measure and describe the operational characteristics of intersections, roadway segments, and other facilities. This term equates seconds of delay per vehicle at intersections to letter grades "A" through "F" with "A" representing optimum conditions and "F" representing breakdown or over capacity flows.

Intersections

The complete methodology for intersection level of service analysis is established in *the Highway Capacity Manual (HCM), 6th Edition* published by the Transportation Research Board (TRB). **Table 1** presents the delay thresholds for each level of service grade at signalized and unsignalized intersections.

Table 1: Level of Service Definition for Intersections

Level of Service	Brief Description	Average Delay (seconds per vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Free flow conditions.	< 10	< 10
B	Stable conditions with some affect from other vehicles.	10 to 20	10 to 15
C	Stable conditions with significant affect from other vehicles.	20 to 35	15 to 25
D	High density traffic conditions still with stable flow.	35 to 55	25 to 35
E	At or near capacity flows.	55 to 80	35 to 50
F	Over capacity conditions.	> 80	> 50

Source: *Highway Capacity Manual, 6th Edition*

Level of service calculations were performed for the study intersections using the Synchro 11 software package with analysis and results reported in accordance with *HCM* methodology.

Level of Service Policy

Carson City

The *Carson City Municipal Code* provides the following level of service policy:

A traffic LOS D or better, in the context of providing a safe, efficient, and convenient transportation system, shall be maintained through mitigation of impacts from all conditions on all city maintained arterial and collector roads and at city road intersections, except as noted in the Carson City master plan.

Hence, LOS "D" has been used as the threshold criteria for this analysis.

Traffic engineering practitioners recognize that LOS E/F conditions for the side street approach, during the peak hour(s), does not indicate an intersection failure or the need for mitigation. This condition (LOS E/F for a minor side-street approach) commonly exists throughout urban and suburban areas and is manageable in most cases until both volumes and delay become excessive.

EXISTING CONDITIONS

Roadway Facilities

A brief description of the key roadways in the study area is provided below.

North Ormsby Boulevard is generally a north-south 2-lane (one lane in each direction) minor collector roadway, per NDOT roadway classification, that connects West King Street with Washington Street and Ash Canyon Road. North Ormsby Boulevard provides access to the east side of the project via two new project road intersections (and provides connections on the west side of the project site via roadway extensions with Manhattan Drive and West Washington Street). The posted speed limit in the project area is 35 mph.

West Washington Street in the project area is generally an east-west minor collector roadway, per NDOT roadway classification, with two lanes (one lane in each direction). On-street parallel parking is generally allowed on the north side of West Washington Street east of North Ormsby Boulevard. The posted speed limit is 25 mph.

Richmond Street is generally a north-south 2-lane (one lane in each direction) local roadway. Curb, gutter, sidewalk, and on-street parallel parking currently exists along both sides of the roadway. It does not have a posted speed limit, but has a *prima-facie* speed limit of 25 MPH.

Bicycle & Pedestrian Facilities

There are no bicycle or pedestrian facilities along North Ormsby Boulevard immediately adjacent to the project site. An existing marked crosswalk is located across North Ormsby Boulevard just south of its intersection with West Washington Street. Sidewalks exist on both sides of North Ormsby Boulevard south of West Washington Street.

Class 2 bike lanes are located along both sides of West Washington Street east of the project site. Sidewalks are provided along both sides of West Washington Street east of North Ormsby Boulevard and along both sides of Richmond Street. A crosswalk is located on the eastbound (west approach) leg of the West Washington Street/Richmond Avenue intersection.

Transit Facilities

Jump Around Carson (JAC) provides four buses on four distinct fixed routes. While there are no transit routes in the immediate vicinity of the proposed Andersen Ranch West Project, a stop location for JAC Routes 1, 2A, 2B, and 3 are all located within one mile at the Downtown Transfer Plaza. These existing routes leave on 1-hour headways between the hours of 6:30 AM and 6:30 PM on weekdays and 8:30 AM to 3:30 PM. A transfer to RTC Intercity and Tahoe Transport District 19x is also available at this location. **Exhibit 1** shows a JAC route map of where the Downtown Transfer Plaza is located.

Exhibit 1: JAC Route Map

Crash History

Vehicle crash data within the project vicinity was obtained from NDOT for the most recent five years available (January 1, 2016, to January 1, 2021). During the most recent five years, only one (1) crash was reported in the project area. This crash occurred on January 11, 2018, at the intersection of West Washington Street and North Ormsby Boulevard. This crash was reported as a property damage only type crash involving a single vehicle that ran off the roadway. A summary of this crash (as provided by NDOT) is included in this report as **Appendix A.**

Traffic Volumes

AM and PM peak hour traffic volumes were collected at the study intersections on April 4 and April 5, 2022, with the Carson City School District in session. The existing AM and PM peak hour intersection turning movement volumes are shown on **Figure 3**.

Intersection Level of Service Analysis

Existing AM and PM peak hour intersection level of service analysis was performed for the study intersections using Synchro 11 analysis software. The existing intersection lane configurations and controls are shown on **Figure 3. Table 2** shows the existing conditions level of service results, and the technical calculations are provided in **Appendix B**.

Table 2: Existing Intersection Level of Service

Int. ID	Intersection	Control	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	N. Ormsby Boulevard/ W. Washington Street	Side-Street Stop				
	Southbound Approach		4.3	A	3.3	A
	Westbound Approach		10.7	B	9.4	A
2	W. Washington Street/ Richmond Avenue	Side-Street Stop				
	Eastbound Approach		0.1	A	0.1	A
	Westbound Approach		5.7	A	0.6	A
	Northbound Approach		10.9	B	9.2	A
	Southbound Approach		17.3	C	9.8	A

Notes: 1. Delay is reported in seconds per vehicle for the worst approach/movement for side-street stop-controlled intersections.
Source: Headway Transportation, 2022

As shown in **Table 2**, the existing study intersections currently operate within policy level of service thresholds during the AM and PM peak hours.

PROJECT CONDITIONS

Trip Generation

Trip generation rates from *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) were used to develop trip generation estimates for the proposed project based on the Single-Family Detached Housing rates. **Table 3** shows the project Daily, AM peak hour, and PM peak hour trip generation estimates.

Table 3: Project Trip Generation Estimates

Land Use (ITE Code)	Size[1]	Project Trips[2]				
		Daily	AM	AM In/Out	PM	PM In/Out
Single-Family Detached Housing (210)	61 du	576	43	11 / 32	58	37 / 21

Notes: 1. du = dwelling units; 2. Trips were calculated based on the following rates per du: Daily – 9.43; AM – 0.70 (26% in / 74% out); PM – 0.94 (63% in / 37% out)
Source: Headway Transportation, 2022

As shown in **Table 3** above, the project is expected to generate approximately 576 Daily, 43 AM peak hour, and 58 PM peak hour trips.

Since the proposed project will be connected to the residential neighborhoods to the west (via an extension of both Manhattan Drive and West Washington Street), additional rerouted trips were estimated (as diverted trips) and added to the project trips to and from the project site. It was assumed that 50% of the approximately 62 single family homes (i.e., 31 homes) located to the west of the project would reroute through the project site as shown in **Table 4** below.

Table 4: Diverted (rerouted) Trip Estimates

Land Use (ITE Code)	Size[1]	Project Trips[2]				
		Daily	AM	AM In/Out	PM	PM In/Out
Single-Family Detached Housing (210)	31 du	292	22	6 / 16	29	18 / 11

Notes: 1. du = dwelling units; 2. Trips were calculated based on the following rates per du: Daily – 9.43; AM – 0.70 (26% in / 74% out); PM – 0.94 (63% in / 37% out)
Source: Headway Transportation, 2022

As shown in **Table 4** above, rerouted traffic is expected to divert 292 Daily, 22 AM peak hour, and 29 PM peak hour trips from the surrounding roadway network to the study roadways.

Trip Distribution

Project trips and rerouted trips were distributed to the adjacent roadway network based on existing traffic volumes, the locations of complimentary land uses, and anticipated travel patterns. Project trips and rerouted trips were distributed based on the following:

- 25% to/from the north via North Ormsby Boulevard
- 50% to/from the east via West Washington Street
- 25% to/from the south via North Ormsby Boulevard

Trips entering/exiting the project site (including the rerouted traffic) were distributed with approximately half assigned to each project road (50% to north project road and 50% to the south project road). To be conservative, 100% of the project trips were assigned to North Ormsby Boulevard. Diverted trips were assigned to North Ormsby Boulevard and West Washington Street using the same distribution as the project trips. **Figure 4** shows the project trip distribution and assignment for the project trips plus the rerouted trips.

Project Access

The primary access to the project site will be via two (2) new east-west project roads that will each form a new "tee" intersection with North Ormsby Boulevard on the east side of the project site where North Ormsby Boulevard is relatively flat and straight. These two project roads will extend across the project site and provide secondary access to the west side of the project site via connections with Manhattan

Drive and West Washington Street respectively. The two project road intersections with North Ormsby Boulevard will be side street stop-controlled and analyzed as a "north" project road intersection and a "south" project road intersection.

EXISTING PLUS PROJECT CONDITIONS

Traffic Volumes

Project trips and rerouted trips (**Figure 4**) were added to the existing traffic volumes (**Figure 3**) to develop the Existing Plus Project conditions traffic volumes, shown on **Figure 5**.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Existing Plus Project traffic volumes, the existing peak hour factors from the counts, and the lane configurations and controls shown on **Figure 5**. **Table 5** shows the level of service results, and the technical calculations are provided in **Appendix C**.

Table 5: Existing Plus Project Intersection Level of Service

Int. ID	Intersection	Control	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	N. Ormsby Boulevard/ W. Washington Street	Side-Street Stop				
	Southbound Approach		4.9	A	4.1	A
	Westbound Approach		11.2	B	9.7	A
2	W. Washington Street/ Richmond Avenue	Side-Street Stop				
	Eastbound Approach		0.1	A	0.1	A
	Westbound Approach		5.4	A	0.5	A
	Northbound Approach		11.4	B	9.4	A
	Southbound Approach		18.7	C	10.3	B
3	N. Ormsby Boulevard/ North Project Road	Side-Street Stop				
	Northbound Approach		0.4	A	1.5	A
	Eastbound Approach		9.2	A	9.0	A
4	N. Ormsby Boulevard/ South Project Road	Side-Street Stop				
	Northbound Approach		0.4	A	1.3	A
	Eastbound Approach		9.4	A	9.0	A

Notes: 1. Delay is reported in seconds per vehicle for the worst approach/movement for side-street stop-controlled intersections.
Source: Headway Transportation, 2022

As shown in **Table 5**, the study intersections and driveways are expected to operate at LOS "C" or better with the additional of project traffic and rerouted traffic.

FUTURE YEAR CONDITIONS

The Future Year analysis estimates operating conditions for the 20-year horizon (year 2042).

Planned Roadway Improvements

The extension of North Ormsby Boulevard to Winnie Lane is shown as an improvement in the CAMPO 2050 unconstrained traffic model. This project will pay its pro rata share to construct the future connection.

Traffic Volume Forecasts

Future Year (2042) background traffic volumes were developed based on applying a 1% per year growth rate for 20 years (based on the projected growth of traffic volumes on North Ormsby Boulevard from 2030 to 2050 in the constrained Carson City Travel Demand Model). In addition, trips generated from the

proposed 203 single-family lot Andersen Ranch (East) project, were added to the study intersections (for both the Future Year No Project and Future Year Plus Project scenarios), based on trip distribution and assignment assumptions identified in the traffic impact study previously completed for that project (July 11, 2019 and supplement from December 12, 2019).

Figure 6 shows the Future Year (No Project) traffic volumes at the study intersections.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections using Synchro analysis software. **Table 6** shows the Future Year conditions level of service results, and the technical calculations are provided in **Appendix D**.

