

**STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF JANUARY 27, 2021**

**FILE NO: SUB-2020-0016**

**AGENDA ITEM: E.6**

**STAFF CONTACT:** Heather Ferris, Associate Planner

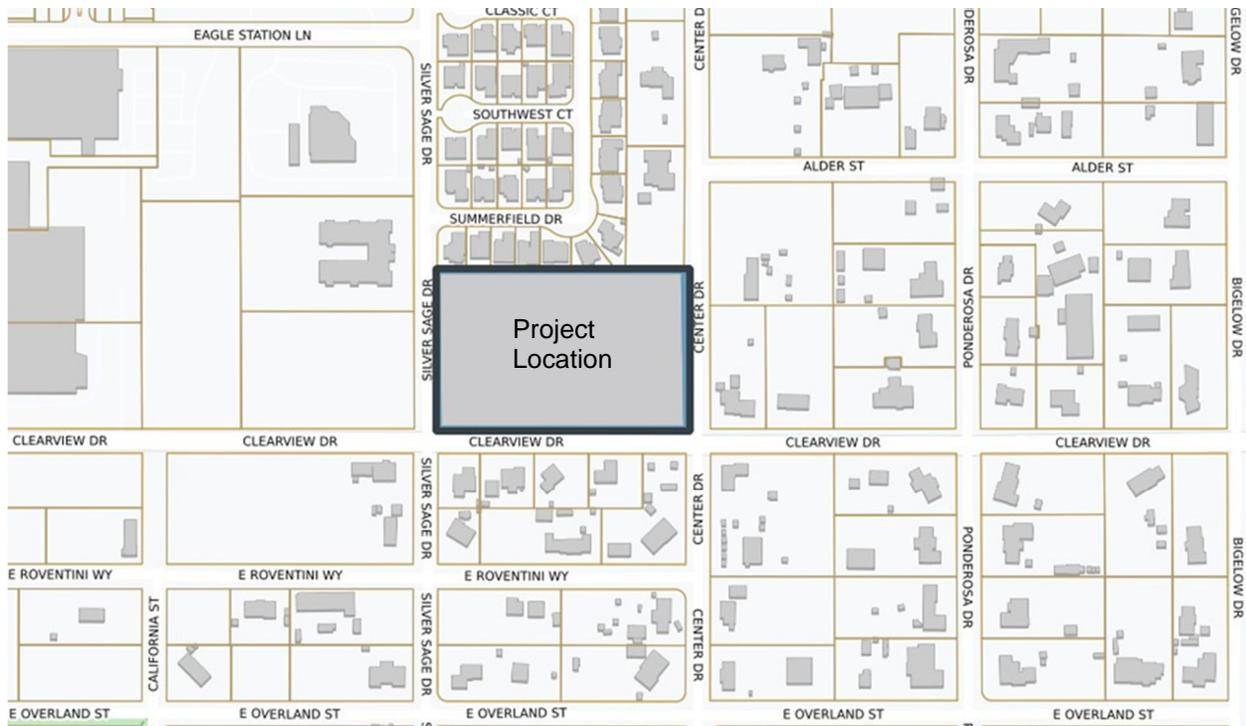
**AGENDA TITLE:** SUB-2020-0016 For Possible Action: Discussion and possible action regarding a Tentative Subdivision Map known as Borda Crossing to create 28 single family residential lots on a 5.27 acre parcel zoned Single Family 1 Acre (SF1A) known as Borda Crossing, located at the northeast corner of Silver Sage Drive and Clearview Drive, APN 009-124-03 (Heather Ferris, hferris@carson.org).

**STAFF SUMMARY:** The applicant is proposing to create 28 residential lots, with a minimum lot size of 5,009 square feet. Vehicular access is proposed from Silver Sage Drive and Center Drive. The plans include large, landscaped buffer areas to the north and south. The Planning Commission makes a recommendation to the Board of Supervisors, and the Board has the authority to approve a Tentative Subdivision Map. The Tentative Subdivision Map is dependent upon the approval of a Zoning Map Amendment (ZA-2020-0005) from Single Family 1 Acre to Single Family 6,000. At their May 27, 2020 meeting, the Planning Commission recommended approval of the Zoning Map Amendment to the Board of Supervisors. The Board of Supervisors considered the Zoning Map Amendment on June 18, 2020; however, the Board declined to take action and continued the matter to allow the applicant to either bring forward an alternative zoning or a lot layout that would address the concerns of the neighborhood. The Board will consider the zoning map amendment at the meeting where it considers the tentative subdivision map.

**RECOMMENDED MOTIONS:**

“I move to recommend approval of Tentative Subdivision Map SUB-2020-0016 based on the ability to make the required findings and subject to the conditions of approval.”

**VICINITY MAP:**



## **RECOMMENDED CONDITIONS OF APPROVAL: Tentative Map**

### **The following are 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 final map.
5. With the submittal of any 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 a final map.
8. The applicant must sign and return the Notice of Decision for conditions for approval within ten (10) days of receipt of notification after the Board of Supervisors meeting. If the Notice of Decision is not signed and returned within ten (10) days, then the item may 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 one hundred fifty percent (150%) 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 ten percent (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 one (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's Office shall approve any Covenants, Conditions & Restrictions (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.
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 homeowner's 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.
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. The Tentative Subdivision Map is only approved if the applicant obtains approval of the Zoning Map Amendment (ZA-2020-0005) from Single Family 1 acre to Single Family 6,000.
21. The required internal setback shall be as follows:  
  
Front: 10 feet to front of house; 20 feet to front of garage  
Side: 5 feet with a 2-foot projection allowed for the fireplace per Division 1.14 of the Development Standards.  
Rear: 20 feet  
  
These setbacks shall be stated on the final map as well as in the CC&Rs.
22. The required peripheral setbacks shall be front (Clearview Drive) setback 65.2 feet; west side setback 10 feet (with a 2-foot projection allowed for the fireplace per Division 1.14 of the Development Standards); east side setback 12.4 (with a 2-foot projection allowed for the fireplace per Division 1.14 of the Development Standards); and rear setback 56.7 feet. These setbacks shall be stated on the final map as well as in the CC&Rs.
23. A minimum lot area shall be 5,009 square feet. All building improvements, including but not limited to landings, porches, and eaves, must be located within the property lines of the lot.
24. Prior to recording the final map, the applicant shall provide the Community Development Department with a disclosure statement or similar instrument for review and approval. The document shall be recorded and provide for disclosure that properties in the vicinity are permitted to keep horses and other livestock and that there may be inconvenience or discomfort (e.g., noise, dust, and odors) that may arise from living in close proximity to such properties.
25. As part of the site improvement permit, the applicant must provide a landscape and irrigation plan demonstrating compliance with the applicable sections of the Development Standards in Division 3. The final landscape plan shall be substantially the same as the conceptual landscape plan with regard to provisions for screening and buffering along the periphery boundary of the subdivision.
26. 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.
27. The HOA or similar entity must maintain all common open areas including common open space, landscaping and irrigation, including all landscaping and irrigation located within the rights-of-way; the internal private road; and pathways.
28. 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.

29. 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.
30. The project is located on the boundary of two water pressure zones. A check valve must be installed on the Center Street main extension to properly separate the two pressure zones.
31. The meandering pathway along the frontage on Clearview Drive, and on Center Drive south of the entrance must be made of concrete. This meandering concrete pathway must be privately owned and maintained.
32. Bayonne Avenue must be privately owned and maintained.
33. A full local rural street section must be paved along the Center Drive frontage from the proposed entrance to Clearview Drive as shown. This section must meet the minimum width for a rural street with no parking. The existing street section is in very poor condition and the extra pavement is necessary to serve the subdivision.
34. A “Share the Road” sign must be installed on the Clearview Drive frontage.
35. The project must meet all applicable Carson City Development Standards and Standard Details including but not limited to the following:
  - a) The water main extension in Center Drive must extend along the entire frontage of the subject parcel, not just to the entrance of the subdivision, and connect into the existing main on Center Drive.
  - b) Bayonne is an east-west oriented right-of-way and must be named Bayonne Avenue, not Bayonne Drive.
  - c) The pavement patch in Clearview Drive must meet the structural section for an urban arterial, or match existing, whichever is greater.
  - d) A half street section must be paved along the Center Drive frontage from the proposed entrance to the north property line as shown. The added pavement must meet the minimum width for half of a local rural street with no parking.
  - e) Valley Gutters must be installed where necessary for drainage to cross streets.

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

**SITE DEVELOPMENT INFORMATION:**

SUBJECT SITE AREA: 5.27 acres

EXISTING LAND USE: Vacant

**MASTER PLAN DESIGNATION:** Medium Density Residential (MDR)

**ZONING (EXISTING):** Single Family 1 acre (SF1A)

**ZONING (PROPOSED UNDER ZA-2020-0005):** Single Family 6,000 (SF6)

**KEY ISSUES:** Is the Tentative Map consistent with the required findings? Does the proposal meet the Tentative Map requirements and other applicable requirements?

**SURROUNDING ZONING AND LAND USE INFORMATION**

**NORTH:** Single Family 6,000 & Single Family 21,000/ Single Family Residences  
**SOUTH:** Single Family 1 acre/ Single Family Residences  
**EAST:** Single Family 1 acre/ Single Family Residences  
**WEST:** Retail Commercial/ Bank & vacant (approved townhome development)

**ENVIRONMENTAL INFORMATION:**

FLOOD ZONE: Zone X  
SLOPE: Generally flat  
SEISMIC ZONE: Zone III (Moderate Severity)  
FAULT: Beyond 500 feet

**SITE HISTORY:**

ZA-2020-0005- At their May 27, 2020 meeting, the Planning Commission recommended approval of the Zoning Map Amendment from SF1A to SF6, to the Board of Supervisors. The Board of Supervisors considered the Zoning Map Amendment on June 18, 2020; however, the Board declined to take action and continued the matter to allow the applicant to either bring forward an alternative zoning or a lot layout that would address the concerns of the neighborhood.

SUB-2020-0015- November 3, 2020 staff completed a Conceptual Subdivision Map review of a 28 lot Common Open Space Subdivision.

**BACKGROUND / DISCUSSION:**

The subject property is located at the northeast corner of Silver Sage Drive and Clearview Drive. The parcel is vacant and approximately 5.27 acres in size.

The applicant proposes to subdivide 5.27 acres to create 28 single family residential lots, with approximately 1.13 acres of common open space and a total of 0.58 acres of private open space (private rear yards). The applicant is seeking to utilize the provisions of CCMC 17.10: Common Open Space Development. Common Open Space developments must comply with the allowable density of the zoning district, but may have flexibility on lot size, lot width, and setbacks. The allowable density in the Single-Family 6,000 zoning district is 7.26 units per acre. The applicant proposes 5.3 units per acre.

The Tentative Subdivision Map is dependent upon the approval of a Zoning Map Amendment (ZA-2020-0005) from Single Family 1 Acre to Single Family 6,000. At their May 27, 2020 meeting, the Planning Commission recommended approval of the Zoning Map Amendment to the Board of Supervisors. The Board of Supervisors considered the Zoning Map Amendment on June 18, 2020; however, the Board declined to take action and continued the matter to allow the applicant to either bring forward an alternative zoning or a lot layout that would address the concerns of the neighborhood. Based on the Board's action, the Zoning Map Amendment will not be re-considered by the Planning Commission.

The overall design concept is the creation of lots that are on average 5,037 square feet. The subdivision is proposed to be accessed via a single through street with access from Silver Sage Drive and Center Drive. Each lot will be accessed via the proposed Bayonne Avenue. Bayonne Avenue will have a 60-foot right-of-way and be improved with 23.5-foot-wide drive lanes, providing for on-street parking; curbs; gutters; and a 5-foot sidewalk on both sides of the street. Homes will

each have a standard two-car garage and a minimum 20-foot long driveway. The northern and southern portions of the property, approximately 1.13 acres in total, are the proposed common open space areas with walkways throughout to serve as the required recreational open space. Each lot will also have a rear yard of approximately 897 square feet to serve as private open space.

Per CCMC 17.10.030.4 the periphery boundary setbacks shall be those established for yard areas by the underlying zoning district. As discussed above, this Tentative Subdivision Map is dependent upon the approval of a Zoning Map Amendment from Single Family 1 Acre to Single Family 6,000 (SF6). Therefore, the base zoning utilized for this project is SF6. The SF6 zoning requires minimum setbacks as follows:

Front:	20 feet
Side:	5 feet
Street Side:	10 feet
Rear:	10 feet

The proposed periphery setbacks meet or exceed the required setbacks for the SF6 zoning. The open space along the northern and southern boundaries of the site will provide large buffer areas of 36.7 feet and 45.2 feet, respectively, between the subdivision boundaries and the rear property lines of individual lots. Additionally, homes will be setback a minimum of 20 feet from the rear property lines thereby extending the periphery setbacks along the northern and southern boundary to 56.7 feet and 65.2 feet. Homes will be a minimum of 10 feet from the western boundary of the subdivision (with a 2 foot projection allowed per Division 1.14 of the Development Standards for a fireplace); and a minimum of 12.4 feet from the eastern boundary of the subdivision (with a 2 foot projection allowed per Division 1.14 of the Development Standards for a fireplace). The periphery boundary of the subdivision will be landscaped with trees and bushes in order to provide for additional buffering and screening for neighboring properties. Moreover, Center Drive and Clearview Drive provide additional buffering between the proposed development and the existing residences to the east and south of the proposed subdivision. It should be noted, the applicant's representative provided an email on January 13, 2020 clarifying the common area landscape will not include turf. Division 3 of the Development Standards does not require the use of turf and encourages the use of plant varieties indigenous to arid regions.

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

**PUBLIC COMMENTS:** Public notices were mailed to 70 property owners within 600 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, staff have received public comments, opposing the project, from 17 individuals. Any additional written comments that are received after this report is completed will be submitted prior to or at the Planning Commission meeting on January 27, 2021 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.

**Engineering Division:**

The Engineering Division has no preference or objection to the tentative map request and offers the following conditions of approval:

- The project is located on the boundary of two water pressure zones. A check valve must be installed on the Center Street main extension to properly separate the two pressure zones.
- The meandering pathway along the frontage on Clearview Drive, and on Center Drive south of the entrance must be made of concrete. The path connects to concrete sidewalks on either side and concrete is less susceptible to developing wide cracks that are less compatible with ADA travel. This meandering concrete pathway must be privately owned and maintained.
- Bayonne Avenue must be a private street. The Board of Supervisors has given staff direction that streets that only serve a subject subdivision must be private. In past projects the Board of Supervisors has made exception for streets where the applicant has offered to pay for some amount of maintenance up front.
- A full local rural street section must be paved along the Center Drive frontage from the proposed entrance to Clearview Drive as shown. This section must meet the minimum width for a rural street with no parking. The existing street section is in very poor condition and the extra pavement is necessary to serve the subdivision.
- A “Share the Road” sign must be installed on the Clearview Drive frontage.
- The project must meet all applicable Carson City Development Standards and Standard Details including but not limited to the following:
  - The water main extension in Center Drive must extend along the entire frontage of the subject parcel, not just to the entrance of the subdivision, and connect into the existing main on Center Drive.
  - Bayonne is an east-west oriented right-of-way and must be named Bayonne Avenue, not Bayonne Drive.
  - The pavement patch in Clearview Drive must meet the structural section for an urban arterial, or match existing, whichever is greater.
  - A half street section must be paved along the Center Drive frontage from the proposed entrance to the north property line as shown. The added pavement must meet the minimum width for half of a local rural street with no parking.
  - Valley Gutters must be installed where necessary for drainage to cross streets.

The Engineering Division 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 the Engineering Division 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.*

The existing infrastructure has been found sufficient to supply the water and sanitary sewer needs of the subdivision, and the City has the capacity to meet the water and sewer demand.

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 if the conditions of approval are met.

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.*

Development engineering has no comment on this finding.

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.*

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 existing infrastructure is sufficient to meet the additional demand imposed by the subdivision. Intersections in the area have been previously studied and have passing levels of service with sufficient capacity to accommodate the relatively small increase in trips from the subject project.

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

The site is not near an active fault line and is not in a special flood hazard area.

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.*

Development engineering has no comment on this finding.

These comments are based on the tentative map plans and reports submitted. All applicable code requirements will apply whether mentioned in this letter or not.

### **Parks, Recreation & 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 on the Carson City website.

The City's approved tree species list for commercial projects can be found on the Carson City website.

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.
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 permit. Note: Special care and consideration should be taken in the protection of existing trees on-site.
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).

**TENTATIVE MAP FINDINGS:** Staff recommends approval of the Tentative Subdivision Map based on the findings below and in the information contained in the attached reports and documents, pursuant to CCMC 17.05 (Tentative Maps); 17.07 (Findings) and NRS 278.349, subject to the recommended conditions of approval, and further substantiated by the applicant's

written justification. 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 (NDEP) on December 21, 2020. NDEP has advised that it requires an intent to serve or a will serve letter from the municipal sewer service provider and additional information regarding topography, floodplain, master plan and adjacent properties under the same ownership, and a brief description of the historic use of the property. The applicant provided the additional information to NDEP on January 12, 2021. The Public Works department has advised of adequate capacity to meet water and sewer demand. The utility design must 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 and commercial developments which are served by the existing public services including schools, sheriff, transportation facilities, and parks. Per the January 11, 2021 email received from the School District they do not have any additional comments beyond the information provided for previous projects and have indicated that the School District will be re-districting which should help. For previous projects the School District indicated that they remain concerned about capacity and advised that for every 100 new homes it expects about 30 new students. With most of the schools now at capacity, the limited capital funding for new facilities, it is concerned, as it cannot “rezone” its way out of the problem. Development Engineering has reviewed the development for impacts to water, sewer, storm drainage, and roadway systems. The existing infrastructure has been found to be sufficient to supply water and sanitary sewer and the City has capacity to meet the demand. As conditioned, the road network will be adequate to serve the project. The Fire Department has also reviewed the development. At the time a site improvement permit or building permit is submitted the project will be reviewed to ensure compliance 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 proposed subdivision is not adjacent to public lands.

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

The Tentative Subdivision Map is dependent upon the approval of a Zoning Map Amendment (ZA-2020-0005) from Single Family 1 Acre to Single Family 6,000. At their May 27, 2020 meeting, the Planning Commission recommended approval of the Zoning Map Amendment to the Board of Supervisors. The Board of Supervisors considered the Zoning Map Amendment on June 18, 2020; however, the Board declined to take action and continued the matter to allow the applicant to either bring forward an alternative zoning or a lot layout that would address the concerns of the neighborhood. Therefore, staff has recommended a condition of approval making the approval of the Tentative Subdivision Map contingent upon the approval of the Zoning Map Amendment (ZA-2020-0005) from Single Family 1 Acre to Single Family 6,000. Therefore, the base zoning utilized for evaluation of this project is SF6.

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. The allowable density in the Single-Family 6,000 zoning district is 7.26 units per acre. The applicant proposes 5.3 units per acre.

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 proposed Bayonne Avenue will accommodate on street parking on both sides of the road. Each proposed floor plan provides for garage parking for at least two cars.

As part of the requirements for a Common Open Space Development the applicant must provide for 250 square feet of open space per dwelling unit, which may include private open space and/or common open space. At least 100 square feet per dwelling unit of common open space must be designed for recreational use. This translates to a total open space requirement of 7,000 square feet (0.16 acres), with 2,800 square feet designated for recreational use. The applicant proposes 1.13 acres common open space areas with walkways throughout the common open space to serve as the required recreational open space. Each lot will also have a rear yard of approximately 897 square feet to serve as private open space, thus complying with the open space requirement.

The proposed periphery setbacks meet or exceed the required setbacks for the SF6 zoning. The open space along the northern and southern boundaries of the site will provide large buffer areas of 36.7 feet and 45.2 feet, respectively, between the subdivision boundaries and the rear property lines of individual lots. Additionally, homes will be setback a minimum of 20 feet from the rear property lines thereby extending the periphery setbacks along the northern and southern boundary to 56.7 feet and 65.2 feet. Homes will be a minimum of 10 feet from the western boundary of the subdivision (with a 2 foot projection allowed per Division 1.14 of the Development Standards for a fireplace); and a minimum of 12.4 feet from the eastern boundary of the subdivision (with a 2 foot projection allowed per Division 1.14 of the Development Standards for a fireplace). The periphery boundary of the subdivision will be landscaped with trees and bushes in order to provide for additional buffering and screening for neighboring properties. Moreover, Center Drive and Clearview Drive provide additional buffering between the proposed development and the existing residences to the east and south of the proposed subdivision.

The Master Plan designation of the subject parcel is Medium Density Residential. The Medium Density Residential designation provides for single family residential neighborhoods at a density of 3-8 dwelling units per acre. Compatible zoning districts include Single Family 6,000, Mobilehome 6,000, Single Family 12,000, and Mobilehome 12,000. Parcels in this area are a transition between the commercially zoned parcels to the west and the low-density single-family residential parcels to the east. Properties to the north and south are designated as Medium Density Residential with properties to the west and east being designated Mixed-Use Employment and Low Density Residential, respectively. The applicant is proposing to change the zoning of the parcel from Single Family 1 acre to Single Family 6,000 (ZA-2020-0005) which is consistent with the underlying Master Plan.

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

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 existing infrastructure is sufficient to meet the additional demand imposed by the subdivision. Intersections in the area have been previously studied and have passing levels of service with sufficient capacity to accommodate the relatively small increase in trips from the subject project. The applicant has provided a traffic memo outlining the estimated trips based on the ITE Trip Generation Manual (10<sup>th</sup> edition). The proposed single-family residential project will generate approximately 264 daily trips, 21 AM Peak Hour trips, and 28 PM Peak Hour trips. This is below the threshold for a full traffic analysis. The subdivision will be access via Silver Sage Drive and Center Drive via a new proposed street. Each lot will be accessed via the proposed Bayonne Avenue. Bayonne Avenue will have a 60-foot right-of-way and will accommodate on-street parking; curbs; gutters; and a 5-foot sidewalk on both sides of the street.

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

The site is relatively flat, and there are no faults within 500 feet. The site includes areas designated as FEMA zone X (area with minimal flooding risk).

**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. NDEP has requested a will serve letter for the sewer provider as well as additional information outlined in finding 1 above. Public works has opined that there is adequate sewer capacity.

**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. There is adequate access for emergency services and adequate fire flows to serve the project. At the time a site improvement permit or building permit is submitted

the plans will be reviewed to ensure compliance with the currently adopted edition of the International Fire Code and the Northern Nevada Fire Code Amendments as adopted by Carson City and all other applicable development standards.

**12. Recreation and trail easements.**

Carson City Parks, Recreation and Open Space has reviewed the project and finds that there are adequate public recreational facilities in the area. The project is required to install and maintain a 5-foot wide meandering concrete path along Clearview Drive and up Center Drive to the entrance. Additionally, the applicant will continue the path, in decomposed granite, on the north side of the projects Center Drive access and west along the northern property boundary to Silver Sage Drive.

Attachments

Public Comments

Application- SUB-2020-0016

1/13/21 email from applicant's representative, Louis Cariola

## Heather Ferris

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**From:** Michael Tanchek <mtanchek@yahoo.com>  
**Sent:** Thursday, January 7, 2021 4:22 PM  
**To:** Larry Leach; Greg Short; Connie Creech; Alfred Canary; Darlene Warnock; Earlene Issel; Greg Garling; Karen Crandall; Miriam Volpin; Sunny Volpin; Tammy Riddle; Heather Ferris; Alex Tanchek; Mary Graber; Daniel Goggiano; Mary Siders; Armando Ramirez; Qin Song  
**Cc:** Lori Bagwell; Ann Knowles NV Appeal; Kelsey Penrose (Carson Now); Stacey Giomi; Sena Loyd; Nathaniel Killgore; Lisa Schuette; Stan Jones; Maurice White  
**Subject:** "Borda Crossing" Development on Clearview

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To Heather Ferris- Please make sure that this e-mail is included as written comments in the materials provided to the Board of Supervisors when they next review the proposed ordinance to change the zoning and to the Planning Commission when they consider the application and Tentative Map for the Borda Crossing project. I will be filing additional comments to supplement these, but as you undoubtedly know, it can take a while to digest the contents of a 120 page application.

Dear Friends and Neighbors-

Krista Leach got some interesting information from Heather Ferris, the City Planner handling the development on the north side of Clearview. I cut and pasted the following from Krista's e-mail...

"Krista- Thank you for clarifying.

At this point the tentative subdivision is scheduled to go to the Planning Commission on January 27, 2021. The neighbors will be notified a minimum of 10 days prior to the Planning Commission meeting per [Carson City Municipal Code 18.04.045](#). The Planning Commission will not reconsider the zoning map amendment because the Board of Supervisors did not remand the matter back to them for further consideration. The Tentative Map and zoning map amendment will be heard concurrently by the Board of Supervisors, likely at their February 18, 2021 meeting.

### Municode Library

MunicodeNEXT, the industry's leading search application with over 3,300 codes and growing!

Written comments that are received by close of business, Tuesday 1/19/21 will be included in the staff report packets. Any comments that are received after that will be considered late material; however, all late material is forwarded to the Planning Commission for their consideration. All public comments are also forwarded on to the Board of Supervisors for their consideration. Residents are also able to participate by providing comment during the meetings. Unfortunately, I believe public participation during the meetings will continue to be via phone into the new year.

Please feel free to contact me with additional questions.

Heather

**Heather Ferris**

Associate Planner

Carson City, NV 89701

775-283-7080

It seems that we are dealing with process that is short on transparency and accountability, but is full of plausible deniability. It's only getting worse.

On June 18, 2020, the Board of Supervisors decided not act on the rezoning application for what was, at that time, a proposal from JJ Summers LLC, to rezone the northeast corner of Silver Sage and Clearview ("the Borda property"). Here's a link to Ann Knowles' article on that meeting from the Appeal [Carson City supervisors delay rezoning decision | NevadaAppeal.com](#)



### **Carson City supervisors delay rezoning decision**

Anne Knowles

The Board of Supervisors on Thursday delayed a residential rezoning decision telling staff to find a solution th...

As a general rule, most people don't really understand how the administrative process works. So, things like missing deadlines, filing comments with the wrong people, going to the wrong meetings, not understanding the issues and standards, assuming the bureaucracy is looking out for their interests, and, so forth are common mistakes. As a result, the public at large tends to be at the mercy of people with their own special interest agendas.

Based on the comments from our Late Mayor Bob Crowell and Supervisors Bonkowski and Giomi when the zoning matter was first heard, many of us were under the impression that the Community Development staff was supposed to work with the residents who were opposing the planned rezoning to establish a reasonable buffer and transition between the project and the single family one acre zoning. On the other hand, the Staff seems to believe that what the Supervisors had in mind was to ignore the community and people impacted by the proposal and help the developers create a Planned Unit Development under new ownership with a housing density that is greater than that of the adjacent Southpointe development. This would explain why Greg Short was told by Rob McFadden that the project was a "done deal."

Now, you might say to yourself, "I thought this was a Borda application through JJ Summers LLC up at Stateline, so where did Rob McFadden come in?" That's a good question. A word of warning...It gets rather confusing and it's hard to know who you are supposed to be dealing with at any point in time. But then, that's the point.

There is a second development slated for the intersection of Silver Sage and Clearview. Silver View Townhomes was given a "special use permit" for a high density 34 unit "planned unit development" on the northwest corner of Silver Sage next to the credit union. Silver View is being developed by State Street Developers (Rob McFadden, Mark Turner, and Sam Landis) and was represented before the Planning Commission by Turner. On or about October 29, 2020, four months after the Supervisors' decision not to act on the rezoning application, the Borda property was sold to RPJ NV LLC, controlled by Landis. If you had gone to the open house hosted by Rob McFadden of RCM Realty Group, another principal of State Street, you would have been treated to a proposal tentatively called Clearview Estates by a company known about the change in ownership since the plans that exhibited at the open house were done for a company called Ridgeline Development, owned by Landis. This group is involved in many of the developments around Carson City, such as Silver Oak, Mills Landing, and Jackson Village, the 41 houses being built on 3.66 acres wedged in between the Kohl's

loading dock and Southwest Gas equipment yard. Keep in mind that there is nothing inherently illegal in this game of musical companies, but if you are looking for some transparency regarding what is happening in your neighborhood, you won't find it here.

With all of the high density development proposed for our neighborhood, I raised the issue of the cumulative effects created by bringing in over 1,400 new residents into the area south of Koontz between the hills above the Fandango down to Silver Sage and Center. The party line on these developments has been that they're all separate, so they can only be considered one at a time. Using that rather unusual logic, it could be argued that it would be possible to inject 2,000 new homes into South Carson and, as long as you do it on two or three acres at a time, there will never be any noticeable impact on the character of our semi-rural community.

At the moment, we are looking at 34 residences on the northwest corner of Clearview and Silver Sage plus an additional 28 across the street on the northeast corner by the same developer. That works out to 62 residences on 8 acres in a semi-rural neighborhood. You may as well add in the 41 houses on 3.66 acres one block to the north at Jackson Village (coincidentally, being sold by one of the principles at State Street Development and designed by the same firm that prepared the applications for the two phase project on Clearview.) This is simply a common scheme to inject as many residences as possible into a low density neighborhood while avoiding de facto high density zoning.

Given what's been going on with this project:

1. The Board of Supervisors should deny the proposed rezoning of the parcel in its entirety.
2. In addition, the Board of Supervisors should consider restoring the zoning on the west side of Clearview to SF 1 acre.
3. If possible, the Board of Supervisors should review their decision to allow the Silverview Townhome project and revoke the special use permit for the project.
4. The Planning Commission should reject the Tentative Map of the Borda Crossing project and dismiss the application in its entirety.
5. If 1, 2, and/or 3 are not acceptable, then the Board of Supervisors should specifically direct the Staff to delay any further action on either the zoning or PUD application and work with the existing residents within a minimum of 1/4 of a mile of any part of Borda Crossing until the Staff, developer, and residents are able to reach a reasonable resolutions of the traffic, wellhead protection, and transitional zoning issues that are consistent with the Commission and Supervisors' lawful past policies and practices concerning development in the neighborhood south of Koontz and Clearview Drives between Ponderosa and Oak.
6. The City should begin the process of amending the City's outdated Master Plan insofar as the Master Plan relates to the conversion of the semi-rural community from Koontz Drive south to I-580 to higher densities of housing to the detriment of the existing community. This process could be begun by amending the 2021-2025 Strategic Plan to include changing the Master Plan, as mentioned above.

Michael Tanchek  
740 Clearview Drive  
Carson City, Nevada 89701

## Heather Ferris

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**From:** Michael Tanchek <mtanchek@yahoo.com>  
**Sent:** Monday, January 11, 2021 9:45 PM  
**To:** Heather Ferris; Hope Sullivan  
**Cc:** Larry Leach; Alex Tanchek; Lisa Schuette  
**Subject:** Additional Comments for Borda Crossing

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Heather and Hope,

In the process of drafting supplemental comments, I realized that some of my previous comments may not be in the record, particularly as it relates to Main Street Development's new plans for the project at Clearview and Center (currently called Borda Crossing.)

Back on October 6, 2020, when I first raised the issue of the work being done Borda Crossing by Manhard and others, that ultimately included staking, utility marking, and excavation, I sent in comments attached to an e-mail. As you might remember, this was when Rob McFadden told Greg Short that the project was "a done deal" and the city workers told me that they were checking pavement markings because it "was ready to go." My comments addressed File Number ZA-2020-0005, the JJ Summers zoning map amendment. It appears that Staff is recommending that the Supervisors close out that file and address the zoning issue in the Borda Crossing proceeding instead. So, I am assuming my comments would not be forwarded to the Planning Commissioners. I want to make sure my comments do become part of the record in the newer Borda Crossing proposal. The comments are a bit dated because we have discovered quite a bit of new information since they were originally submitted. If you need me to forward another copy of those comments for inclusion in the record, please let me know before January 15, 2021 so I can get a copy filed in a timely manner.

I would also like my late-filed comments of June 17, 2020 for the June 18 Supervisors' meeting concerning JJ Summers' zoning change application (File Number ZA-2020-0005) included in information packet for the next Planning Commission meeting where the plan for Borda Crossing will be addressed. Since, as noted above, the Borda plan is not part of the original JJ Summers proceeding, I wanted to make sure this information is also included in the record since it pretty much deals with the same subject matter. Again, if you need me to forward another copy of those comments for inclusion, please let me know before January 15, 2021 so I can get a copy filed in a timely manner.

Thank you,  
Michael Tanchek

January 11, 2021

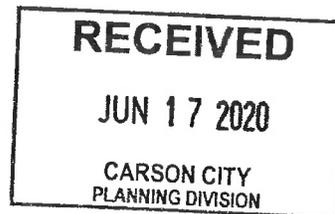
Objection to the Recommendation of the Carson City Planning Commission  
Zoning Map Amendment, File Number ZA-2020-0005

Carson City Board of Supervisors

June 18, 2020

Agenda Item 24.b

Michael J. Tanchek  
740 Clearview Drive  
Carson City, NV



I am filing an objection to the Carson City Planning Commission's ("Commission") recommendation to the Board of Supervisors ("Board") to amend the Carson City zoning map by changing the 5.266 acre parcel ("the parcel") west of Center Drive and north of Clearview Drive (APN 009-124-03) from SF1A to SF6. This issue is before the Carson City Board of Supervisors on June 18, 2020 as Agenda Item 24.b.

I attempted to appeal the Commission's decision on June 4, 2020, but was refused and informed by Staff that such appeals are not permitted because the Commission's action was merely a recommendation to the Board. In accordance with the Staff's instructions, I am bringing my objection and alternative recommendation before the Board.

I reside at 740 E. Clearview Drive and am one of the seven neighborhood residents who filed timely written comments with the Commission. My residence, on the northeast corner of Clearview and Center Drives, fronts approximately 300 feet of the east side of the parcel. In addition, I am one of the adjacent residents who rely on a domestic well for my drinking water. My well head is approximately 50 feet from the parcel on Center Drive.