Table 6: Future Year Intersection Level of Service

Int. ID	Intersection	Control	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	N. Ormsby Boulevard/ W. Washington Street	Side-Street Stop				
	Southbound Approach		4.5	A	3.5	A
	Westbound Approach		12.0	B	9.8	A
2	W. Washington Street/ Richmond Avenue	Side-Street Stop				
	Eastbound Approach		0.1	A	0.2	A
	Westbound Approach		5.8	A	0.7	A
	Northbound Approach		12.5	B	10.0	B
	Southbound Approach		23.6	C	10.7	B

Notes: 1. Delay is reported in seconds per vehicle for the worst approach/movement for side-street stop-controlled intersections.
Source: Headway Transportation, 2022

As shown in **Table 6**, the study intersections are expected to operate within policy level of service thresholds under Future Year (no project) conditions.

FUTURE YEAR PLUS PROJECT CONDITIONS

Traffic Volumes

Project trips (**Figure 4**) were added to the Future Year (including the Andersen Ranch East project trips) traffic volumes (**Figure 6**) to develop the Future Year Plus Project conditions traffic volumes, shown on **Figure 7**.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Future Year Plus Project traffic volumes. **Table 7** shows the level of service results, and the technical calculations are provided in **Appendix E**.

Table 7: Future Year Plus Project Intersection Level of Service

Int. ID	Intersection	Control	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
1	N. Ormsby Boulevard/ W. Washington Street	Side-Street Stop				
	Southbound Approach		5.0	A	4.1	A
	Westbound Approach		12.8	B	10.1	B
2	W. Washington Street/ Richmond Avenue	Side-Street Stop				
	Eastbound Approach		0.1	A	0.2	A
	Westbound Approach		5.6	A	0.5	A
	Northbound Approach		13.2	B	10.3	B
	Southbound Approach		26.3	D	11.3	B
3	N. Ormsby Boulevard/ North Project Road	Side-Street Stop				
	Northbound Approach		0.3	A	1.1	A
	Eastbound Approach		9.6	A	9.2	A
4	N. Ormsby Boulevard/ South Project Road	Side-Street Stop				
	Northbound Approach		0.3	A	1.0	A
	Eastbound Approach		9.7	A	9.2	A

Notes: 1. Delay is reported in seconds per vehicle for the worst approach/movement for side-street stop-controlled intersections.
Source: Headway Transportation, 2022

As shown in **Table 7**, the study intersections are expected to operate within policy level of service thresholds under Future Year Plus Project Conditions.

Recommended Improvements

Consistent with prior projects, it is anticipated that this project will be required to pay a pro rata share of the cost to construct the Ormsby Boulevard Extension to Winnie Lane. It is estimated that 144 vehicles per day (i.e., 25% of the 576 daily trips generated from the project) would utilize the future extension. The CAMPO 2050 travel demand model estimates this extension will carry 2,450 vehicles per day. The pro rata share for this project is approximately 5.9% (144/2450 vehicles per day) or $81,420, which is 5.9% of the latest cost estimate received from Carson City staff of $1,380,000 to construct the roadway extension.

The project will construct frontage improvements (curb, gutter, and sidewalk) along the site frontage of North Ormsby Boulevard. These improvements will conform to the existing curb, gutter, and sidewalk located along the west side of North Ormsby Boulevard just south of the North Ormsby Boulevard/West Washington Street intersection.

It is recommended that the project install a Class 2 bike lane in both the northbound and southbound direction on North Ormsby Boulevard adjacent to the project site. Turn lanes on North Ormsby Boulevard at the project road intersections are not warranted based on NDOT standards at unsignalized intersections for two-lane roadways in urban areas.

CONCLUSIONS

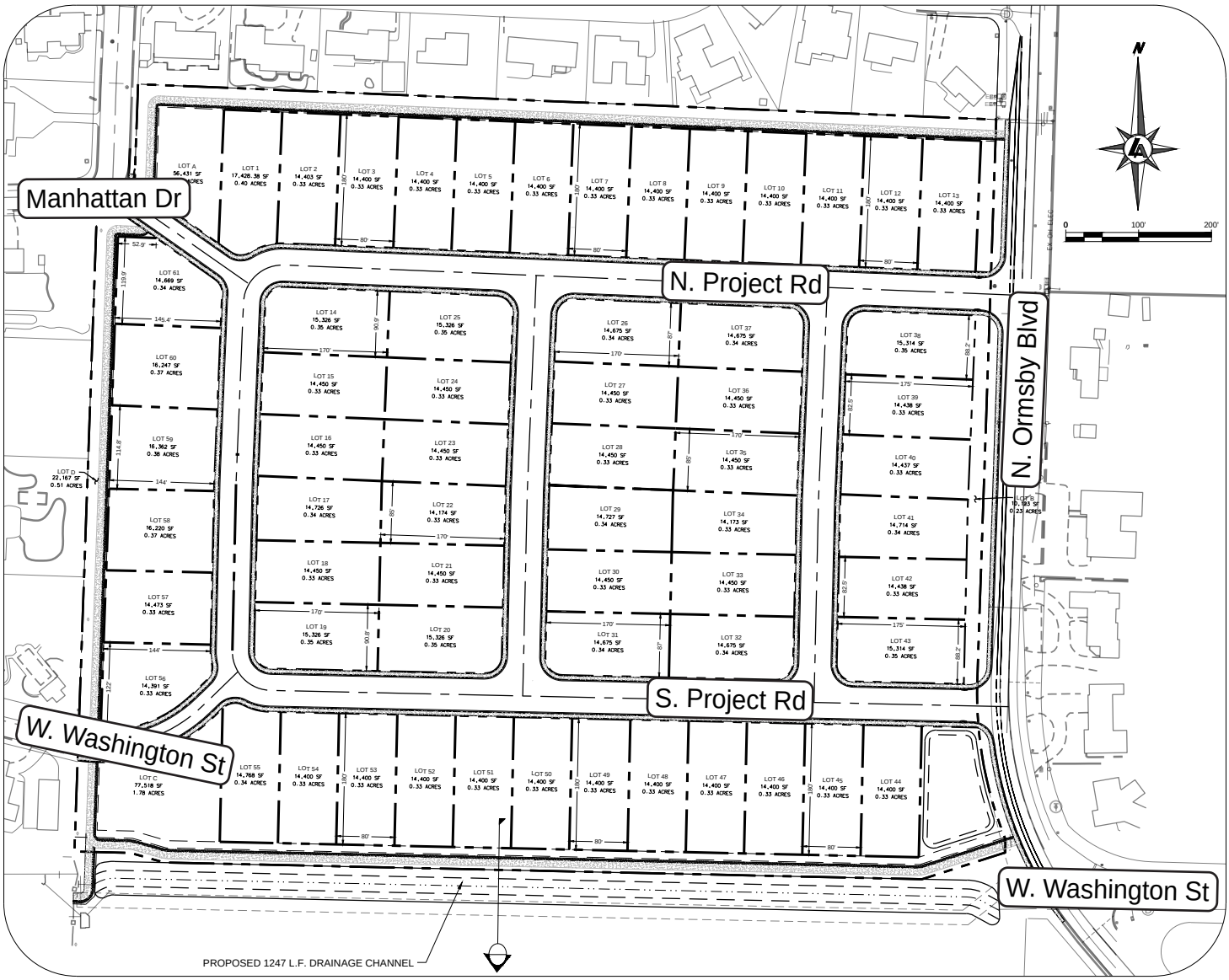
The following is a list of our key findings and recommendations:

- The proposed project includes 61 Single-Family housing lots and is anticipated to generate approximately 576 Daily, 43 AM peak hour, and 58 PM peak hour trips on the external roadway network.
- Under Existing and Existing Plus Project conditions, the study intersections are expected to operate within policy level of service thresholds.
- Under Future Year and Future Year Plus Project conditions, the study intersections are expected to operate within policy level of service thresholds.
- The project will construct curb, gutter, and sidewalk frontage improvements along the west side of North Ormsby Boulevard adjacent to the project site consistent with the existing curb, gutter, and sidewalk just south of the North Ormsby Boulevard/West Washington Street intersection.
- The installation of Class 2 bike lanes is recommended along North Ormsby Boulevard in both directions adjacent to the project site.
- It is anticipated the project will be required to pay its pro rata share of approximately $81,420 (5.9%) for the North Ormsby Boulevard extension to Winnie Lane based on a total cost estimate of $1,380,000 for the future extension project.

NO SCALE

- Project Site
(#) - Study Intersection
- - - - Future Connection

Figure 1
Andersen Ranch 463 West
Traffic Impact Study
Project Location



Proposed 61 Single Family Lots

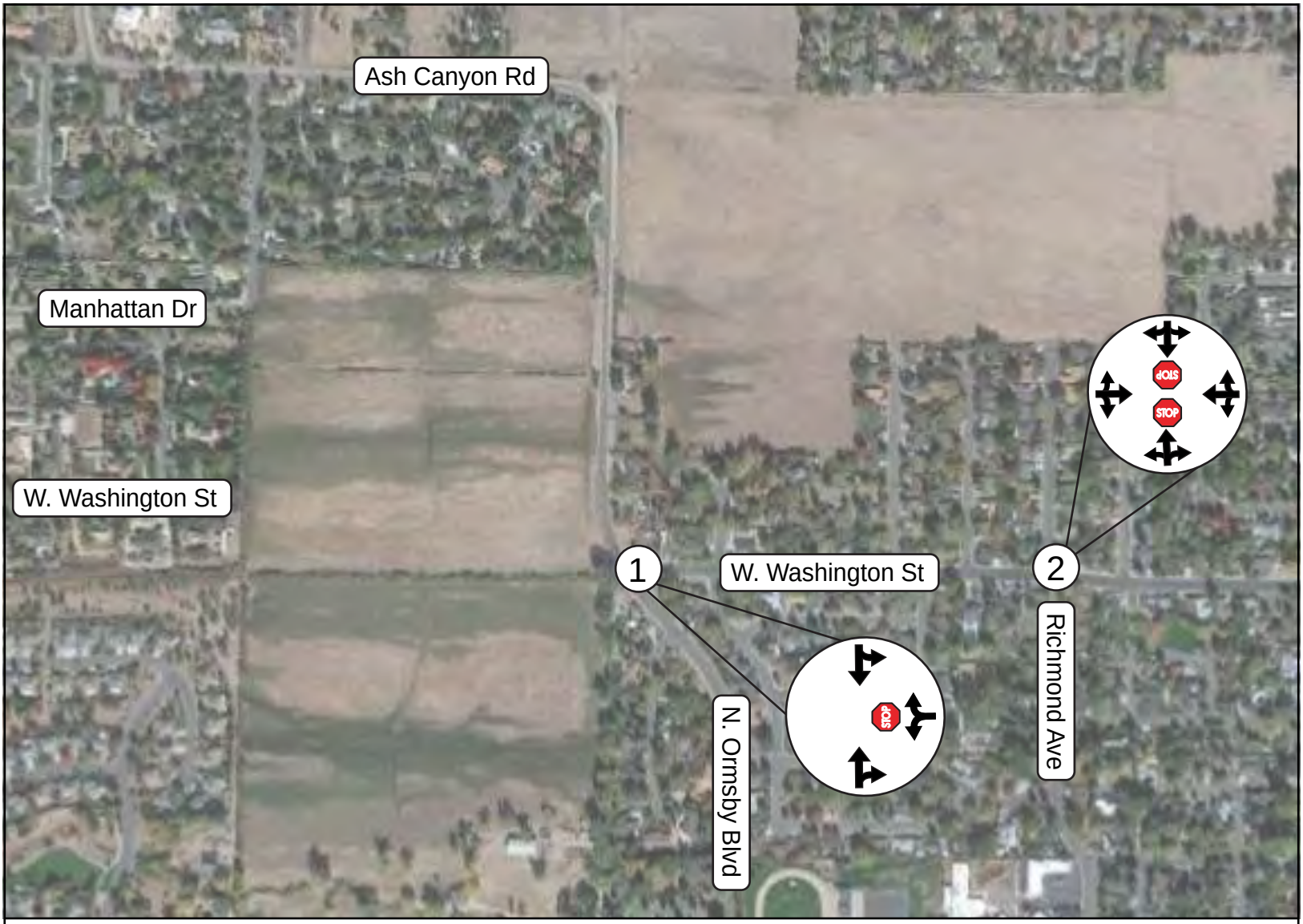
NO SCALE

Figure 2

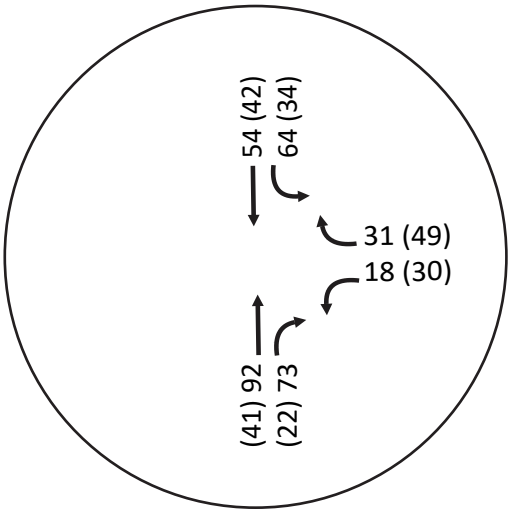
Andersen Ranch East

Traffic Impact Study

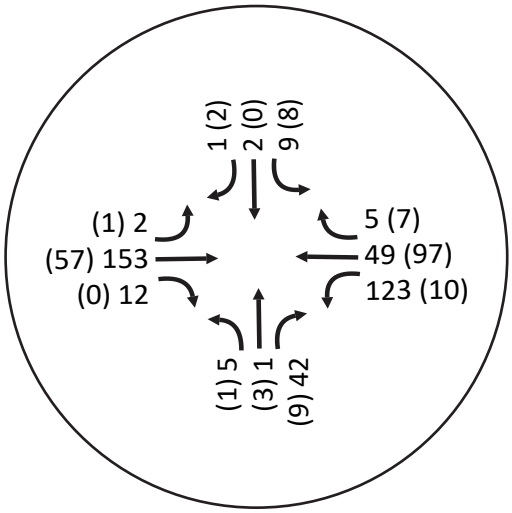
Preliminary Site Plan



1 *N. Ormsby Blvd / W. Washington St*



2 *W. Washington St / Richmond Ave*



AM Peak Hour Volume (PM Peak Hour Volume)

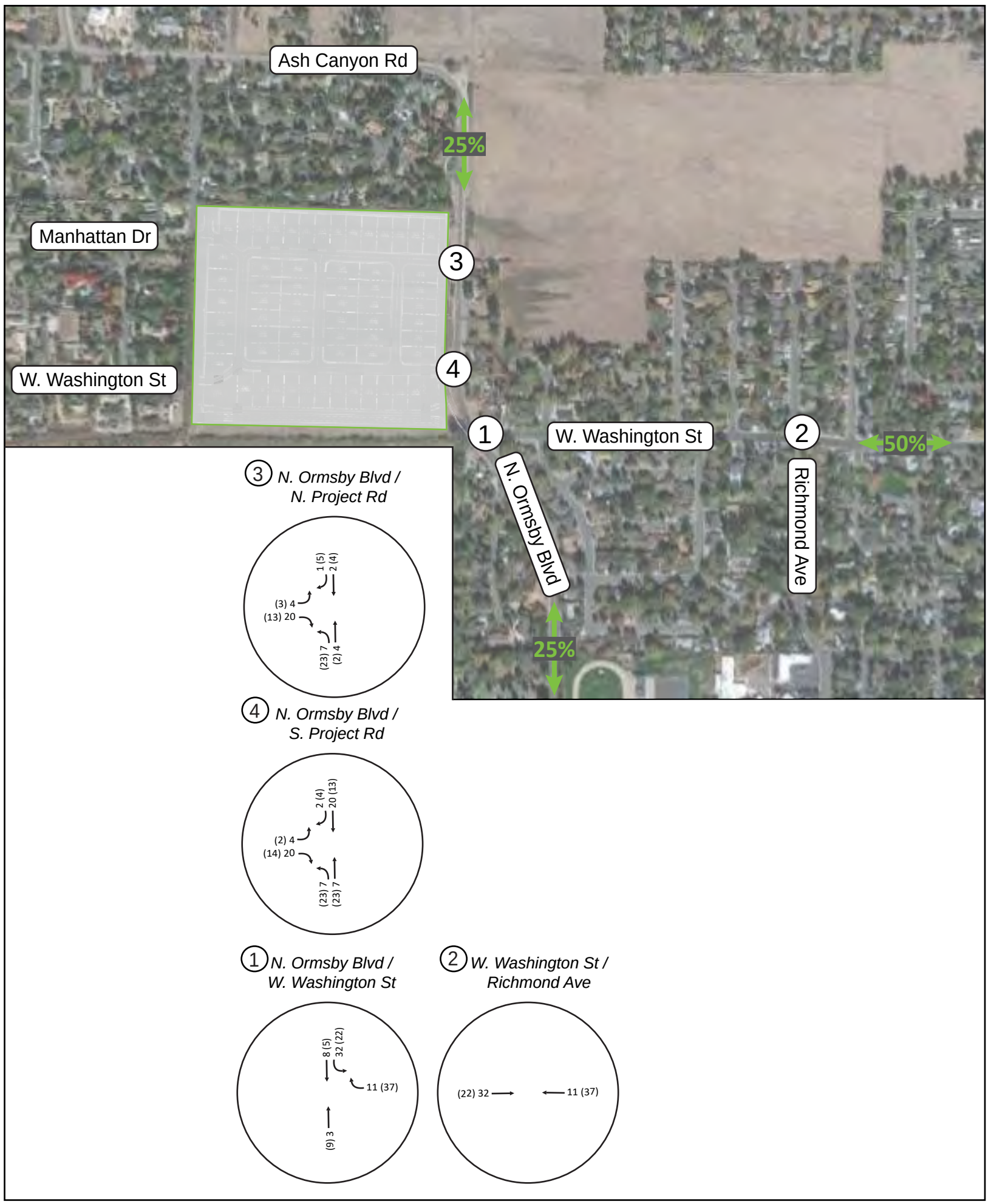
- Project Site
- # - Study Intersection
- STOP - Stop

NO SCALE

Figure 3

Andersen Ranch Traffic Impact Study

Existing Traffic Volumes, Lane Configurations, & Controls



NO SCALE

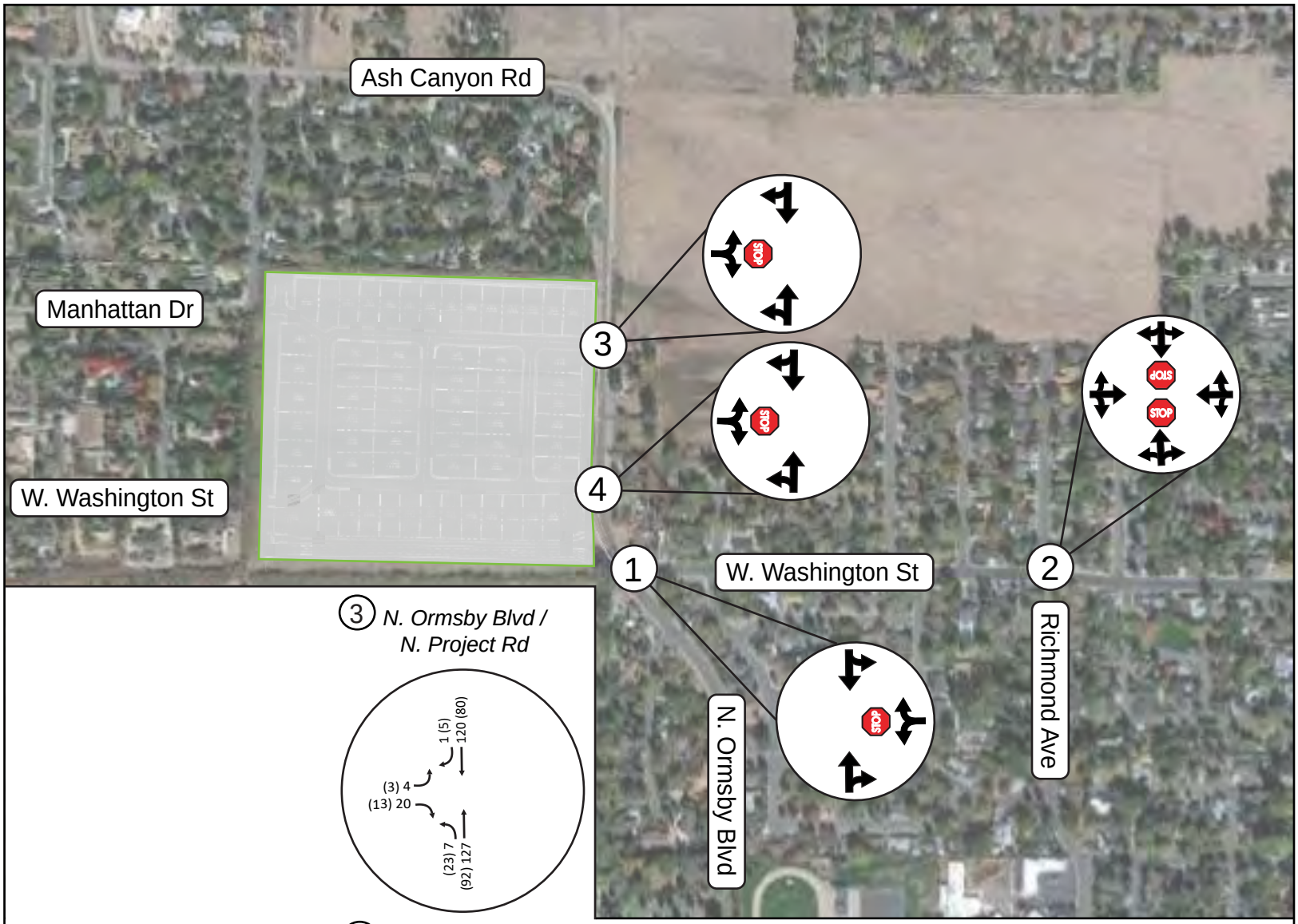
AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- # - Study Intersection
- XX% - Trip Distribution

Figure 4

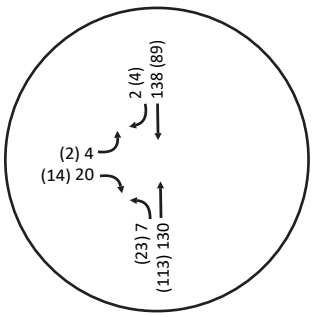
Andersen Ranch East
Traffic Impact Study

Project Trip Distribution & Assignment (including rerouted trips)

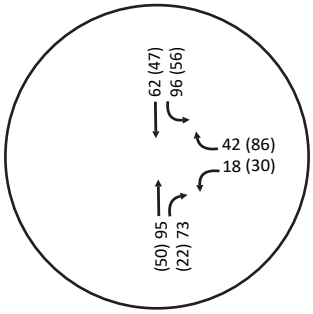


3 *N. Ormsby Blvd / N. Project Rd*

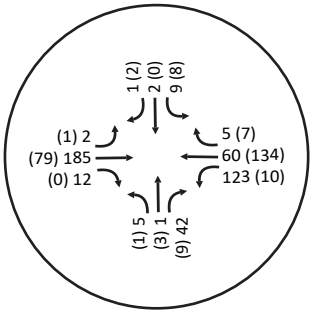
4 *N. Ormsby Blvd / S. Project Rd*



1 *N. Ormsby Blvd / W. Washington St*



2 *W. Washington St / Richmond Ave*



NO SCALE

AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- # - Study Intersection
- STOP - Stop