In February, I provided comments concerning the special use permit convert unsold commercial property on Clearview and Silversage to 34 townhouses. At that time, I told the Commission that my bigger concern was using that special use permit as a pretext for rezoning the parcel being discussed today into a much higher housing density than already existed. Staff pointed out that my concern was groundless because, well, the parcel was SF 1A. I find it hard to believe that Staff did not know, at that time, that this rezoning request was in progress.

The Board of Supervisors should reject the recommendation made by the Commission in this matter at its May 27, 2020 meeting and, as shown on page 2 of the Staff Report under the heading of "Alternatives," not introduce the Ordinance and not amend the zoning map.

The Commission's recommendation relied on a recommendation by Carson City's Planning Staff ("Staff") which, in turn, relied on the report submitted by the applicant's consultant, Susan Pansky Planning ("Pansky report").

Absent rejecting the proposed amendment to the zoning map, an additional alternative would be to return the matter to the Planning Commission with instructions to amend its recommendation to include SF21 zoning along Center and Clearview Drives. This alternative was

proposed and supported by residents adjacent to the parcel as shown in their submissions to the Commission on pages 11, 27, 29, 30, and 33 of the Staff Report.

A map showing the residents' proposed alternative is included as Attachment 1.

My objection is based on and supported by the following:

1. The Commission failed to address the alternative zoning proposal raised by the residents. As shown on the maps of existing and proposed zoning on page 7 of the Staff report, there is no SF 6 zoning on Center Drive between Koontz Drive and Clearview Drive nor on Clearview between Silver Sage and Center. The SF 6 zoning designation for the entire parcel is inconsistent with the current zoning on the north, south and east sides and does not provide an adequate transition between the proposed SF6 and the surrounding SF 1A and SF 21 .

Zoning for SF 21 lot sizes on both Center and Clearview is consistent with the manner in which the Southpointe development to the north was allowed to proceed, is consistent with the Master Plan, is consistent with the Commission's past practices, and meets the objections of the surrounding residents.

-Zoning on the east side along Center is all zoned SF 1 acre. Most of the properties are greater than one acre in size. Almost the entire east side of the parcel borders my property. The northeast corner of the parcel borders the 2+ acre Tolle property complete with its rodeo quality roping arena. Silver Peak Stables, at the southeast corner of Clearview and, Center is about 2 acres in size.

-Across Clearview on the south, some clarification is necessary. The Staff neglected to include either the current or proposed zoning on those properties bounded by Clearview, Center, Roventini, and Silver Sage as shown on the map found on page 7 of the Staff report. In its the narrative, Staff says that the land to the south is zoned SF 1A. However, the Assessor's map for that block shows that the existing residential properties along Clearview to be about 4/10ths of an acre in size (Attachment 2). These residences are consistent with SF 21 zoning which allows one to three units per acre. They do not reflect SF 6 proposed for the parcel across the street. As pointed out by the applicant on page 3 of the Pansky report (Table 1), SF 21 conforms to Medium Density Residential and is, therefor, consistent with the Master Plan. Since the SF 21 zoning along Center and the existing residences on the south side of Clearview already meet the requirements for SF 21, both meet the master plan's designation of the area as Medium Density Residential, amending the proposed zoning to SF 21 along Clearview would also be reasonable, consistent, and appropriate.

-The north side of the parcel is adjacent to both the SF 6 zoning along Silver Sage and the SF 21 zoning along Center. The properties associated with the Southpointe development on Center were carved out as a 1,000 foot long strip of SF 21 in order to provide a more rational and orderly transition between the SF 6 along Silver Sage and and the SF 1A on Center. As previously shown by the applicant in the Pansky report, SF 21 conforms to Medium Density Residential and is, therefor, consistent with the Master Plan. Amending the zoning map to reflect SF 21 on the remaining 380 feet along Center would be reasonable, consistent, and appropriate.

2. Section II of the proposed ordinance on page 3 of the Staff Report states, in part, that "the Amendment will provide for land uses compatible with existing adjacent land uses." This is

questionable at best, particularly when you consider the livestock and domestic wells adjacent to the parcel. Mere conclusory statements not sustained by substantive information in the Commission's record and should not be relied upon by the Board.

-The area south of Koontz is home to quite a bit of livestock. On Center, the Creech and Tolle residences have horses. The Tolle place even has a rodeo practice arena. At the intersection of Center and Clearview, Silver Peak Stables provides facilities for boarding and training horses and is popular with the charros from the Mexican community. The Canarys and myself are also at that intersection, but currently have no livestock. I do have facilities for smaller animals such as llamas and goats and the Canarys have livestock shelters.

-Carson City Municipal Code 7.13.050 deals with zoning and livestock. There is a significant distinction between animals allowed on SF 1A and SF 6. Subsection 4.a states: "Horses, swine, fowl, sheep or other animals of a similar nature shall not be maintained on any lot or parcel other than a lot or parcel zoned agriculture (A), conservation reserve (CR), single-family one-acre (SF1A), single-family two-acre (SF2A) or single-family five-acre (SF5A)." Further on, the ordinance states that "Livestock and farm animal numbers will be established at the density of one (1) animal unit for each seven thousand (7,000) square feet of lot area." This number is significant because SF 6 zoning doesn't meet the 7,000 square foot threshold. Clearly, lot sizes this small don't mix well with and are incompatible with the larger lots where livestock are allowed to be kept, especially SF 1A and larger.

3. Addressing the potential impacts the rezoning might have on domestic wells adjacent to and near the parcel was legitimately before the Commission in terms of the required findings under Section II of the proposed ordinance. The water issues affect both the compatibility with adjacent land uses and negative impacts to public health, safety, and welfare. The issues should have been considered in light of the proposed alternative zoning along Clearview and Center.

-Commissioner Perry was unaware that there are domestic wells providing water to residents in Carson City. In response to Commissioner Perry, a Staff Engineer pointed out that "There are areas of town where they were developed with wells. If a well goes dry they would have to connect. It's not the norm, but it does happen." (Video taped minutes at 46:37) There are a significant number of domestic wells south of Koontz. Four of them are on the periphery of the parcel being rezoned. In addition to my residence, the Creech residence also has a domestic well on the east side of Center. The Silver Peak Stables and Labadie residence on the southeast corner of Clearview and Center is on a domestic well. And, the French residence on the southwest corner of Clearview and Silver Sage is also on a domestic well.

-The Staff Engineer also told the Commission that "Surface water run-off is typically not considered a source of pollution for groundwater" (Video taped minutes at 49:04) is inaccurate. The Nevada Division of Environmental Protection found the problem of drinking water contamination from urban run-off to be significant enough to address the problem in a publication (Attachment 3) titled "Wellhead Protection and Nevada Regulations for Protection of Groundwater." The publication is instructive as to the importance of protecting sources of well water. On page 2, NDEP makes seven recommendations for establishing a sound well head protection plan in order to protect underground drinking water sources, such as ours. Following the recommendations, is a listing of sources of ground water pollution threatening groundwater supplies. The very first source they identify is Nonpoint Sources, stating "Nonpoint source

pollution originates from a diffuse source such as urban runoff (emphasis added), irrigation drainage, mining recommends a minimum wellhead protection area with a radius construction, etc. Nonpoint sources can contaminate both surface and ground water" (emphasis added.) Attachment 4 is a publication from the Wisconsin Groundwater Coordinator Council explaining and illustrating how a residence (or in our case, almost 40 residences in a relatively small area) can have serious negative impacts on existing groundwater resources.

-The Staff Engineer also told the Commission that the "mandatory" sewer hook up requirement south of Koontz focused on nitrates and septic tanks. However, he neglected to mention that this was done in order to protect the large number of domestic wells in the area from potential groundwater contamination.

-Mr. Fellows, the City's Chief Stormwater Engineer, identified stormwater run-off as an issue requiring mitigation, including a retention basin. I raised this concern because the Mayors Park retention basin at Center and Koontz frequently fills up with contaminated run-off. Attachment 5 is a photo of that retention basin after a summer rain. I am legitimately worried about infiltration of contaminated into our wells as the water percolates out of a basin in such close proximity to our drinking water. I realize it is a design issue, but as a side note, the retention basin should be located as far away from the domestic wells as possible.

-Subdivisions, such as the one being proposed for this parcel, can create another water problem because hard-scape and stormwater diversions reduce the amount of water available to recharge the groundwater wells. This problem was also identified in the Wisconsin fact sheet. Well owners can't do much about natural declines in groundwater, but artificially created reductions can and should be prevented before they create a problem.

Amending the proposal to include the SF 21 buffer along Clearview and Center could mitigate most, if not all, of the associated water problems.

4. The Commission failed to take into account the cumulative effects of recent actions involving development in the area, including the introduction of 1,400 additional residents into such a limited area. Conditions in Carson City have changed since 2006, the date Staff says the last master plan revision took place. Planning should be a dynamic process that taking into consideration what has actually occurred rather than relying on what someone hoped would happen more than 15 years ago. Downplaying the effects that this many new residents will have on local roads, schools, and other community services is not constructive.

-Over 400 dwelling units are either under construction or have been approved along 4,200 foot section of Clearview Drive between Center Drive and Voltaire Street. An additional 143 units have been approved on Cochise (Curry) Street at Overland Street, just south of Clearview. Forty-one more units are under construction at Jackson Village, one block north of Clearview. Using the U.S. Census Bureau average household size for Carson City, this translates to about 1,400 more residents.

-Traffic is already serious problem for existing residents, particularly on Clearview, Silver Sage, and Koontz because they are used as a by-pass between south Carson Street and Edmonds. That was the case before the freeway and is still the case today. Using Clearview enables drivers traveling between northeast Carson City and Lyon County to avoid three additional stoplights and the congestion on Carson Street. As for local residents, it is quicker and

more convenient to use the same by-pass to access northbound 580 at Fairview rather than the 395-Hwy 50 interchange on south Carson Street.

-There are currently about 40 homes on Clearview between Carson Street and Edmonds. Yet, as I pointed out at the February hearing and Staff confirmed for this proposal, Clearview sees about 7,000 vehicles per day. This traffic is not primarily local. Contrary to the opinions of the applicant, Staff and the Commission, the traffic generated by 1,400 additional residents along that corridor will have a significant negative impact on the "quality of life" of the local community.

-At the February hearing, Mary Siders, a resident of the Southpointe development, testified that the problems those residents were already having getting on to Silver Sage would be exacerbated by the proposed 34 residential units to be contributed by the Silver View Townhomes project. Add in the 41 units from Jackson Village currently under construction and you've got the drivers from 75 additional residences trying to use Silver Sage between Southpointe and the Greater Nevada Credit Union as their principle means of access. Now add in the potential for 36 more units from rezoning this parcel and things will only get worse.

-The impact on schools is addressed on page 6 of the Pansky report. While the applicant and the school district agree that the potential for 10 new students based on this proposal when viewed in isolation would not be a problem, The representative for the district said that the "aggregate of all development," i.e., the cumulative effect, is an ongoing concern. Pose the same question, but include the students among the 1,400 additional residents to be expected soon, and the district's position could very well be different. Adding even more students to an ever increasing total will have an impact and require the district to come up with more resources to deal with it.

-An item not mentioned at all is the impact that 1,400 more residents in their service territory will have on the already busy Fire Station 53 on Snyder Avenue.

-The Pansky report discusses a "transition" to higher densities on both sides of Silver Sage on page 8. The projects cited include: Jackson Village, a walled off, isolated high density project completely surrounded by JC Penney, Kohl's, Southwest Gas, Greater Nevada Credit Union, and the Mountain View Health and Rehabilitation Center; and the Silver View Townhomes, which required a special use permit since no commercial businesses wanted to acquire the property. The report also points to the area east of the bowling alley, north of the freeway, and south of the fire station, Ross Gold Park, and Snyder Avenue. This is an anomalous and isolated triangle of high density apartments, senior housing, townhomes, and condominiums that is nowhere near being adjacent to Silver Sage. The only real "transition" to higher density that has actually occurred in the past 30 years is Southpointe. The alternative proposed by the residents, myself included, would have the zoning mirror what was done with Southpointe.

Residents directly impacted by the proposal have offered a reasonable alternative to what was recommended by the Commission. The zoning along Clearview and Center should be the same as the SF 21 on Center. In the words of Susan Pansky, the existing residents "...are not asking for anything outside of what the master plan had contemplated in its last update."

In conclusion, the Carson City Board of Supervisors should reject the recommendation of the

Planning Commission or, in the alternative, return the matter to the Commission with instructions to amend their recommendation to include a buffer of SF 21 zoning along those parts of the parcel adjacent to Clearview and Center.

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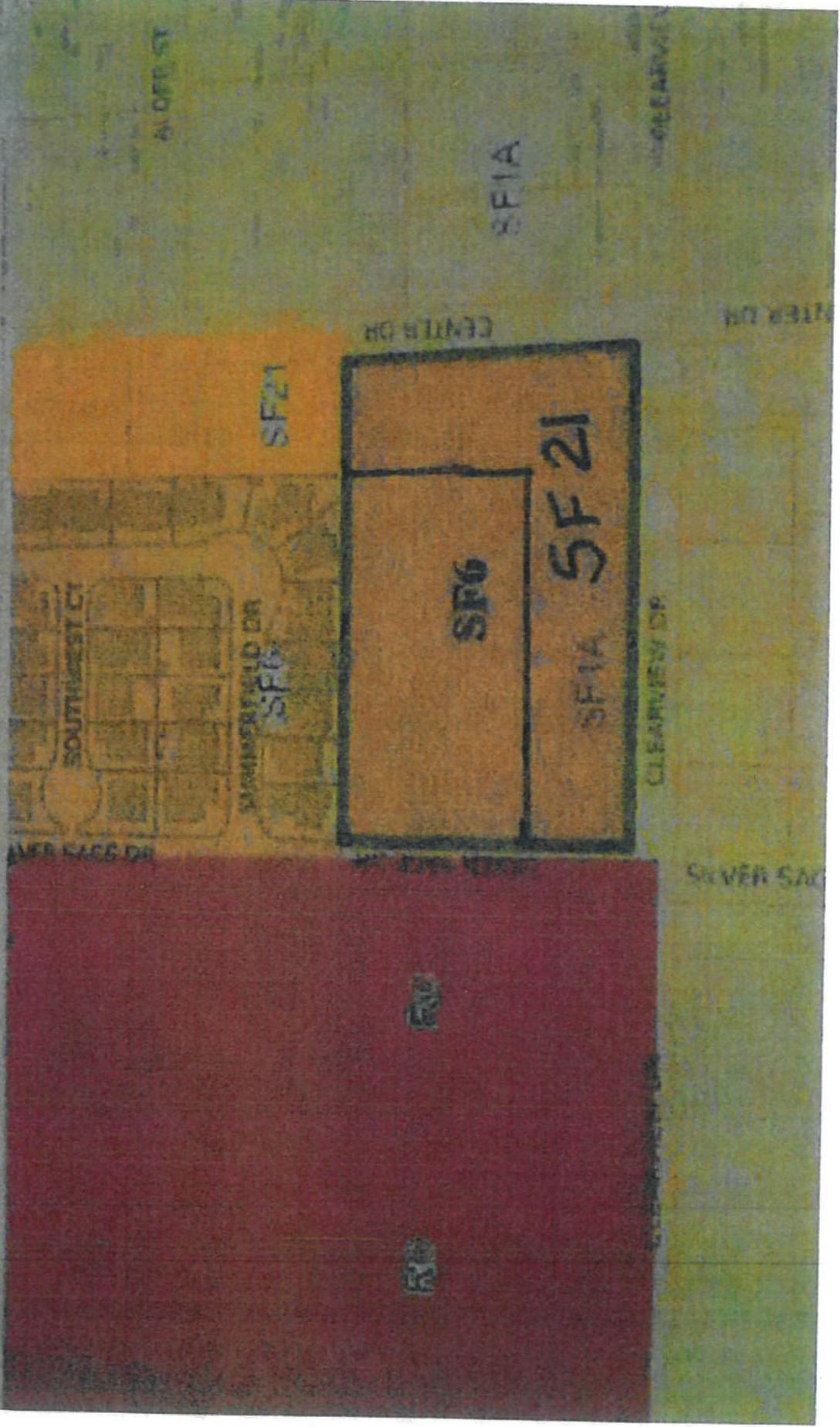
Michael Tanchek

740 Clearview Drive

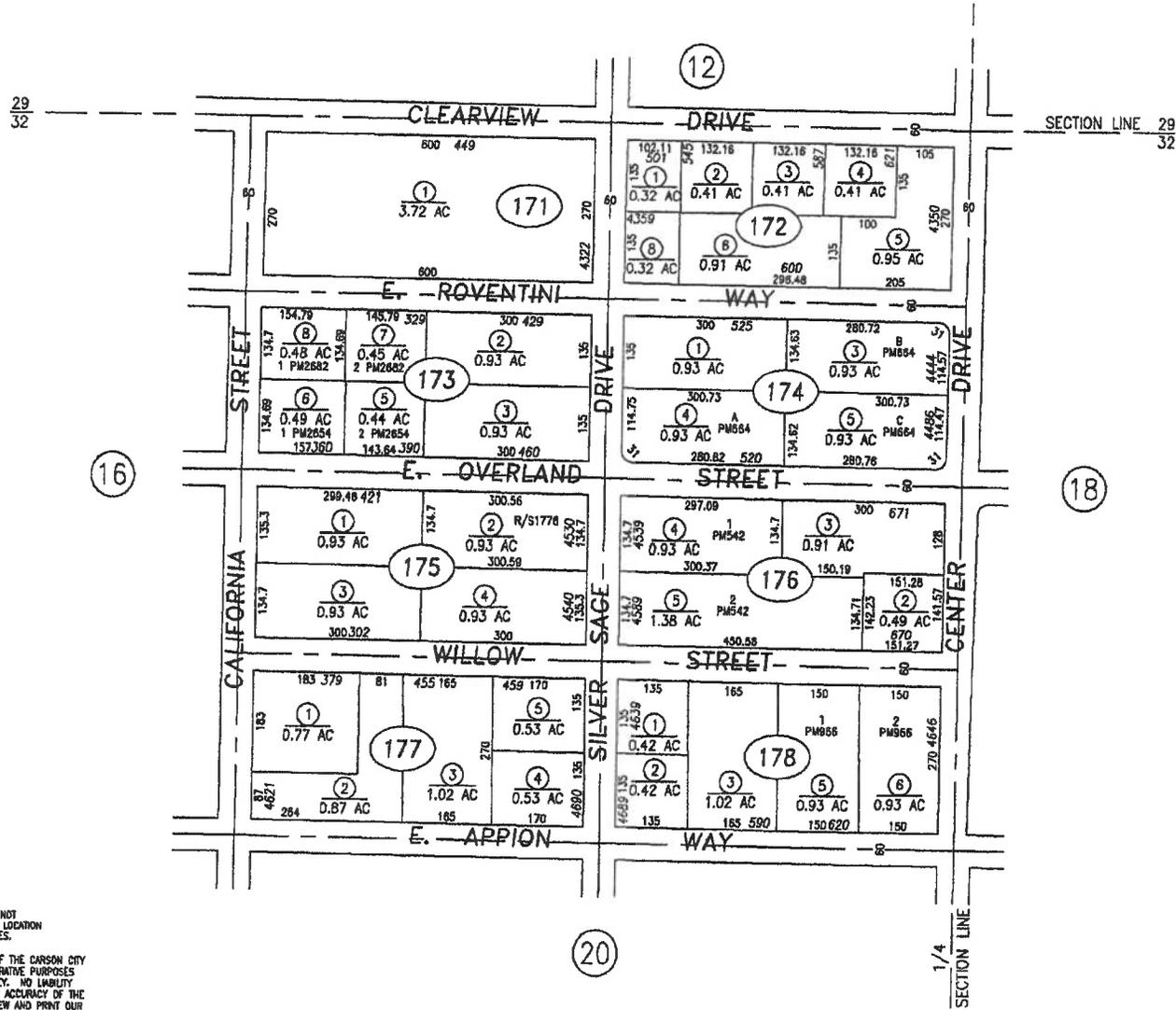
Carson City, NV 89701

June 5, 2020

# PROPOSED ALTERNATIVE ZONING



NE1/4 NW1/4 SECTION 32, T.15 N., R.20 E., M.D.B. & M.



ATTACHMENT 2

PARCEL 9-173-01 is now 07 & 08.

NOTE:  
SOME PARCELS DELINEATED HEREON MAY NOT BE PRESENTED IN TRUE SIZE, SHAPE, OR LOCATION DUE TO DISCREPANCIES BETWEEN LOT LINES.  
CARSON CITY, NEVADA  
THIS MAP IS PREPARED FOR THE USE OF THE CARSON CITY ASSESSOR FOR ASSESSMENT AND ILLUSTRATIVE PURPOSES ONLY. IT DOES NOT REPRESENT A SURVEY. NO LIABILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DELINEATED HEREON. YOU CAN VIEW AND PRINT OUR MAPS AT NO CHARGE FROM OUR WEBSITE AT WWW.CARSON-CITY.NV.US




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## WELLHEAD PROTECTION AND NEVADA REGULATIONS FOR PROTECTION OF GROUND WATER

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### **Introduction**

In Nevada most communities receive their drinking water from underground sources through private wells or public water supply systems. In addition to supplying water, the subsurface environment has been used for centuries to dispose of liquid and solid wastes. Subsurface waste disposal from businesses, industrial manufacturing, septic tanks or farming could contaminate both public and private drinking water wells. Therefore, protecting these water supplies is extremely important.



The State of Nevada has adopted water quality legislation and pursuant regulations to protect the ground water from potential contaminant sources. Some potential contaminant sources regulated by the Nevada

Administrative Code (NAC) include underground storage tanks, landfills, wastewater treatment systems, mining facilities, underground injection systems, and hazardous waste treatment and storage/disposal facilities. Since poorly constructed wells and unplugged/unused wells can act as direct conduits for contaminants to reach an aquifer, the construction and abandonment of water wells are also regulated by the State through the Division of Water Resources.

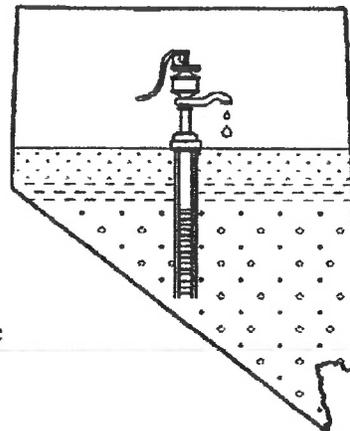
The Nevada Division of Environmental Protection (NDEP), the lead agency for ground water protection in the State of Nevada, implements and enforces regulations under the Nevada Water

Pollution Control Law and other laws included in various chapters of the Nevada Revised Statutes (NRS). The Nevada Division of Minerals (NDOM), the Nevada Department of Agriculture (NDOA), the Nevada Division of Water Resources (NDWR), and the Nevada State Health Division (NSHD) also enforce regulations which protect ground water. Information regarding specific regulations can be obtained by contacting the respective divisions. Also, the NAC is available on the world wide web at [www.leg.state.nv.us](http://www.leg.state.nv.us).

Nevada has passed statutes that provide for source specific controls such as design and performance standards for mining facilities, landfills, etc. Also, Nevada has land use statutes that enable local authorities to manage potential sources of contamination as part of Wellhead Protection Programs (WHPPs). This fact sheet summarizes the description of a Wellhead Protection Program and most other potential contaminant sources regulated by the NAC.

### **Wellhead Protection Program**

The State Wellhead Protection Program (WHPP) is a voluntary program that encourages local governments, communities, and utility companies to take systematic preventive measures to protect their underground drinking water resources. The basic idea of wellhead protection is to reduce the risk of ground water contamination by



managing potential sources of contamination. A community must determine the land surface area around a water supply well, called the wellhead protection area (WHPA), that should be protected. Before a plan or program can be developed, it is important to identify the existing and potential threats to the ground water. Then the WHPA should be managed to protect the ground water.

The Bureau of Water Pollution Control (BWPC) within NDEP is the lead agency for Nevada's Wellhead Protection Program. The BWPC provides technical assistance, educational guidance, and financial assistance (when available) for local program development and implementation of WHPPs. The State recommends the following elements be included in the development of a WHPP.

- Formation of a local WHPP team, and identification of roles and responsibilities of all team members.
- Delineation of wellhead protection areas (WHPAs): the State's recommendation is to consider a minimum WHPA of a 3,000 foot radius or a 5-year travel time capture zone for shallow, unconfined or semi-confined aquifers.
- Identification of potential contaminant sources: an extensive inventory is needed within your community and near the wells to identify the location of facilities using, manufacturing, or storing materials that have the potential to contaminate your drinking water wells.
- Management strategies: to protect your water supply wells from potential sources of contamination.
- Contingency planning: a detailed emergency response plan is needed to be ready for use if an accidental event threatens your drinking water supply.
- Plans for the siting of new wells: to maximize yield and reduce the potential for contamination.
- Public participation: to ensure involvement of local citizens throughout the wellhead protection process.

The management of land use in the WHPA is usually the responsibility of local governments. Local governments have a variety of regulatory and non-regulatory management options to protect their underground drinking water resources and develop a Wellhead Protection Program (WHPP). The fact sheet entitled "Local Authority for Ground Water and Wellhead Protection" contains the details of the regulatory management options.

#### ***Nonpoint Sources***

Nonpoint source pollution originates from a diffuse source such as urban runoff, irrigation drainage, mining construction, etc. Nonpoint sources can contaminate both surface and ground water resources. The Bureau of Water Quality Planning (BWQP) within NDEP manages a program for the control of nonpoint sources of water pollution. The BWQP's current approach to controlling nonpoint sources of water pollution to both surface and ground water is to seek compliance through regulatory and non-regulatory programs including technical and financial assistance, training, technology transfer, demonstration projects and education. This approach includes coordination of land and water resource management agencies and public outreach. NAC 445A.305 - 445A.340 contains regulations regarding nonpoint sources.

#### ***Underground Storage Tank Regulation, Petroleum Discharge and Hazardous Waste Cleanup***

The Bureau of Corrective Actions (BCA) within NDEP oversees cleanup activities at sites where soil and/or water contamination has been identified, including contamination from Leaking Underground Storage Tanks (NAC 590.700 - 590.790).

The Underground Storage Tank (UST) program focuses on pollution prevention, by setting performance standards for UST-system design, construction, installation, upgrading and



notification requirements (NAC 459.9921 - 459.999). The BCA provides implementation and oversight for multimedia corrective action cases (NAC 445A.226 - 445A.22755, and 445A.273 - 445A.2737), consultant certification (NAC 459.970 - 459.9729), and the petroleum reimbursement fund programs for leaking tanks which have been repaired/removed (NAC 445A.2738 - 445A.2739).

Remediation of contamination from historical operations at active or former Department of Defense facilities, and all remediation projects on Department of Energy facilities are overseen by the Bureau of Federal Facilities, a part of NDEP.

### ***Hazardous Waste Management***

The Bureau of Waste Management (BWM) within NDEP has developed a Hazardous Waste Management plan. The plan provides a mechanism to inventory the sources, types, and quantities of hazardous waste managed in Nevada. NAC 444.842 - 444.976, and 459.952 - 459.95528 contain the implementing regulations.



The RCRA Facility Branch of the BWM is authorized by EPA and has responsibility for implementing Title 40 of the Code of Federal Regulations regarding hazardous waste facilities. An owner or operator of a facility must submit a permit application to BWM for review and approval to operate a facility for hazardous waste treatment, storage, and/or disposal. The permit application also requires that the facility owner/operator implement a ground water monitoring program for disposal facilities to determine the facility's impact on the quality of underground water resources.

### ***Recycling***

The Bureau of Waste Management within NDEP provides funding and technical assistance for recycling programs. Nevada does not have a statewide program for the collection and proper disposal of residential household hazardous wastes, however, several counties operate household hazardous waste collection programs (NAC 444A.005 - 444A.655). These programs help protect ground water through public awareness and proper disposal of potential contaminants. Information about locations and proper disposal of household hazardous wastes can be obtained by calling the Nevada Recycling Hotline at 1-800-597-5865.



### ***Solid Waste***

NDEP's solid waste disposal regulations (NAC 444.570 - 444.7499) require permits for all disposal sites. The Bureau of Waste Management enforces the solid waste disposal regulations to protect the public health and safety including protection of ground water resources. The disposal site location and the facility design must meet criteria stated in the regulations. The permit application for a solid waste facility must include a comprehensive ground water monitoring program to determine the landfill performance in protecting ground water resources.



### ***Septic Systems and Wastewater***

The Bureau of Water Pollution Control (BWPC) within NDEP acts as the primary enforcement agency for Nevada's Water Pollution Control Law. NAC 445A.070 - 445A.348 contain the implementing regulations. The BWPC regulates all septic

systems with a capacity of 5,000 gallons or more of effluent per day. The BWPC also regulates dairies and animal feed lots having a minimum number of animals. NDEP has been delegated the National Pollutant Discharge Elimination System (NPDES) permitting program under the Clean Water Act. Besides NPDES permits for discharge to surface waters, the BWPC also issues State Ground Water Permits for infiltration basins and land application of Publicly Owned Treatment Works (POTW) effluent. NDEP requires the approval of treatment/disposal sites from local governmental bodies before issuing a permit. The BWPC also regulates land application of sewage sludge, or biosolids, a by-product of wastewater treatment.

The Bureau of Health Protection Services (BHPS) within NSHD and the county health authorities regulate the construction of individual septic systems with capacities less than 5,000 gallons per day (NAC Chapter 444).

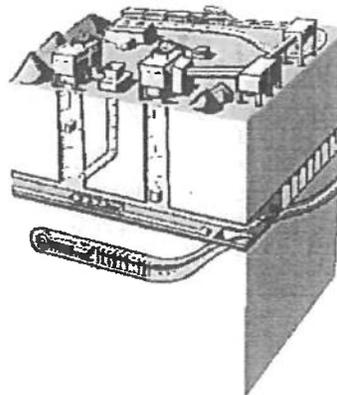
#### ***Underground Injection Control***

An injection well is either a dug hole or a bored, drilled or driven shaft whose depth is greater than its largest surface dimension. Injection is defined as the subsurface emplacement of fluids in a well. Many of these fluids may be hazardous and could contaminate underground water resources. The Bureau of Water Pollution Control within NDEP has attained primacy for the federal Underground Injection Control (UIC) Program under the Safe Drinking Water Act. The program requires preliminary construction approval for certain injection wells, including geothermal and oil/gas production injection wells, and initial and periodic mechanical integrity testing. It also provides enforcement capabilities for action against noncomplying facilities. NAC 445A.810 - 445A.925 contains regulations regarding the underground injection control program.

#### ***Mining Facilities***

The Bureau of Mining Regulation and Reclamation (BMRR) within NDEP enforces regulations governing the design, construction, operation, closure and reclamation of mining

facilities (NAC 445A.350 - 445A.447, and 519A.010 - 519A.415). A permit is required before construction of any new process components or modifications to existing process components such as, heap leaching facilities, lined solution ponds, and tailing impoundments. The permit also requires site-specific surface and ground water monitoring programs. The facilities must routinely characterize process solutions and waste rock. Submittal of quarterly and annual reports is required. Spills or releases must be reported to the BMRR.



#### ***Hydrocarbon and Geothermal Production***

The Nevada Division of Minerals (NDOM) has the authority to review and approve design of oil, gas and geothermal wells (NAC 522.010 - 522.195, and 534A.010 - 534A.690). NDOM's authority also includes testing and approval of blow out prevention equipment, and well plugging and abandonment design and verification. The NDOM works in coordination with NDEP's UIC program.



#### ***Pesticides***

The Nevada Department of Agriculture (NDOA) has the authority to administer the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and the Nevada Pesticides Act in the State. This includes authority to restrict, prohibit or cancel the use of specific pesticides statewide or by agricultural area if a pesticide is determined to be detrimental to public health (NAC 555.250 - 555.530, 555.600 - 555.700, and 586.005 - 586.151). The NDOA



has completed a draft State Ground Water Pesticide Management Plan (PMP). Pesticides that may pose an adverse effect to the environment will be subject to an EPA-approved pesticide specific PMP as a condition for their legal sale and use in

Nevada.

#### ***Well Construction and Abandonment***

The Nevada Division of Water Resources (NDWR) licenses well drillers and regulates well drilling in the State. NAC 534.010 - 534.500 contains regulations for well construction, casing material, proper drilling techniques/sanitary seals and the proper plugging of abandoned wells. All wells other than mining exploration boreholes must be drilled by a well driller licensed in Nevada. Also, NDWR is the custodian of all well logs for wells drilled in the State. The Bureau of Safe Drinking Water (BSDW) within NDEP further regulates well construction for public water systems (NAC 445A.54022 - 445A.5405).

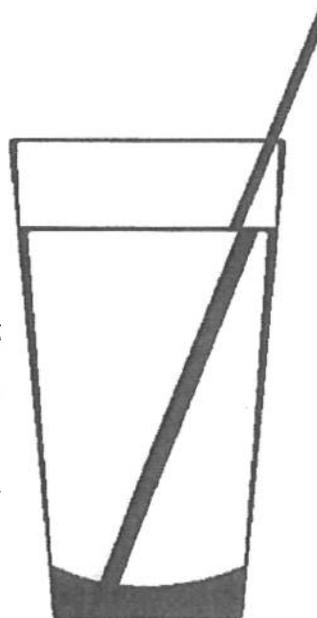
#### ***Subdivision Review***

The NDEP and the NDWR conduct a comprehensive review of all subdivisions for ongoing development to ensure protection of public health and safety (NAC 278.010 - 278.530, and 445A.342). NDWR's review determines whether or not the water purveyor has sufficient water rights to serve any proposed subdivision. Within NDEP, the Bureau of Water Pollution Control's review determines the availability of proper and adequate wastewater disposal services to minimize wastewater disposal's impact on ground water quality. BSDW's subdivision review includes evaluation of the historical

land use and current zoning of the area. BSDW also reviews soil characteristics if individual septic systems are used. In addition, BSDW requires a will-serve letter if public water systems supply drinking water to the proposed subdivision. If domestic wells are used to supply drinking water, then BSDW requires ground water quality monitoring to ensure that the water quality meets drinking water standards.