Figure 5

Andersen Ranch Traffic Impact Study

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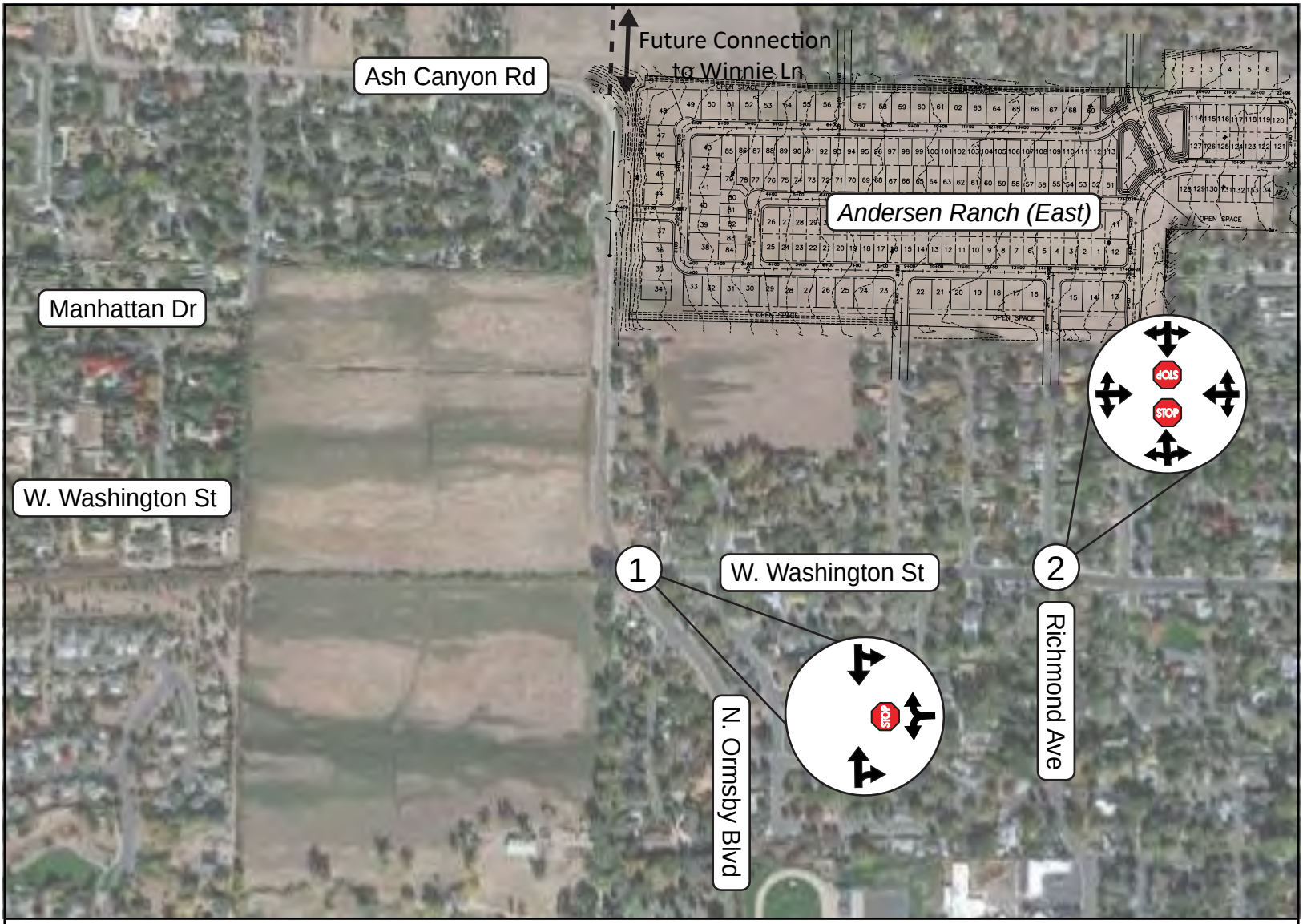
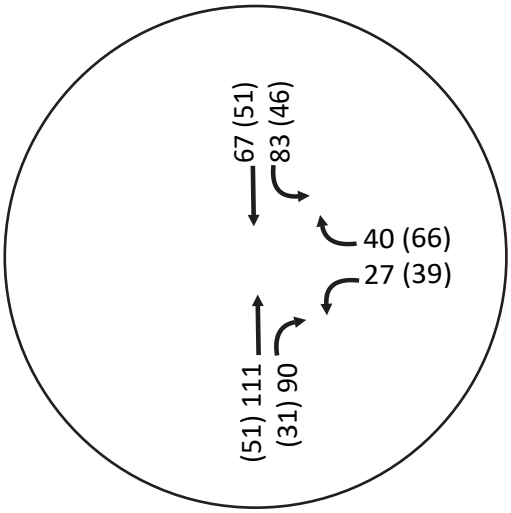
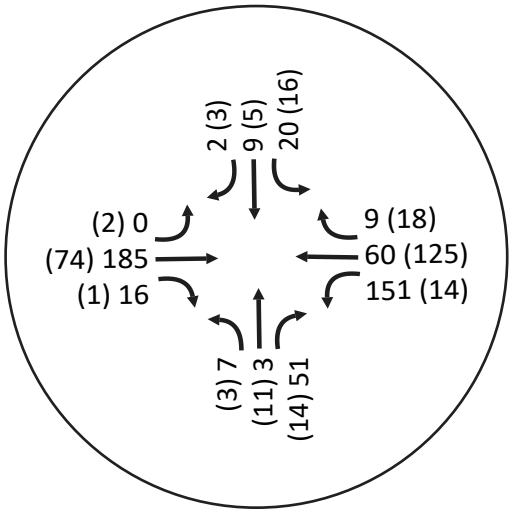
Existing Plus Project Traffic Volumes, Lane Configurations, & Controls



1 N. Ormsby Blvd / W. Washington St



2 W. Washington St / Richmond Ave



***Includes Andersen Ranch (East) Trip Gen**

NO SCALE

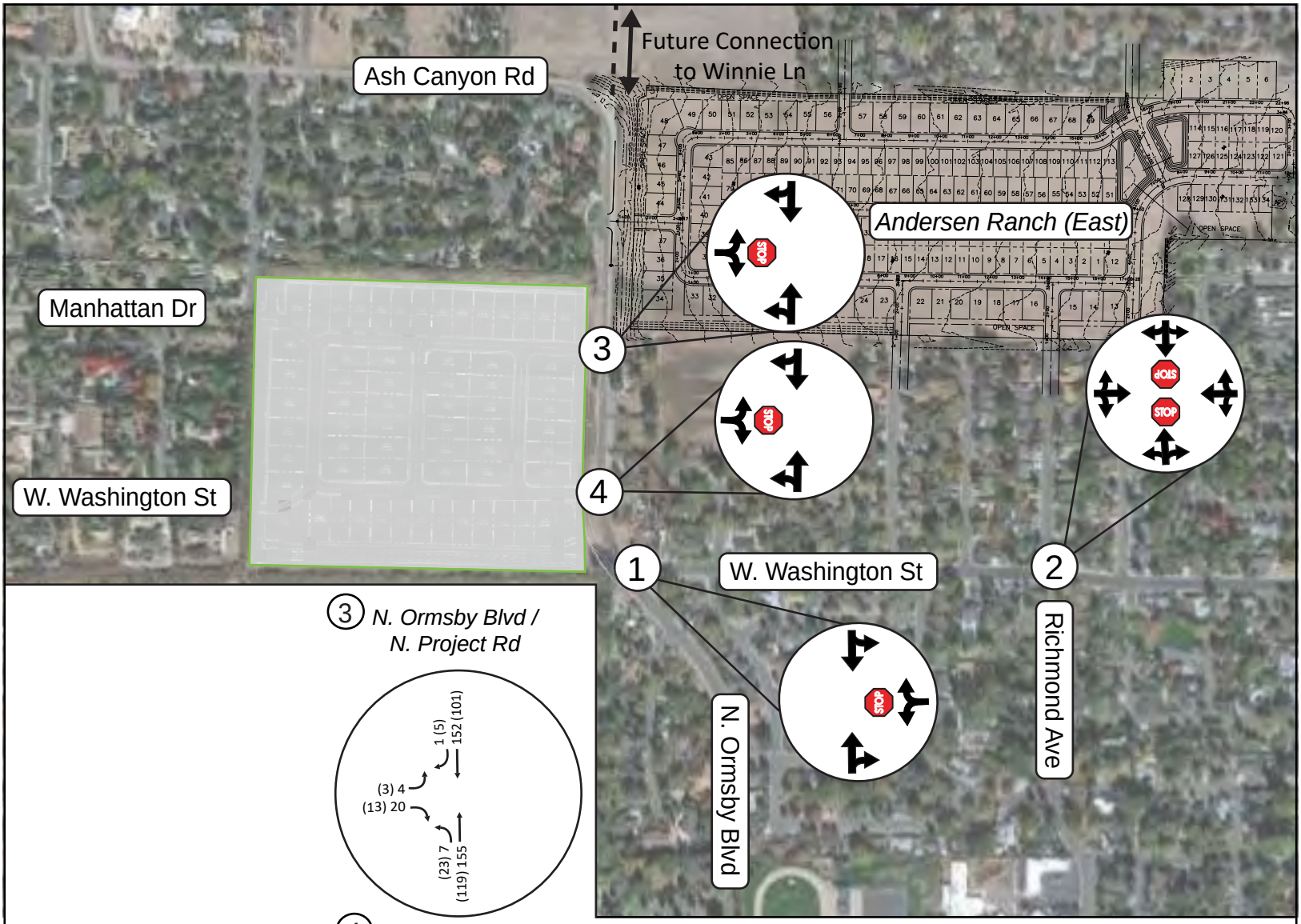
AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- # - Study Intersection
- STOP - Stop
- ---- - Future Connection

Figure 6

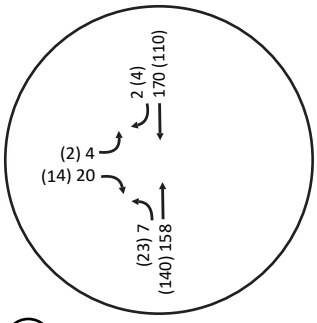
Andersen Ranch East
Traffic Impact Study

***Future Year Traffic Volumes*, Lane Configurations, & Controls**

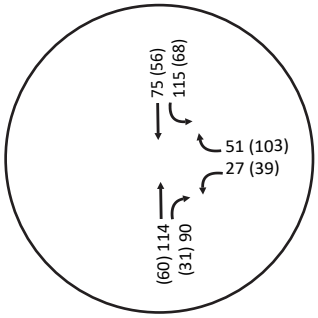


3 *N. Ormsby Blvd / N. Project Rd*

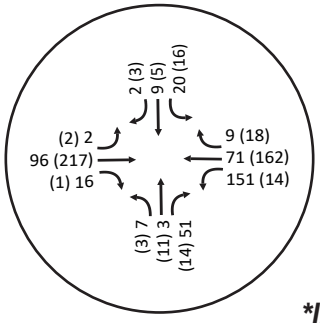
4 *N. Ormsby Blvd / S. Project Rd*



1 *N. Ormsby Blvd / W. Washington St*



2 *W. Washington St / Richmond Ave*



Includes Andersen Ranch (East) Trip Gen

NO SCALE

AM Peak Hour Volume (PM Peak Hour Volume)

- Project Site
- # - Study Intersection
- STOP - Stop
- ---- - Future Connection

Figure 7

Andersen Ranch East
Traffic Impact Study

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Future Year Plus Project Traffic Volumes*, Lane Configurations, & Controls

Appendix A
NDOT Crash Data

INTERSECTION DETAIL
N ORMSBY BLVD @ W WASHINGTON ST
01 JAN 16 - 01 JAN 21
COUNTY: CARSON CITY

Crash Severity	Crash Date	Crash Year	Crash Time	Primary Street	Distance	Dir	Secondary Street	Weather	Fatalities	Injured	Property Damage Only	Injury Type	Crash Type	Total Vehicles
PROPERTY DAMAGE ONLY	11-Jan-2018	2018	08:01 PM	N ORMSBY BLVD	679	N	W WASHINGTON ST	OTHER			PDO		NON-COLLISION	1
									Sum: 0	Sum: 0	Count: 1			
									Count: 0	Count: 0				
									Total:	1				

V1 Type	V1 Dir	V1 Driver Age	V1 Lane Num	V1 Action	V1 Driver Factors	V1 Driver Distracted	V1 Vehicle Factors	V1 Most Harmful Event	V1 All Events
SEDAN, 4 DOOR	N			NOT REPORTED	APPARENTLY NORMAL		DROVE LEFT OF CENTER		RAN OFF ROAD LEFT: OVERTURN/ROLLOVER

V2 Type	V2 Dir	V2 Driver Age	V2 Lane Num	V2 Action	V2 Driver Factors	V2 Driver Distracted	V2 Vehicle Factors	V2 Most Harmful Event	V2 All Events	First Harmful Event	Nonmotorist Factors	Factors Roadway	Lighting	HWY Factors	Agency	Accident Num	Accident Rec Num
															CCSO	CCSO182	2404784

Appendix B
Existing LOS Calculations

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	31	92	73	64	54
Future Vol, veh/h	18	31	92	73	64	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	26	44	131	104	91	77

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	442	183	0	0	235	0
Stage 1	183	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	571	857	-	-	1326	-
Stage 1	846	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	530	857	-	-	1326	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	699	1326	-
HCM Lane V/C Ratio	-	-	0.1	0.069	-
HCM Control Delay (s)	-	-	10.7	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2	-

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	49	41	22	34	42
Future Vol, veh/h	30	49	41	22	34	42
Conflicting Peds, #/hr	3	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	34	56	47	25	39	48

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	189	60	0	0	72	0
Stage 1	60	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	802	1008	-	-	1534	-
Stage 1	965	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	779	1008	-	-	1534	-
Mov Cap-2 Maneuver	779	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	3.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	907	1534	-
HCM Lane V/C Ratio	-	-	0.099	0.025	-
HCM Control Delay (s)	-	-	9.4	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	153	12	123	49	5	5	1	42	9	2	1
Future Vol, veh/h	2	153	12	123	49	5	5	1	42	9	2	1
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	222	17	178	71	7	7	1	61	13	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	80	0	0	240	0	0	671	674	232	701	679	77
Stage 1	-	-	-	-	-	-	238	238	-	433	433	-
Stage 2	-	-	-	-	-	-	433	436	-	268	246	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1512	-	-	1321	-	-	369	375	805	352	372	981
Stage 1	-	-	-	-	-	-	763	706	-	599	580	-
Stage 2	-	-	-	-	-	-	599	578	-	735	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1509	-	-	1320	-	-	325	321	804	288	318	979
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	321	-	288	318	-
Stage 1	-	-	-	-	-	-	761	704	-	597	497	-
Stage 2	-	-	-	-	-	-	511	495	-	677	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	5.7	10.9	17.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	679	1509	-	-	1320	-	-	311
HCM Lane V/C Ratio	0.102	0.002	-	-	0.135	-	-	0.056
HCM Control Delay (s)	10.9	7.4	0	-	8.2	0	-	17.3
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.5	-	-	0.2

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	57	0	10	97	7	1	3	9	8	0	2
Future Vol, veh/h	1	57	0	10	97	7	1	3	9	8	0	2
Conflicting Peds, #/hr	3	0	7	7	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	64	0	11	109	8	1	3	10	9	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	71	0	0	210	215	71	211	211	117
Stage 1	-	-	-	-	-	-	73	73	-	138	138	-
Stage 2	-	-	-	-	-	-	137	142	-	73	73	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1474	-	-	1536	-	-	749	684	994	748	688	938
Stage 1	-	-	-	-	-	-	939	836	-	868	784	-
Stage 2	-	-	-	-	-	-	869	781	-	939	836	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1470	-	-	1526	-	-	736	671	987	730	675	934
Mov Cap-2 Maneuver	-	-	-	-	-	-	736	671	-	730	675	-
Stage 1	-	-	-	-	-	-	931	829	-	865	775	-
Stage 2	-	-	-	-	-	-	859	772	-	925	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	9.2	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	870	1470	-	-	1526	-	-	763
HCM Lane V/C Ratio	0.017	0.001	-	-	0.007	-	-	0.015
HCM Control Delay (s)	9.2	7.5	0	-	7.4	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Appendix C
Existing Plus Project LOS Calculations

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	42	95	73	96	62
Future Vol, veh/h	18	42	95	73	96	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	26	60	136	104	137	89

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	551	188	0	0	240	0
Stage 1	188	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	494	851	-	-	1321	-
Stage 1	842	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	440	851	-	-	1321	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	625	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	4.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	665	1321	-
HCM Lane V/C Ratio	-	-	0.129	0.104	-
HCM Control Delay (s)	-	-	11.2	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.3	-

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	86	50	22	56	47
Future Vol, veh/h	30	86	50	22	56	47
Conflicting Peds, #/hr	3	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	34	98	57	25	64	53

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	254	70	0	0	82	0
Stage 1	70	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	737	996	-	-	1522	-
Stage 1	955	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	703	996	-	-	1522	-
Mov Cap-2 Maneuver	703	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	899	1522	-
HCM Lane V/C Ratio	-	-	0.147	0.042	-
HCM Control Delay (s)	-	-	9.7	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	185	12	123	60	5	5	1	42	9	2	1
Future Vol, veh/h	2	185	12	123	60	5	5	1	42	9	2	1
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	268	17	178	87	7	7	1	61	13	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	96	0	0	286	0	0	733	736	278	763	741	93
Stage 1	-	-	-	-	-	-	284	284	-	449	449	-
Stage 2	-	-	-	-	-	-	449	452	-	314	292	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1491	-	-	1270	-	-	335	345	758	320	343	961
Stage 1	-	-	-	-	-	-	721	675	-	587	571	-
Stage 2	-	-	-	-	-	-	587	569	-	695	669	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1488	-	-	1269	-	-	293	293	757	259	291	959
Mov Cap-2 Maneuver	-	-	-	-	-	-	293	293	-	259	291	-
Stage 1	-	-	-	-	-	-	719	673	-	585	485	-
Stage 2	-	-	-	-	-	-	496	484	-	636	667	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	5.4	11.4	18.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	632	1488	-	-	1269	-	-	281
HCM Lane V/C Ratio	0.11	0.002	-	-	0.14	-	-	0.062
HCM Control Delay (s)	11.4	7.4	0	-	8.3	0	-	18.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.5	-	-	0.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	79	0	10	134	7	1	3	9	8	0	2
Future Vol, veh/h	1	79	0	10	134	7	1	3	9	8	0	2
Conflicting Peds, #/hr	3	0	7	7	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	89	0	11	151	8	1	3	10	9	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	162	0	0	96	0	0	277	282	96	278	278	159
Stage 1	-	-	-	-	-	-	98	98	-	180	180	-
Stage 2	-	-	-	-	-	-	179	184	-	98	98	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1423	-	-	1504	-	-	677	628	963	676	632	889
Stage 1	-	-	-	-	-	-	911	816	-	824	752	-
Stage 2	-	-	-	-	-	-	825	749	-	911	816	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1494	-	-	665	616	957	660	620	886
Mov Cap-2 Maneuver	-	-	-	-	-	-	665	616	-	660	620	-
Stage 1	-	-	-	-	-	-	904	809	-	821	744	-
Stage 2	-	-	-	-	-	-	816	741	-	897	809	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	9.4	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	824	1419	-	-	1494	-	-	695
HCM Lane V/C Ratio	0.018	0.001	-	-	0.008	-	-	0.016
HCM Control Delay (s)	9.4	7.5	0	-	7.4	0	-	10.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	20	7	127	120	1
Future Vol, veh/h	4	20	7	127	120	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	22	8	138	130	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	285	131	131	0	-	0
Stage 1	131	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	705	919	1454	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	874	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	701	919	1454	-	-	-
Mov Cap-2 Maneuver	701	-	-	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	874	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1454	-	874	-	-
HCM Lane V/C Ratio	0.005	-	0.03	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	23	92	80	5
Future Vol, veh/h	3	13	23	92	80	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	25	100	87	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	240	90	92	0	-	0
Stage 1	90	-	-	-	-	-
Stage 2	150	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	748	968	1503	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	735	968	1503	-	-	-
Mov Cap-2 Maneuver	735	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	878	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	914	-	-
HCM Lane V/C Ratio	0.017	-	0.019	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	20	7	130	138	2
Future Vol, veh/h	4	20	7	130	138	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	22	8	141	150	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	308	151	152	0	-	0
Stage 1	151	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	684	895	1429	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	680	895	1429	-	-	-
Mov Cap-2 Maneuver	680	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	871	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1429	-	850	-	-
HCM Lane V/C Ratio	0.005	-	0.031	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	14	23	113	89	4
Future Vol, veh/h	2	14	23	113	89	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	15	25	123	97	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	272	99	101	0	-	0
Stage 1	99	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	717	957	1491	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	704	957	1491	-	-	-
Mov Cap-2 Maneuver	704	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	857	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1491	-	916	-	-
HCM Lane V/C Ratio	0.017	-	0.019	-	-
HCM Control Delay (s)	7.5	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Appendix D
Future Year LOS Calculations

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	40	111	90	83	67
Future Vol, veh/h	27	40	111	90	83	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	39	57	159	129	119	96

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	558	224	0	0	288	0
Stage 1	224	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	489	813	-	-	1268	-
Stage 1	811	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	813	-	-	1268	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	4.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	607	1268	-
HCM Lane V/C Ratio	-	-	0.158	0.094	-
HCM Control Delay (s)	-	-	12	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.3	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	66	51	31	46	51
Future Vol, veh/h	39	66	51	31	46	51
Conflicting Peds, #/hr	3	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	43	73	57	34	51	57

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	236	74	0	0	91	0
Stage 1	74	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	754	990	-	-	1510	-
Stage 1	951	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	725	990	-	-	1510	-
Mov Cap-2 Maneuver	725	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	872	1510	-
HCM Lane V/C Ratio	-	-	0.134	0.034	-
HCM Control Delay (s)	-	-	9.8	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	185	16	151	60	9	7	3	51	20	9	2
Future Vol, veh/h	2	185	16	151	60	9	7	3	51	20	9	2
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	264	23	216	86	13	10	4	73	29	13	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	288	0	0	816	816	277	847	821	95
Stage 1	-	-	-	-	-	-	283	283	-	527	527	-
Stage 2	-	-	-	-	-	-	533	533	-	320	294	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1485	-	-	1268	-	-	295	310	759	281	308	959
Stage 1	-	-	-	-	-	-	722	675	-	533	527	-
Stage 2	-	-	-	-	-	-	529	523	-	690	668	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1267	-	-	243	253	758	215	251	957
Mov Cap-2 Maneuver	-	-	-	-	-	-	243	253	-	215	251	-
Stage 1	-	-	-	-	-	-	720	673	-	531	431	-
Stage 2	-	-	-	-	-	-	419	427	-	618	666	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	5.8	12.5	23.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	565	1482	-	-	1267	-	-	237
HCM Lane V/C Ratio	0.154	0.002	-	-	0.17	-	-	0.187
HCM Control Delay (s)	12.5	7.4	0	-	8.4	0	-	23.6
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.6	-	-	0.7