#### ***Public Water Systems***

The Bureau of Safe Drinking Water (BSDW) within NDEP is the primary enforcement authority for the supervision of public drinking water systems as authorized under the federal Safe Drinking Water Act. The BSDW is responsible for the monitoring and regulation of public drinking water systems. NAC 445A.450 - 445A.67644 contains regulations regarding the public water system supervision program.



#### ***Prevention is the best solution . . .***

Public water suppliers have the responsibility to protect public health and safety by providing safe drinking water. Public water suppliers need to identify potential sources of contamination and work with the appropriate agencies to protect ground water resources. Appropriate preventive measures to protect ground water are less expensive than clean up of contaminated ground water. Managing potential sources of contamination, in part through State and Local regulations and authority, will potentially save millions of dollars in the long term and protect public health.

***For More Information Contact:******Nevada Division of Environmental Protection***

901 S. Stewart Street, Suite 4001  
Carson City, Nevada 89706-0851  
(775) 687- 4670

***Nevada Division of Minerals***

400 West King Street, Suite 106  
Carson City, Nevada 89703-0062  
(775) 687 - 5050

***Nevada Division of Water Resources***

901 S. Stewart Street, Suite 4001  
Carson City, Nevada 89706-0851  
(775) 684 - 2800

***Nevada Department of Agriculture***

350 Capitol Hill Avenue  
Reno, Nevada 89502-2292  
(775) 688 - 1182 ext. 251

***Nevada State Health Division***

4150 Technology Way  
Carson City, Nevada 89701-5405  
(775) 684 - 4200

***For More Information about Wellhead Protection:  
Contact the Bureau of Water Pollution Control, NDEP at (775) 687- 9422***

***NDEP encourages persons or organizations to reproduce all or part of this fact sheet for general circulation.  
Funded by the Drinking Water State Revolving Fund Wellhead Protection Program Set-Aside through the Nevada Division of Environmental Protection and a Clean Water Act §319 grant from the U.S. Environmental Protection Agency.***



**RESIDENTIAL DEVELOPMENT  
AND GROUNDWATER RESOURCES**  
**COMPREHENSIVE PLANNING AND GROUNDWATER FACT SHEET 3**  
**WISCONSIN GROUNDWATER COORDINATING COUNCIL**  
July 2002

New residential development is one of the most common types of growth experienced by Wisconsin communities. In 2000, over 16,000 new one and two-family homes were built in Wisconsin. Wisconsin is expected to have an additional 400,000 households by 2015, so the number of new homes will continue to grow.

To understand how residential development can affect groundwater, it's important to recognize that all land has groundwater beneath it (Figure 1). Groundwater flows through underground soil and rock materials, generally from higher to lower areas on the land surface. Sometimes we plan to directly use that groundwater, as when we drill individual drinking water wells. But even when we do not plan to use it, residential development may affect both the quality and amount of local groundwater.

The choice of water supply and wastewater treatment for residential development is critical. It will affect the size of lots required, and the acceptable number and density of homes. Placement of wells and wastewater systems relative to groundwater flow direction is also important. Educating homeowners on proper lawn care or wastewater management practices later is important, but cannot always overcome poor decisions in the original design. So, good planning of residential development is the first step to protecting groundwater quality in residential areas.

This fact sheet examines the relationship between residential development, particularly development of new subdivisions, and the groundwater resource. It also discusses ways in which impacts can be minimized.

#### Water Supply Considerations

Water to serve residential developments can be provided in three ways: through connection to a community water system, a subdivision water system, or individual home wells.

- *Community water systems* may use surface water or groundwater. When groundwater is used, withdrawal of water from high capacity wells might reduce the amount of water available to local streams and lakes. Careful design and management of these wells can reduce these impacts, but Wisconsin law does not currently

require consideration of surface water effects. Changes to the community infrastructure may be needed to provide services to additional homes. The quality of community water systems is continually monitored.

- *Individual home wells* have smaller impacts on groundwater and surface water flow than high capacity wells, especially when the water is returned to the groundwater through onsite wastewater treatment. Since homeowners generally use well water without treatment, the quality of groundwater available onsite is critical. Homeowners are responsible for monitoring their own water quality.

**Figure 1. Groundwater underlies Wisconsin, and supplies water for rural and urban uses.**



- *Subdivision water systems* are required to monitor water quality if one well serves 25 or more residents. Typically this is assumed to be the case when 7 or more homes are interconnected to one well. Water systems serving fewer homes are otherwise similar to individual wells in their regulation and impacts on groundwater.

### Wastewater Treatment Considerations

Wastewater treatment for a residential development can similarly be provided in three ways: through connection to a municipal system, development of a group onsite wastewater treatment system, or individual onsite wastewater treatment systems. Both public facilities and onsite systems vary in the degree of treatment they are designed to provide.

- Use of *municipal sewers* allows wastewater to be treated off-site, so groundwater contamination potential is minimized. However, in sewer developments with individual home wells, the local groundwater level may be lowered because the public sewer removes wastewater from the area, preventing it from naturally replenishing groundwater.
- In developments with *onsite wastewater treatment systems*, whether individual or group systems, wastewater replenishes local groundwater. However, some contaminants, such as nitrate and chloride, are not removed by conventional systems and may cause local groundwater quality problems even when systems are constructed to applicable state codes. If the development is in the recharge area for the public water source, contaminants could also affect the public water supply. Research shows that developments with individual onsite wastewater treatment systems and private wells require lot sizes of at least an acre to protect drinking water quality.
- Especially sensitive areas for onsite wastewater treatment include those with highly permeable soils, or shallow depths to groundwater or fractured bedrock. In such areas, bacteria, viruses, volatile organic compounds, or other contaminants may also affect groundwater. The community may choose to direct

development away from sensitive groundwater areas, even when onsite wastewater codes allow it, or require additional wastewater treatment, such as sand filtration, disinfection, or nitrate removal.

### Conservation Subdivisions

Conservation subdivisions (sometimes called cluster development) preserve green space in a community by using less land for individual lots, and maintaining the natural features of the land as much as possible. Such developments can have many environmental benefits, including potential groundwater benefits if less land is developed into fertilized lawns and landscapes.

However, conservation subdivisions, like any development using small lots, must be carefully designed to prevent unwanted “recycling” of wastewater into private wells. This “recycling” occurs when onsite wastewater treatment system drainfields or mounds are located *upgradient* (uphill in the groundwater flow system) from private or group wells. Wastewater containing high levels of nitrate and other contaminants that re-enters the groundwater can be pumped by downgradient wells, even on neighboring properties. To minimize such problems:

- determine groundwater flow direction and avoid constructing wells downgradient from onsite wastewater treatment systems,
- use advanced onsite wastewater treatment systems,
- or connect conservation subdivisions to a community sewer and water supply.

### Groundwater Issues Common to All Residential Development

Besides water supply and wastewater treatment, issues common to all residential developments include (Figure 2):

- Land covered with impervious surfaces such as homes, driveways, roads and parking lots may have more runoff and less groundwater recharge than undeveloped land. However, increased groundwater recharge may occur if the runoff water naturally infiltrates onsite or is infiltrated by raingardens or other stormwater management systems.

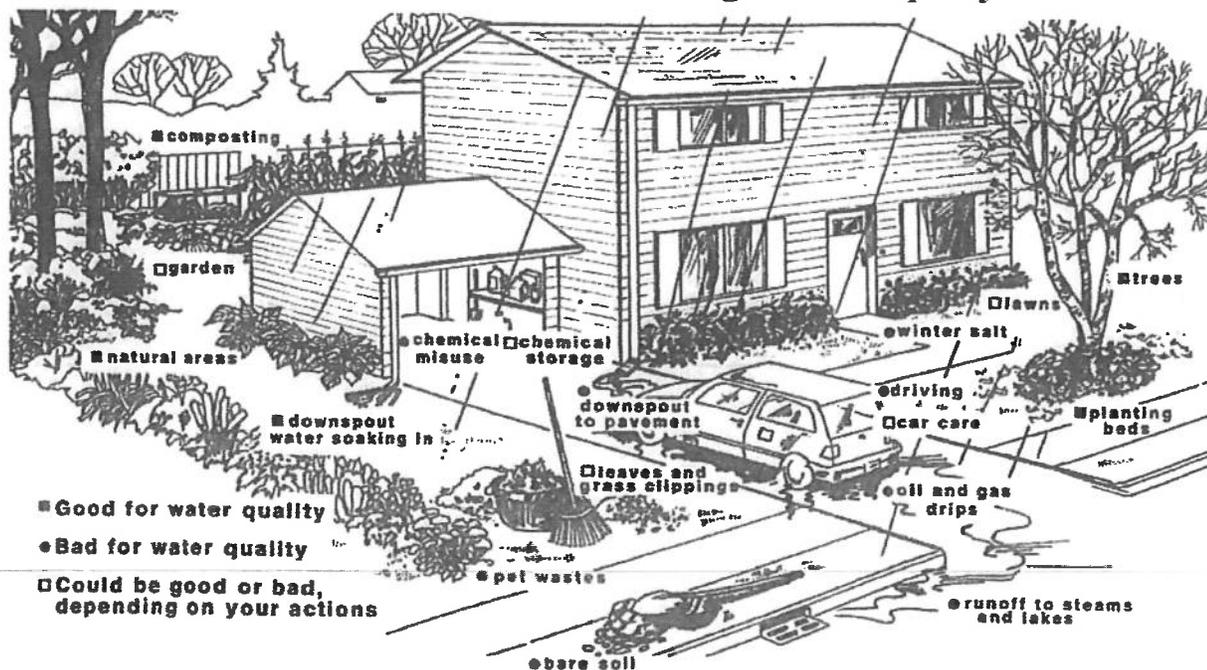
- Where storm sewers are used, they may divert water that otherwise would recharge groundwater.
- Water supplies for new homes may require an increased withdrawal of groundwater.
- Roads and parking lots serving developments mean more use of road salt and more oil, gas and other fluids from vehicles, which can end up in local streams, lakes or groundwater.
- Fertilization and irrigation of lawns increases the risk of contaminating groundwater or surface water.
- Improper waste disposal practices (dumping waste oil or antifreeze on the ground, for example) can also harm groundwater quality.
- past uses of the land. If the land was used for a barnyard, dump, or other waste disposal site, groundwater contamination may already be present. It might be difficult to get good quality water for a private well.
- upgradient land uses. Groundwater flow direction for the subdivision should be determined. Maps are available from the Wisconsin Geological and Natural History Survey for some areas. Contamination sources in the recharge area for private wells in the new development should be identified.
- suitability of property for development of onsite wastewater treatment systems and private wells. An assessment of the local aquifer is needed to ensure that it can supply enough water to the number of private wells planned for the area. The soils on the property also need to be evaluated for their acceptability for the use of onsite wastewater systems (if proposed).

#### Evaluating the Quantity and Quality of Groundwater Available for Residential Development with Onsite Water and Wastewater Systems

When evaluating the potential of a piece of land for residential development using individual wells and wastewater treatment systems, the following factors should be considered:

- existing groundwater quality. The developer could be required to install monitoring wells, and sample them for human-made contaminants such as nitrate and pesticides, and natural water quality problems such as

**Figure 2. Typical activities around the home can affect groundwater quality.**



arsenic, iron and radioactivity. Existing neighboring wells can be sampled if there are other homes in the area. Accurate information about the depth and construction details is needed for existing wells. If groundwater problems exist, local governments can consider requiring treatment systems or a notification of groundwater problems on the home's deed.

### Minimizing the Impacts of Residential Development on Groundwater Resources

Fortunately, there are steps that planners, engineers, and developers can take, before, during, and after development, to minimize the effects of residential development on groundwater resources. These include:

- using raingardens to encourage infiltration of stormwater and recharge to groundwater.
- minimizing paved surfaces such as driveways, or installing brick driveways and walks instead of poured concrete or asphalt.
- requiring use of advanced wastewater treatment systems, such as nitrate removal systems, in vulnerable groundwater areas.
- providing centralized water or sewer in areas where natural conditions or housing density make onsite system use unsafe or marginal.
- educating homeowners on the need for proper maintenance of private wells and onsite wastewater treatment systems, periodic testing of private well water, and planning for eventual well, pump or drainfield replacement.
- placing private wells upgradient from onsite wastewater treatment systems on the same or neighboring property to prevent recycling of wastewater into private wells.
- encouraging or requiring water conservation and use of water saving devices, such as low-flow showerheads and toilets, within homes.
- restricting the types and amounts of pesticides and fertilizers used on lawns and gardens.
- encouraging or requiring limits on landscape watering.
- providing education on natural landscaping and other low water demand vegetation.
- providing opportunities, such as Clean Sweep programs, for residents to properly dispose of hazardous household products.
- requiring periodic maintenance of onsite wastewater treatment systems if they are used.

In summary, residential development can have many impacts on both the quality of local groundwater and the amount of water needed by a community. Good planning can balance the need for residential development with protection of both the health and well-being of residents and the quality and quantity of local water resources.

For additional information on residential development options and planning tools, see:

- Ohm, B. W., 1999, Guide to Community Planning, Department of Urban and Regional Planning, Univ. of Madison, Wisconsin /Extension, 275 p. Available from UW Extension.
- WDNR and University of Wisconsin Extension, 2002, Planning for Natural Resources – A Guide to Including Natural Resources in Local Comprehensive Planning, 83 pages. Available from County Extension offices, the Department of Administration's Office of Land Information Services (608-267-2707) and at the WDNR Land Use website.

This is one of a series of groundwater factsheets designed to provide information to assist communities with comprehensive planning. Other factsheets and more detailed information to assist planners can be found at the Groundwater Coordinating Council (GCC) web site, <http://dnr.wi.gov/org/water/dwg/gcc/> or the WDNR Land Use Team website at <http://dnr.wi.gov/org/es/science/landuse/index.htm>.

Acknowledgements: Illustration, page 1 from WDNR publication WR-423-95 WI Groundwater Research and Monitoring Project Summaries; page 3, Extension publication GWQ009 Rethinking Yard Care.

Comprehensive Planning and Groundwater Fact Sheets were produced by GCC subcommittee members Dave Lindorff, WI Department of Natural Resources; Christine Mechenich, Central WI Groundwater Center, and Chuck Warzecha, WI Department of Health and Family Services. July 2002

ATTACHMENT 5



Carson City Planning Commission  
Borda Crossing Subdivision Map, File Number SUB-2020-0016

The following comments were filed with the Planning Division on October 6, 2020 when on-site work commenced at what has since been named Borda Crossing. At that time, the only open file was the zoning map amendment filed by JJ Summers and filing an objection to whatever was going on out there at the time seemed prudent. Three weeks later, the property was sold to a company managed by Sam Landis, one of the principals in Main Street Development, who is also developing a high density townhome project across the street. Some of the information contained in these comments is incorrect, but was based on our understanding at the time. For example, the rezoning of the west side of Center from SF 1A to SF21 was, shall we say, quite irregular and, in response to an issue raised by Supervisor Giomi, could quite possibly be used as an example of what constitutes arbitrary and capricious decision-making. I will be filing supplemental comments on that and other issues as we get closer to the deadline for comments.

Michael Tanchek  
740 Clearview  
Carson City  
January 12, 2021

Carson City Board of Supervisors  
Carson City Planning Commission  
Zoning Map Amendment, File Number ZA-2020-0005  
East Clearview Drive Rezoning

On June 18, 2020, the Carson City Board of Supervisors ("Board") returned the Planning Commission's ("Commission") recommendation to amend the Carson City zoning map by changing the 5.266 acre parcel ("the parcel") west of Center Drive and north of Clearview Drive (APN 009-124-03) from SF1A to SF6 (Agenda Item 24.b).

Judging from the USA street marking for proposed excavation limits for the project, it appears that a decision has been reached, although I do not know when and by whom. In the event that a final decision has not yet been reached, I offer the following comments.

Summary Points

1. The residents in the directly affected neighborhood prefer that the parcel remain in SF1A.
2. The residents requested a "buffer" of SF1A on Center and SF21 on Clearview as an alternative zoning proposal. Supervisor Bonkowski described this alternative as "split zoning.
3. The Commission failed to consider the residents' alternative zoning proposal.
4. The residents' alternative proposal is neither arbitrary nor capricious because it reflects past practice and policy, reflects the existing development on both Clearview and Center, and is

consistent with the Master Plan.

5. Staff's recommendation neglected to consider past policy and practice and the existing character of the neighborhood, particularly as it relates to horses and other farm animals.

6. The proposal is incompatible with the existing semi-rural character of the community South of Koontz.

7. Staff mistated the nature of the development actually taking place in the neighborhood and used examples of development projects which are either outside of the neighborhood or the product of thinly disguised spot zoning to justify further urban encroachment into the neighborhood.

8. Staff and the Commission neglected to consider the impact on public services, including schools and emergency services, of adding an additional 1,600 residents in South Carson from projects currently underway or approved.

9. Staff did not mention the Southwest Carson Traffic Circulation Study and the proposed expenditure of tax dollars to justify and subsidize the further urbanization of the community south of Clearview and west of Silver Sage, preferring to focus on the alleged 362 daily trips solely generated by the proposal.

My residence, 740 E. Clearview Drive, is on the northeast corner of Clearview and Center Drives. With approximately 300 feet of the east side of the parcel, I have the most frontage adjacent to the parcel. I am zoned SF1A and am on a domestic well located less than 60 feet from the property line.

I addressed the problems associated with domestic well contamination and diversion in my earlier comments to both the Commission and the Board and incorporate those same comments here.

In February, I provided comments regarding using a "special use permit" to convert the 2 1/2 acres of unsold commercial property at Clearview and Silver Sage to 34 townhouses. At that time, I told the Commission that my bigger concern was using that special use permit as a pretext for rezoning the parcel being discussed today into a much higher housing density than already existed. The Planning Staff ("Staff") dismissed my concern, pointing out that it was groundless because the parcel was zoned SF1A. I find it hard to believe that Staff did not know that this rezoning request was in progress and did not inform the Commission that the parcel was, in fact, being proposed for rezoning. Staff and the applicant did exactly what I said they would do and used that "special use permit" as justification for rezoning this parcel.

The residents around the parcel, myself included, would prefer that the parcel remain in SF1A. We see further encroachment of higher density development as a threat to our quality of life and the character of our neighborhood. A significant number of residents have told me they believe that the decision has already been made. The Board, Commission, and Staff can check off the box that says they had "public participation," and then the parcel will be rezoned according to the wishes of the developer. I appreciate the direction the Board gave to the Planning staff to explore other options with the developer. Although, as stated above, it does appear that the decision has already been made and Staff and the developer are proceeding as originally intended.

We have proposed an alternative referred to as the "buffer." Supervisor Bonkowski called this proposal "split zoning." This would allow changing the zoning along Center and Clearview to SF21 and the balance of the parcel to SF6. This alternative was proposed and supported by residents adjacent to the parcel as shown by their correspondence to the Commission on pages 11, 27, 29, 30, and 33 of the original Staff Report.

Staff took the position that the zoning change proposed by the affected residents could not be discussed in relation to this proposal because the proposal is a zoning change and no site plan has been filed. We disagree.

There are two issues to be decided: 1) Whether the parcel should be rezoned; 2) If it should be rezoned, what should the new zoning be? Neither question requires a site plan to be resolved. Should the parcel remain SF1A, be changed to all SF6, or be split zoned to reach a reasonable accommodation? Saying that an alternative zoning change cannot be considered in a zoning change application because a site plan hasn't been filed is unreasonable. If that is really the case, then the applicant first needs to file a site plan based on the existing SF1A and then request the zoning change. Such a requirement would be neither reasonable nor realistic. By the same token, imposing that requirement in order to adopt the proposed alternative, would also be unreasonable and a textbook example of arbitrary and capricious conduct. Our late Mayor Bob Crowell was correct in his assessment that the issue of appropriate zoning for the parcel needs to be resolved first.

Supervisor Giomi raised a good point when he asked whether the alternative zoning would result in arbitrary and capricious lot lines. The answer is no, it would not. In fact, not recognizing the existing situation which is consistent with the policy and practice that resulted in the existing lot lines would be much more likely to result in an arbitrary and capricious finding.

The buffer concept in this neighborhood goes back decades. The area between Koontz and Colorado ("Kitchen development") was built up in the early 1970's as SF6. At that time, properties on the north side of Koontz remained in SF1A between the higher density of the Kitchen development and the semi-rural community South of Koontz. This was in large part because the SF6 designation wasn't compatible and conflicted with the horses and other livestock found on the properties south of the Kitchen development. For now, the north side of Koontz east of Silver Sage is still SF1A except for the moderate density creep from the west by Southpointe and the north by the Rasner subdivision off of Baker.

In the late 90's, developer Jim Bawden of Landmark Homes started building Southpointe. The first phase was on the north side of Koontz, east of Silver Sage. This consisted of the construction of 27 homes, 12 on SF6 surrounded by 13 on larger lot sizes with two one acre lots on the eastern side. These two one acre parcels were the original SF1A buffer in the neighborhood. If Center extended north of Koontz, these one acre parcels would be adjacent to Center. Later, the Rasner subdivision used a Master Plan amendment to convert their property into higher density SF12 instead of the existing SF1A. Keeping one acre buffers to the west at Southpointe and the south along Koontz were discussed at length during the amendment hearing and agreeable to the

parties. While the parcels west, south, and east of the Rasner homes remain SF1A for now, it is predictable that all of the properties north of Koontz will either be rezoned or issued special use permits so that they can also be converted from SF1A to higher densities as part of the pattern of one bite at a time, creeping conversion.

The same pattern of creep taking place on Koontz is also taking place one bite at a time South of Koontz. The second phase of Southpointe involved the proposed construction of 90 or so homes on four fifths of the undeveloped SF1A tract bounded by Koontz, Center, Clearview, and Silver Sage. (The remaining 1/5 is the parcel that is the subject of this rezoning request.) Because of significant opposition by the existing residents, it was agreed to extend the one acre buffer that was in place north of Koontz to the south along Center for the full length of the development. The lot lines for both buffered areas match.

Getting back to Supervisor Giomi's original question, matching the existing lot lines that begin north of Koontz and extend south down Center for the remaining three hundred feet to Clearview would be neither arbitrary nor capricious. It would simply follow the existing precedent applied to the adjacent properties in a similar development. If there is a problem with arbitrary and capricious action in this case, it would be by acting contrary to and ignoring the prior buffering policy and practice.

With the benefit of hindsight, Landmark Homes should never have been permitted to extend Southpointe into the community of one acre minimums South of Koontz. This pre-dated the current master plan and was the proverbial "camel's nose under the tent." It opened the door for the expansion and intrusion of more higher density development into the semi-rural community South of Koontz. Using a mistake made in the past to justify making more mistakes in the future is not sound policy.

In its report to the Commission, Staff pointed out that "(T)he Zoning Map is a tool to implement the Master Plan. Pursuant to Nevada Revised Statutes (NRS) 278.250 the zoning map designation shall be consistent with the Master Plan designation. The current zoning designation of Single Family 1 acre is not consistent with the underlying Master Plan of Medium Density Residential. " Yet, Southpointe, which consists of SF6 with an SF21 buffer, is consistent with the Plan. This is true, even with the underlying agreement to limit the SF21 with one residence per acre. This is also borne out in the report prepared by Susan Pansky Planning for the Applicant is consistent with the residents' view. Figure 4 of the report shows that SF21 is consistent with Medium Density Residential and, as such, consistent with the Master Plan. Adopting our alternative zoning proposal and developing the parcel in question like Southpointe would, likewise, be consistent with the plan.

The maps showing the existing and proposed zoning on page 7 of Staff's report omitted the zoning designation adjacent block to the south of the parcel, bounded by Clearview, Center, Roventini, and Silver Sage. It is designated as Medium Density Residential on the Master Plan map. Staff says it is zoned SF1A. However, the Assessor's map shows the existing residential properties fronting Clearview to be about 4/10ths of an acre in size. This is consistent with SF21, not SF1A. While

those parcels don't reflect SF6 proposed for the parcel directly across the street, they do mirror the existing zoning of the buffer on the west side of Center.

The Commission failed to address the alternative zoning proposal raised by the residents. As shown on the maps of existing and proposed zoning on page 7 of the Staff report, there is no SF6 zoning on Center Drive between Koontz Drive and Clearview Drive nor on Clearview between Silver Sage and Center. The SF6 zoning designation for the entire parcel is inconsistent with the current zoning on the north, south and east sides and does not provide an adequate transition between the proposed SF6 and the surrounding SF 1A and SF 21 .

Since the existing SF21 buffer on Center and the existing residences on the south side of Clearview already meet the requirements for SF21, both meet the Master Plan's designation of the area as Medium Density Residential, amending the proposed zoning to SF21 along Clearview would also be reasonable, consistent, and appropriate.

Staff and the Commission seem to place a fervent belief in the sanctity of the Master Plan to control zoning and any other values appear irrelevant when it comes to forcing conformity with their predetermined zoning choices. The Master Plan is a policy document used to guide the physical development of the City and does not have the force of law as a regulation or ordinance. The key word is "guide." The Master Plan is a guiding document, not a controlling one.

Goal 9.4 of the Plan is to "PROTECT THE CHARACTER OF EXISTING RURAL NEIGHBORHOODS." The Goal clearly states "*(T)he character of existing rural neighborhoods will be protected.*" and "*(T)he quality and character of established neighborhoods will be maintained.*" Goal 9.4a states that the policy is to "*(E)nsure that infill and redevelopment is designed in a manner that minimizes impacts on the character and function of rural neighborhoods.*"

This pertains directly to the community South of Koontz. We have always been recognized as rural to a large extent and we live here, in large part, because of the rural character. This is a quality of life issue for us. We have a strong interest in protecting or maintaining the character of our community. We are the ones who will be forced to bear the impacts from new development most directly and believe that it is the City's obligation to balance our good faith expectations with the desires of the planners. As our semi-rural neighborhoods are converted to higher density urban areas, we are continuing to lose, not maintain, the diversity in our city.

The Staff concludes at Section II on page 3 of their Report that "the Amendment will provide for land uses compatible with existing adjacent land uses." This is questionable at best.

Carson City Municipal Code 7.13.050 deals with zoning and livestock. There is a significant distinction between animals allowed on SF1A and SF6. Subsection 4.a states: "Horses, swine, fowl, sheep or other animals of a similar nature shall not be maintained on any lot or parcel other than a lot or parcel zoned agriculture (A), conservation reserve (CR), single-family one-acre (SF1A), single-family two-acre (SF2A) or single-family five-acre (SF5A)." Not only is SF6 incompatible with farm animals, so are the larger, transitional lot sizes, specifically, SF12 and SF21. Common sense tells us that using SF12 and SF21 as transitions between SF6 and SF1A are not at all arbitrary or

capricious and is quite reasonable even though the residents would be precluded from keeping farm animals.

Supervisor Bonkowski correctly identified the inevitable conflicts resulting from urbanizing neighborhoods that have extensive equestrian communities. There are a greater number of horses South of Koontz than one might think. All of the SF1A properties adjacent to the parcel have livestock or facilities for livestock. The Tolle place on Center keeps horses, has a rodeo practice arena and is adjacent to the parcel. The Creeches, next door to Ms. Tolle also have horses. There are three residences at the intersection of Clearview and Center adjacent to the parcel. Silver Peak Stables provides facilities for boarding and training a number of horses, mainly charros from the Mexican community who can't keep horses where they live. The Canaries, on the southwest corner, don't have horses, but they do have shelters for horses and hay storage. I don't have horses, but I do have fencing, water, and shelter available for smaller animals such as llamas and goats.

Further south, between Silver Sage and Oak, most of the residents have horses or facilities for horses. Even so, the master planners have decided that everything west of Silver Sage until you reach the freeway needs to be converted to a much higher urban population density that is incompatible with anything other than household pets. Even though this area is not adjacent to the parcel proposed for rezoning, Staff and the applicant have used the development of this area as justification for the proposed zoning change when it's convenient.

Goal 9.4a states that the policy is to *"(E)nsure that infill and redevelopment is designed in a manner that minimizes impacts on the character and function of rural neighborhoods." Establish guidelines for the incorporation of higher density residential at the fringe of existing rural neighborhoods, as well as on individual lots within them (although this pattern will be discouraged).*" In addition, goal 9.4b deals with "Spot" rezoning, stating *"Discourage "spot" rezoning of parcels within established rural neighborhoods that have not been identified as higher density on the Land Use Map and/or that are not contiguous with lots zoned for a comparable density."* Evidently, when it comes to the community South of Koontz, these goals do not apply.

The so-called "transition" to a higher density, more urbanized community on both sides of Silver Sage is discussed on page 8 of the Pansky report where it says: *"The area surrounding Silver Sage Drive on both the east and west sides has been transitioning to higher density residential and commercial land uses slowly over the past several years."* This self-serving comment is used to justify the further intrusion of incompatible, higher density residential projects South of Koontz, but is entirely misleading. The projects cited as evidence of this supposed transition of the neighborhood South of Koontz deserve further scrutiny:

Jackson Village is an isolated 41 unit high density project on three and two-thirds acres on Eagle Station Lane. It is isolated from the community, walled off by Kohl's on the west, the Southwest Gas equipment yard to the east, Mountain View Health and Rehabilitation Center to the north and to the south, is directly across the street from the JC Penney and Greater Nevada Credit Union parking lots. Unable to secure a commercial tenant as intended by the master plan, it required a

special use permit to move forward. After five years, it is still under construction.

Silver View Townhomes is located on unbroken ground at the corner of Silver Sage and Clearview. The undeveloped site is next to the Greater Nevada Credit Union. Consistent with its intended use as retail/commercial property, it was available for commercial development for several years. The only commercial interest we are aware of was Max Baer's proposed Beverly Hillbillies Casino which did not come to fruition. Unable to acquire a commercial tenant and much like Jackson Village, a special use permit to bring in 34 high density town homes was acquired in March of this year.

The Pansky report also mentions *"...a 51-unit condominium development on East Roland Street" and ...the high density residential townhome community, Ross Park..."*

Silver Crest Condominiums on Roland also required a special use permit just like Jackson Village and Silverview. It is located in The site is surrounded by one acre residential properties. This is an anomalous little neighborhood in an isolated triangle of mixed high density apartments, gated senior housing, townhomes, condominiums, a church, and mini-storage that is backed up against the freeway to the south, South Carson Street with the bowling alley and Aloha Liquors on the frontage road to the west, and Fire Station 53, Ross Gold Park, and Snyder Avenue along the northeast side.

Ross Park development is a "camel's nose under the tent" project like Southpointe. Currently, 75% of the properties in that neighborhood are one acre or greater with the remainder being half acres. Ross Park, on the other hand consists of building permits for 23 units on a 3/4 acre triangle bounded by California, Snyder, and Ross Gold Park. While it is a small parcel, it is the first project north of Snyder. It is the first of many and, at some time in the future, will serve as the "evidence" needed to provide justification for the planned conversion of all of the semi-rural properties to the west of Silver Sage to higher, urban densities.

The Ross Park project has been in the works for over 13 years. Some infrastructure was installed on the site, but it would appear that was done to evade losing the building permits. No residential units have been built. Engel & Volkers AG, a multi-national German company that generally assists clients in buying or selling luxury property worldwide, is looking for someone to purchase the site and permits. The same thing is happening on the other side of S. Carson Street and Snyder at the Cochise Multi-family project. Here, once again, no construction is taking place, the owner is just trying to sell a 6.8 acre parcel with permits for 143 units. They are essentially speculating on the permit market, rather than building homes.

To insist that this building permit lottery is evidence that *"(T)he area surrounding Silver Sage Drive on both the east and west sides has been transitioning to higher density residential and commercial land uses slowly over the past several years"* is ridiculous. In fact, the only real development that has taken place in the area South of Koontz was the large-scale development between Clearview and Roland, east of Ponderosa in the late 1990's and, more recently, the Canyon Vista development between Clearview and Appion, west of the newly completed freeway.

In both cases, the developments are on one acre minimums. The higher density projects aren't even being built and the only real "transition" to higher density that has actually occurred in the community in the past 30 years is Southpointe.

Furthermore, the necessity of resorting to "special use permits" in lieu of "spot zoning," helps further the illusion of contiguity and urban development in the community. There simply is no real transition to higher density housing actually occurring place South of Koontz.

While Staff may enjoy the luxury of looking at projects in isolation, ignoring everything beyond the four corners of the application. the Commission and the Board are obligated to see the bigger picture. The Commission failed to take into account the cumulative effects of recent actions involving development in the area, including the introduction of almost 700 more residential units west of Center between Koontz and the freeway.

<u>Project</u>		<u>Units</u>
Carson Hills Apartments	370	
Cochise Multi-family	143	
Jackson Square		41
Silver View	34	
Silver Crest Condominiums	51	
Ross Park	23	
Clearview and Center Rezoning	<u>35</u>	
Total units	697	

Applying the U.S. Census Bureau average household size for Carson City of 2.33 persons per household to the total number of proposed households South of Koontz, this translates to more than 1,600 additional residents west of Center and south of Koontz. There is a real lack of transparency by not considering the role of this rezoning proposal as justification for the City's plan to convert a significant part of the community west of Center to a much higher population density.

On page 6 of the Pansky report, Andrew Feuling, Director of Fiscal Services for the Carson City School District, generally expects 30 students forevery 100 residential housing units. While the applicant and the school district agree that the potential for 10 new students based on this proposal when viewed in isolation would not be a problem, Mr. Feuling also said that the "aggregate of all development," i.e., the cumulative effect from all of the development taking place, is an ongoing concern. Limiting the review to merely the parcel under consideration, the estimate is for approximately 10 students across all grade levels simply ignores the bigger issue facing our community. Notwithstanding students being generated from other new and proposed developments around Carson City, pose the same question, but include the students among the 1,600 additional residents to be expected soon, and the district's position could very well be different. Adding even more students to an ever increasing total will have an impact and require the people of Carson City to come up with more resources to deal with it. Clearly, the school district shares some of the concerns of the residents South of Koontz.

Another item not mentioned at all is the cumulative impact that will be generated by 1,600 more residents less than one mile from the already busy Fire Station 53 on Snyder Avenue.

An ongoing problem for the current residents South of Koontz is increasing traffic, particularly on Clearview, Silver Sage, Koontz, and Center. These streets are used as a by-pass from south Carson Street to Saliman and Edmonds. That was the case before the freeway and is still the case today.

At the February Commission hearing on the Silver View Townhomes project, Mary Siders, a resident of the Southpointe development, testified about the problems those residents were already having getting on to Silver Sage. She said the problem would be exacerbated by the proposed 34 residential units to be contributed by the Silver View Townhomes project. Add 41 more from Jackson Village and the potential for 38 more units from rezoning this parcel and you've got drivers from 113 more residences trying to use Silver Sage between Southpointe and the Greater Nevada Credit Union as their principle means of access. Things aren't looking any better for Ms. Siders.

There are currently about 40 homes on Clearview from Silver Sage to Edmonds. Yet, as I pointed out at the February hearing and Staff confirmed for this proposal, Clearview already sees about 7,000 vehicles per day. This traffic is not primarily local. Clearview enables drivers traveling to northeast Carson City and Lyon County to avoid three additional stoplights and the congestion on Carson Street. It is also faster and more convenient to use the same by-pass to access northbound 580 at Fairview rather than the 395-Hwy 50 interchange on south Carson Street.

According to Staff, the "Institute of Traffic Engineers (ITE) Trip Generation Rates Manual (9th Edition) indicates that 38 units would general (sic) approximately 362 average daily trips..." Using the same multiplier, an additional 1,076 average daily trips would actually be generated by the 113 new residential units coming into our neighborhood. This doesn't even include the contribution to the traffic load from the 513 additional residential units at Carson Hills Apartments and the Cochise Multi-family development.

Again, the Commission and the Board should be considering the this project in light of the bigger picture. The Southwest Carson Traffic Circulation Study isn't mentioned in relation to this proposal. Since the study is merely a proposal intended further the residential development South of Koontz, Staff does not appear to believe it is relevant to the current proposal. This is in keeping with Staff's practice of compartmentalizing individual projects and ignoring the overall impact on the community. This lack of transparency helps keep local residents from objecting to the plans until it's too late. It also creates a "sunk cost" issue, i.e., "we can't justify investing so many tax dollars in upgrading the streets if we don't move forward and build more residential units in the area."

The Cochise Multi-family and Ross Park projects should realize a substantial windfall in the value of their unsold building permits by providing a level of street access that they don't currently enjoy.

After reading the proposal, it is clear that the plan does nothing to address the residents' issues. It just makes the problem worse. Staff's recommendations in the Circulation Study that are most relevant to the residents South of Koontz are:

- Realignment of Snyder Avenue to Appion Way and then signaling the intersection of Appion/Snyder/S. Carson Street (and W. Overland)
- Improving access from properties south of the Snyder Avenue to Oak Street and then improving Oak Street between Roland Street and Clearview Drive
- Using Silver Sage Drive to accommodate additional traffic and promote circulation and development in the area

Reducing the number of driving lanes on S. Carson and then adding a fifth traffic signal will create more congestion on S. Carson from the freeway to Koontz. As a result, it will force highway traffic onto Appion and Oak and then onto Clearview and Silver Sage to avoid the congestion. In addition to the highway traffic, using Oak Street to funnel even more traffic onto Clearview and into the bottleneck at the Silver Sage/Clearview intersection will create an even worse impact on our neighborhood. Staff's plan also recognizes even more traffic on Silver Sage in order to accommodate the conversion of the existing properties in the neighborhood higher density residential.

In conclusion, the zoning for the Clearview parcel should remain as SF1A. However if it is going to be changed, it should reflect the alternative that was offered by the the residents directly impacted by the proposal. The parcel along Center should remain SF1A or, at the very least be no less than the existing SF21 on the west side of Center. The same goes for Clearview with the parcels being no less than the same size as those on the south side of the street. In the words of Susan Pansky, the existing residents "...are not asking for anything outside of what the master plan had contemplated in its last update."

In addition, the Master Plan is outdated and doesn't consider changes that have taken place in Carson City since 2006. Fifteen years is much too long an interval between plan revisions. It's time for the Board to initiate a significant city-wide revisiting, revision, and amendment of the Master Plan.

ss  
 Michael Tanchek  
 740 Clearview Drive  
 Carson City, NV 89701

October 6, 2020

## Heather Ferris

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**From:** Michael Tanchek <mtanchek@yahoo.com>  
**Sent:** Friday, January 15, 2021 3:59 PM  
**To:** Heather Ferris  
**Cc:** Larry Leach; Connie Creech; Greg Garling; Mary Graber; Armando Ramirez; Qin Song; Lisa Schuette; Stacey Giomi; Stewart; Miriam Volpin; Sunny Volpin  
**Subject:** Additional Comments Borda Crossing (SUB 2020-0016) and (ZA-2020-0005)  
**Attachments:** Jan 15 2021 Split Zoning Transitional Buffers and Spot Zoning.docx  
  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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Heather-

Here are some additional comments for inclusion in the records for both the Planning Commission's review of State Street Development's tentative subdivision proposal for the Borda Crossing (SUB 2020-0016) and the Board of Supervisors consideration of both the Borda Crossing tentative subdivision map and the original the rezoning application from JJ Summers LLC for the property on Clearview now proposed as Borda Crossing (ZA-2020-0005.) The comments are in the e-mail, but I have also included them as an attachment.

Thank you,

Michael Tanchek  
 740 Clearview  
 January 15, 2021

Supplemental Comments  
 Carson City Board of Supervisors (JJ Summers LLC Rezoning ZA-2020-0005)  
 Carson City Planning Commission (Borda Crossing SUB 2020-0016)

Michael Tanchek  
 740 Clearview Dr.  
 Carson City 89701  
 January 15, 2021

"SPLIT ZONING," TRANSITIONAL BUFFERS, and "SPOT ZONING"

When the Board of Supervisors first heard the request for rezoning the Borda property at Clearview and Center (June 18, 2020), then Supervisor Bonkowski wanted to know if, "split zoning," could be an option that would mitigate the concerns of the local residents. He never really got an answer. Supervisor Giomi wanted to know whether approach might be construed as "arbitrary and capricious." The answers, from what I can tell, are "yes," "split zoning is permissible and "no" it would not be arbitrary and capricious unless it was done improperly.

In response to a question from Krista Leach, Heather Ferris wrote that "There are no state statutes or local municipal codes that prohibit a split Master Plan designation or split zoning, whether on a block or single property." That goes a long way towards addressing Supervisor Giomi's concern.

The record should include comments I originally submitted to the Planning Division on October 6, 2020. My comments provide quite a bit of information concerning the history of the one acre transitional buffer zones along Koontz and Center. In a nutshell, when Southpointe was started north of Koontz, the zoning on the east side was left single family one acre,

s a transitional buffer between the SF 6000 and the one acre parcels on the north side of Koontz. When the Rasner development was approved (north of Koontz, east of Southpointe, and accessed by Baker), the lots were zoned at an intermediate density to avoid an abrupt transition between the SF 6000 in the Kitchen subdivision and the SF 1A on the north side of Koontz.

In the late 1990's, Jim Bawden of Landmark Homes wanted to extend Southpointe across Koontz into the semi-rural community. (Whether or not this intrusion should have been allowed into the neighborhood in the first place is water under the bridge.) However, the move was actively opposed by the existing residents in the community. As a result, it was agreed that the west side of Center would be zoned SF 1 acre. This "split zoning" was done to provide a transitional buffer to accommodate the residents in the less densely developed neighborhood to the east, just like it was across the street on Koontz.

We were quite surprised to learn from a map in the application submitted for JJ Summers that the zoning on Center had somehow gone from the agreed upon SF 1A to SF 21, single family half acre. It appears that the Commission acted capriciously when they arbitrarily expanded the area to be rezoned and then compounded the error by deliberately choosing not to provide adequate notice of the change to the residents of the neighborhood in 2008.

All of the existing houses on the west side of Center are on one acre, reflecting the SF 1A zoning that existed when they were built. There is one exception. The smaller lot next to Mayor's Park was allowed in order to accommodate the storm water basin and leach field in the the park. Jim Schneider wanted to build two houses on the southernmost one acre parcel even though he knew only one was allowed by the zoning. In anticipation of a favorable recommendation from the Planning Commission, he built the existing house on the northern half of the property and left the south half vacant. Shortly thereafter, he filed an application to rezone his property so he could build the second residence. The rezoning was opposed by Margaret O'Driscoll and Elaine Sharp. Ms. O'Driscoll and Ms. Sharp are both also opposed to the Borda Crossing plan as proposed by State Street. The Schneider property has since been acquired by Greg Garling. Mr. Garling feels that the part of Borda Crossing that directly abuts his south fence line should be one acre and match the lot lines just like him and his neighbors to the north.

Notwithstanding the problems with the process, several issues that are relevant to the Borda Crossing plan were addressed by the Commissioners in the Schneider matter. First of all, Commissioner Wendell suggested that "spot zoning" would be a concern of the Commission if they rezoned the Schneider parcel while everything to the north, south, and east on Center was still SF 1A. (Given that the de facto "spot zoning" of the small parcels at Jackson Square between the Kohl's loading dock and Southwest Gas' equipment yard and Silver View Town Homes and the Devil's Triangle cross from Ross Gold Park into high density residential directly adjacent to SF 1A zoning is being used to justify rezoning Borda Crossing. It looks like any excuse will do to justify imposing higher density development in the neighborhoods south of Koontz.)

When Commissioner Mullet suggested considering rezoning the parcel to the south (directly across the street from Ms. O'Driscoll at what is now Borda Crossing) to single family half acre, SF 21, "along...Center Drive for the depth of those lots and then the front part of that larger lot could then go down to the six...to match the neighborhood to the north of it...kind of split that large one up...so you have some consistency on Center." (As an aside, while not a perfect solution, I think Commissioner Mullet had an idea of matching lot lines is worth pursuing. And, this time, it should be pursued with the participation of the community's residents.) Commissioner Mullet's suggestion was dropped. Instead the Commission decided to just rezone the existing one acre residential properties from SF 1A to SF 21.

Ann Smith, of Western Engineering representing the applicant, expressed the belief that the comprehensive master plan accommodates approval of the application and that the application represents "a good use of the property and a reasonable request." Commissioner Wendell felt that staff was trying to alleviate the concern over spot zoning and the approach would be to consider the parcels as a transition area.

The application was revisited at the following meeting of the Planning Commission. At that time, the Staff representative agreed with changing the zoning designation of the subject parcels, and stated that "... it's a good transition zone between the 6,000 square foot lots in the South Pointe subdivision and the one acre lots across the street."

The Schneider rezoning contains information very relevant to Borda Crossing. First of all, Commissioner Wendell's opinion that approving a zoning classification at the southern end of Center that was inconsistent with the zoning to the north for the benefit of a single property owner constituted improper "spot zoning." This is the same situation proposed in the Borda Crossing plan with SF 6000 being placed next to SF 21.

In the Schneider application, the developer, staff, and the Commission all agreed that SF 21 zoning on Center represented a good transition between the SF 6000 and SF 1A, was consistent with the master plan, represented good use of the property, and alleviated the "spot zoning" problem.

The Schulz Ranch Specific Plan Area in the Master Plan can provide some good guidance on how to approach these transitional areas when higher density development butts up against rural and semi-rural neighborhoods.

Now State Street Development is now proposing to avoid the six houses to the acre limitation and convert the property to higher density residential by pursuing a "common open space development." When the Board of Supervisors directed Staff to work with the developer to come up with a better plan, I really don't think that the further extension of a high density invasion into a semi-rural neighborhood was what they had in mind. This special privilege work-around not only violates the spirit and underlying purpose of the Master Plan, it pretty clearly demonstrates that the Staff and the McFadden-Landis-Turner combine are fine with ignoring the past policies and practices of the Commission. It appears that they could care less about what the neighboring residents or the Board of Supervisors think.

At this point, the Commission and Supervisors should reject the Borda Crossing plan in its entirety as part of a common scheme by State Street Development to extend a spot zoned high density residential development into a low density community. They should take whatever steps are necessary to revoke the special use permit granted to State Street for the Silver View Townhomes. In addition, the west side of Center Drive should be restored to SF 1A zoning to reflect what is actually there and, if it would help, amend the Master Plan to place all of Center into the low density classification.

In the event the recommendation in the above paragraph cannot be adopted, we would be willing to work towards a reasonable accommodation. Center is not the only part of the Borda Crossing project where a realistic transition should be considered. A majority of the residents along the north fence line between Borda Crossing and Southpointe as well as residents on the south side of Clearview between Silver Sage and Center have all expressed their opposition to the plan as submitted. Perhaps former Commissioner Mullet's "matching" proposal could be used as a starting point.

**Heather Ferris**

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**From:** Michael Tanchek <mtanchek@yahoo.com>  
**Sent:** Tuesday, January 19, 2021 1:08 PM  
**To:** Planning Department; Heather Ferris  
**Cc:** Krista Leach; Greg Short; Connie Creech; Alfred Canary; Darlene Warnock; Earlene Issel; Daniel Goggiano; Greg Garling; Karen Crandall; Miriam Volpin; Sunny Volpin; Tammy Riddle; Alex Tanchek; Mary Graber; Mary Siders; Armando Ramirez; Qin Song; Rob Ferber; Stewart; Alan Callanan; Harry and Nyki Koch; Walt Homentowski; Jennifer Miller; Kassie Herling; Shaylayna Thayer; Jim Balderson; Donna and Mark Ford; Linda Curtis; Debbie McMurtrey; Mike and Rhonda Imberi; Laurel Dority  
**Subject:** SUB-2020-0016 Additional supplemental comments-Water and Traffic  
**Attachments:** 4- Borda Crossing comments water and traffic SUB-2020-0016.odt

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Heather-

Here are those additional comments I promised you.

Thanks, Mike Tanchek

Supplemental Comments- Water and Traffic  
 Carson City Board of Supervisors (JJ Summers LLC Rezoning ZA-2020-0005)  
 Carson City Planning Commission (Borda Crossing SUB 2020-0016)

Michael Tanchek  
 740 Clearview Dr.  
 Carson City 89701  
 January 19, 2021

### Wellhead Protection

There are a significant number of domestic wells south of Koontz Lane. The French's on the southwest corner of Silver Sage and Clearview, Silver Peak Stables, and myself at the intersection of Clearview and Center are all on domestic wells and immediately adjacent to Borda Crossing. Wellhead protection is of vital concern to all of us. This issue was first raised at the Planning Commission hearing on JJ Summers original zoning request. Commissioner Perry was surprised to learn that there were domestic wells south of Koontz, let alone three directly adjacent to the parcel on Clearview.

A little history is in order. In 1995, the area south of Koontz became subject to the Mandatory Sewer Connection Program. The following is from the Development Engineering Division's website.

"The Mandatory Sewer Connection Program **was created** and defined by Resolution No. 1995-R-31 **to protect the groundwater supply from contamination** from septic systems in the southeast area of Carson City. The resolution requires that all properties in the designated areas must sewer their properties using the Carson City sewer system, as it becomes available...The Southeast Carson City Mandatory Sewer Connection Program area is defined as being bounded by parcels adjacent to the south side of Clear Creek Road and Snyder Avenue to the south, east side of Highway 395 to the west, south of Kingsley Lane to the north, and BLM property east of Gentry Lane."

Although the program initially targeted septic systems, the same dynamics are at work when other pollutants are leached into the groundwater as well. The Development Engineering Division's website provides a link to the Environmental Protection Agency's "National Pollutant Discharge Elimination System (NPDES) Stormwater Program." The Division's link doesn't appear to work, so you should try

[https://www.epa.gov/sites/production/files/2015-10/documents/nps\\_urban-facts\\_final.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/nps_urban-facts_final.pdf)

This link should take you to EPA Bulletin EPA 841-F-03-003 "Protecting Water Quality from Urban Runoff." Concentrated urban runoff is just as bad, if not worse, than the threat to the groundwater posed by widely scattered septic tanks.

The following information is found at page 12 of the Borda Crossing tentative map application.

**"A retention basin is proposed for the south east corner of the site within the common open space.**

Maintenance of the basin will be the responsibility of a condominium association, or similar entity. The Conceptual Drainage Study in the Appendix includes analysis and description of the stormwater capture, conveyance, and retention system for the site. The retention basin itself will be approximately 4' deep and lined with rock. The capture/conveyance system will include oil and grease filters to remove pollutants before stormwater is routed to the basin. The filtered stormwater will be infiltrated back into the ground on-site within the retention basin. Per the attached Geotechnical Report (Wood Rodgers, December 17, 220), test pits were dug to 10' below the surface and demonstrated no presence of groundwater, which is noted in the Report to be 40' below the surface."



Wood Rogers test pit for the retention basin/leach field to be placed at on the southeast corner of the site. The truck is approximately 55 feet from my domestic well.

This "solution" is at odds with the recommendation of Susan Pansky in the application prepared for JJ Summers. At page 6 she wrote:

"According to the Chief Stormwater Engineer, Robb Fellows, the location of the subject property is lacking in stormwater infrastructure. There are underground systems to the north in Koontz Lane and to the east in Hillview Drive. For future development, a detention basin would be required on the project site as well as roadway drainage conveyance either to the north or east. The north would likely be a better route, if possible, due to the shorter distance as well as the presence of curb and gutter along Silver Sage Drive between the parcel and Koontz Lane."

Now State Street proposes a leachfield on the southeast corner of the parcel next to my well as a superior solution Pansky's recommendation to use the existing storm drain system on Silver Sage at the northwest corner of the parcel. This is personally significant to me because I believe the proposal imposes a direct and substantial hazard to my domestic water supply. I do not agree that the mere fact that the City can sell its water to me through its commercial water business is sufficient justification to allow State Street Development to put a leach field next to my well.

The plan also proposes a through street connecting Silver Sage and Center. This additional paved street would connect to Center less than 100 feet northwest of my well, providing an additional source of contamination at the well head.

The City and State Street are on notice of my concern with the location of the leach field and street, and the threat they pose to my domestic well. I believe that the siting of the retention basin is being proposed knowingly and deliberately even though the City and State Street were made aware of the hazard posed to my well.

All of the run-off associated with Borda Crossing should be diverted to Silver Sage. Diverting the run-off to Silver Sage would use infrastructure already in place, as recommended by Ms. Pansky in the earlier JJ Summers rezoning application. Retention basins or leach fields, if they are even necessary, should be located on the northwestern part of the property.

Mark Twain is credited for pointing out that, here in Nevada, "Whiskey is for drinking. Water is for fighting over." That is quite evident in south Carson where there are apparently those on the City staff who believe these domestic wells are something to be eradicated by any means necessary. The City needs to recognize domestic wells as an important low-cost water source serving Carson City's residents, rather than being treated as a competitor to the City's commercial water business.

## Traffic

Traffic is a big issue in our semi-rural residential neighborhood. We recognize it is a problem elsewhere as well. We also recognize that the problems are often self-inflicted due to over-development and the approval of projects that are simply out of place.

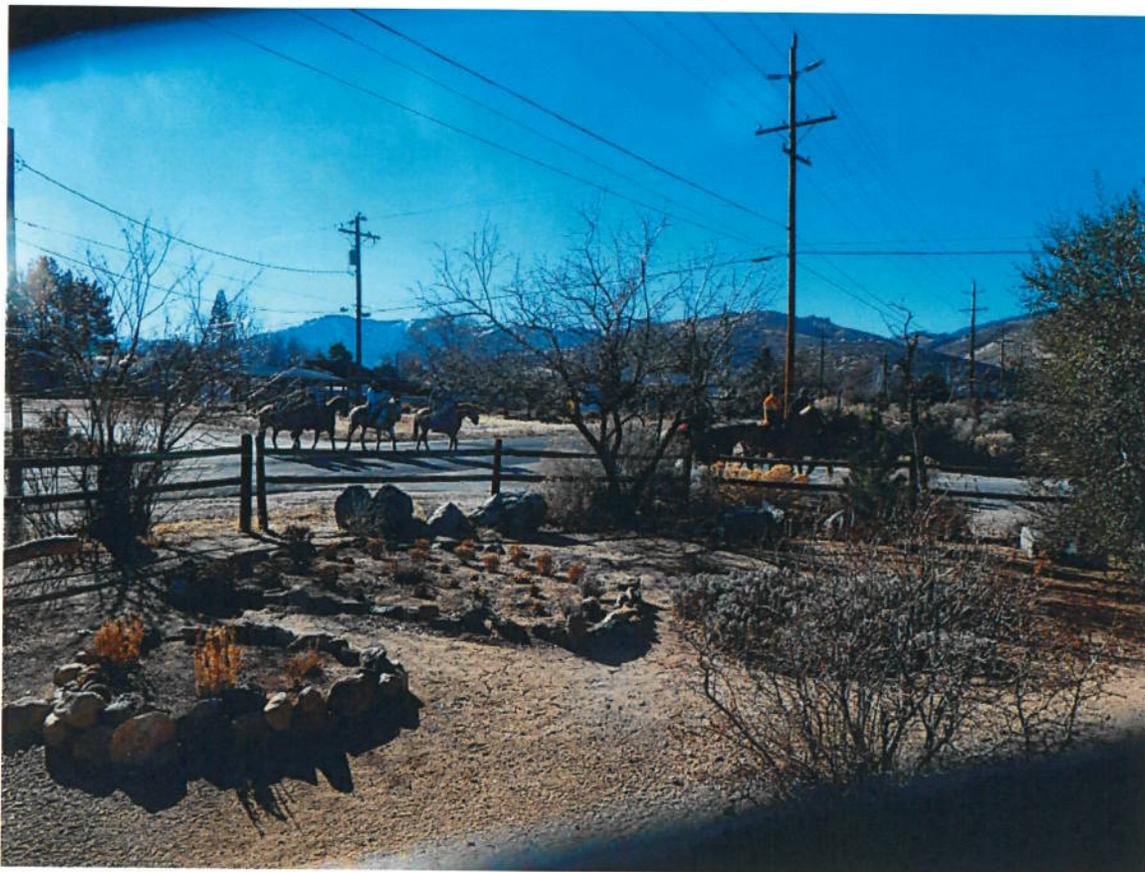
All of the residents in the area surrounding Borda Crossing, from both the low density neighborhoods and medium density Southpointe are objecting to the increased traffic overall, the proposed street connecting Silver Sage and Center, and the negative impact on the significant amount of recreational use on Center.

The Southwest Carson Circulation was still in the discussion phase when I last looked at it. It appears that the plan is to route a significant amount of the traffic to the intersection of Clearview and Silver Sage. The increased traffic would come from two sources. One is the planned conversion of all of the single family one acre, low density parcels west of Silver Sage and south of from Clearview to Snyder an urban medium density community similar to what is proposed at Borda Crossing. The other is to route traffic from the high density community behind the bowling alley south of Snyder through a planned upgrade of Oak Street to its intersection with Clearview across from Big 5.

When Mary Siders, a resident of Southpointe, and I testified in opposition to the Silver View Townhouse project at the corner of Silver Sage and Clearview, Ms. Siders principal concern was problems associated with increased traffic congestion from 34 townhomes interfering with their ability to get in and out of Southpointe on Summerfield. Her concerns were downplayed by Staff and State Street. Adding an additional 28 homes to that intersection is only going to make it worse. The City's position that 34 townhomes at that location wouldn't cause a problem didn't seem particularly realistic. Increasing the total number to 62 residences at that intersection is downright ridiculous. We aren't even considering the contribution from the 41 residential units they're putting in at Jackson Village on Eagle Station Lane.

The residents on Clearview from Silver Sage to Center have told me about their problems getting into and out of their homes because of the traffic. Greg Short has filed comments objecting to any plan that would put more driveways on Clearview between Center and Silver Sage. I can relate because that is why I moved my primary driveway from Clearview to Center.

Center Drive is also problematic. There is more traffic on that street than one would expect. That is because it is used to by-pass the traffic and three traffic signals on Carson Street between Clearview and Koontz and the four-way stop at Silver Sage and Koontz. This is the most convenient route east from South Carson Street to Baker, Saliman, Edmonds, and on to the communities out Highway 50 in Lyon County. The problem on Center is compounded by the fact that it gets a significant amount of recreational use. There a lot of walkers, joggers, and dog walkers who use Center. People even walk down from the Kitchen development to walk their dogs because of the more pleasant rural feel. Local bicyclists prefer it to the designated bike lanes on Silver Sage because there is more room and less traffic for them to worry about.



Charros and other equestrians are among the regular recreational users of Center.

When the original JJ Summers rezoning application went before the Board of Supervisors. Supervisor Bonkowski, himself in the business of selling real estate, expressed real concern about the conflict the rezoning would create for the equestrian community in the neighborhood. Besides the charros who stable their horses at Silver Peak Stables, adjacent to Borda Crossing, there is a few blocks south. In addition, there are horses on the Creech and Tolle properties just north of me on Center and at the Thayers place on Roventini behind Greg Short and next to the Canary's. All of whom are opposed the the project.

The through street bisecting Borda Crossing from Silver Sage to Center is unacceptable. That just increases the already too high traffic on Center. One issue raised by one of Staff's conversations with Krista Leach was the necessity of the street to allow for looping the water system through to the water line on Center. It is very important to loop because you can't really have dead ends in a water line, However, a street is not necessary to accomplish the task. Those of us on the south and east sides are opposed to the street and any additional driveways on Clearview. The preferred alternative is a cul de sac from Silver Sage rather than the through street. This is problematic relative to the traffic problems on Silver Sage. That could be mitigated somewhat by reducing the number of houses at Borda Crossing.

Respectfully,

Michael Tanchek

740 Clearview  
Carson City, 89701  
January 19, 2012

Supplemental Comments- Community Outreach  
Carson City Board of Supervisors (JJ Summers LLC Rezoning ZA-2020-0005)  
Carson City Planning Commission (Borda Crossing SUB 2020-0016)

Michael Tanchek  
740 Clearview Dr.  
Carson City 89701  
January 19, 2021

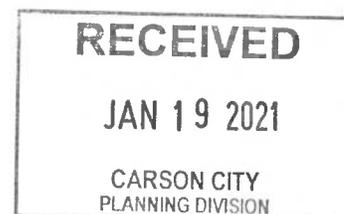
To: Heather Ferris  
Carson City Planning Division

Re: Community outreach

I am submitting the attached map. It shows some of the local interest in the Borda Crossing project. I have personally talked to all of the residents in the homes color coded on the map. Those in yellow all opposed the proposed plan. I wasn't able to contact those denoted in blue. The two in orange just asked to be kept apprised of the proceedings.

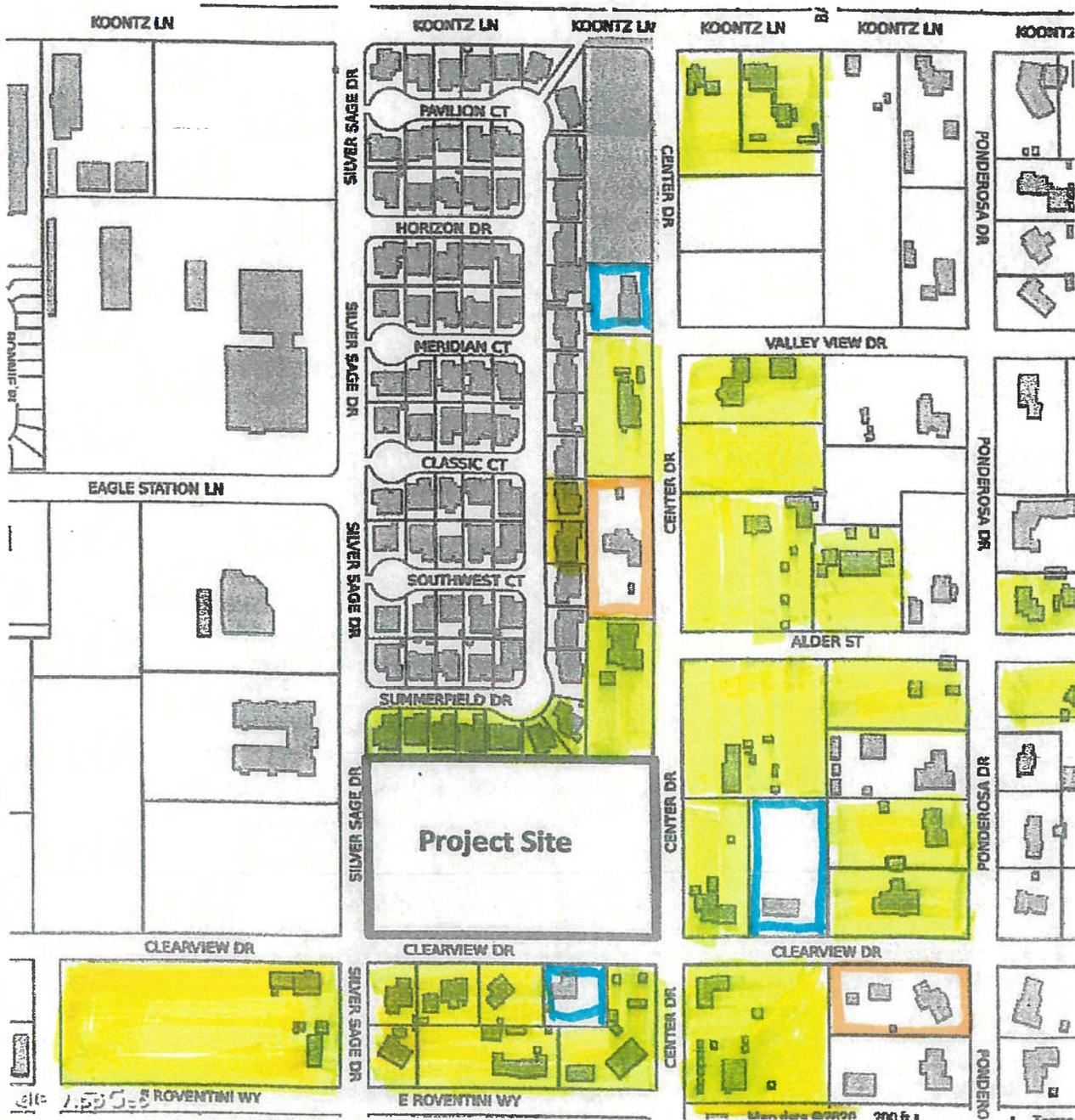
There are more people opposing the project because of the negative impact it will have on our chosen quality of life, but they are outside the area shown on your vicinity map.

Thank you,  
Michael Tanchek  
Jan. 19, 2021



# VICINITY MAP: SUB-2020-0016

SUBJECT PROPERTY: SILVER SAGE DRIVE/CLEARVIEW DRIVE  
APN: 009-124-03



- OPPOSED
- KEEP INFORMED
- UNABLE TO CONTACT

*Michael Tull*  
1/19/21

**Heather Ferris**

---

**From:** Larry <lllvfr@sbcglobal.net>  
**Sent:** Friday, January 15, 2021 4:10 PM  
**To:** Heather Ferris; Hope Sullivan  
**Subject:** Borda Crossing Tentative Map Input, File SUB-2020-0016, APN 009-124-03  
**Attachments:** Tentative Map Input.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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Hi Heather and Hope,

Attached is our input regarding the Borda Crossing Tentative Map.

Please include our comments in the record for consideration by the Planning Commission and, ultimately, the Board of Supervisors.

Thank you for all of your explanations concerning how the process works and for being so available.

Hope you have a nice weekend.

Krista & Larry Leach

**Carson City Planning Commission January 27, 2021 Meeting, Agenda Item E.6:  
Planning Commission File SUB-2020-0016, APN 009-124-03 – Dependent on Zoning Map  
Amendment ZA-2020-0005 which was continued by the Board of Supervisors on June 18, 2020  
(Agenda Item 24.B)**

Here is our input regarding the above-referenced Tentative Map application known as “Borda Crossing:”

People buy homes and property based on what is around them at the time of purchase including the applicable zoning laws. Our area in south Carson City is still largely rural with a lot of horse properties. We are now significantly hemmed in by the freeway and, unfortunately, have never nor will probably ever receive the pedestrian/equestrian/bicyclist overpass at Valley View Drive that was initially planned. To put a larger number of homes than currently zoned for with the resulting traffic and other considerations into this area is neither prudent nor fair to the local residents. There is so much other new and proposed development/construction occurring on the south end of town that is already impacting us including the narrowing of South Carson Street. People, by nature, find the least traveled route through an area which has driven our traffic up exponentially. We have no sidewalks so it has become a very dangerous situation.

As the Planning Commission, you have the duty to protect and enhance the quality of life of all of the residents of Carson City. The current national and worldwide affairs and their ensuing economic effects should not have any bearing on your decision with respect to this Tentative Map application. It is not always appropriate to just follow the dollar signs of additional property tax revenues as there are oftentimes just as many or more negative consequences as well.

The subject Tentative Map is dependent upon the underlying Zoning Map Amendment ZA-2020-0005. This was continued by the Board of Supervisors at their June 18, 2020 meeting and remanded back to staff to work with the applicant to find a solution that better suits the neighborhood by creating larger lots around the perimeter as a buffer between the new houses and existing ones. In a June 18, 2020 Nevada Appeal article, former Supervisor Brad Bonkowski is quoted as stating “I don’t think it’s a good mix to put single-family 6,000 next to horses. I want to create more of a transition zone.” Late Mayor Bob Crowell is quoted as saying “I think we want Planning to take a closer look at the compatibility issue.” Although the Tentative Map does allow for a buffer zone on Clearview Drive, it does not create larger lots around the perimeter and it includes a through street from Silver Sage Drive to Center Drive. In addition, it is for a Common Open Space Development which ultimately creates even smaller lot sizes than regular SF6. Therefore, this Tentative Map should be categorically denied.