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	74	1	14	125	18	3	11	14	16	5	3
Future Vol, veh/h	2	74	1	14	125	18	3	11	14	16	5	3
Conflicting Peds, #/hr	3	0	7	7	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	82	1	16	139	20	3	12	16	18	6	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	162	0	0	90	0	0	281	288	90	285	278	153
Stage 1	-	-	-	-	-	-	94	94	-	184	184	-
Stage 2	-	-	-	-	-	-	187	194	-	101	94	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1423	-	-	1512	-	-	673	624	971	669	632	896
Stage 1	-	-	-	-	-	-	915	819	-	820	749	-
Stage 2	-	-	-	-	-	-	817	742	-	908	819	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1502	-	-	654	610	965	640	617	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	654	610	-	640	617	-
Stage 1	-	-	-	-	-	-	908	812	-	817	738	-
Stage 2	-	-	-	-	-	-	797	731	-	879	812	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	10	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	754	1419	-	-	1502	-	-	658
HCM Lane V/C Ratio	0.041	0.002	-	-	0.01	-	-	0.041
HCM Control Delay (s)	10	7.5	0	-	7.4	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Appendix E

Future Year Plus Project LOS Calculations

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	51	114	90	115	75
Future Vol, veh/h	27	51	114	90	115	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	39	73	163	129	164	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	663	228	0	0	292	0
Stage 1	228	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	425	809	-	-	1264	-
Stage 1	808	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	366	809	-	-	1264	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	570	1264	-
HCM Lane V/C Ratio	-	-	0.195	0.13	-
HCM Control Delay (s)	-	-	12.8	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.4	-

Intersection	
Int Delay, s/veh	5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	103	60	31	68	56
Future Vol, veh/h	39	103	60	31	68	56
Conflicting Peds, #/hr	3	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	43	114	67	34	76	62

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	301	84	0	0	101	0
Stage 1	84	-	-	-	-	-
Stage 2	217	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	693	978	-	-	1498	-
Stage 1	942	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	654	978	-	-	1498	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	776	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1498	-
HCM Lane V/C Ratio	-	-	0.183	0.05	-
HCM Control Delay (s)	-	-	10.1	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	217	16	151	71	9	7	3	51	20	9	2
Future Vol, veh/h	2	217	16	151	71	9	7	3	51	20	9	2
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	310	23	216	101	13	10	4	73	29	13	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	116	0	0	334	0	0	877	877	323	908	882	110
Stage 1	-	-	-	-	-	-	329	329	-	542	542	-
Stage 2	-	-	-	-	-	-	548	548	-	366	340	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1466	-	-	1220	-	-	268	286	716	255	284	941
Stage 1	-	-	-	-	-	-	682	645	-	523	519	-
Stage 2	-	-	-	-	-	-	519	515	-	651	637	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1463	-	-	1219	-	-	218	231	715	192	229	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	231	-	192	229	-
Stage 1	-	-	-	-	-	-	679	642	-	520	420	-
Stage 2	-	-	-	-	-	-	407	417	-	579	634	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	5.6	13.2	26.3
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	524	1463	-	-	1219	-	-	213
HCM Lane V/C Ratio	0.166	0.002	-	-	0.177	-	-	0.208
HCM Control Delay (s)	13.2	7.5	0	-	8.6	0	-	26.3
HCM Lane LOS	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0	-	-	0.6	-	-	0.8

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	96	1	14	162	18	3	11	14	16	5	3
Future Vol, veh/h	2	96	1	14	162	18	3	11	14	16	5	3
Conflicting Peds, #/hr	3	0	7	7	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	107	1	16	180	20	3	12	16	18	6	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	203	0	0	115	0	0	347	354	115	351	344	194
Stage 1	-	-	-	-	-	-	119	119	-	225	225	-
Stage 2	-	-	-	-	-	-	228	235	-	126	119	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1375	-	-	1480	-	-	609	573	940	606	580	850
Stage 1	-	-	-	-	-	-	888	799	-	780	719	-
Stage 2	-	-	-	-	-	-	777	712	-	880	799	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1371	-	-	1470	-	-	591	559	934	578	566	847
Mov Cap-2 Maneuver	-	-	-	-	-	-	591	559	-	578	566	-
Stage 1	-	-	-	-	-	-	880	792	-	776	708	-
Stage 2	-	-	-	-	-	-	758	701	-	850	792	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	10.3	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	705	1371	-	-	1470	-	-	599
HCM Lane V/C Ratio	0.044	0.002	-	-	0.011	-	-	0.045
HCM Control Delay (s)	10.3	7.6	0	-	7.5	0	-	11.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	20	7	159	160	1
Future Vol, veh/h	4	20	7	159	160	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	22	8	173	174	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	364	175	175	0	-	0
Stage 1	175	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	635	868	1401	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	631	868	1401	-	-	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	843	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1401	-	817	-	-
HCM Lane V/C Ratio	0.005	-	0.032	-	-
HCM Control Delay (s)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	23	128	107	5
Future Vol, veh/h	3	13	23	128	107	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	14	25	139	116	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	308	119	121	0	-	0
Stage 1	119	-	-	-	-	-
Stage 2	189	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	684	933	1467	-	-	-
Stage 1	906	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	672	933	1467	-	-	-
Mov Cap-2 Maneuver	672	-	-	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	843	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1467	-	870	-	-
HCM Lane V/C Ratio	0.017	-	0.02	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	20	7	162	178	2
Future Vol, veh/h	4	20	7	162	178	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	22	8	176	193	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	386	194	195	0	-	0
Stage 1	194	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	617	847	1378	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	613	847	1378	-	-	-
Mov Cap-2 Maneuver	613	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	841	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1378	-	796	-	-
HCM Lane V/C Ratio	0.006	-	0.033	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	13	23	149	116	4
Future Vol, veh/h	2	13	23	149	116	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	25	162	126	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	340	128	130	0	-	0
Stage 1	128	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	656	922	1455	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	644	922	1455	-	-	-
Mov Cap-2 Maneuver	644	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1455	-	872	-	-
HCM Lane V/C Ratio	0.017	-	0.019	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

CONCEPTUAL DRAINAGE STUDY

for

Andersen Ranch West
Carson City, Nevada
(APN: 009-012-20)

Prepared For:

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JN: 8947.004

July 2022

TABLE OF CONTENTS

I. INTRODUCTION

A. Description of Project

This conceptual drainage report identifies the existing and conceptually proposed site conditions, and the potential drainage improvements for the approximately 29.7-acre parcel (APN 009-012-21) located in South ½ of Section 7, North ½ of Section 18, Township 15N, Range 20E. The existing parcel is proposed to be developed as a single family subdivision development, consisting of 61-units, 3.8-acres of open space, and associated on-site civil and drainage infrastructures. Connections to Manhattan Drive and W. Washington Street, along with half street improvements to N. Ormsby Boulevard along the frontage are proposed. This study has been conducted in accordance with Division 14 of the Carson City Municipal Code.

B. Existing Site Conditions

The existing site is currently undeveloped and overgrown with brush and weeds. The property is bordered by N. Ormsby Boulevard to the east, Ash Canyon Creek to the south, developed residential lots to the west. The existing site slopes at approximately 2.5% across the project site and generally slopes from west to east. Off-site runoff entering the site is captured within the existing irrigation ditches around the perimeter of the site on the west and north boundaries and on-site runoff currently flows to multiple existing storm drain inlets that run beneath N. Ormsby Boulevard on the westerly side of the property boundary.

Based on FEMA FIRM panel 3200010091F (eff. 2/18/2021), the property is within "Shaded Zone X". A FEMA Firmette for the project location is included in the Appendix C.

C. General Location Map

II. EXISTING AND PROPOSED HYDROLOGY

A. Drainage Basin Boundaries

For the purposes of the conceptual study, the project site is analyzed using a single drainage basin with an approximate area of 30.3-acres used to determine the peak runoff for the existing and proposed site conditions. Offsite flows within Ash Canyon Creek have been analyzed and detailed by House Moran, a copy of this report has been included Appendix D of this report. Existing conditions were analyzed using a single open space basin.

B. Design Storm and Peak Flow Calculations

According to the Carson City Municipal Code, the Rational Formula Method was used to generate peak discharges for the site using the 10-yr 24 hour duration minor storm event and 100-yr 24 hour duration major storm event. The peak discharges for the project were calculated using:

Design Discharge, Q = C I A

Where:

Q = maximum rate of runoff (cfs),
A = contributing basin area (acres),
C = runoff coefficient,
I = average rainfall intensity for design storm,

A rational coefficient of 0.30 was used to determine runoff flow for the existing site considering it is currently unimproved with native plants. For the proposed side conditions a weighted average runoff coefficient was determined per three separate subbasins.

Subbasin 1 (Right-of-Way) 5.38 Acres, C=0.95
Subbasin 2 (Open Space Area): 3.83 Acres, C=0.3
Subbasin 3 (Residential): 20.49 Acres, C=0.5

The weighted average runoff coefficient for the proposed condition was calculated to be 0.55. The peak discharge for each design storm for the existing and proposed conditions was calculated in **Table 1** below.

	10-YR 24 HOUR STORM				100-YR 24 HOUR STORM			
	Runoff Coefficent	Rainfall Intensity (i)	Area (A)	Q10 (cfs)	C	Rainfall Intensity (i)	A	Q100 (cfs)
Existing Conditions	0.30	0.094	30.3	**0.85**	0.30	0.144	30.3	**1.31**
Proposed Conditions	0.55	0.094	30.3	**1.57**	0.55	0.144	30.3	**2.40**

Table 1

As a result of the improvements, peak flow will increase by 0.24 cfs and 0.83 cfs, for the 10-year and 100-year storm events, respectively.

III. PROPOSED DRAINAGE FACILITIES

A. Routing of Flow in and/or around Site and Proposed Facilities

Onsite flows will be routed into proposed curb and gutters, and proposed underground storm drainage into the detention basins located adjacent to the westerly edge of N. Ormsby Boulevard. The detention basins will be sized in order to contain the difference between the pre-development and post-development 10-year, 24-hour storm runoff as required by Carson City Code. In addition to these storm events, the project will be designed to help mitigate the 100-year, 24-hour storm event to help alleviate the

flooding within Ash Canyon Creek. The downstream storm drain system capacity of 100-cfs will not be exceeded.

B. Mitigation Measures

Best Management Practices techniques will be implemented to manage the increase in runoff from the proposed development and improve the quality of storm water runoff, minimize local erosion and potential discharges to adjacent properties.

C. Floodplain Modification

Included in Appendix D is a study of the existing Ash Canyon Creek drainage flows and CLOMR to be submitted to Carson City as part of the Tentative Subdivision Map Review. This memo outlines the existing flows and proposed mitigation measures. To prevent flooding impacts to the development, a detention basin and swale is proposed on the south end of the proposed development, north of the existing Ash Canyon Creek. For further discussion, reference the included report prepared by House Moran in Appendix D of this report.

IV. CONCLUSION

The Andersen Ranch West TM will be designed in accordance with Carson City Municipal Code and Carson City Development Standards. The project will not have a detrimental effect on the surrounding properties.