Although NRS 278.250 Subsection 2 indicates that the “zoning regulations must be adopted in accordance with the master plan for land use,” Subsection 2(m) requires “the protection of existing neighborhoods and communities.” Furthermore, Subsection 3 requires that “the zoning regulations must be adopted with reasonable consideration, among other things, to the character of the area.” Per the current Master Plan Land Use Map, the block is designated Medium Density Residential (MDR). However, per the Carson City online interactive zoning map, all of the west side of Center Drive between Koontz Lane and the subject property is zoned SF21. There are no lots smaller than approximately 1 acre on Center Drive with the exception of the .5 acre parcel next to Mayor’s Park which is due to the park being 1.5 acres. Ideally, both sides of Center Drive between Koontz Lane and

Clearview Drive should be no smaller than 1 acre lots. Just because the Master Plan indicates that MDR includes Zone Districts SF6 and SF12, there is nothing that precludes larger lot zoning especially as a transition buffer to the Low Density Residential properties on the east side of Center Drive all the way to the Prison Hill Recreation Area. Also, per the current Master Plan Land Use Map, the block on the south side of Clearview Drive directly across from the subject property is designated MDR. However, per the Carson City online interactive zoning map, all of the lots are zoned SF1A although the majority of them are .41 acre. It is important to note that in the Master Plan, the Schulz Ranch Specific Plan Area requires “lot sizes shall be provided to allow for a gradual transition in density between existing 1-acre lots and the more urban development.” Our rural neighborhood should be afforded the same accommodation. Better yet would be the concept of “matching” the zoning to what is across or adjacent to each side of the subject property in the established neighborhoods.

Per Planning Division staff, there are no state statutes or local municipal codes that prohibit a split Master Plan designation or split zoning, whether on a block or a single property. Therefore, we propose the following for the protection of our rural area: The entire block between Silver Sage Drive east to Center Drive and between Clearview Drive north to Koontz Lane be designated in the Master Plan as Low Density Residential on the east and south sides with the balance to be designated Medium Density Residential. The zoning on the west side of Center Drive should be conformed to SF1A as on the east side of the street. The zoning on the north side of Clearview Drive should also be conformed to SF1A as it is on the south side of the street with the block just south of the subject property reverting back to Low Density Residential as well in congruence with the properties to the south and east of it. In addition, the subject property should only have ingress and egress via a cul-de-sac from Silver Sage Drive with the exception of private driveways for the 1 acre lot on Center Drive. The only things that should be retained from the Tentative Map application are the landscaped buffer/pedestrian zones on the south and north sides.

There are other pertinent concerns for consideration also:

The four-way stop intersections of Silver Sage Drive and Koontz Lane and Silver Sage Drive and Clearview Drive are disasters waiting to happen. Not many drivers know the proper rules to navigate them and we are subjected to standoffs almost every time we drive through them. We are now definitely getting the 34 single family lots on the 2.75 acres parcel known as Silver View directly opposite the subject property. Please note that both Silver View and Borda Crossing now have the same owner. To put another 28 homes across the street is even more encroachment. The traffic is already extremely dangerous on Clearview Drive as it is one of the main arteries through our section of town to get to the freeway going north and it has no sidewalks.

Not only is our rural way of life in south Carson City gravely threatened, wildlife is also. We have had a six-point mule deer buck on our vacant 1 acre parcel on Center Drive. We have a coyote den somewhere off of Alder Street. We have great-horned owl nests in our area as well as resident Cooper’s and red-tailed hawks. Occasionally, we have a bald eagle or an osprey. There are rabbits, bobcats, and raccoons along with the domestic livestock and many ground units.

For the neighborhood property owners who do have horses, there is no longer anywhere to safely ride. The overpasses at Clearview Drive and Koontz Lane are far too dangerous to take a horse over to the

Prison Hill area. They can no longer go south because of the freeway and the also dangerous Snyder Avenue overpass.

It is evident that the Master Plan has not always been adhered to so why should it be now? There are discrepancies in the zoning versus the Master Plan all throughout the south Carson City area. We are common citizens who are not familiar with the ins and outs of city planning. What lay person knows to also go looking for Master Plan documentation when they have found the online interactive zoning map to rely on? Many owners depended on the zoning laws in effect when they purchased their properties only to have those assurances taken away from them through no fault of their own. It is paramountly unfair to have a developer now try to dictate a change without a compromise which should only be in the best interests of the affected property owners who never saw this coming.

The south part of town has certainly paid its dues lately with respect to all of the high density development on both sides of Carson Street. It is no longer pleasant to drive anywhere and our rural way of life is at stake. We now find ourselves, even more than ever, in a David versus Goliath situation fighting an owner/developer who has not addressed our concerns nor those of the Board of Supervisors. We deserve to be protected by the city and our elected officials. It is frustrating and incomprehensible that the big picture is rarely, if ever, taken into consideration.

We are optimistic that the Planning Commission and, ultimately, the Board of Supervisors, will take our concerns and recommendations to heart and find in our favor. We hope not to end up in the unfortunate position of having to pursue further legal action if necessary. Please be aware that although we have identified quite a number of concerned neighbors, there are probably many more we have not been able to make contact with due to the current COVID conditions and restrictions. Also, many of us own multiple properties or lots larger than 1 acre so that should be factored in as well. It is imperative that all of our voices be heard but that may not be the case.

Respectfully submitted,  
Krista E. and Lawrence L. Leach  
Valley View Trust  
4031 & 4051 Center Drive  
4149 Bigelow Drive  
Carson City, NV 89701  
775-882-7769 home

January 15, 2021

## Heather Ferris

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**From:** att@e.att-mail.com <cecilcrandall@sbcglobal.net>  
**Sent:** Sunday, January 17, 2021 10:38 PM  
**To:** Heather Ferris  
**Subject:** Fw: Borda Crossing Development Sub-2020-0016 and Zoning Map Amendment ZA-2020-0005

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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Can you please verify that you received this e-mail from me? I am having email problems and received a notice it did not go through, however, it appears to have been sent. Thank you.

----- Forwarded Message -----

**From:** att@e.att-mail.com <cecilcrandall@sbcglobal.net>  
**To:** "hferris@carson.org" <hferris@carson.org>  
**Cc:** Carson City Planning Commission & Carson City Board of Supervisors <publiccomment@carson.org>  
**Sent:** Sunday, January 17, 2021, 10:24:30 PM PST  
**Subject:** Borda Crossing Development Sub-2020-0016 and Zoning Map Amendment ZA-2020-0005

I am responding in writing as required to both the Carson City Planning Commission and Carson City Board of Supervisors to state I am in agreement with my neighbors to deny the proposed Borda Crossing Development and deny the proposed change to the Zoning regulations from 1-Acre single family parcels to 28 residential lots in the size of 5009-6000 square feet.

Vehicular access is proposed from Silver Sage Drive and Center Drive. Currently the City of Carson has not maintained the roads in southeast Carson City to carry the proposed increase in traffic. One only has to drive around southeast Carson to see the condition of the roads. Years ago there was a tax increase passed by the citizens to maintain and repair southeast Carson roads and the funds were to sunset. The City (Carson City Board of Supervisors) met prior to the sunset of the tax and approved removal of the sunset restriction. The City did not spend the funds for the purpose intended nor could they identify where the funds were actually used other than thru general funds. One needs only to drive from Koontz south on Center or Ponderosa or Bigelow the short distance to Roland and see the deteriorated condition of the streets. East and west streets are just as poor. The roads are not satisfactory for increased traffic.

Not only are the roads poorly maintained, there are not enough Public Works employees to take on the challenge of a densely populated subdivision. I live on Muldoon Street and my property holds a section of the ditch that carries the water from the I-580 reservoir to Clearview. The water in the ditch comes from the west under Muldoon Street thru a syphon directed in a curved manner at my retaining wall forcing the water to turn and flow north where it makes a turn west and shortly after makes another turn north to angel itself to the corner of Clearview & Hillview where it goes underground to the 5th Street water station. From July 2017 to December 2020, Public Works did not work any maintenance on my ditch property. My yard would flood every time it rained. The stormwater crew came in December 2020 and spent 3+ days to repair the ditch for which I am grateful. The only test of the repair was the most recent storm and water stayed in the confines of the ditch and did not flood my yard. However, the ditch does not empty so additional work will be needed before summer as standing water is a breeding ground for mosquitos that carry diseases. I am concerned at the length of time it will take the crew to return for the needed repair when rains do come. The subdivision being built on the Lompa property on the flood plains will keep several workers busy. Does Public Works have enough employees to take on another new subdivision and respond to the service needs of existing and new residents?

I am also concerned about the need for water. Is there enough water to supply the new subdivision as well as service the existing residents? Which well will service the new subdivision? Will everyone have good water pressure. I water

late at night as my water pressure is very poor. Will water need to be purchased from Minden again as we are facing a severe draught this summer?

I, like my neighbors, have located on the one acre parcels for peace and tranquility. If the Borda Crossing is anything like the 2-story homes in back of Kohl's, they will block the mountain views and are totally out of character and style with the rural atmosphere of our large yards, shade trees, sheds for RV's & car enthusiasts and animal enclosures. The colors are extremely off beat. Please leave the 5,.9 acres for 1-acre homes and send the Borda Crossing north or east of Carson to develop their densely populated subdivision.

Thank you for the opportunity to submit my comments. Karen Crandall, 4521 Muldoon St, Carson City, NV 89701 Ph. Cell 775-721-5737, Home 775-883-1247

## Heather Ferris

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**From:** Debbie McMurtrey <debbie.mcmurtrey@gmail.com>  
**Sent:** Monday, January 18, 2021 4:48 PM  
**To:** Heather Ferris  
**Subject:** Fwd: Borda Crossing SUB-2020-0016

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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

**From:** **Debbie McMurtrey** <debbie.mcmurtrey@gmail.com>  
**Date:** Mon, Jan 18, 2021 at 4:46 PM  
**Subject:** Borda Crossing SUB-2020-0016  
**To:** <planning@carson.org>

RE: Borda Crossing SUB-2020-0016

My name is Debrah McMurtrey. I am the owner and current occupant of 541 Summerfield Drive. My property butts up against the proposed subdivision of Borda Crossing. Based on the current information distributed, I am opposed to this development being approved. Additionally, I believe that the planning commission should reject the current application/proposal.

Not only will the packing of the two-story homes create additional traffic issues to the area, which is an issue that has yet to be addressed in the area, but the current design and surrounding area does not allow for adequate infrastructure for the ensuing development. Also, the design currently displayed to the group will create an eye sore to the surrounding community, and will ultimately affect our future real estate value in the area.

Lastly, there has been improper communication to the local community about the development from both the developer and planning commission. It was only by chance that the community found out about the project due to the developer's mobilized equipment on October 13th, 2020, at which point the community began to question what was occurring on the land.

There are better options on how this land can and should be developed; Borda Crossing SUB-2020-0016 is not the right option and should be rejected.

For your records and considerations,

Debrah McMurtrey

Dear Heather Ferris,

I want to go on record in support of my neighbors opposing the project, File Number SUB-2020-0016. The fact that the community is already not too crowded, it is a perfect area for my children to be able to walk to school safely. Our view of the stars and mountains is not something we want to get rid of. The traffic it creates will not only lead to safety problems but take away the peace our area already has developed.

Thank you,

Armando Ramirez

583 Summerfield Dr.

Carson City, NV 89701

**Heather Ferris**

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**From:** Michael Tanchek <mtanchek@yahoo.com>  
**Sent:** Monday, January 18, 2021 11:27 PM  
**To:** Planning Department; Heather Ferris  
**Cc:** Mary Siders; Krista Leach  
**Subject:** Fw: Correction to comments "Borda Crossing" Development on Clearview  
**Attachments:** Comment on Water Sewer Fees.docx

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Heather-

I am forwarding this e-mail as comments to be included in the Borda Crossing packets for the Commissioners from Mary Siders. Ms. Siders lives on Summerfield at the south end of the Southpointe subdivision. She and I both testified in the Silver View Townhomes special use permit application and like me, she is not in favor of the Borda proposal.. She also forwarded a copy of a sewer and water rate analysis she has been working on. It may not be directly related to Borda Crossing, but should make some interesting reading on its own.

Thank you,  
 Mike Tanchek  
 740 Clearview

Mary-  
 Roads are a big issue all around and I especially appreciate your concern about water since they want to put a retention pond and what I consider to be a leach field for urban run-off 50 feet from my well.  
 Mike

----- Forwarded Message -----

**From:** Mary Siders <mary.siders@gmail.com>  
**To:** Michael Tanchek <mtanchek@yahoo.com>  
**Sent:** Monday, January 18, 2021, 02:15:22 PM PST  
**Subject:** Re: Correction to comments "Borda Crossing" Development on Clearview

Hi Mike,

I'm only getting to all the Borda emails today; working full time takes most of my time and energy all week, unless I get some extra inspiration! Thank you for all the information. One of my concerns with the townhome development and now the Borda development is the narrowness of Clearview and no plans to modify the roads for the additional traffic. I am also concerned about the increase in impermeable cover and the effect on runoff.

When you stopped by my house to inform me about the Borda project, I mentioned to you the analysis I had done concerning changes to Carson City Utilities water and sewer rates. I've attached my most recent analysis that I sent in to the Board. (I've never received any responses from them, even when I spoke in person back in 2013 and sent follow-up letters.)

Thanks for devoting so much time on the proposed Borda project; I know how time-consuming such things are.

Mary

## Comment on Rates and the Proposal to Raise Stormwater Fee

### Proposal

The proposal to raise the flat-rate stormwater fee on single-family homes recommends a 64% increase, from \$5.69 to \$9.43. However, rather than increasing yet another flat-rate fee, I have a proposal that is more equitable and will raise more money for the utility.

Based on an analysis using 2014-2015 water usage data for 13,543 single family homes (5/8" line) in Carson City, I recommend revising sewer rates to be based on actual usage rather than a flat rate. In 2013, the city went from a sewer rate based on actual usage for winter months (approximating indoor-only use) to a flat fee for sewer. That current flat rate is \$40.45, based on an overall *average* wintertime use of approximately 5,000 gallons per month for single-family homes.

Use of flat rates has the perverse effect of making conservative users pay too much (i.e., it penalizes those who should be rewarded) and benefits those who are extravagant users (i.e., it rewards those who should be penalized for excessive use).

This is an opportunity to rectify that perverse incentive and promote water conservation by returning to a fee structure based on actual use for sewer. The summary statistics provided in the attached table show that charging single-family homes a rate of \$10.00 per kgal water used per winter month (based on the assumption that use during winter months = indoor only use), has the following benefits:

1. Produces a more equitable system that rewards conservation instead of disincentivizing it.
2. Provides the city with approximately \$75,000 more income per month than the current flat-fee for sewer (based on data for these 13,543 homes).
3. Produces more revenue per month than the proposed stormwater rate increase would (based on this analysis using data for 13,543 single-family homes vs. an increase in stormwater fees for these 13,543 homes).

### Review of the 2013 Water & Sewer Rate Study

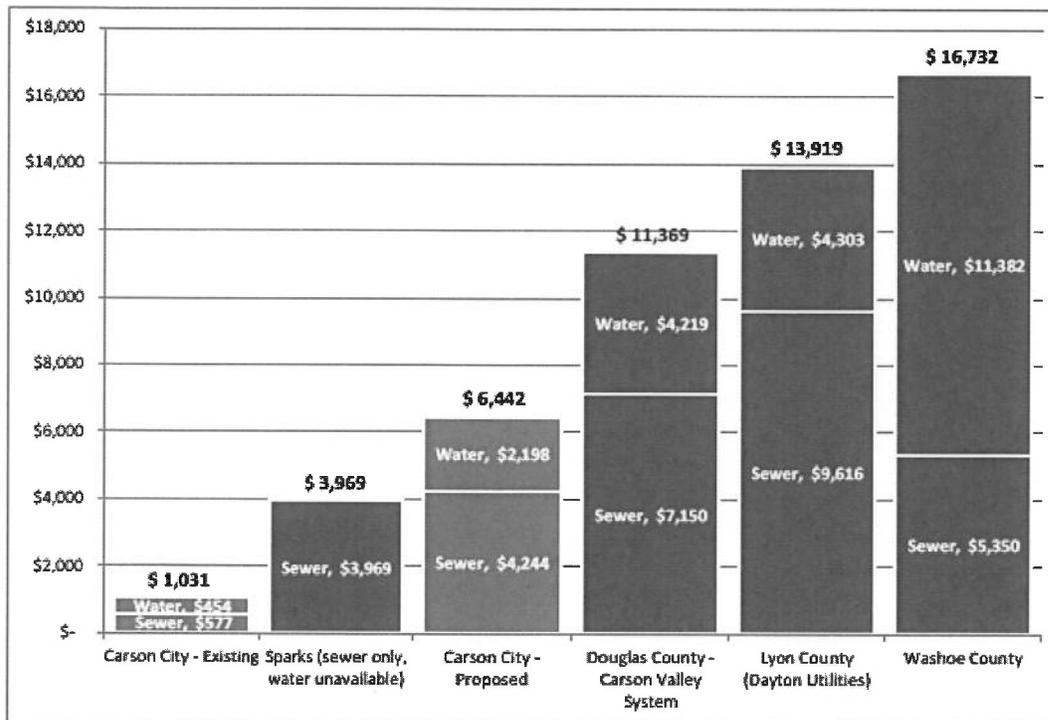
In November 2012, Carson City awarded a \$99,595 contract (Contract 1213-122) to FCS Group. The contracted goal of the water and sewer rate study was to *"equitably generate adequate revenues."* The staff summary in the contract stated that the study would evaluate *"possibly eliminate winter averaging for residential sewer."* This summary also stated that the *"rate study is proposed as revenue neutral; overall rates will not be raised as a result of this study."*

The final report for the *Water & Sewer Rate Study* was released in October 2013. The goals of the study were stated as **(1)** maintaining financial stability of the Utility, and **(2)** promoting a fair and equitable allocation of water & sewer system costs to customers. Additional goals were **(3)** promoting conservation and **(4)** making development pay for itself (i.e., fair connection fees for new construction).

## Connection Fees

In 2009, connection fees for water and sewer were slashed 90%, from \$4,543 to \$454 for water and from \$5,770 to \$577 for sewer. This 90% reduction for builders remained in place for about 8 years.<sup>1</sup> The final report for the **2013 Water & Sewer Rate Study** recommended increasing fees for water from \$454 to \$2,198 and fees for sewer from \$577 to \$4,244 for single-family homes. **The recommendations were not adopted.** As of May 2020, the current connection fees for single-family homes seem to be \$3,440 for water and \$3,130 for sewer (\$6,570 total). This is far less than the combined fees in 2008 (\$10,313); in fact, a 157% increase is needed to merely attain the 2008 fees! In other words, **rate payers have been heavily subsidizing homebuilders for the past 11 years** and continue to do so. This is unacceptable when the most conservative users have seen their bills nearly triple over the same time period.

**Figure from the Water & Sewer Rate Study (October 2013) showing recommended fees**  
**Exhibit 3-4: Single Family Water and Sewer Connection Charge Comparisons**



The recommendations provided in the **2013 Water & Sewer Rate Study** were **not adopted** when it came to connection fees. It appears that in 2020, connection fees for single-family homes are still **considerably less than they were in 2008**. Raising connection fees would fulfill Goal 4 of the 2013 rate study, and offer an additional funding mechanism. Even if rates were to return to 2008 levels, this would provide additional funds to the utility, and be entirely reasonable. In fairness, because users have been subsidizing builders for the past 11 years, fees should increase at least 2% per year over the time period of the subsidy, because some users saw their rates nearly triple over that same time period.

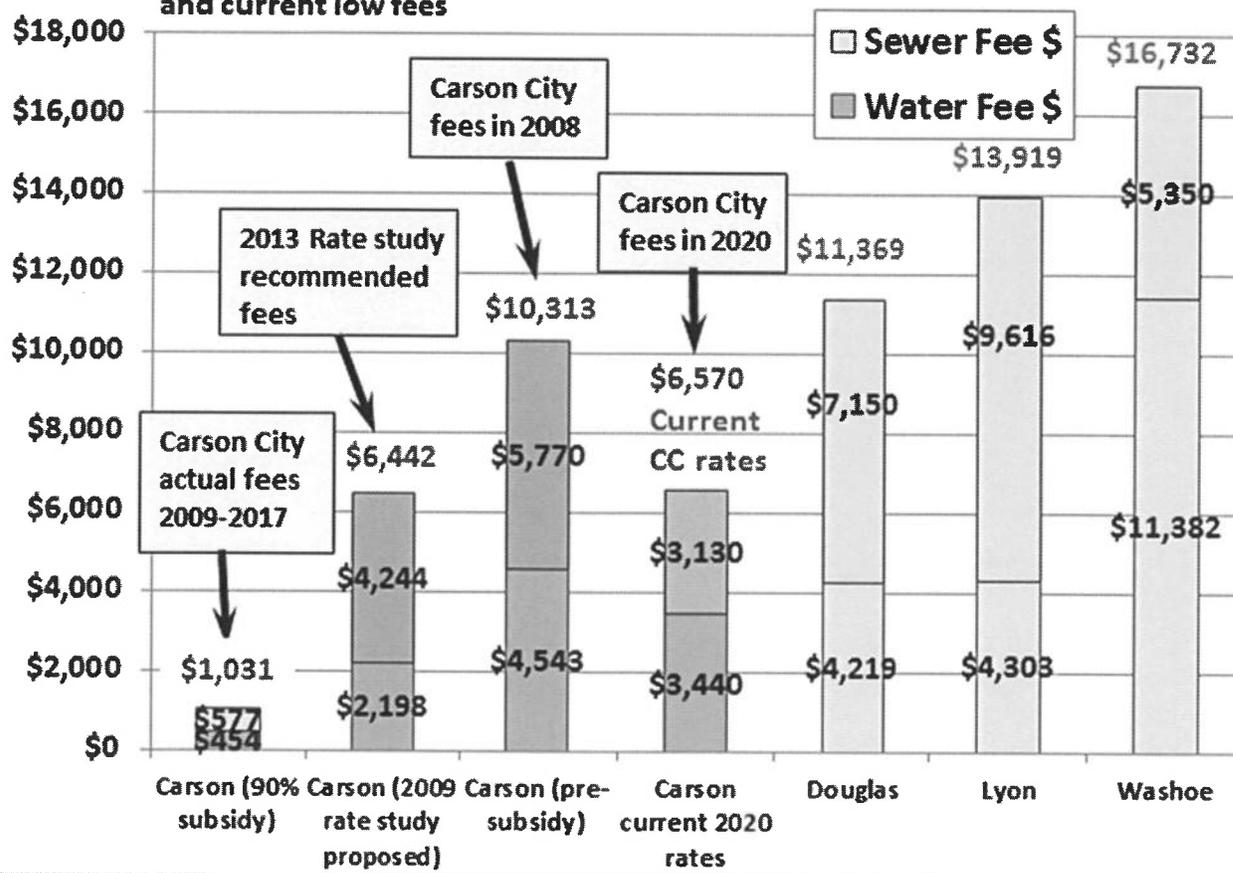
<sup>1</sup> The data on actual fees are difficult to find online on the city website. It appears the 90% rate cut was maintained for 6-8 years. The city said it does not track the number of tap fee, so estimates on lost income are based on building permits issued.

### Water and Sewer Connection Fees in Carson City

Type	2008 Fees	2009 Fees (maintained for 8 years?)*	2013 Water & Sewer Study Recommended Fees for 2013	Current 2020 Fees	Recommended fees based on 2% yearly increase since 2008
Water	\$4,543	\$454	\$2,198	\$3,440	\$5,649
Sewer	\$5,770	\$577	\$4,244	\$3,130	\$7,174

\*This information was not available online on a year-to-year basis, but it appears that the 90% reduced rate continued for at least 8 years.

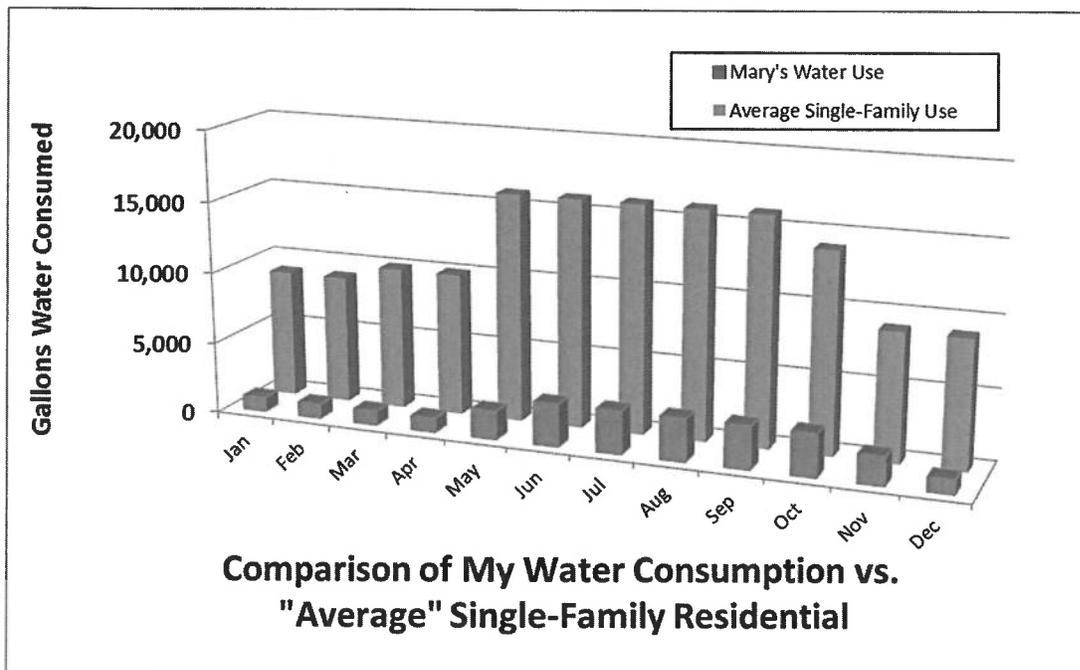
**Comparison of Connection Fees, Showing Carson City's 90% Subsidy in 2009 and current low fees**



### Proposed Modification Based on Data Evaluation

Attachment 1 (attached at end of this letter) provides an analysis and summary of 2014-2015 annual data from 543 single-family homes in Carson City, based on actual water usage. This table clearly shows why a flat-rate fee for sewer is highly inequitable and why an adjustment based on actual usage (for four winter months) provides a fair way to generate additional revenues. It also shows why such an adjustment generates more funds than an increase of yet another flat-rate fee (i.e., stormwater fee).

The highly inequitable increases previously adopted by the Board have resulted in unacceptable increases in the water and sewer bills for the **most conservative consumers**. By way of example, my conservative use of water, which averages 1,000 gallons per month during winter, places me at the 10<sup>th</sup> percentile of water users (single-family homes, 5/8" line) in Carson City. By adopting flat rates as the base rates for water and sewer, this resulted in a **250% increase** in my sewer bill and a **112.5% increase** in my water bill from January 2010 to January 2018. My base rate is now that of the "average user." This is highly inequitable and unfair, as clearly shown in the graph below.



The Board is now reviewing a proposal to raise the flat-rate fee for stormwater by **64%** for single-family homes, from \$5.69 to \$9.43 per month. **Flat fees always penalize the most conservative users, and are inherently inequitable.** As proposed in this comment letter, there are better ways to generate more revenue for the utility and resolve inequitable charges at the same time. Table 1 provides a demonstration of a more equitable approach to sewer fees that will also generate more funds than the Board's proposed flat-rate increase to the stormwater fee. I urge you to reconsider increasing yet another flat-rate fee. Salaries have remained flat since 2009; so the constant increases in flat-rate fees for water and sewer charges are especially challenging for single-earner households. If the flat fee increase is imposed, that will mean that **my water & sewer bill has nearly tripled (185% increase)** between 2010 and 2021, despite my conservation of water.

My efforts to **conserve water** include xeriscaping my front and back yards and planting pollinator-friendly perennial flowers with drip irrigation, at a total cost of more than \$12,000. I also replaced three old toilets with new low-flow toilets, at a cost of more than \$1,000. For these efforts, I am now penalized by being forced to **subsidize large consumers and builders** by paying a flat rate based on "average consumption." This structure is **highly inequitable and discourages conservation.**

Sincerely,

Mary A. Siders, 560 Summerfield Drive, Carson City, NV 89701, [mary.siders@gmail.com](mailto:mary.siders@gmail.com)

October 5, 2020

### ATTACHMENT – Table 1

Table 1 below provides a statistical summary using actual Carson City data from 2014-2015 for single-family homes with a 5/8-inch water line. Volume-based rates for sewer yield greater revenue and are more equitable (i.e., those who use the most pay the most) than the flat rate for sewer. Volume-based rates also encourage conservation; flat rates do not. Results of my analysis show the distribution of use based on deciles (with 90-100% broken down further). Fewer than 5% of homes use more than 10 kgal per month.

**Table 1. Proposed flow-based rates vs. current flat rates**

Percentile of Use	Wintertime kgal used	Sewer rate based on flow	Sewer rate as flat fee
10% =	0 to 1 kgal	\$10.00	\$40.45
20% =	2 kgal	\$20.00	\$40.45
30% =	3 kgal	\$30.00	\$40.45
40% =	3 kgal	\$30.00	\$40.45
50% =	4 kgal	\$40.00	\$40.45
60% =	4 kgal	\$40.00	\$40.45
70% =	5 kgal	\$50.00	\$40.45
80% =	6 kgal	\$60.00	\$40.45
90% =	8 kgal	\$80.00	\$40.45
91% =	8 kgal	\$80.00	\$40.45
92% =	9 kgal	\$90.00	\$40.45
93% =	9 kgal	\$90.00	\$40.45
94% =	10 kgal	\$100.00	\$40.45
95% =	10 kgal	\$100.00	\$40.45
96% =	11 kgal	\$100.00	\$40.45
97% =	12 kgal	\$100.00	\$40.45
98% =	14 kgal	\$100.00	\$40.45
99% =	17 kgal	\$100.00	\$40.45
100% =	>20 kgal	\$100.00	\$40.45
Average revenue from rates =		\$46.60	\$40.05
Count of homes (n) = 13,543			
Total revenue generated =		\$631,103.80	\$542,397.15

By summing the amounts from each decile (i.e., 10<sup>th</sup> percentile) for rates based on flow volume versus a flat rate, the relative revenue of each approach is shown. The flow-based rate generates more than 15% more revenue than the flat rate, while also promoting conservation. The **flow-based rate is more equitable and properly rewards conservative users**. In this example, the sewer fee is capped at \$100, meaning that any residence with average wintertime use over 10 kgal per month pays no more than \$100 for the sewer portion of their monthly bill. This still yields more funding than an unfair flat rate.

*This analysis is, however, only an estimate using Carson City data from 2014-2015 water season.*

## Heather Ferris

---

**From:** Planning Department  
**Sent:** Tuesday, January 19, 2021 8:30 AM  
**To:** Heather Ferris  
**Subject:** FW: Borda Crossing SUB-2020-0016

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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**From:** Greg Short <gregpatshort@gmail.com>  
**Sent:** Monday, January 18, 2021 9:38 AM  
**To:** Planning Department <planning@carson.org>  
**Subject:** Borda Crossing SUB-2020-0016

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I purchased my home at 545 Clearview Dr in 1998. One of the deciding factors was that the vacant lot across the street from me was zoned SF1A. I strongly feel that the property in question mirror the same requirements the sub division to the north ie 1 acre lots on the perimeter facing the existing 1 acre lots.

I have reviewed the new sub division map and am against a thru street connecting Silver Sage and Center Dr. A single ingress egress from Silver Sage with a cul de sac at the Center Dr end would work with 1 or 2 acre lots on the Center Dr end and 1/2 acre lots on Clearview side. The interior lots could be high density reflecting the homes to the north. Also the new homes should all have access from the new street with no access to Clearview Dr nor Center Dr.

I certainly understand property owners rights and am sure an equitable solution is at hand.

Thank You for your consideration,

Greg Short

545 Clearview Dr

CC NV 89701

775-721-3373

**Heather Ferris**

---

**From:** Planning Department  
**Sent:** Tuesday, January 19, 2021 8:31 AM  
**To:** Heather Ferris  
**Subject:** FW: "Borda Crossing SUB-2020-0016"

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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**From:** Earlene Issel <[eissel@sbcglobal.net](mailto:eissel@sbcglobal.net)>  
**Sent:** Monday, January 18, 2021 12:58 PM  
**To:** Planning Department <[planning@carson.org](mailto:planning@carson.org)>  
**Cc:** Lisa Schuette <[lschuette@carson.org](mailto:lschuette@carson.org)>  
**Subject:** "Borda Crossing SUB-2020-0016"

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want to be on record in support of my neighbors OPPOSING THE PROJECT for the subdivision at the corner of Clearview and Center for 28 residential lots at a minimum lot size of 5,009 square feet, with a new street between Silver Sage and Center. This neighborhood is zoned for Single Family 1 acre. Changing the zoning to Single Family 6000 or lower is NOT ACCEPTABLE. Bringing hoards of people into this area is **irresponsible** city planning. The **traffic will be unbearable**. The **burden on infrastructure, emergency fire and police**, will be substantial. Nevada is the driest state in the nation. We have **limited water resources** with numerous stakeholders, not just residential growth. The **semi-rural quality of life** in this long established area of equestrian and large animal residential properties will be **negatively impacted** if the Borda Crossing SUB-2020-0016 is allowed to proceed. UNRESTRAINED GROWTH is not good for anyone but the developers and is certainly not reflective of the aesthetic beauty of this part of Carson City. It certainly does not reflect the careful and responsible planning and governance of our state's capitol.

Sincerely, Earlene Issel, 4224 Ponderosa Dr., 89701. [eissel@sbcglobal.net](mailto:eissel@sbcglobal.net)

**Heather Ferris**

---

**From:** Planning Department  
**Sent:** Tuesday, January 19, 2021 8:32 AM  
**To:** Heather Ferris  
**Subject:** FW: Comment In Regards To: SUB-2020-0016  
**Attachments:** Sub-2020-0016.docx

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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**From:** Pamela Homentowski <phomentowski@yahoo.com>  
**Sent:** Monday, January 18, 2021 2:21 PM  
**To:** Planning Department <planning@carson.org>  
**Subject:** Comment In Regards To: SUB-2020-0016

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Please file the attached comment to "Borda Crossing SUB-2020-0016" for the January 27, 2021 meeting.

Thank you,  
Pam Homentowski

To: [Planning@carson.org](mailto:Planning@carson.org)

Re: Borda Crossing SUB-2020-0016

In regards to the above proposed development of 28 2-story homes on Clearview between Silver Sage and Center. We live on the corner of Clearview and Silver Sage and this intersection is already very busy and with another 28 homes will make it even more congested along with the 34 townhouses on the north west corner of Silver Sage and Clearview, this would cause us problems getting in and out of our driveway. The lots in this area are anywhere from 1/3 acres to 1 acre parcels and I would agree to like lot sizes as our home but not the proposed 28 homes which would be about 3 homes to our 1 home. Clearview and Silver Sage can't handle the additional traffic without causing major issues and possible accidents.

Please reconsider larger lots as what the homes are on the south side of Clearview. This would be less impact on the traffic in the area.

Please file comments in "Borda Crossing SUB-2020-0016" meeting on January 27, 2021

Thank you,

Walt and Pam Homentowski  
501 Clearview Dr  
Carson City, NV 89701

Carson City Planning Commission January 27 2021 Meeting, Agenda Item E.6:PLanning Commission File SUB 2020-0016, APN 009-124-03- Dependant on Zoning Map Amendment ZA 2020-005 which was continued by The Board of Supervisors on June 18, 2020(Agenda Item 24.B)

Here is our comment regarding the above referenced Tentative Map application known as "Borda Crossing:"

Our sentiments mirror that of Larry and Krista Leach as well as the entire neighborhood of Center Streets and our surrounding area. However we would like to add our concerns for our neighborhood in regards to the curb and gutter on the remaining parts of Center Alder and Clearview which will be left as is. The city has failed to maintain let alone update the roads in our neighborhood. Our street Alder, has never been paved and our house has been here since 1958. The city has one time spread asphalt grindings on one portion of Alder Street over 18 years ago and has never touched it since. Are we going to get the same city services as the people inundating our neighborhood as you purpose? The most western portion of Valley View is still dirt. Yet we have had 3 new homes built in this area in the last 2 years. We feel the burden of this monumental task should fall on the shoulders of the contractor. They are trying to change the zone requirements and add much more traffic to our neighborhood with the added street and condensed neighborhood. All so they can sell more homes on smaller lots. The buffer zone was put in place to keep us rural which is why the city has told us they do not maintain our roadways. If you change the zoning we believe the city should be required to maintain our area as if it were downtown. Our tax dollars are not any less than parts of the city that are well maintained.

Respectfully submitted,  
Nicole M. and Harry J. Koch  
820 Alder Street  
Carson City, NV 89701  
775-721-5916

January 16,2021

**Heather Ferris**

---

**From:** Planning Department  
**Sent:** Tuesday, January 19, 2021 8:33 AM  
**To:** Heather Ferris  
**Subject:** FW: Borda Crossing SUB-2020-0016

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

-----Original Message-----

**From:** Chris Krick <cbkrick@hotmail.com>  
**Sent:** Monday, January 18, 2021 6:01 PM  
**To:** Planning Department <planning@carson.org>  
**Subject:** Borda Crossing SUB-2020-0016

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My name is Christopher B Krick.

I would like to state my objection to the planned development, as I believe it would negatively impact the property values of the adjacent pieces of property.

And to a lesser extent the value of the other properties in the neighborhood. Owners purchase their properties in this neighborhood because of the 1 acre zoning. And to come back 30 years later and change that zoning is unfair. This will add both vehicle and foot traffic to our neighborhoods.

Sent from my iPhone

**Heather Ferris**

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**From:** Planning Department  
**Sent:** Tuesday, January 19, 2021 3:17 PM  
**To:** Heather Ferris  
**Subject:** FW: Special Use Permit File No. SUB-2020-0016

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**From:** Peggy ODriscoll <peggy\_odriscoll@yahoo.com>  
**Sent:** Tuesday, January 19, 2021 2:57 PM  
**To:** Planning Department <planning@carson.org>  
**Subject:** Special Use Permit File No. SUB-2020-0016

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My name is Margaret O'Driscoll and I live at 740 Clearview Drive in Carson City. I live directly east of the proposed development and zoning change located at the northeast corner of the intersection of Silver Sage Drive and Clearview Drive (APN 009-124-03).

I am very much opposed to the zoning change and housing development plan as proposed. I don't object to the owners of the property developing their land, but the planned development should mirror the rest of the neighborhood. It should appear as an extension of the housing development that has already been built along the east side of Silver Sage Drive (between Koontz Lane and Clearview Drive). In addition, the houses located along Center Drive should be on 1-acre lots to serve as a transition between the current zoned area and the more denser proposed development.

We've lived in our house for nearly 30 years. We moved to this part of town because we liked the more rural feel of the area due to the larger lot sizes. Please don't approve the zoning change and planned development as proposed.

Thank you

Margaret O'Driscoll  
 40 Clearview Drive  
 83-3129

## Heather Ferris

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**From:** Darlene Warnock <darlenewarnock@gmail.com>  
**Sent:** Tuesday, January 19, 2021 3:59 PM  
**To:** Planning Department; Heather Ferris; Public Comment  
**Subject:** Borda Crossing Development Sub-2020-0016 and Zoning Map Amendment ZA-2020-0005

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I am responding in writing on January 19, 2021 as required to both the Carson City Planning Commission and Carson City Board of Supervisors to state I am in agreement with my neighbors to deny the proposed Borda Crossing Development and deny the proposed change to the Zoning regulations from 1-Acre single family parcels to 28 residential lots in the size of 5009-6000 square feet.

I live in the Southpointe subdivision, and enjoy being in an area where traffic is lighter and the houses are built in such a way as to provide wonderful views of our mountains. However, the roads south and east of me are poorly maintained and more development will erode them even further. I worry about maintenance crew availability to keep the areas cleared of debris to facilitate rainwater flow to underground passages, preventing flooding. I see articles in the paper during instances of flooding where the owners being impacted state the ditches and grates made to contain and direct the water flow are not maintained but filled with branches, leaves, and other built-up debris. Will more thought go into proper drainage systems during building? I understand wanting to increase the tax base for additional revenue, but building too quickly with no thought to the long-term impact on the community can be more costly in the long run.

Already there are huge building projects in process (Carson Hills Apartments, Little Lane project Arbor Villas, Jackson Village behind Kohl's, Mills Landing, Schultz Ranch and Silver Oak ) as well as the projects still being planned (Anderson Ranch, Lompa Ranch, Emerson Drive Cottages, Silver Crest Condominiums, Silverview Townhomes). There may be others I am unaware of, but that is a lot of homes. All of those homes will require services, including water. Water to build the homes, then water for the families—laundry, bathrooms, cleaning, drinking, cooking, gardens, lawns. Can we meet these needs? Will the schools we presently have be able to absorb the increase in children?

This is a rural area, and while I do not have horses I feel badly for those who do have them, and want to enjoy them, to ride them and revisit that heritage. They are being boxed in as development encroaches and promises to allow for that rural atmosphere are forgotten. Those who purchased larger tracts of land to ensure adequate space for the lifestyle they wanted are being forgotten in the excitement of the building rush. Can we please slow all this building down a bit? Or if not, then at the very least keep the one acre minimum per house for the Borda Crossing Development.

Thank you for your consideration of my concerns, which I would like included in the record for consideration.

Darlene Warnock  
 3919 Southpointe Drive

Carson City, NV 89701

**Heather Ferris**

---

**From:** CONNIE CREECH <connielou@prodigy.net>  
**Sent:** Tuesday, January 19, 2021 4:02 PM  
**To:** Heather Ferris  
**Cc:** Public Comment; Planning Department  
**Subject:** Public Comment SUB-2020-0016  
**Attachments:** #2 Public Comment Clearview parcel.pdf; Kenneth - Public Comment Clearview parcel.pdf

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Please see attached letters

January 19, 2021

To members of the Carson City Planning Commission the Board of Supervisors

Re: SUP-2020-0016. Tentative Subdivision Map known as Borda Crossing to create 28 single family residential lots on a 5.27 acre parcel zoned Single Family 1 Acre (SF1A), located at the northeast corner of the intersection of Silver Sage Dr. and Clearview Dr. APN 009-124-03SUB-2020-0016

Re: Zoning Map Amendment – File No. ZA-2020-005

I am writing to provide public comment to the above references and request that they be included in the record for consideration by the Planning Committee and the Board of Supervisors.

I currently reside at 4071 Center Drive and have lived at this residence on two acres for 43 years. My father homesteaded this property in 1957, with the intent to maintain a rural lifestyle for his family to enjoy in the future. Center Drive was a dirt road when my family developed and moved on to this property. It is important to keep this area as a rural lifestyle with low density residential area to maintain the resident's quality of life.

I have owned and housed horses on my property the entire time I have lived here. I have enjoyed riding my horses leisurely on the neighborhood streets, trail riding on Prison Hill and across the Carson River. One by one my access to these areas have been cut off. I participated in both the planning of public access on Prison Hill and the Carson River, advocating for an overhead bridge for non-motorized access over the freeway on Valley View Dr. and a bridge over the Carson River at the old McTarnahan bridge site, both of which were filed in the drawer as unfeasible.

In every single Carson City Public Opinion Survey the leading concerns to the quality of life is traffic congestion and growth issues. I have witnessed enormous growth in south Carson and huge traffic increase. It is very apparent the highest priority concerns of the citizens are being ignore by our city leaders. The recent high density developments approved in South Carson proves this outright.

It is outrageous to me that the Planning Commission would even consider allowing the proposal of a high density subdivision directly across the street from one and two acre residences and ruin the quality of life of these home owners. It is unbelievable that this is even being proposed without any regard to the public comments received from the surrounding home owners at the time of the Zoning Map Amendment meeting in May of 2020. I am strongly opposed to this proposal. It is in no way compatible with the area landscape, restricts views, and intrudes on open space and wildlife in the area as well as the residents' quality of life. It is very evident that the developer wishes to cram as many homes on this 5 acre parcel as possible because of their own greed for money.

Page 2.

The rezoning and development of this 5.27 acre property should be consistent with what is already developed within this block, maintaining similar lot lines. The neighboring residents agreed with the rezoning at the time of the South Pointe development in the 1990s that there would be 1 acre parcels along Center Dr. with access to higher density homes on Silver Sage Dr. via a cul de sac and no access from Clearview Dr. as is the case on Koontz Lane.

In addition, I am adamantly opposed to a street being proposed from Silver Sage to Center Drive. This would greatly increase the traffic on Center Dr. As traffic increases so does speed, which is not suitable with the current aspects of existing street use. Anyone can see Center Dr. is used for recreation and exercise, appealing to neighborhood residents as walkers, joggers, dogs, strollers, horseback riders, bicycles and others as well as those visiting our city Mayor's Park located on the corner of Center Dr. and Koontz Lane.

I urge the commission to vote no on this project proposal. Thank you for your consideration of these comments.

Sincerely,

Connie L. Creech  
4071 Center Dr.  
Carson City, NV 89701

January 19, 2021

Dear Planning Commission members,

Re: SUP-2020-0016

I am commenting about the development proposal being requested for the SUP-2020-0016 on the Corner of Silver Sage Dr. Clearview and Center Dr.

I live at 4071 Center Dr. and will be directly impacted by this development. I am very concerned about the additional traffic that would be caused by adding a through street from Silver Sage to Center Dr. I have seen equestrian accidents from inconsiderate drivers. They do not realize horses take flight when startled. There are many horse owners in the area that commonly ride their horses on the shoulder of Center Dr. including my wife. Also there are other people that use the street for walking their dogs to the Park on the north end of Center Dr., children riding bicycles, moms with strollers, runners, and sledders in the winter.

Also, I believe a transition zone from 1 acre to 21,000 zone should be included on Center Dr. and Clearview Dr. to transition to medium density properties accessed from Silver Sage. This we agreed with when the housing development across the street was built. I also don't think the two story townhouses are in harmony with the current neighborhood.

Respectfully,

Kenneth Creech  
4071 Center Dr.

**Heather Ferris**

---

**From:** Donna Ford <donna.ford@evrealestate.com>  
**Sent:** Tuesday, January 19, 2021 4:09 PM  
**To:** Heather Ferris; Public Comment  
**Subject:** Input Regarding Borda Crossing (North Clearview Drive between Silver Sage Drive and Center Drive), File SUB-2020-0016  
**Attachments:** Borda\_Crossing\_Letter\_For\_Planning\_Commission.pdf

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We want our comments included in the record for consideration by the Planning Commission.

We are new owners as of Jan. 6, 2021 at 527 Summerfield Dr (at the corner of Silver Sage and Summerfield). Attached is our letter of concerns for the proposed development at Borda Crossing

Please send confirmation email and letter has been received.

Sincerely,  
Donna and Mark Ford & Martin Ransom

Jan. 19, 2021

Ford/Ransom Family  
527 Summerfield Dr  
Carson City, NV 89701  
[donna.ford@evrealestate.com](mailto:donna.ford@evrealestate.com)  
530-391-6655

Hello,

Letter to the Planning Commission for Input Regarding Borda Crossing (North Clearview Drive between Silver Sage Drive and Center Drive), File SUB-2020-0016

We want our comments included in the record for consideration by the Planning Commission.

We are new to the neighborhood as of Jan. 6, 2021. We were just informed by a neighbor on Sunday Jan. 17th, 2021 about the proposed Planning Development regarding Borda Crossing. I am also the real estate agent that represented us in the purchase of our home. One of the first questions I asked the sellers agent, Claudia Saavedra is if there was notification to the current owners regarding any development for the property located directly behind the home known as Borda Crossing. She said the owners have not received any notification of any new development and she had not known of any either but only that it could possibly be developed on in the future. This was a couple days before submitting our offer on Nov. 12, 2020.

It seems that after talking to neighbors that no notifications were sent to anyone regarding this proposed development. I have to ask why this would be?

We are concerned for the new development on many different levels but one main concern we have is the small size of the proposed lots to be able to squeeze in many homes in such a small space. Another concern is if indeed all the homes will be 2-story. They are also proposing a community style back yard to the these homes. It is clearly not keeping in with the current neighborhood if this is the case. It will also increase the traffic flow in the area.

There is already an approved development for townhomes across from the proposed Borda Crossing development by the same developer. This is to much development in two small areas.

We do understand the need for housing but it should be done with keeping in with the current neighborhood and the homeowners should have been a part of this process from the beginning.

Thank you for your time and consideration.

Sincerely,

Donna Ford  
Mark Ford  
Martin Ransom

**Heather Ferris**

---

**From:** Daniel Goggiano <dan.goggiano@goggiano.net>  
**Sent:** Tuesday, January 19, 2021 9:13 PM  
**To:** Heather Ferris; Public Comment  
**Subject:** SUB-2020-0016 Additional supplemental comments  
**Attachments:** 4- Borda Crossing comments SUB-2020-0016.pdf

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Good Evening Heather,

Please see my attached comments regarding the Borda Crossing proposed development. I would appreciate confirmation of receipt of this email.

Thank you,  
Daniel Goggiano

Supplemental Comments  
Carson City Board of Supervisors (JJ Summers LLC Rezoning ZA-2020-0005)  
Carson City Planning Commission (Borda Crossing SUB 2020-0016)

Daniel Goggiano  
4475 Bigelow Drive, Carson City 89701  
January 19, 2021

I would like to first acknowledge that I have had the opportunity to review the comments that have been submitted thus far by my neighbors. For the record, I agree with and support the concerns regarding the Borda Crossing development.

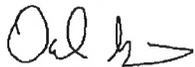
Based on all comments and raised concerns, there can be no doubt that there will be significant impact on the adjacent existing neighborhoods. This is in direct contradiction to Guiding Principle 9 of the existing Carson City Master Plan which states that *"The City will also work to maintain the quality and character of established neighborhoods and ensure that infill and redevelopment is designed in a manner that minimizes impacts on existing neighborhoods, including rural neighborhoods located within the City's urbanizing areas."*

There is no compelling reason to allow development beyond the current zoning of the land and allowing it substantially changes the character of the established neighborhoods. I currently live in this area, with goats and chickens on my property. We moved to this location so that we could enjoy that rural lifestyle and we purchased our property with that in mind. If we, as a community, allow unbridled development in areas that are not planning for it, the repercussions will be direct and substantial to adjacent communities.

The age of our Master Plan is of concern to me. I cannot state with any certainty that it reflects the current will and desire of the community. That said, we must either adopt it as correct, and thus rule against this application because of its impacts on existing neighborhoods, or we must address the current Master Plan with a formalized process that involves community input such as the process that was used in 2006.

I appreciate the ability to submit these comments in these challenging times. I would suggest that live, in-person comment periods would be much more appropriate in highly contested applications such as this one.

Sincerely,



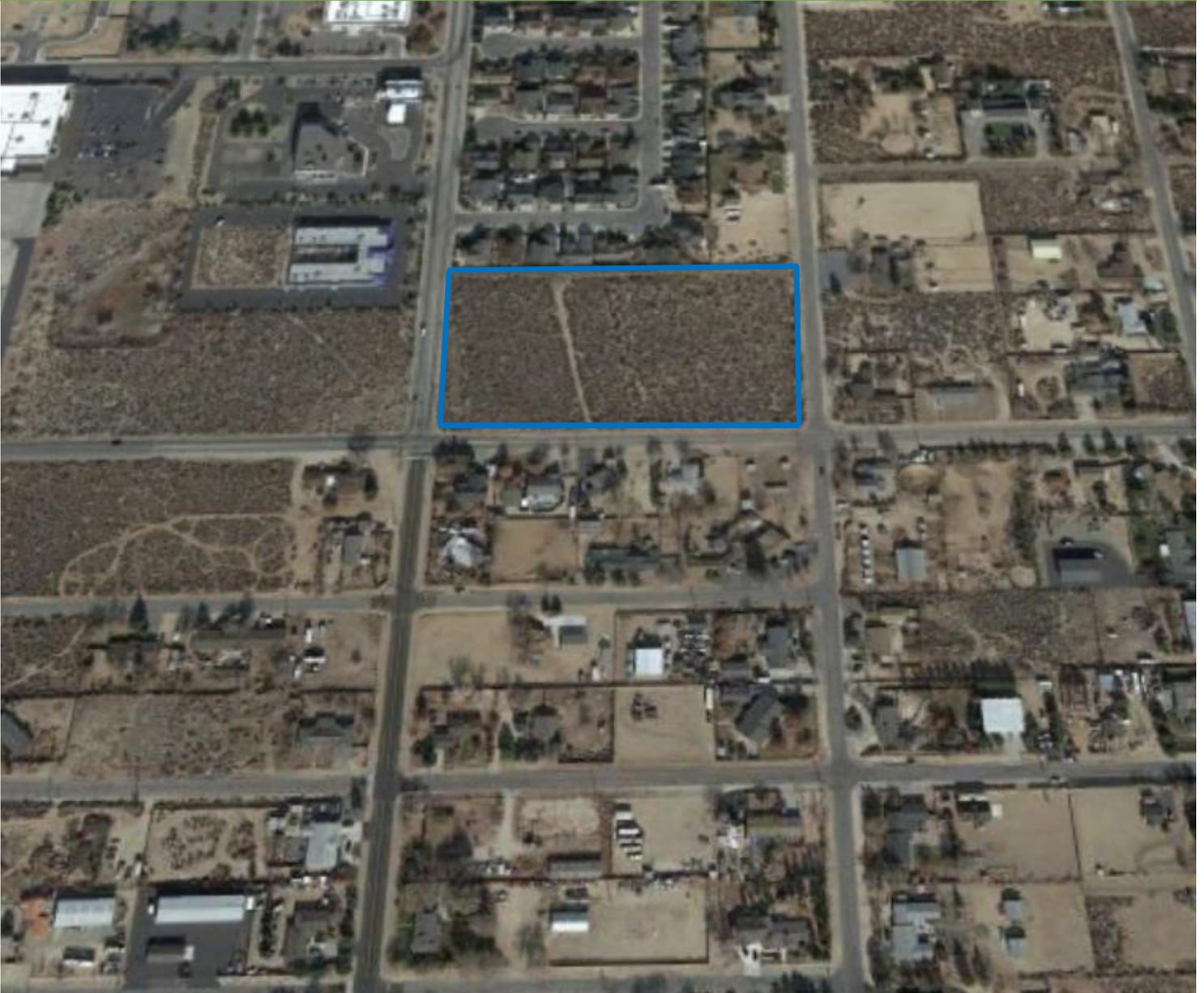
Daniel Goggiano  
4475 Bigelow Drive, Carson City, NV 89701

# Borda Crossing

Tentative Map  
w/ Common Open Space

December 17, 2020

\*Revised December 29, 2020



Prepared For:

**State Street  
Development, LLC.**

Prepared By:



241 Ridge Street, Suite 400  
Reno, NV 89501

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### APPENDICES

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Application & Supporting Information
Copy of Conceptual Subdivision Map Letter
Master Plan Policy Checklist
Tentative Map Plan Set
Landscape Plan
Road Name Reservation
Conceptual Drainage Study
Geotechnical Report
Confirmation of Taxes Paid
Excerpt of Minutes: Board of Supervisors Meeting of June 18, 2020 (ZA-2020-0005)



## PROJECT LOCATION

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The 5.27-acre site project site is located on the northeast corner of Clearview Drive and Silver Sage Drive on APN 009-124-03, approximately 0.3 miles east of S. Carson Street. Center Drive bounds the property on the east. Less than 0.15 miles west of the site, Clearview Drive provides access to retail shopping and restaurants via a public street system. The site is vacant and unaddressed.

**Figure 1: Project Location**



Project Area



## EXISTING MASTER PLAN AND ZONING

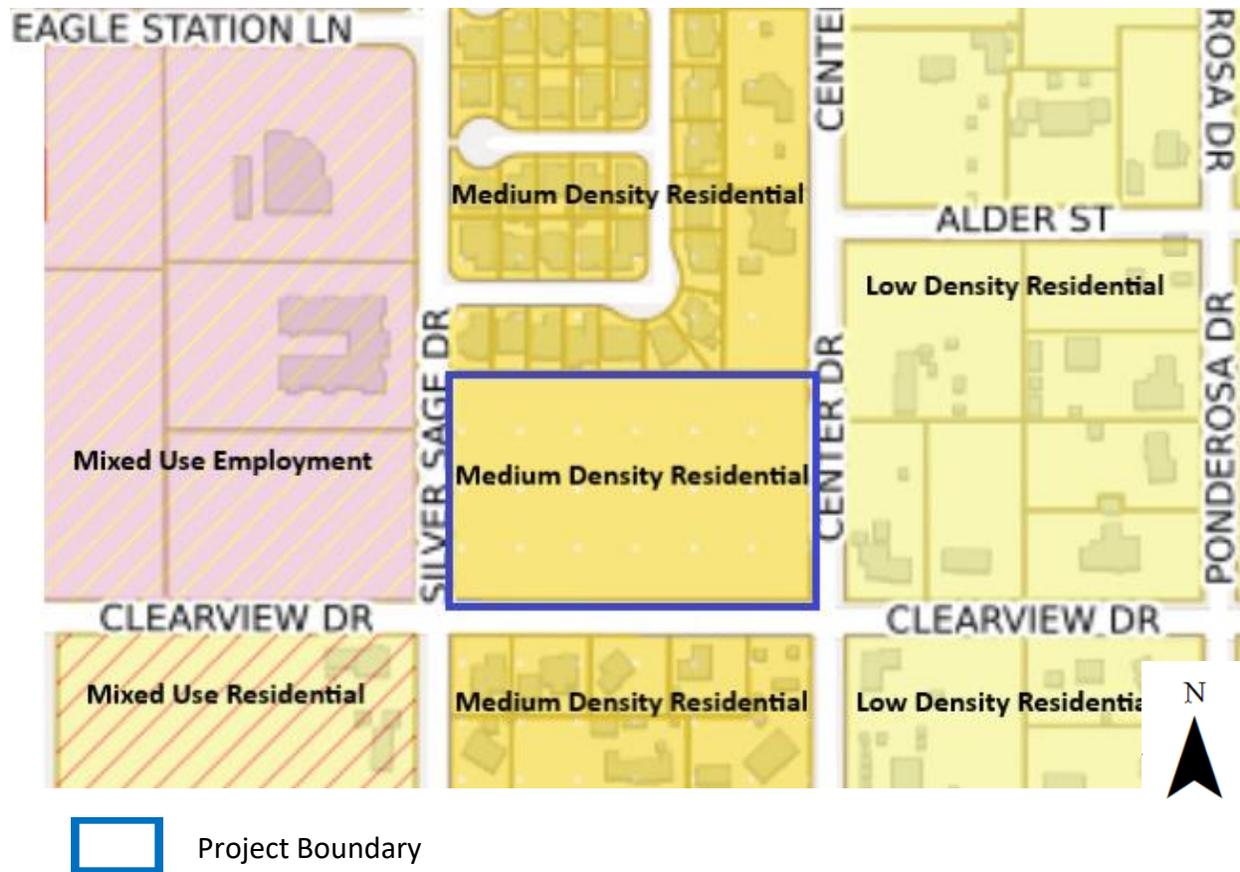
The site's Master Plan designation is Medium Density Residential (MDR) and the zoning is Single Family 1-acre minimum lot size (SF1A). The surrounding Master Plan designations, zoning, and current land uses are as depicted in Figures 2, 3, and 4.

**Figure 2: Surrounding Property Designations**

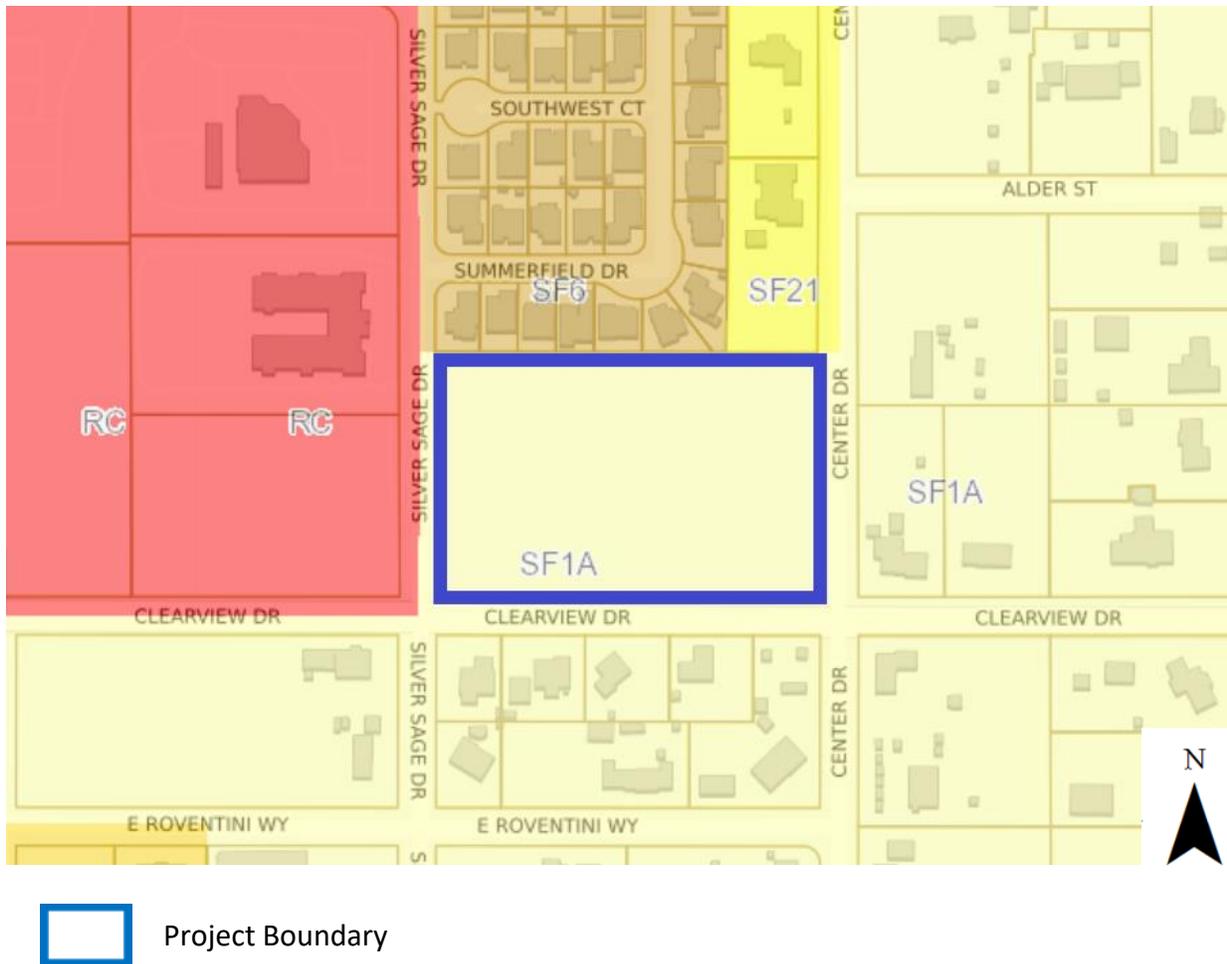
Direction	Master Plan	Current Zoning	Current Land Use
<b>North</b>	MDR	SF6 (Single Family 6000 sf minimum lot size), SF21 (Single Family 21000 sf minimum lot size)	Single family residential
<b>East</b>	LDR (Low Density Residential)	SF1A	Single family residential
<b>South</b>	MDR	SF1A	Single family residential
<b>West</b>	MUE (Mixed Use Employment)	RC (Retail Commercial)	Vacant, TM for 34 attached-townhomes approved via SUB-2020-0001



Figure 3: Existing Master Plan Designation



**Figure 4: Existing Zoning Designation**



As depicted in Figures 1 through 4, the site is located in an area of transitioning land use and Zoning designations. To the west and north, higher density residential and commercial designations permit more urban development types. In this case, to the north are existing single family residences on lot sizes between 6,534 square feet (sf) and one acre. West of the project is the site of an approved TM for attached single family homes (named Silver View Townhomes per file SUB-2020-0001) approved by the Board of Supervisors on March 19, 2020. The Townhome lot sizes will average 1,845 sf, with a project density of 12.36 acres per unit. To the east and south, more rural uses would be typical of the land use and zoning designations. In this case, to the south there are residential lots between 13,939 sf and 41,382 square feet. To the east are two lots of 40,510 sf and 2.07 acres in size.



## APPLICATION REQUEST

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This application package includes requests for a **Tentative Map** to create 28 single family residential lots on a 5.27 acre parcel utilizing Carson City Municipal Code (CCMC) provisions of Chapter 17.20, *Common Open Space Development*.

## PROPOSED ZONING

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The proposed subdivision requires a Zoning Map Amendment from SF1A to SF6. The change in zoning will correct an existing inconsistency with the Master Plan. Per Chapter 3, Land Use Planning, of the Carson City Master Plan, MDR land use is compatible with zoning designations with density ranges of 3 to 8 du/acre. SF6 zoning allows for a maximum density of 7.26 units per acre (while SF1A permits 1 unit per acre).

The amendment process was initiated for the property in 2020. The Planning Commission heard a request to amend the zoning from SF1A to SF6 on May 27, 2020 (ZA-2020-0005) voting 6 to 1 recommending approval to the Board of Supervisors. On June 18, 2020, the Board of Supervisors heard the first reading of an Ordinance to amend the zoning. Their discussion is memorialized in the Minutes from the meeting, the relevant pages of which are included in the Appendix of this document. The Supervisors discussed their apprehension with amending the zoning without a development plan to consider, despite the Planning Commission's recommendation and the fact that one is not required to approve a zone change. They also conveyed concern with neighboring property compatibility, as demonstrated in public comment submitted by property owners to the east and south. The Supervisor's tabled the amendment in order to allow City Staff additional time to work with the applicant on details of proposed development and/or a different zoning amendment. This TM proposal is that update. While the Minutes note that the zoning change does not require a second hearing by the Planning Commission, Staff has requested the applicant bring forward a discussion of the proposed zoning concurrently with the TM public hearings. The applicant has agreed to do so in order to assuage any concerns by the Supervisors or the public on the development intended for the site.

## PROJECT DESCRIPTION AND JUSTIFICATION

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The TM proposes 28 single family residential lots on a 5.27-acre site, a density of 5.3 units per acre (28 units/5.27 acres). The project is to be named "Borda Crossing". The development plan is consistent with the provisions for a Common Open Space development per chapter 17.10 of Carson City Municipal Code (CCMC). Typical lot dimensions are +/- 42' x 120'. The lots range in size from 5,009 square feet (sf) to 5,040 sf, with an average size of ~5,037 square feet.

The Appendix includes conceptual floorplans and a conceptual elevation is included as Figure 5 of this document. The base model includes three-bedrooms and 2,171 square feet of floor space. Custom options will allow for variation. Each unit will include a three-car garage (one tandem stall), a covered patio, and a covered porch. Driveways are a minimum of 20' in length and access two garage spaces abreast. The homes are proposed to be two stories with a maximum building height of +/- twenty four (24) feet.



One roadway with a 60' Right of Way (ROW) is proposed running east/west through the site. The ROW is purposefully aligned across Silver Sage Drive from the access to the Silver View Townhomes. The drive lanes are 23.5' in width, permitting on-street parking. The ROW include curbs and gutters and 5' wide sidewalks on each side.