V. REFERENCES

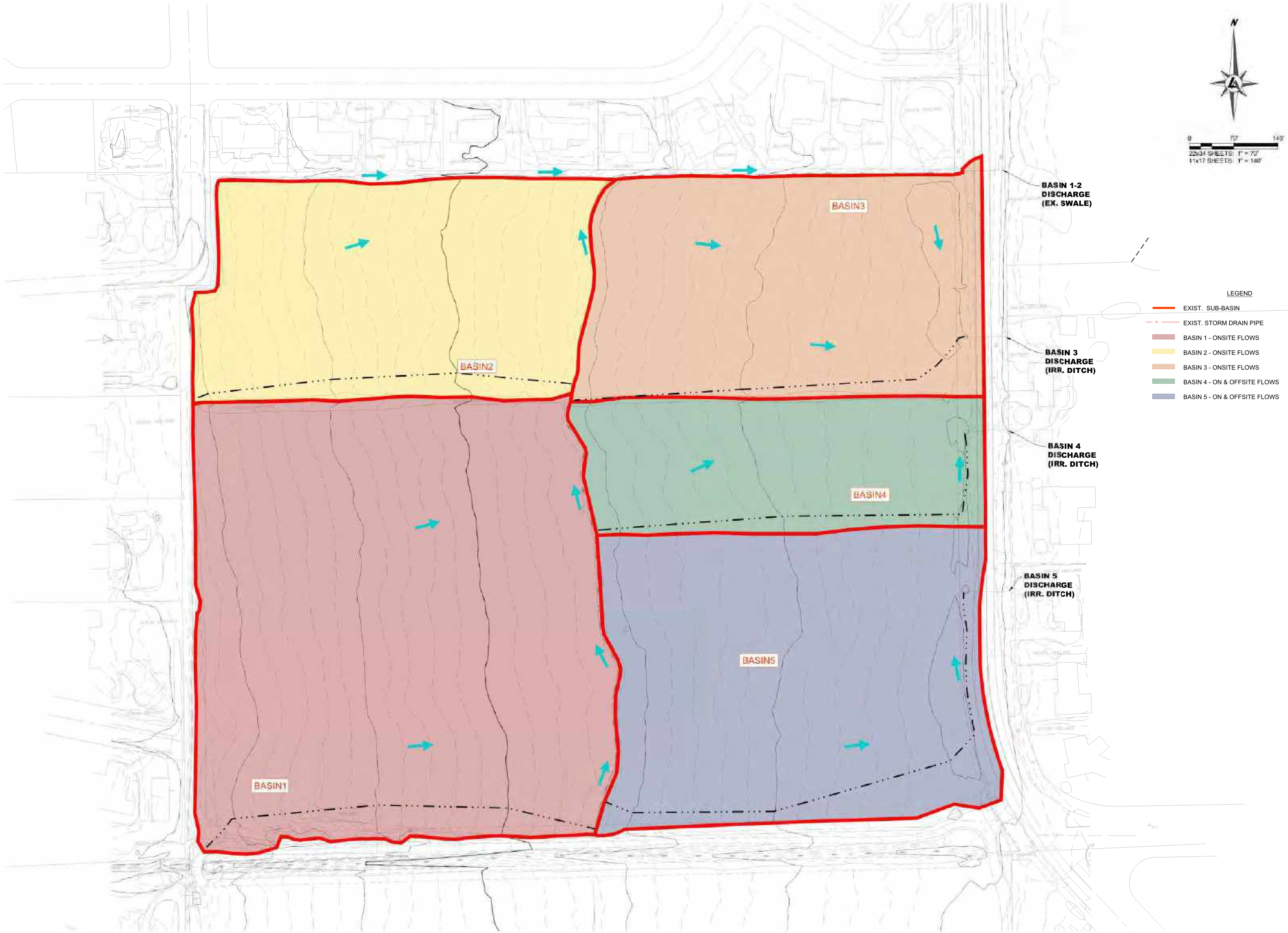
Carson City, "Carson City Development Standards".

Carson City, "Carson City Municipal Code," Carson, 2020.

Federal Emergency Management Agency. (December 22, 2016). *Flood Insurance Rate Map*. Douglas County, Nevada and Incorporated Areas. Effective. Revised: December 22, 2016. Map Number 3200010092G.

National Oceanic and Atmospheric Administration (NOAA), "Atlas 14 Precipitation-Frequency Atlas Volume 1, Version 5". [Online]. Available: https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html

APPENDIX A – DRAINAGE EXHIBIT



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ANDERSEN-COLARD RANCH ENTERPRISES., LLC

ANDERSEN RANCH WEST
COMMON OPEN SPACE DEVELOPMENT
PRELIMINARY DRAINAGE EXHIBIT

CARSON CITY NV

REV	DATE	DESCRIPTION	BY

PRELIMINARY
NOT FOR CONSTRUCTION

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

EXH

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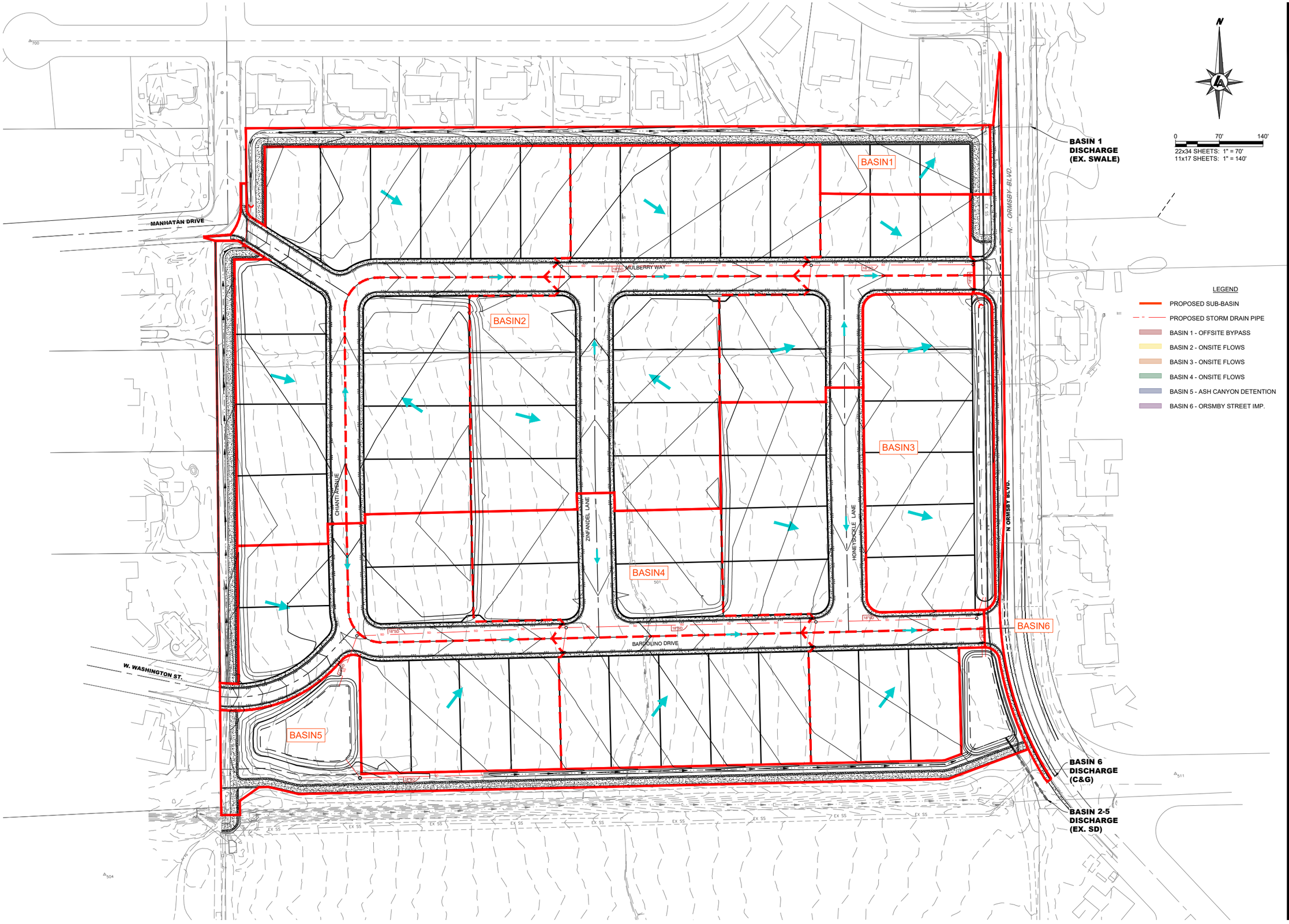
DESIGNED BY: JRL
CHECKED BY: TR
JOB NO.: 8947.004



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EXH

DRAWN BY:	JRL
DESIGNED BY:	JRL
CHECKED BY:	TR
JOB NO.:	8947.004

\\lo.lumosengineering.net\Shared\LAProj\8947.004 - Andersen Ranch Development Tentative Map\Civil\Hydrology\8947004-Drainage Areas (proposed).dwg,20 sc PLAN, 08/09/2022 11:24 am jstor