Sidewalks along the proposed new roadway will connect to new sidewalk along the Silver Sage Drive frontage on the west. On the east, a new sidewalk on the southern portion of Center Drive will connect to the new roadway sidewalk. A meandering walking path will provide a pedestrian connection to the sidewalks, located within the common open space on the north and north east of the project site.

### **Setbacks**

With the intent of providing significant separation between new and existing development, the setbacks along the north and south project boundaries are much larger than required in the proposed zoning district of SF6. They are analogous with, and exceed, the existing requirements of SF1A zoning. The northern border of the TM includes a common open space boundary between adjacent properties and the new lot boundaries of at least 30 feet. Additionally, a 20' rear setback between the new homes and the new lot boundaries is proposed, placing the structures at least 50' from the northern property line. The Clearview Drive frontage on the south will include the same 50' setback of structures from the property boundary, again with a minimum 30' wide strip of common open space and a 20' setback within the new lot boundaries. These dimensions exceed the setbacks for existing SF1A zoning (30' for front and rear) and the setbacks in SF6 zoning (10' for rear; 20' for front). On the eastern border of the project, there is a minimum of 7.4' between new lot boundaries and Center Drive plus a 5' internal setback to the structure, a total of 12.4 feet. The street side setback is 10' in SF6 districts. The west periphery, along Silver Sage Drive meets the SF6 street side setback for structures of 10 feet. See Figure 8 for a summary of the development standards.

### **Open Space**

The open space provided in the TM substantially exceeds the standards of CCMC 17.10 for common open space development. Per CCMC, each lot requires 250 sf of open space, equating to 7,000 sf total (0.16 acres) for all the lots (28 x 250 sf). The minimum size of private yards is 897 square feet, with fences proposed for each lot, creating a private back yard/open space for each new home. The entire subdivision includes +/- 1.71 acres of total open space within the entire project (32.4%), including +/- 1.13 acres of common open space (21.4%) and 0.58 acres of private open space (11%). In accordance with CMCC 17.10, areas between buildings or other development with dimensions less than 15 feet, constituting the front and side yards of the individual lots, are not counted toward the private open space total. Areas with dimensions less than 25' outside the new lot boundaries are not counted towards the common open space total. The attached Color Exhibit depicts all the aforementioned areas.

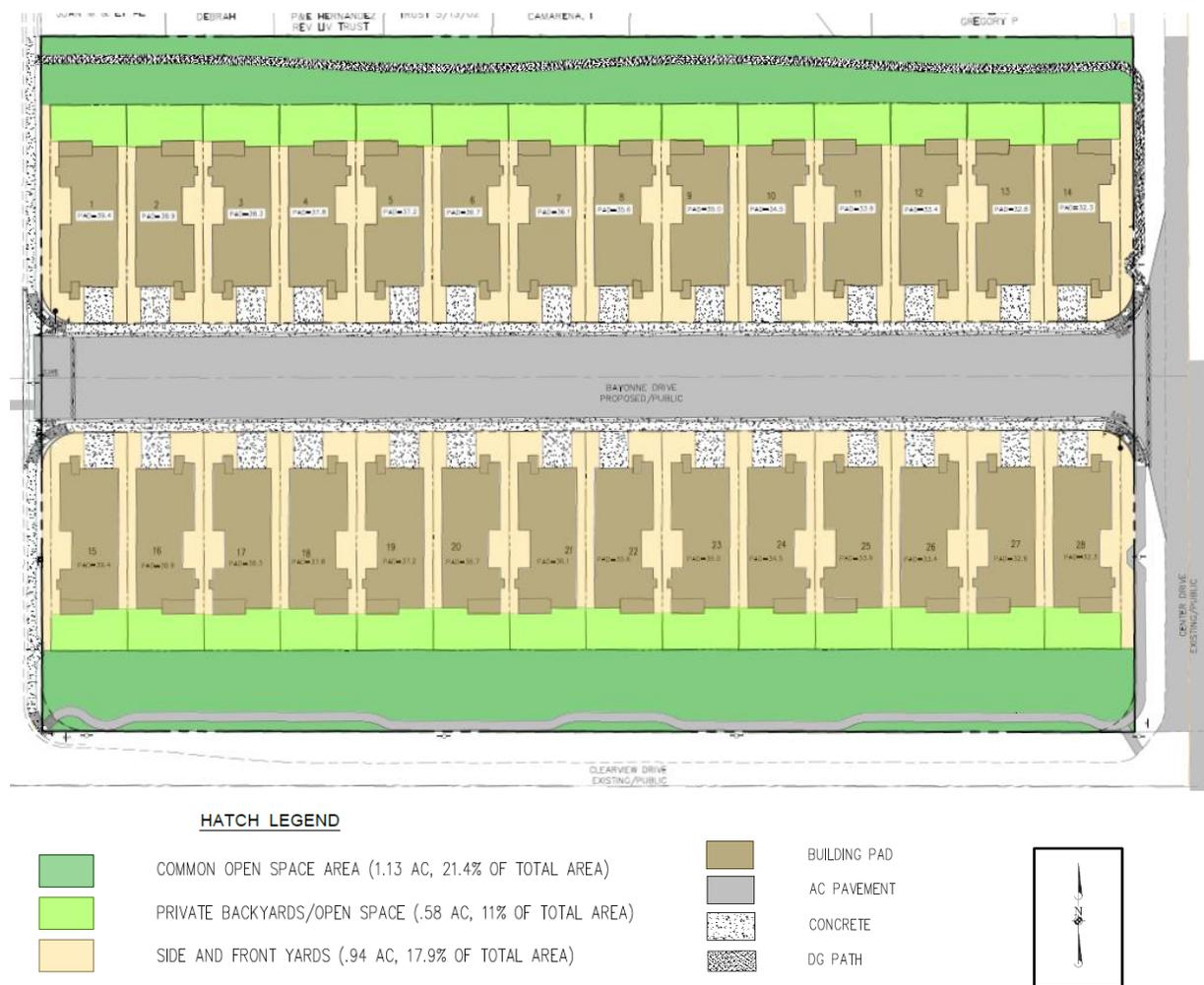
### **Landscaping and Recreation**

The western, southern, and south eastern borders of the project includes sidewalks with significant trees and bushes planned along their lengths, creating an attractive project frontage. The north and north east of the site includes walking paths, also with significant complimentary landscaping. The walkways are

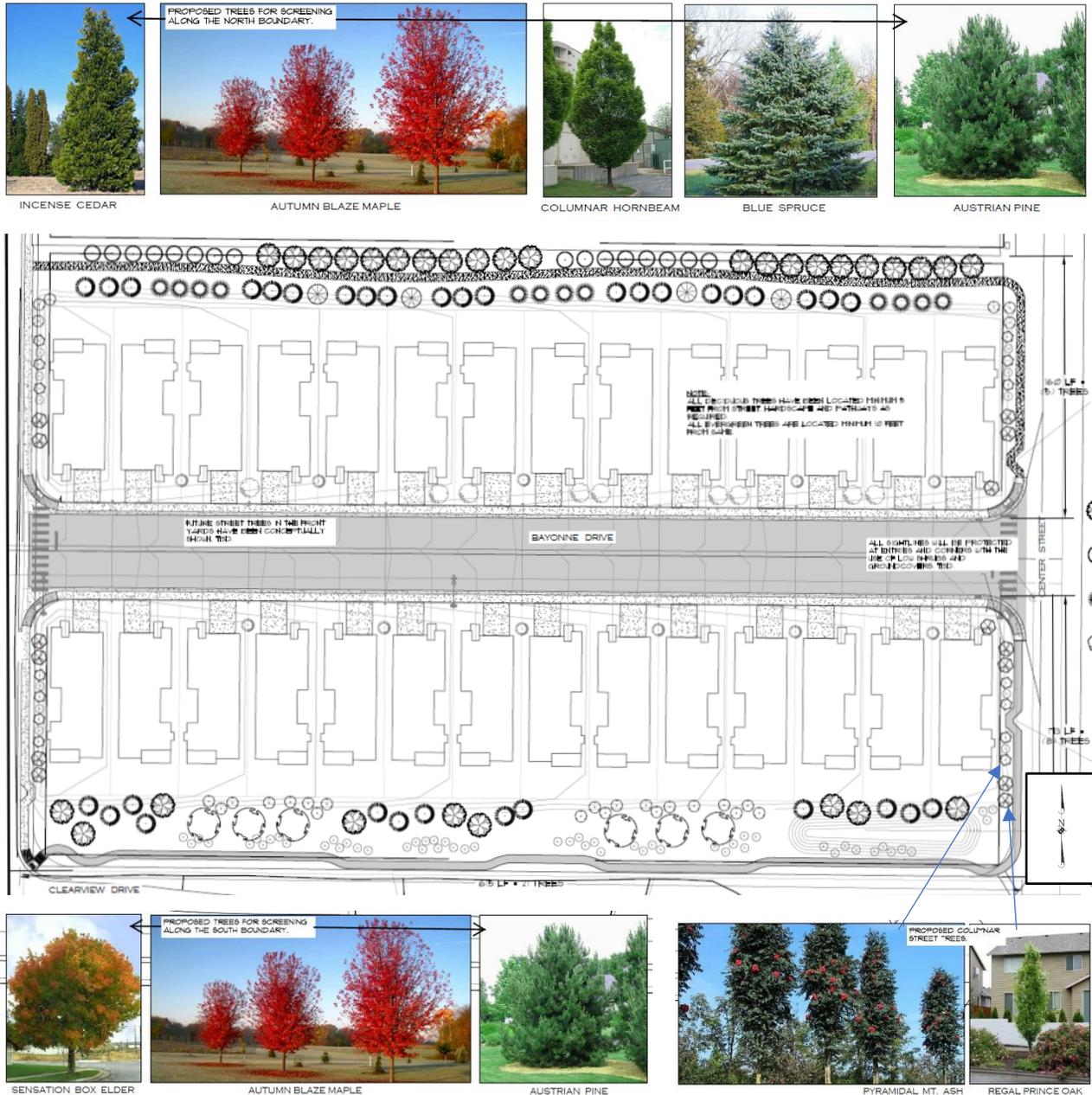


proposed to be decomposed granite. The walkways and sidewalks, including those along the new ROW, will create a loop around and through the entire site, creating an opportunity for active pedestrian recreation within the project area. Per the attached Preliminary Landscape Plan and as depicted in Figure 6, substantial landscaping along the project periphery will enhance the pedestrian experience as well as provide additional screening of the project from existing development. Where the walkway or landscaping is not present, the common open space will be irrigated and turfed. A requirement of CCMC 17.10 for 100 sf of common open space per unit (2,800 sf) will be met and substantially exceeded by the expansive turfed and landscaped area around the paths and sidewalks (+/- 1.13 acres). The internal walkways will be private, but public access will be permitted via an easement for the on-site sidewalk on the south side (other sidewalks are within the public ROW). The common open space, walking paths, and landscaping will be maintained by a homeowner’s association, or similar entity. Figures 5 and 6 depict the open spaces and landscaping.

**Figure 5: Tentative Map – Open Space exhibit (see attached Color Exhibit for more details)**



**Figure 6: Tentative Map – Preliminary Landscaping (see attached for complete legend and planting details)**



**Architecture**

A conceptual rendering for the proposal is provided as Figure 7 and the Appendix includes floorplans. The proposed architecture is meant to serve as a representation of the intended building materials and general color palette proposed for the project. Any variation in the design will retain two car garages with a driveway that permits access to stalls that are abreast. The maximum height of the proposed two story structures is 24 feet. Figure 8 is a summary of the development standards.



**Figure 7: Proposed Architecture**



**Figure 8: Development Standards**

Carson City Standard	SF6 Zoning District	Project (Borda Crossing TM periphery)
Density	7.26 units/acre maximum	5.3 units/acre
Front Setback - South	20'	50' minimum
Rear Setback - North	10'	50' minimum
Street side Setback - East	10'	12'7" minimum
Street side Setback - West	10'	10'
Open Space (common/private) 250 sf per lot (28 lots x 250 = 7,000 sf)		74,487 sf (1.71 acres) including a minimum 897 sf of private, fenced back yard per unit
Maximum Height	26'	24'

**Floodplain**

The project area is designated as Flood Zone X, which indicates a minimal flood hazard.



## Drainage

A retention basin is proposed for the south east corner of the site within the common open space. Maintenance of the basin will be the responsibility of a condominium association, or similar entity. The Conceptual Drainage Study in the Appendix includes analysis and description of the stormwater capture, conveyance, and retention system for the site. The retention basin itself will be approximately 4' deep and lined with rock. The capture/conveyance system will include oil and grease filters to remove pollutants before stormwater is routed to the basin. The filtered stormwater will be infiltrated back into the ground on-site within the retention basin. Per the attached Geotechnical Report (Wood Rodgers, December 17, 220), test pits were dug to 10' below the surface and demonstrated no presence of groundwater, which is noted in the Report to be 40' below the surface.

## Dust Control

Any necessary dust control will be provided in accordance with Carson City regulations and requirements.

## SITE ANALYSIS

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Carson City Municipal Code Chapter 17.10.035 *Site analysis to determine common open space and lot size variations* requires assessment of the project area in order to propose a development with common open space. Since the site is virtually flat, has no significant vegetation, drainage ways, wetlands, flood, or seismic hazards, most of the items required in a Site Analysis are already addressed in this document and the associated tentative map plan set. Responses to all the Code sections are noted below with references to the locations where relevant information may be found.

### **1. Location Map. A general location map providing the context of location and vicinity of the site.**

The cover page and Figure 1 of this document depict the location and vicinity of the site.

### **2. Land Use and Zoning. Current and planned land use and adopted zoning on the site and adjacent adopted zoning and current, planned and approved, but unbuilt land uses.**

See Figures 2, 3, and 4, which depict and describe the Master Plan, zoning, existing and approved uses for the site and surrounding properties.

### **3. Existing Structures. A description of the location, physical characteristics, condition and proposed use of any existing structures.**

There are no existing structures on the site.

### **4. Existing Vegetation. A description of existing vegetation, including limits of coverage, and major tree sizes and types. In the instance of heavily wooded sites, typical tree sizes, types and limits of tree coverage may be substituted.**

The vacant site is covered with rabbit brush and sage brush.

### **5. Topography. An analysis of slopes on the site, and adjacent to the site, using a contour interval of 5 feet, or at a contour interval appropriate for the site and agreed to by the director, identifying areas with**



**15 percent or greater slope, areas with 33 percent or greater slope and areas identified as "skyline" on the adopted Carson City skyline map.**

There are no slopes over 15% on or adjacent to the property. The site is virtually flat.

**6. Soil. An analysis of the soil characteristics of the site using Soil Conservation Service (SCS) information.**

The attached Geo-tech report includes an analysis of the soil characteristics, noting that there are no significant geotechnical constraints that would preclude the proposed construction. The soil is classified as Sand Surpass Sandy Loam, comprised of dominantly silty to clayey sand. No evidence of high groundwater was encountered, with groundwater noted to be approximately 40' below the surface.

**7. Natural Drainageways. Identification of natural drainageways on and adjacent to the site.**

Drainage ways were not identified on the site, which is practically flat, gently sloping to the north east.

**8. Wetlands and Water Bodies. Identification of existing or potential wetlands and water bodies on the site.**

There are no water bodies or wetlands on the site.

**9. Flood Hazards. Identification of existing and potential flood hazards using Federal Emergency Management Agency (FEMA) information.**

The project area is designated as Flood Zone X, which indicates a minimal flood hazard.

**10. Seismic Hazards. Identification of seismic hazards on and/or near the site, including location of any Holocene faults.**

No faults or seismic hazards are known to exist on the site.

**11. Easements. A description of the type and location of any easements, public and/or private, on the site.**

Sheet 2 of the tentative map displays the known public utility easements on site.

**12. Utilities. A description of existing or available utilities, and an analysis of appropriate locations for water, power, sanitary sewer and storm water sewer facilities.**

The Comments from SUB-2020-0015 (comment 19) directed that the water main must be extended "up" the Center Street frontage. As a result, the proposed design connects to Silver Sage drive on the west with a new 8" line that extends east along the new ROW, connecting to a new line moving south along Center Drive with a final connection to an existing main on Clearview Drive, completing a looped system. A new 8" sewer line will likewise run west to east along the new ROW, extend south along Center Drive and connect to an existing main at the intersection of Center Drive and Clearview Drive. Storm sewer facilities will be created utilizing a 12" inch line, capturing stormwater on site in the new ROW and conveying it east and then south to the retention facilities on the south east corner of the common open space. The water, sewer, and stormwater system designs follow the new ROW alignment to make appropriate connection to existing facilities. Electric power will be connected to existing facilities on the Center Drive and Silver Sage Drive frontages with new lines undergrounded. See Sheet 3 of the TM for details of existing and proposed utilities.



**13. Appropriate Access Points. An analysis of appropriate access points based upon existing and proposed streets and highways and site opportunities and constraints.**

The primary driver for design of access is the previous approval of the Silver View Townhomes to the west of the subject site, which includes a primary access on Silver Sage Drive. The proposed tentative map aligns its new ROW with the Townhomes’ access. Once that ROW orientation was established, the design of the utilities followed the same orientation.

**PROJECT BENEFIT**

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The Board of Supervisors hearing to approve an Ordinance amending the zoning for the site was not accompanied by development plans (June 18, 2020). This TM details the intended development for the property including expansive setbacks on the north and south of the project area that significantly exceed the requirement of the existing zoning and the proposed zone change to SF6. The east side setback also exceeds the standard for SF6 zoning. This benefits owners of adjacent development by providing setbacks that are analogous to the existing zoning. Also, due to the project design, the east side of the project only include the side -of-lot frontages for two homes, with fences and significant landscaping planned. Further, since the existing zoning is not consistent with the Master Plan land use of Medium Density Residential, the proposed TM provides a means for the Board to approve a zone change that will introduce consistency in concert with a clear plan for intended development.

**TRAFFIC**

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Per the ITE Trip Generation tables (10<sup>th</sup> edition) the proposed 28 units will not generate over 80 peak hour trips or 500 ADT (Average Daily Trips), therefore, the design does not necessitate submittal of a traffic impact study (per Title 18 Appendix: Division 12.13 – Traffic and impact study requirements). See the attached Trip Generation Letter from Headway Transportation, dated November 11, 2020, for more details.

**Figure 8: ITE Average Trip Generation**

Land Use	Dwelling Units	ADT (weekday)	AM Peak Hour (7AM -9AM)	PM Peak Hour (4PM-6PM)
Single Family (Land Use 210)	28	264	21	28



## MASTER PLAN POLICY CHECKLIST/FINDINGS

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The purpose of the Master Plan Policy Checklist is to provide a list of answers 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 this Tentative Map application. This section includes the Checklist, Tentative Map Findings, and Special Use Permit Findings.

The project complies with the Master Plan and accomplishes the following objectives.

### Chapter 3: A Balanced Land Use Pattern

1. Goal 1.1c-Water Conservation: The proposed project is expected to encourage water conservation efforts through low-water landscaping, low-flow fixtures, and/or other water saving devices.
2. Goal 1.1e-Sustainable Construction Techniques: The proposed project is expected to utilize sustainable building materials and construction techniques.
3. Goal 1.5d–Coordination of Services: The site is located to be adequately served by city services including fire and sheriff services.
4. Goal 3.3d-Floodplain and Hazard Area Development: The proposed development is not within the 100-year floodplain or other hazardous areas.
5. Mixed Use Employment Policy 1.4-Location: The site is located on existing arterial and collector streets.

### Chapter 4: Equitable Distribution of Recreational Opportunities

The proposed project does not include public recreational facilities.

### Chapter 5: Economic Vitality

1. Goal 5.1j-Housing Mix: The proposed development will provide a housing type that will be appealing to first time homebuyers, young professionals, and downsizers, consistent with the City's goals to encourage a mix of housing for the labor force and the non-labor force.

### Chapter 6: Livable Neighborhoods and Activity Centers

1. Goal 6.1a-Durable Materials: The proposed project is expected to utilize durable, long-lasting building materials.
2. Goal 6.1c-Variety and Visual Interest: The proposed development will incorporate defined entrances and pedestrian connections, landscaping, and other features consistent with the City's Development Standards.
3. Goal 6.2a-Neighborhood Compatibility: The proposed development will provide appropriate height, density, and setback transitions to ensure compatibility with surrounding development.
4. Goal 9.4b-“Spot” Rezoning: The proposed project will not require “spot” rezoning of the site since the requested zone change to SF6 would bring the site into compatibility with the Master Plan and



SF6-zoned property to the north. Additionally, recognizing the Retail Commercial zoning to the west, the proposed SF6 zoning is an appropriate transition to the SF1A zoning to the east.

### Chapter 7: A Connected City

1. Goal 11.2b-Transit Supportive Development: The site is located with frontage on a Minor Arterial (Clearview Drive) and a Minor Collector (Silver Sage Drive) with two bus transit stops (JAC) within walking distance.

### Chapter 8: Specific Plan Areas

The proposed project is not within a Specific Plan Area.

## TENTATIVE MAP FINDINGS

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In accordance with Carson City Municipal Code Section 17.07.005, this project has been designed to 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.**

All environmental health laws and regulations regarding water, air pollution, and waste disposal will be incorporated into the proposed project and its construction.

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

Water is available to the site. It will be provided by Carson City, conform to the applicable health standards, and fulfill quantity requirements for residences.

3. **The availability and accessibility of utilities.**

Public utilities are currently available to serve the proposed project.

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

Police services are currently provided by the Carson City Sheriff's Office. Fire protection will be provided by the Carson City Fire Department. The project meets the requirements of the Fire Department. The Regional Transportation Commission is responsible for transportation in and around the project area. Carson City Parks Department provides recreational and parks services, although this project is not expected to impact recreational services. Educational services are provided by Carson City School District.



- 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 site is not adjacent to public lands.

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

The existing zoning designation of SF1A is not in conformance with the Master Plan. The proposed project is intended to support a zone change to SF6, which would bring the property into conformance with the Master Plan designation of Medium Density Residential (MDR).

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

The proposed project includes access to a Minor Collector (Silver Sage Drive), 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 includes frontages and proposed access to a Minor Collector, Silver Sage Drive. The proposal will not generate enough Average Daily Trips (ADT) to trigger a need for new streets or intersection improvements (See Figure 8 for details).

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

Site topography is relatively flat and stabilized by sage brush. The parcel is designated by FEMA as Zone X, Area of Minimal Flood Hazard. The site will be designed to accommodate peak flow events and proposes a stormwater retention basin on the south of the development. A Preliminary Geotechnical Investigation is included with this submittal package.

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

All recommendations and comments provided during the review of this project will be incorporated where applicable.

- 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 availability and accessibility of fire protection to the proposed residential units will be in compliance with Carson City Fire Department recommendations.

- 12. Recreation and trail easements.**



A public access easement will be recorded over the walkway on the southern side of the project area, providing pedestrian access along Clearview Drive and connection to the sidewalks along the new ROW.



<b>Carson City Planning Division</b> <b>108 E. Proctor Street· Carson City NV 89701</b> Phone: (775) 887-2180 • E-mail: <a href="mailto:planning@carson.org">planning@carson.org</a>			<b>FOR OFFICE USE ONLY:</b>  CCMC 17.06 and 17.07  <h2 style="text-align: center;">TENTATIVE SUBDIVISION MAP</h2> <p><b>FEE*: \$3,500.00 + noticing fee</b>          *Due after application is deemed complete by staff</p> <p><b>SUBMITTAL PACKET – 5 Complete Packets (1 Unbound Original and 4 Copies) including:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Application Form including Applicant's Acknowledgment</li> <li><input type="checkbox"/> Property Owner Affidavit</li> <li><input type="checkbox"/> Copy of Conceptual Subdivision Map Letter</li> <li><input type="checkbox"/> Detailed Written Project Description</li> <li><input type="checkbox"/> Proposed Street Names</li> <li><input type="checkbox"/> Master Plan Policy Checklist</li> <li><input type="checkbox"/> Wet Stamped Tentative Map (24" x 36")</li> <li><input type="checkbox"/> Reduced Tentative Map (11" x 17")</li> <li><input type="checkbox"/> Conceptual Drainage Study</li> <li><input type="checkbox"/> Geotechnical Report</li> <li><input type="checkbox"/> Traffic Study (if applicable)</li> <li><input type="checkbox"/> Documentation of Taxes Paid to Date</li> </ul> <p><b>CD or USB DRIVE with complete application in PDF</b></p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p><b>STATE AGENCY SUBMITTAL including:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 Wet-stamped copies of Tentative Map (24" x 36")</li> <li><input type="checkbox"/> Check made out to NDEP for \$400.00 + \$3/lot <b>\$484</b></li> <li><input type="checkbox"/> Check made out to <u>Division of Water Resources</u> for \$180.00 + \$1/lot <b>\$208</b></li> </ul> </div> <p><b>Application Reviewed and Received By:</b></p> <hr style="width: 100%;"/> <p><b>Submission Deadline:</b> Planning Commission application submittal <a href="#">schedule</a>.</p> <p><b>Note:</b> Submittals must be of sufficient clarity and detail for all departments to adequately review the request. Additional information may be required.</p>		
<b>FILE #</b>					
<b>APPLICANT</b>		<b>PHONE #</b>			
Mark Turner/State Street Development, LLC		775- 745-0881			
<b>MAILING ADDRESS, CITY, STATE, ZIP</b>					
3075 College Parkway, Carson City, NV 89703					
<b>EMAIL</b>					
silveroakmark@me.com					
<b>PROPERTY OWNER</b>		<b>PHONE #</b>			
RPJ NV LLC		775-745-0881			
<b>MAILING ADDRESS, CITY, STATE, ZIP</b>					
508 N Curry St. Ste B, Carson City, NV 89703					
<b>EMAIL</b>					
<b>APPLICANT AGENT/REPRESENTATIVE</b>		<b>PHONE #</b>			
Manhard Consulting/Louis Cariola		775-250-8613			
<b>MAILING ADDRESS, CITY, STATE, ZIP</b>					
241 Ridge Street #400, Reno, NV 89501					
<b>EMAIL</b>					
lcariola@manhard.com					
<u>Project's Assessor Parcel Number(s)</u>					
009-124-03					
<u>Project's Street Address</u>					
north east corner of Clearview Drive and Silver Sage Drive					
<u>Nearest Major Cross Street(s)</u>					
see above					
<u>Project's Master Plan Designation</u>					
MDR					
<u>Project's Current Zoning</u>					
SF1A (anticipated amendment to SF6)					
<u>Project Name</u>					
Borda Crossing					
<u>Total Project Area</u>	<u>Number of Lots</u>	<u>Smallest Parcel Size</u>			
5.27 acres	28	4878 sf			
Please provide a brief description of your proposed project below. Provide additional pages to describe your request in more detail.					
A zoning amendment from SF1A to SF6 was recommended for approval by the PC on 05/27/2020.					
In order to provide the Board of Supervisors with more detailed development plans, this common					
open space TM is submitted for 28 single-family-detached-home-lots accessed by a 60' ROW.					
<b>NOTE:</b> 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		12-16-20 Date			

**PROPERTY OWNER'S AFFIDAVIT**

I, Mark Turner, being duly deposed, do hereby affirm that I am the record owner of the  
(Print Name)  
subject property located at APN 009-124-03, and that I have knowledge of, and I agree to, the  
(Property Address and APN)  
filing of this Tentative Subdivision Map application.

[Signature] 3075 College Parkway 12-16-20  
Signature Address Date

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

STATE OF NEVADA )  
COUNTY Carson City )

On December 16, 2020, personally appeared before me, a notary public,  
[Signature], 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 McKenzie  
Notary Public





## Carson City Planning Division

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

[www.carson.org](http://www.carson.org)  
[www.carson.org/planning](http://www.carson.org/planning)

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November 6, 2020

Louis Cariola  
Manhard Consulting  
241 Ridge Street, Suite 400  
Reno, Nevada 89501  
[lariola@manhard.com](mailto:lariola@manhard.com)

### **SITE INFORMATION:**

Location:	Silver Sage Drive and Clearview Drive
APN:	009-124-03
Master Plan Designation:	Medium Density Residential
Zoning:	Single Family 1 acre
Parcel size:	5.27 acres
Subject:	SUB-2020-0015

PROJECT DESCRIPTION: A Common Open Space Subdivision creating 28 single family residential lots with a mix of common and private open space.

The following is a summary of the staff comments based on the Conceptual Subdivision Map Review meeting held on November 6, 2020.

### **PLANNING DIVISION –**

Contact Heather Ferris, Associate Planner, 775-283-7080

1. An application for a Tentative Common Open Space Subdivision Map must be submitted in accordance with the Carson City Municipal Code (CCMC) 17.10 in order to subdivide the property as proposed on the Conceptual Map. Alternatively, the applicant may consider a Planned Unit Development to more closely tie the proposed development to the required zoning map amendment noted in 2 below.
2. Any application for a Planned Unit Development shall be made consistent with all applicable sections of CCMC 17.09.
3. In order to develop this parcel as proposed, a zoning map amendment from SF1A to SF6 will be required. An application for a zoning map amendment (ZA-2020-0005) was submitted earlier this year. On May 27, 2020 the Planning Commission recommended approval of the amendment to the Board of Supervisors. The Board of Supervisors heard the matter on June 18, 2020; however, the Board declined to take action and continued the matter to allow the applicant to either bring forward an alternative zoning or a lot

layout that would address the concerns of the neighborhood. Due to the amount of time that has passed since the Board of Supervisors hearing, staff has recommended taking the zoning map amendment back to the Planning Commission along with the Tentative Subdivision Map.

4. On the application for the tentative map, call out the proposed building setbacks.
5. Consistent with CCMC 17.10.035, provide a site analysis with the tentative map application.
6. CCMC 17.10.046 outlines the requirements for open space within a Common Open Space Development. When you submit your application for a tentative map include an Open Space exhibit demonstrating compliance with these requirements, including the requirement for the 100 square feet of common open space per unit for recreation.
7. Parking is proposed to be provided via a minimum of a 2-car garage for each unit. The garages are proposed to be traditional, side-by-side garage parking. If the parking requirement is proposed to be met with tandem parking, a Special Use Permit is required. Additionally, parking will be provided along the internal street. Please note, if on-street parking is not proposed, guest parking is required to be provided on-site at a ratio of 1 space for every 2 units (Division 2 of the Carson City Development Standards).
8. The periphery boundary setback is required to be consistent with the setbacks established for yard areas in the underlying zoning. The proposed periphery setback either meets or exceeds these requirements.
9. Due to the concerns raised by neighbors, it is recommended that you provide a conceptual buffering/screening exhibit at the time you submit the application. The periphery boundary areas, particularly on the north, south, and east sides should include landscaping with trees and shrubs to screen the project from the adjacent neighbors.

#### ENGINEERING AND UTILITIES –

Contact Stephen Pottey, Project Manager, 775-283-7079

10. The storm drain development standards are in the process of being revised and moved to a Carson City Drainage Manual. If approved, these changes will include a change in the detention design storm to a 10-year 24-hour event, and the inclusion of Low Impact Design requirements.
11. A meandering 5-foot-wide concrete path must be installed along the Clearview Drive frontage, and up Center drive to the entrance. This path will be privately maintained but must have a public access easement.
12. Curb, Gutter, and Sidewalk must be installed on the project frontage along Silver Sage Drive, with an ADA pedestrian access ramp at the corner of Silver Sage Drive and Clearview Drive.
13. Curb and Gutter must be designed with valley gutters to cross streets where necessary, and

with gravel where the curb transitions to a roadside swale.

14. The west half of Center Drive must be repaved along the entire frontage. The pavement width will meet the Rural Local Street standard.
15. A "Share the Road" sign must be installed on the Clearview Drive frontage.
16. On-street parking will not be allowed on Silver Sage Drive, Clearview Drive, or Center Drive.
17. The project across the street was conditioned to have private streets but was approved with public streets after an offer was made to slurry seal the streets after 5 years. The street of this subdivision will need to be private unless a similar offer is made.
18. A sealed memo must be provided by a professional engineer showing the daily and peak hour trip generation rates and a trip distribution. This must be submitted with the Tentative Map.
19. The water main must be extended up the frontage on Center Drive.
20. The water main must be looped such that no more than 15 services are on a dead-end line.
21. The project crosses pressure zones and the water main must be designed accordingly.
22. 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.
23. All construction work must be to Carson City Development Standards (CCDS) and meet the requirements of the Carson City Standard Details.
24. Addresses for units will be provided during the building permit review process.
25. Fresh water must be used for Dust control. Contact Rit Palmer at Public Works at 283-7382 for more information.
26. 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. This project is near a zone split, so the analysis must look at receiving water from both zones. One of the zones has low pressure, 40 psi, which meets minimum pressure requirements, but may not be sufficient for this size project when due to head losses, so head losses must be analyzed. Please contact Tom Grundy, P.E. at (775) 283-7081 for fire flow test data.
27. A wet stamped sewer main analysis must be submitted that includes addressing the effect of flows on the existing City system. See section 15.3.2 of CCDS.
28. 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.

29. An erosion control plan meeting section 13 of CCDS will be required in the plan set.
30. New electrical service must be underground.
31. 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.
32. A Technical Drainage Study meeting the requirements of section 14 of the Carson City Development Standards must be submitted with the permit and plans.
33. A Construction Stormwater Permit from the Nevada Division of Environmental Protection (NDEP) will be required.
34. A Dust Control Permit from NDEP will be required.

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.

FIRE DEPARTMENT –

Contact Dave Ruben, Fire Marshal, 775-283-7153

35. Project must comply with the International Fire Code and northern Nevada fire code amendments as adopted by Carson City.
36. Provide hydrant location on Tentative Map submittal.

Parks, Recreation & Open Space Department-

Contact Nick Wentworth, Parks Project Manager 775-283-7733

37. 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.
38. 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](http://www.carson.org/beecityusa)

The City's approved tree species list for commercial projects can be found at <https://www.carson.org/Home/ShowDocument?id=15225>

39. 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, Rec. and Open Space Dept. by phone or email through the contacts listed at the top of this document.