APPENDIX B – NOAA FREQUENCY ESTIMATES

NOAA Atlas 14, Volume 1, Version 5 CARSON CITY
Station ID: 26-1485
Location name: Carson City, Nevada, USA*
Latitude: 39.1464°, Longitude: -119.7678°
Elevation:
Elevation (station metadata): 4651 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.16 (0.996-1.37)	1.44 (1.25-1.70)	1.93 (1.66-2.28)	2.39 (2.03-2.82)	3.14 (2.59-3.72)	3.83 (3.06-4.57)	4.66 (3.60-5.62)	5.64 (4.18-6.91)	7.20 (5.04-9.02)	8.63 (5.74-11.0)
10-min	0.882 (0.762-1.04)	1.10 (0.948-1.30)	1.46 (1.25-1.73)	1.81 (1.54-2.15)	2.39 (1.97-2.83)	2.92 (2.33-3.48)	3.55 (2.74-4.27)	4.29 (3.18-5.26)	5.48 (3.83-6.87)	6.56 (4.37-8.37)
15-min	0.728 (0.628-0.860)	0.908 (0.784-1.07)	1.21 (1.04-1.43)	1.50 (1.28-1.78)	1.98 (1.63-2.34)	2.41 (1.92-2.88)	2.93 (2.26-3.53)	3.55 (2.63-4.35)	4.53 (3.17-5.68)	5.42 (3.61-6.92)
30-min	0.490 (0.422-0.578)	0.610 (0.528-0.722)	0.814 (0.698-0.964)	1.01 (0.858-1.20)	1.33 (1.10-1.58)	1.62 (1.30-1.94)	1.97 (1.52-2.38)	2.39 (1.77-2.93)	3.05 (2.13-3.82)	3.65 (2.43-4.66)
60-min	0.303 (0.261-0.357)	0.377 (0.327-0.447)	0.504 (0.432-0.596)	0.625 (0.531-0.740)	0.823 (0.678-0.976)	1.00 (0.802-1.20)	1.22 (0.942-1.47)	1.48 (1.10-1.81)	1.89 (1.32-2.37)	2.26 (1.50-2.88)
2-hr	0.206 (0.184-0.236)	0.255 (0.227-0.292)	0.325 (0.287-0.370)	0.387 (0.338-0.442)	0.481 (0.408-0.551)	0.564 (0.469-0.653)	0.658 (0.533-0.772)	0.772 (0.604-0.918)	0.968 (0.724-1.19)	1.15 (0.832-1.46)
3-hr	0.164 (0.147-0.184)	0.204 (0.184-0.231)	0.256 (0.229-0.289)	0.299 (0.265-0.336)	0.359 (0.313-0.406)	0.411 (0.352-0.469)	0.469 (0.393-0.539)	0.542 (0.445-0.635)	0.662 (0.526-0.804)	0.777 (0.602-0.979)
6-hr	0.115 (0.103-0.128)	0.143 (0.129-0.161)	0.178 (0.159-0.199)	0.205 (0.183-0.229)	0.242 (0.213-0.272)	0.271 (0.235-0.307)	0.300 (0.256-0.344)	0.335 (0.279-0.387)	0.384 (0.312-0.452)	0.428 (0.340-0.512)
12-hr	0.076 (0.068-0.085)	0.095 (0.085-0.107)	0.120 (0.106-0.135)	0.139 (0.123-0.156)	0.165 (0.144-0.187)	0.185 (0.159-0.211)	0.205 (0.174-0.237)	0.226 (0.188-0.264)	0.254 (0.206-0.302)	0.277 (0.220-0.334)
24-hr	0.050 (0.046-0.055)	0.063 (0.058-0.069)	0.080 (0.073-0.088)	0.094 (0.085-0.103)	0.113 (0.102-0.124)	0.128 (0.115-0.140)	0.144 (0.128-0.158)	0.160 (0.141-0.177)	0.182 (0.159-0.203)	0.200 (0.172-0.225)
2-day	0.030 (0.027-0.034)	0.038 (0.034-0.043)	0.049 (0.044-0.055)	0.057 (0.051-0.064)	0.069 (0.062-0.078)	0.079 (0.070-0.089)	0.089 (0.078-0.101)	0.100 (0.087-0.114)	0.115 (0.098-0.132)	0.127 (0.106-0.147)
3-day	0.022 (0.020-0.025)	0.028 (0.025-0.032)	0.036 (0.032-0.041)	0.043 (0.038-0.048)	0.052 (0.046-0.059)	0.059 (0.052-0.067)	0.067 (0.058-0.076)	0.075 (0.065-0.086)	0.087 (0.073-0.100)	0.096 (0.080-0.112)
4-day	0.018 (0.016-0.021)	0.023 (0.021-0.026)	0.030 (0.026-0.034)	0.035 (0.031-0.040)	0.043 (0.038-0.049)	0.049 (0.043-0.056)	0.056 (0.048-0.064)	0.063 (0.054-0.072)	0.073 (0.061-0.084)	0.081 (0.067-0.094)
7-day	0.012 (0.011-0.014)	0.015 (0.014-0.017)	0.020 (0.018-0.022)	0.023 (0.021-0.027)	0.029 (0.025-0.032)	0.033 (0.029-0.037)	0.037 (0.032-0.042)	0.042 (0.036-0.047)	0.048 (0.041-0.055)	0.053 (0.044-0.062)
10-day	0.009 (0.008-0.011)	0.012 (0.011-0.013)	0.015 (0.014-0.017)	0.018 (0.016-0.020)	0.022 (0.019-0.025)	0.025 (0.022-0.028)	0.028 (0.024-0.032)	0.031 (0.027-0.036)	0.036 (0.030-0.041)	0.039 (0.033-0.045)
20-day	0.006 (0.005-0.006)	0.007 (0.007-0.008)	0.009 (0.008-0.011)	0.011 (0.010-0.012)	0.013 (0.012-0.015)	0.015 (0.013-0.017)	0.017 (0.015-0.019)	0.018 (0.016-0.021)	0.020 (0.018-0.023)	0.022 (0.019-0.025)
30-day	0.004 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.010 (0.009-0.011)	0.011 (0.010-0.012)	0.012 (0.011-0.014)	0.014 (0.012-0.015)	0.015 (0.013-0.017)	0.017 (0.014-0.019)
45-day	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.006-0.007)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.008-0.011)	0.010 (0.009-0.012)	0.012 (0.010-0.013)	0.012 (0.011-0.014)
60-day	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.006-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.009 (0.008-0.010)	0.010 (0.009-0.011)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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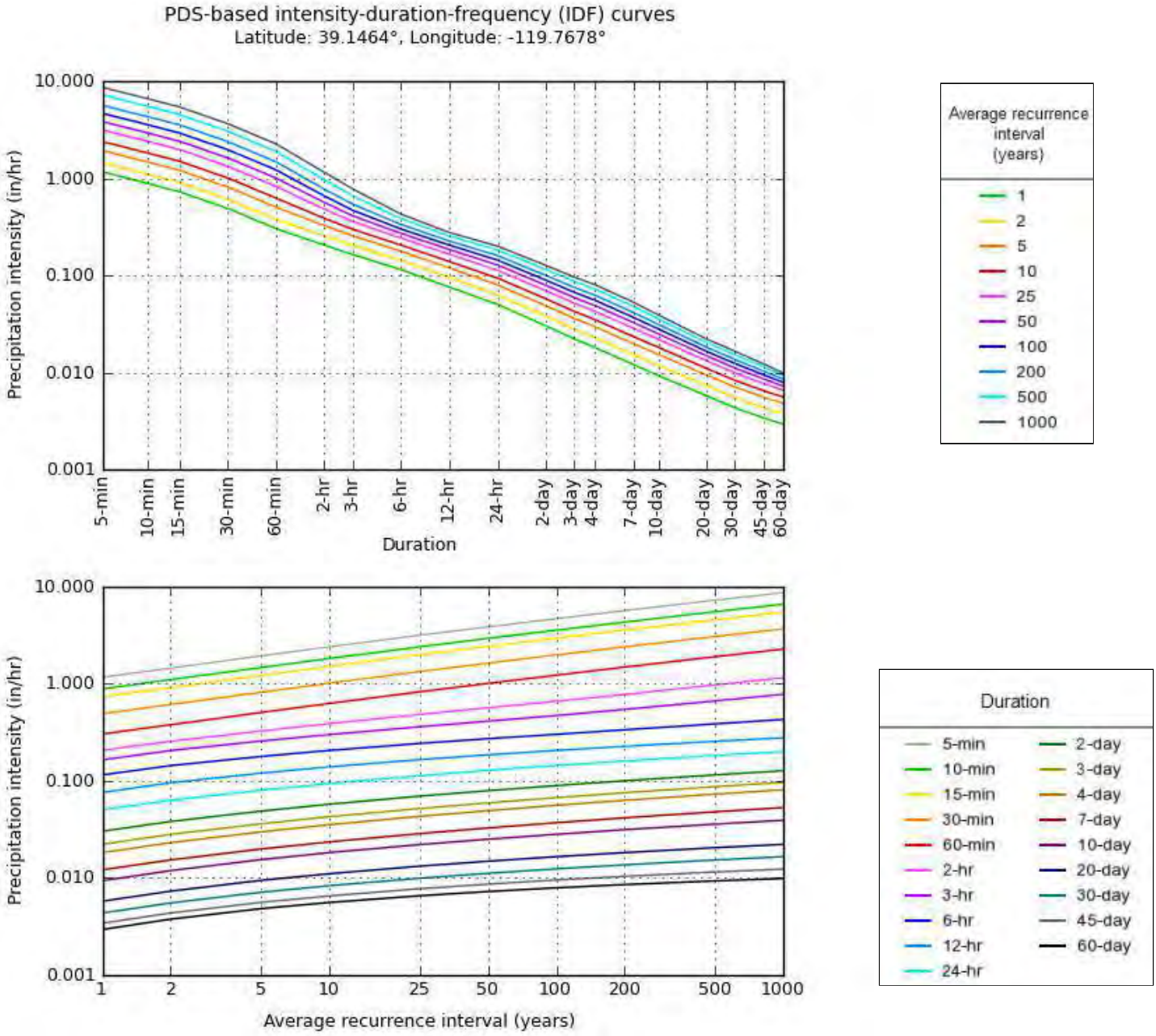
PF graphical



NOAA Atlas 14, Volume 1, Version 5

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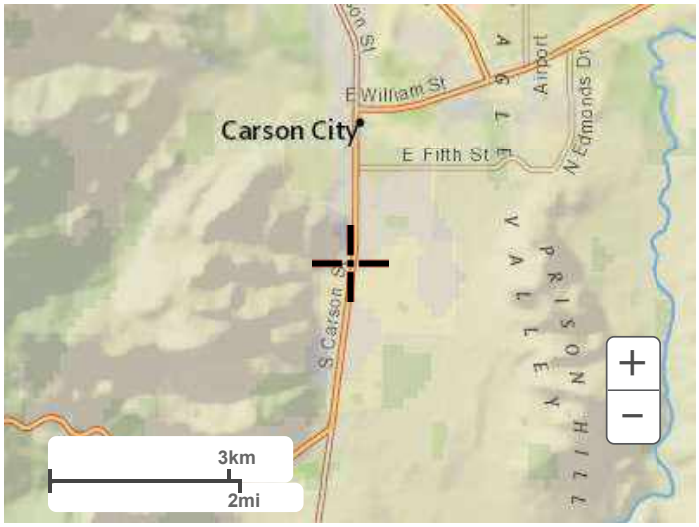
Maps & aerials

Small scale terrain



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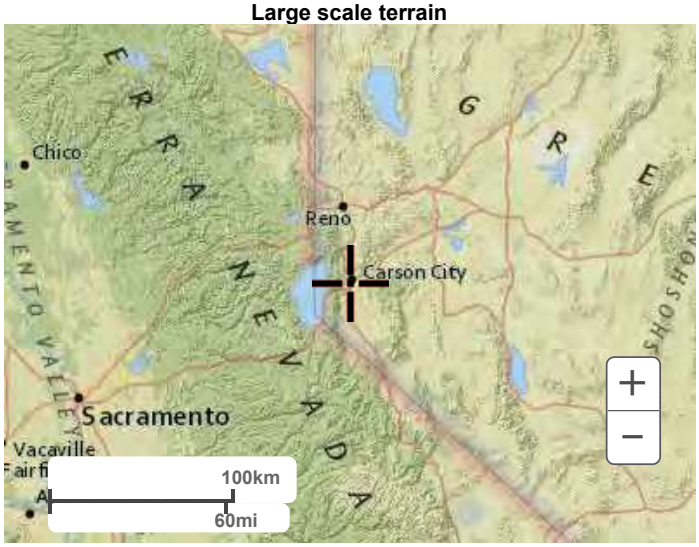
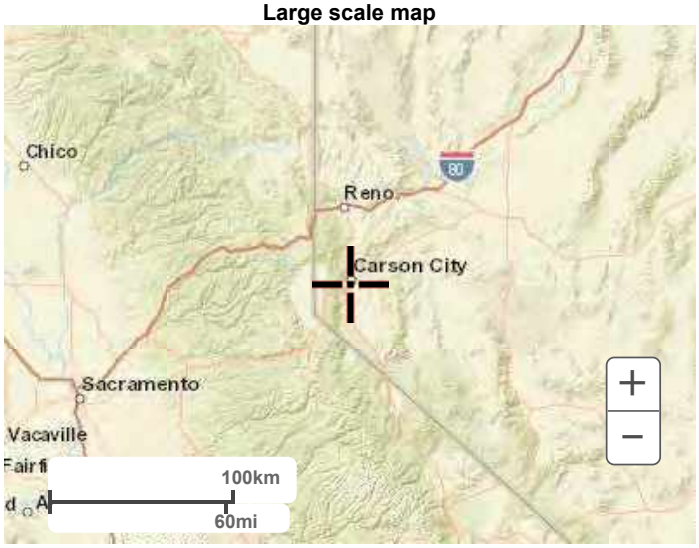
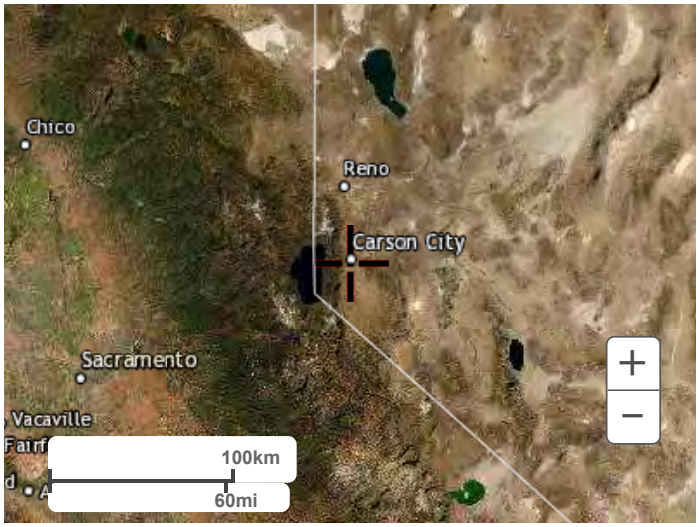


Large scale map



Large scale aerial



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