40. 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.
41. 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 permit. [https://library.municode.com/nv/carson\\_city/codes/code\\_of\\_ordinances?nodeId=TI\\_T18\\_APPENDIXCADEST\\_DIV3LA](https://library.municode.com/nv/carson_city/codes/code_of_ordinances?nodeId=TI_T18_APPENDIXCADEST_DIV3LA)
42. 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).

#### Conclusion-

Comments presented in this letter may not include all the requirements or conditions which may be placed on the project at the time of final review.

You may also note comments provided by various city staff at the conceptual review meeting that may not have been included in any written comments. If you have any questions, please feel free

to contact me.

Sincerely,



Heather Ferris  
Associate Planner

cc: SUB-2020-0015  
Mark Turner- [silveroakmark@me.com](mailto:silveroakmark@me.com)















**RIDGELINE**  
 DEVELOPMENT  
 PO Box 21815 - CARSON CITY, NV 89721  
 TELEPHONE: (775) 684-9275  
 LIC. #0070678 (B2)  
 EXPIRES: 03/31/2022

**BORDA CROSSING  
 CARSON CITY, NEVADA  
 TENTATIVE MAP LANDSCAPE PLAN**



INCENSE CEDAR



PROPOSED TREES FOR SCREENING  
 ALONG THE NORTH BOUNDARY.

AUTUMN BLAZE MAPLE



COLUMNAR HORNBEAM



BLUE SPRUCE



AUSTRIAN PINE

**CARSON CITY LANDSCAPE REQUIREMENTS**

FOR THE FINAL MAP APPLICATION THE FOLLOWING REQUIREMENTS ARE RECOGNIZED AND WILL BE MET.

**LANDSCAPE AREA**

Landscape Area will meet or exceed the required 20% of Impervious Surface Area. Refer to Civil Drawing for the Tentative Map Application area statistics.

**TREE AND SHRUB REQUIREMENTS**

Total Trees Required will be 1/400 SF of required landscape area. Trees shall be minimum 2 inch caliper or 6 ft. height evergreen size.

Total trees provided will include street trees at the rate of 1 tree/30 LF of street frontage in addition to trees required for screening.

Total shrub volume will meet or exceed the requirement of (6) minimum 5 gallon shrubs per required tree.

**APPROVED STREET TREES**

The proposed street trees have been selected from the City's approved tree species list.

**LOCATION OF TREES**

Tree locations have been chosen to accommodate the Tentative Map requirements (\*40) that all deciduous trees be located min. 5' from walks or streets and all evergreen trees be located min. 10'.

**POLLINATOR PLANT MATERIAL**

50% of the plant material will be specified as Pollinator plant material and will be clearly delineated in the plant materials legend accompanying the final submittal package.

NOTE:  
 ALL DECIDUOUS TREES HAVE BEEN LOCATED MINIMUM 5 FEET FROM STREET, HARDSCAPE AND PATHWAYS AS REQUIRED.  
 ALL EVERGREEN TREES ARE LOCATED MINIMUM 10 FEET FROM SAME.

160 LF = (5) TREES

FUTURE STREET TREES IN THE FRONT YARDS HAVE BEEN CONCEPTUALLY SHOWN. TBD.

BAYONNE DRIVE

ALL SIGHTLINES WILL BE PROTECTED AT ENTRIES AND CORNERS WITH THE USE OF LOW SHRUBS AND GROUNDCOVERS. TBD.

CENTER STREET

113 LF = (8) TREES

**CONCEPTUAL PLANT MATERIALS**

TREES	QTY	BOTANICAL / COMMON NAME	CONT	GAL	SIZE
	6	Acer negundo 'Sensation' / Sensation Box Elder	-	2" Cal	-
	30	Acer x freemanii 'Jeffered' TM / Autumn Blaze Maple	-	2" Cal	-
	4	Calocedrus decurrens / Incense Cedar	-	-	6' HT.
	16	Carpinus betulus 'Columnaris' / Columnar European Hornbeam	-	2" Cal	-
	9	Fraxinus pennsylvanica 'Climzon' TM / Climaron Green Ash	-	2" Cal	-
	12	Picea pungens glauca / Blue Spruce	-	-	6' HT.
	34	Pinus nigra / Austrian Black Pine	-	-	6' HT.
	14	Quercus columnaris 'Regal Prince' / Regal Prince Columnar Oak	-	2" Cal	-
	14	Sorbus aucuparia 'Fastigiata' / Pyramidal Mountain Ash	-	2" Cal	-
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT		
	26	Large Shrub / Large Shrub 6'-10' ht.	5 gal		
	65	Medium Shrub / Medium Shrub 5'-6' ht.	5 gal		

NOTE:  
 SHRUB QUANTITIES WILL BE AMENDED IN THE FINAL SUBMITTAL TO MEET OR EXCEED ALL LANDSCAPE REQUIREMENTS.

CLEARVIEW DRIVE

615 LF = 21 TREES



SENSATION BOX ELDER



PROPOSED TREES FOR SCREENING  
 ALONG THE SOUTH BOUNDARY.

AUTUMN BLAZE MAPLE



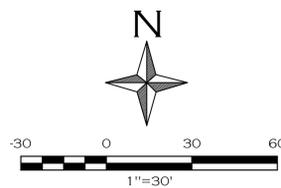
AUSTRIAN PINE



PYRAMIDAL MT. ASH



REGAL PRINCE OAK



**REVISION**


**DATE**

DEC. 16, 2020

**SCALE**

1" = 30'-0"

**DRAWN**

**CHECKED**

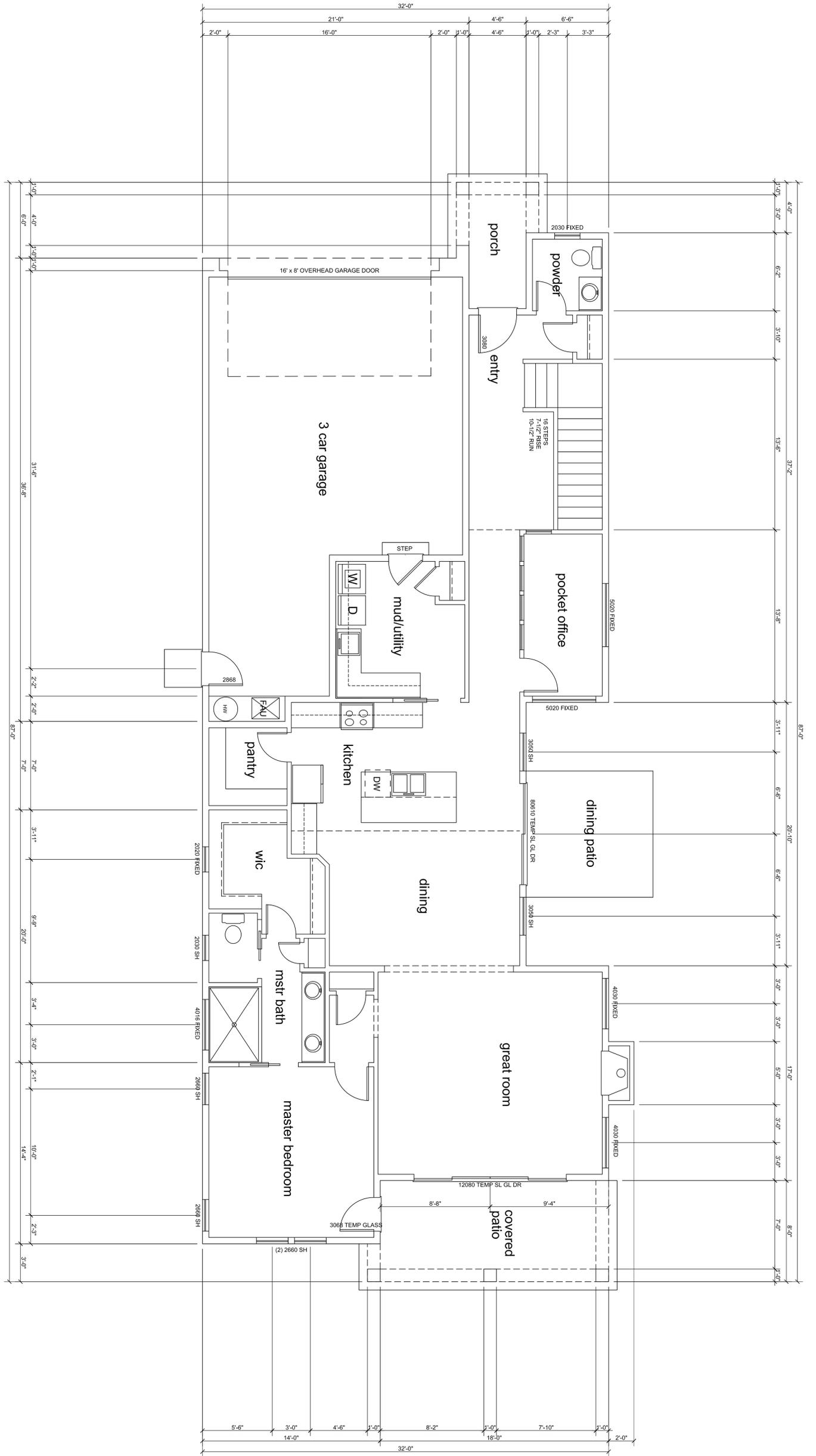
**DRAWING TITLE**

TENT. MAP

**SHEET:**

L1

OF 1 SHEETS



**FIRST FLOOR PLAN**

1657 SQUARE FEET

SCALE: 1/4" = 1'-0"

CONTRACTOR "PROJECT DESIGNER"  
 THESE PLANS ARE PROVIDED & SUBMITTED BY THE  
 CONTRACTOR AS AN EXEMPTION TO NRS 623.330  
 FOR WORK UNDER THE CONTRACTOR'S LICENSE  
 CATEGORY AUTHORIZED UNDER NRS 624.  
 I AM RESPONSIBLE FOR DESIGNS, PREPARATION,  
 AND INFORMATION CONTAINED ON THESE PLANS.

QUALIFIED INDIVIDUAL'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

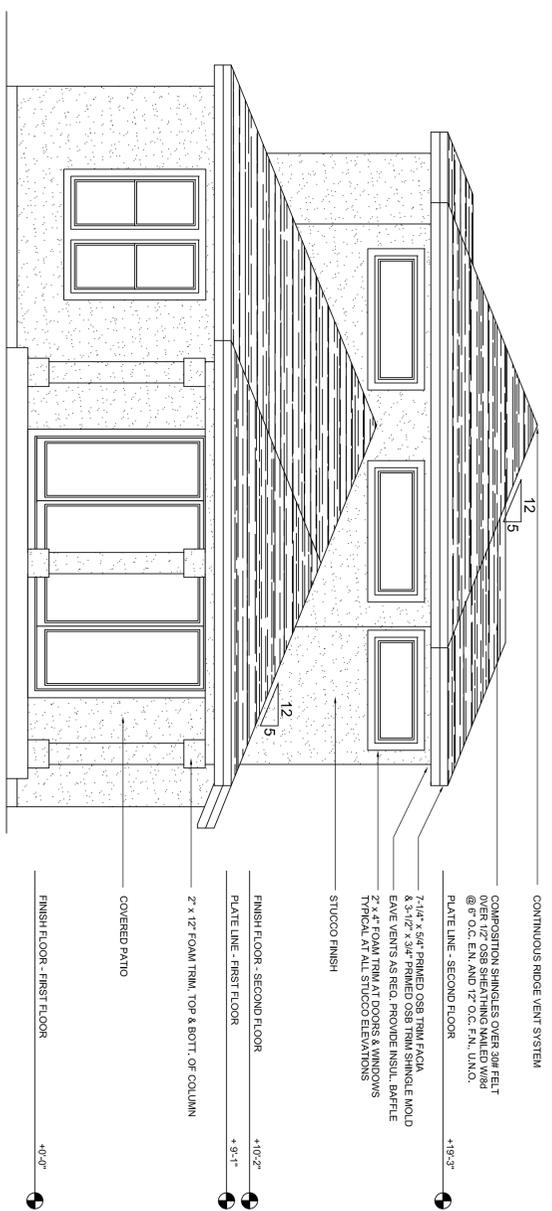
**CLEARVIEW ESTATES (TEMP)**  
**PLAN TWO**

**RIDGELINE DEVELOPMENT LLC**  
 P.O. BOX 21815  
 Carson City, Nevada 89721  
**775-684-9275**  
 Nevada Contractors License #0070678

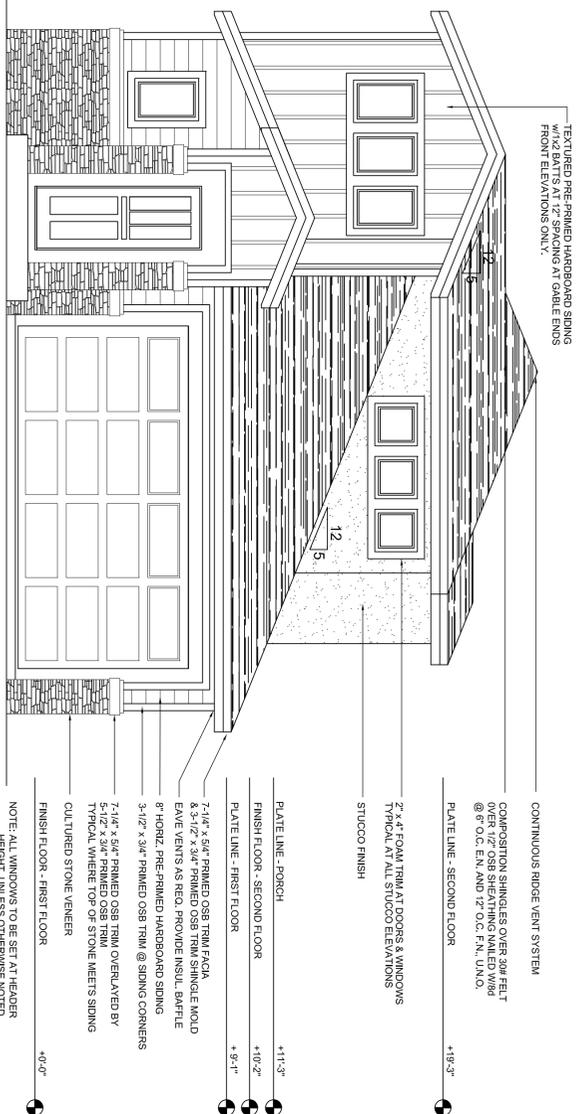
DESIGN DATE:  
 OCTOBER 2020  
 PLAN NO. / SQ. FEET:  
**21771**

**A1**

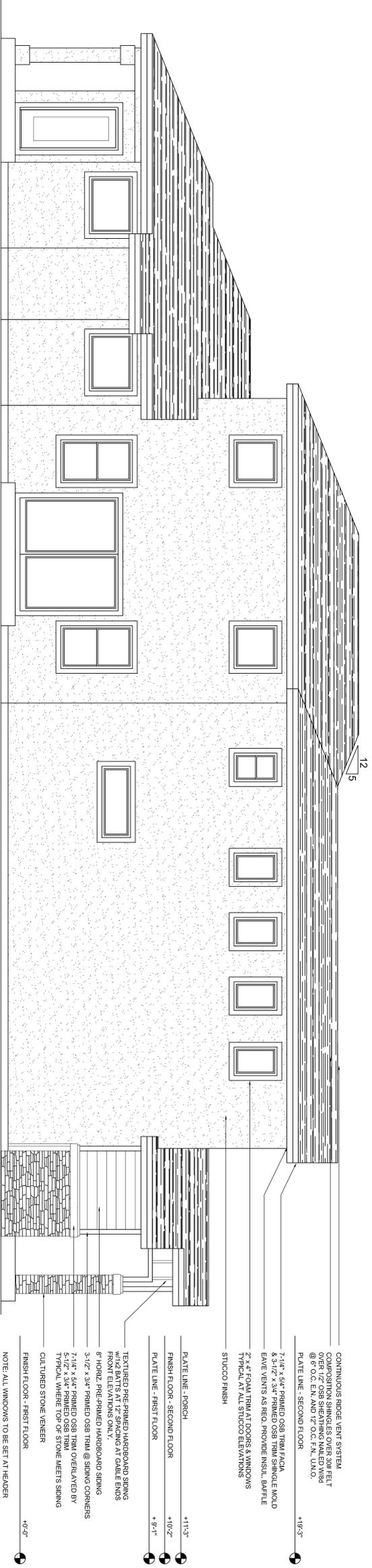




REAR ELEVATION



FRONT ELEVATION "A"



LEFT ELEVATION

EXTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

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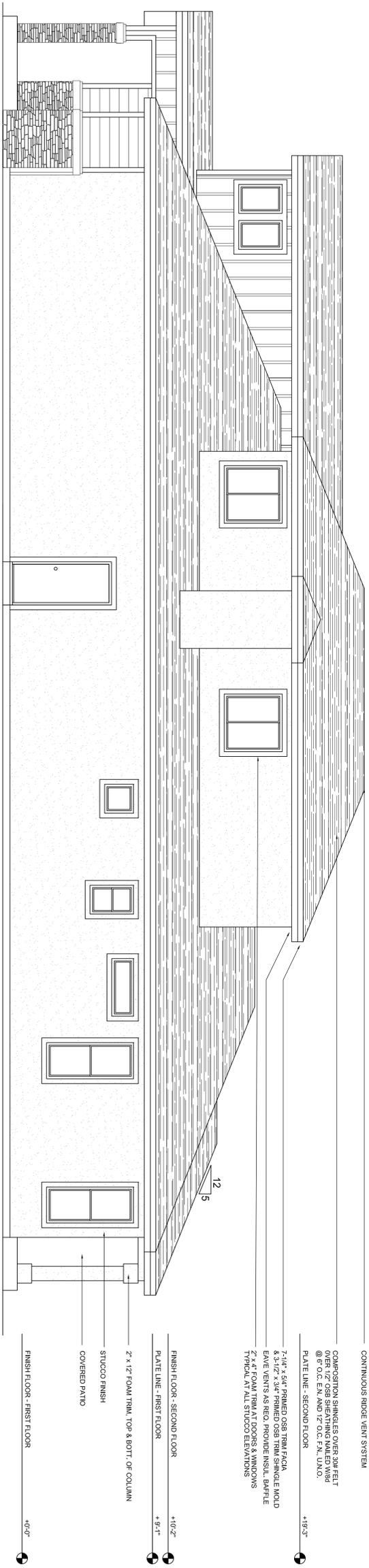
CLEARVIEW ESTATES (TEMP)  
PLAN TWO

CONTRACTOR "PROJECT DESIGNER"  
THESE PLANS ARE PROVIDED & SUBMITTED BY THE CONTRACTOR AS AN EXEMPTION TO NRS 623.330 FOR WORK UNDER THE CONTRACTOR'S LICENSE CATEGORY AUTHORIZED UNDER NRS 624. I AM RESPONSIBLE FOR DESIGNS, PREPARATION, AND INFORMATION CONTAINED ON THESE PLANS.

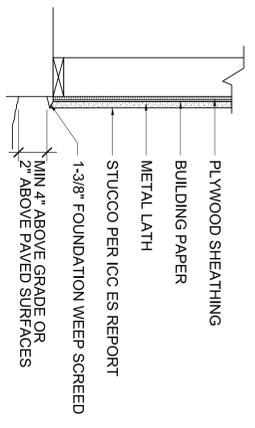
QUALIFIED INDIVIDUAL'S SIGNATURE DATE

DESIGN DATE:  
OCTOBER 2020  
PLAN NO. / SQ. FEET:  
21771

**A3**



RIGHT ELEVATION



- ELEVATION NOTES:**
1. STUCCO EXTERIOR CONTROL JOINTS ARE TO BE PLACED ABOVE AND BELOW WINDOWS AND ABOVE ALL DOORS. VERTICAL CONTROL JOINTS SHALL ALSO BE PLACED IN EXTERIOR WALLS SO AS TO PROVIDE A PLASTER PANEL NO MORE THAN 10'-0" IN ANY DIRECTION. USE "J" WEEP WHOLELS TYPICAL 4" ABOVE GRADE AND 2" ABOVE PAVING.
  2. CLASS "A" COMP ROOF PER BUILDER % 30 LB FELT (MIN)
  3. DUAL GLAZED LOW-E VINYL WINDOWS MINIMUM TYPICAL
  4. TRIM AND FASCIA PER BUILDER
  5. MASONRY PER BUILDER
  6. GARAGE DOOR STYLE PER BUILDER
  7. FRONT DOOR STYLE PER BUILDER

TYPICAL WEEP SCREED INSTALLATION  
SCALE: 1" = 1'-0"

EXTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

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P.O. BOX 21815  
Carson City, Nevada 89721  
**775-684-9275**  
Nevada Contractors License #0070678

CLEARVIEW ESTATES (TEMP)  
PLAN TWO

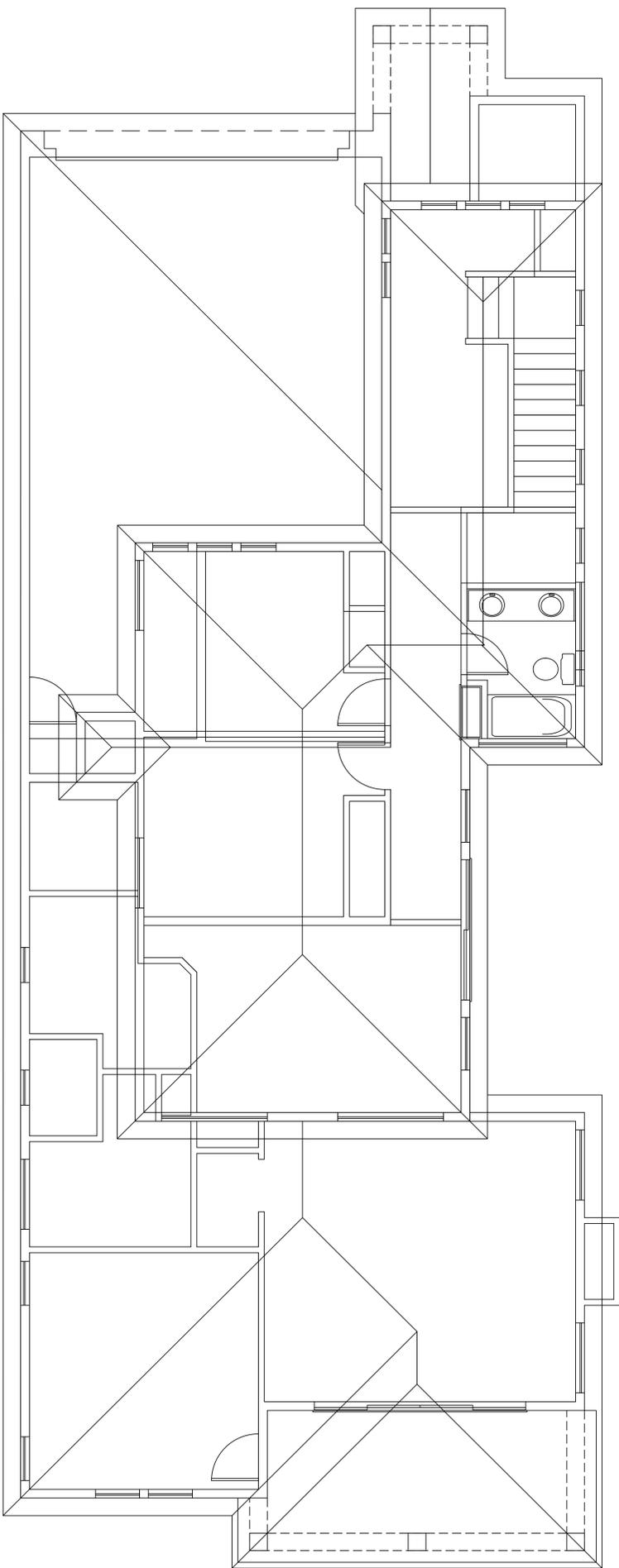
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I AM RESPONSIBLE FOR DESIGNS, PREPARATION,  
AND INFORMATION CONTAINED ON THESE PLANS.

QUALIFIED INDIVIDUAL'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

DESIGN DATE:  
OCTOBER 2020

PLAN NO. / SQ. FEET:  
**21771**

**A4**



**COMBINED ROOF PLAN**

SCALE: 1/4" = 1'-0"

**S3**

PLAN NO. / SQ. FEET:  
**2171**

DESIGN DATE:  
OCTOBER 2020

CONTRACTOR "PROJECT DESIGNER"  
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QUALIFIED INDIVIDUAL'S SIGNATURE DATE

**CLEARVIEW ESTATES (TEMP)  
PLAN TWO**

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# 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: \_\_\_\_\_

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?
- Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?
- Encourage the use of sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?
- Located in a priority infill development area (1.2a)?
- Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

- 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)?
- At adjacent county boundaries, coordinated with adjacent existing or planned development with regards to compatibility, access and amenities (1.5a)?
- 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)?
- 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)?
- 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)?
- Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?
- If at the urban interface, provide multiple access points, maintain defensible space (for fires) and are constructed of fire resistant materials (3.3b)?
- Sited outside the primary floodplain and away from geologic hazard areas or follow the required setbacks or other mitigation measures (3.3d, e)?
- 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)?
- If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

## 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)?
- Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

## 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)?
- Promote revitalization of the Downtown core (5.6a)?
- Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

## 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)?
- 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)?
- 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)?
- 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)?
- 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)?

## 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)?
- Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?
- 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)?



**CARSON CITY BOARD OF SUPERVISORS**  
**Minutes of the June 18, 2020 Meeting**  
**Page 9**

(9:42:35) – Mayor Crowell introduced the item and explained that all the discussion taken place during item 20.A [of the Redevelopment Authority Agenda] would be adopted by reference. There were no additional comments; therefore, Mayor Crowell entertained a motion.

(9:43:33) – Supervisor Bonkowski moved to adopt Resolution No. 2020-R-18, incorporating the changes read into the record during the discussion of item 20.A. The motion was seconded by Supervisor Giomi.

<b>RESULT:</b>	<b>APPROVED (5-0-0)</b>
<b>MOVER:</b>	Supervisor Bonkowski
<b>SECONDER:</b>	Supervisor Giomi
<b>AYES:</b>	Supervisors Bonkowski, Giomi, Bagwell, Barrette, and Mayor Crowell
<b>NAYS:</b>	None
<b>ABSTENTIONS:</b>	None
<b>ABSENT:</b>	None

**24.B FOR POSSIBLE ACTION: DISCUSSION AND POSSIBLE ACTION TO INTRODUCE, ON FIRST READING, AN ORDINANCE CHANGING THE ZONING FROM SINGLE FAMILY ONE ACRE (SF1A) TO SINGLE FAMILY 6,000 (SF6), ON PROPERTY LOCATED AT THE NORTHEAST CORNER OF SILVER SAGE DRIVE AND CLEARVIEW DRIVE, APN 009-124-03.**

(9:43:49) – Mayor Crowell introduced the item. Associate Planner Heather Ferris introduced the subject property and presented the Staff Report with accompanying photographs, all of which are incorporated into the record. She also noted that Staff had been able to make all three findings and that the Planning Commission had recommended the zoning change by a vote of 6-1-0. Ms. Ferris acknowledged the presence of applicant representative Susan Pansky and Development Engineer Steven Pottéy on the phone.

(9:53:01) – Mr. Pottéy addressed several concerns noted in public comments stating that minimum distance standards between domestic wells and septic systems are enforced by the City; however, “there are no minimum distances for detention or infiltration basins.” He also explained that the subdivision map had not yet been submitted; therefore, the impacts on the intersection were not yet known and would be addressed “at the tentative map” stage. Mr. Pottéy clarified that any traffic impact analysis must take into account any “entitled projects as well as projected growth in the area.” He added that any required mitigation will be addressed at the project level. Mayor Crowell inquired about “a buffer zoning along Center and Clearview [Drives]” and Mr. Pottéy believed that the largest impact would be to driveways accessing both streets.

(9:57:44) – Mr. Plemel clarified for Mayor Crowell that the zoning changes may have taken place during the Master Plan process in 2006 where land uses were evaluated, at which time surrounding property owners were notified of the changes. In response to a question regarding split zoning by Supervisor Bonkowski, Mr. Plemel explained that “it’s not against any policy or code to split zone this [property],” adding that such boundaries would be requested by the developer. Planning Manager Hope Sullivan addressed the second finding, compatibility, and offered to work with the applicant and return to the next meeting since “we do need to go back to a first reading [of the ordinance].” Supervisor Bonkowski expressed concern that there are horse properties to the east and south of the subject property, and wished to see a transition zone, compatible to the Master Plan designation,

**CARSON CITY BOARD OF SUPERVISORS**  
**Minutes of the June 18, 2020 Meeting**  
**Page 10**

i.e. Single Family 12,000. Supervisor Giomi was in agreement with the suggestion made by Supervisor Bonkowski. Mayor Crowell was in favor of “creating a better transition zone” as well.

(10:10:22) – Applicant representative Susan Dorr-Pansky introduced herself and noted that the Single Family 21,000 zone represented low-density residential zoning; therefore, was “not an appropriate zone in this location.” She also believed that the current medium density residential zone provided “an adequate buffer,” adding that the parcel was not large and “to split zone that really puts a constraint on us from a design perspective.” She preferred addressing the compatibility element as part of the tentative map “and let us utilize the low density under the SF6 and if we need to cluster it as a part of the PUD (planned unit development) or a common open space subdivision, then we can certainly look at that.” Discussion ensued regarding mitigation between the higher density residences and more cars with equestrians, and Ms. Pansky offered to look at the “best ways to direct traffic to make it impactful,” through a deed restriction or disclosures, citing the Schulz Ranch project as an example. Supervisor Bagwell received confirmation from Ms. Ferris that larger lots may be part of the conditions of approval “if you can tie that mitigation back to one of the findings.” Ms. Sullivan clarified that the item before the Board today was a zoning map amendment; however, with no future development, a deed restriction is not being discussed. She also reminded the Board that in a past discussion regarding the Anderson Ranch development, having single-story homes on the perimeter of the development had been done voluntarily. Ms. Sullivan recommended continuing the item should the Board be concerned about compatibility. She also clarified for Supervisor Giomi that a Master Plan amendment must be initiated by the property owner or the Board of Supervisors. Mayor Crowell entertained additional comments or questions and when none were forthcoming, a motion to continue the item.

**(10:25:07) – Supervisor Bonkowski moved to continue this item and direct Staff to work with the applicant to address the concerns brought up on the record today and bring the item back at a future meeting. The motion was seconded by Supervisor Bagwell. Supervisor Giomi was informed that the item did not have to be returned to the Planning Commission.**

<b>RESULT:</b>	<b>APPROVED (5-0-0)</b>
<b>MOVER:</b>	Supervisor Bonkowski
<b>SECONDER:</b>	Supervisor Bagwell
<b>AYES:</b>	Supervisors Bonkowski, Bagwell, Barrette, Giomi, and Mayor Crowell
<b>NAYS:</b>	None
<b>ABSTENTIONS:</b>	None
<b>ABSENT:</b>	None

**24.C FOR POSSIBLE ACTION: DISCUSSION AND POSSIBLE ACTION REGARDING THE ADOPTION OF BILL NO. 108, ON SECOND READING, AN ORDINANCE APPROVING THE FOURTH ADDENDUM TO A DEVELOPMENT AGREEMENT BETWEEN CARSON CITY AND SILVER OAK DEVELOPMENT COMPANY LIMITED PARTNERSHIP TO MODIFY ARTICLE 2.2 CLUSTER HOUSING OF THE SILVER OAK DEVELOPMENT AGREEMENT, AND PROVIDING OTHER MATTERS PROPERLY RELATED THERETO ON PROPERTIES ZONED SINGLE FAMILY 12,000 PLANNED UNIT DEVELOPMENT (SF-12 P), LOCATED ON THE SOUTH SIDE OF SILVER OAK DRIVE, EAST OF SIENA DRIVE AND RED LEAF DRIVE, AND A PARCEL LOCATED**

## Confirmation of Taxes Paid for APN 009-124-03

Carson City Property Inquiry 009-124-03 : 2020

 Shopping Cart  N

No Personal Exemptions

Billing Fiscal Year (2020 - 2021)

Installment	Date Due	Date Paid	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Amount Paid	Total Unpaid
1	8/17/2020	8/5/2020	\$621.80	\$0.00	\$0.00	\$621.80	\$621.80	\$0.00
2	10/5/2020	10/2/2020	\$621.42	\$0.00	\$0.00	\$621.42	\$621.42	\$0.00
3	1/4/2021	11/6/2020	\$621.42	\$0.00	\$0.00	\$621.42	\$621.42	\$0.00
4	3/1/2021	12/1/2020	\$621.42	\$0.00	\$0.00	\$621.42	\$621.42	\$0.00
<b>Total</b>			<b>\$2,486.06</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$2,486.06</b>	<b>\$2,486.06</b>	<b>\$0.00</b>

November 11, 2020

Mark B. Turner  
Silver Oak Development, LP  
3075 College Drive  
Carson City, NV 89703

### **Trip Generation Letter – Clearview Silver Sage Single-Family Project**

Dear Mr. Turner,

This letter provides trip generation estimates for the proposed Clearview Silver Sage Single-Family Project in Carson City, NV. The proposed project is located on the northeast corner of the Clearview Drive / Silver Sage Drive intersection, as shown in **Figure 1**.



**Figure 1. Project Location**

#### ***Land Use***

The proposed project land use type and quantity are:

- ▶ 28 Single-Family Units

A conceptual site plan for the project is included in **Attachment A**.

#### ***Trip Generation***

Trip generation estimates were calculated based on average trip rates presented in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition*.

**Table 1** shows the Daily, AM Peak Hour, and PM Peak Hour trip generation estimates.

**Table 1. Estimated Project Trips**

Land Use (ITE Code)	Quantity	Daily			AM			PM		
		Total	In	Out	Total	In	Out	Total	In	Out
Single Family (210)	28 Units	264	132	132	21	5	16	28	17	11

Source: Headway Transportation, 2020

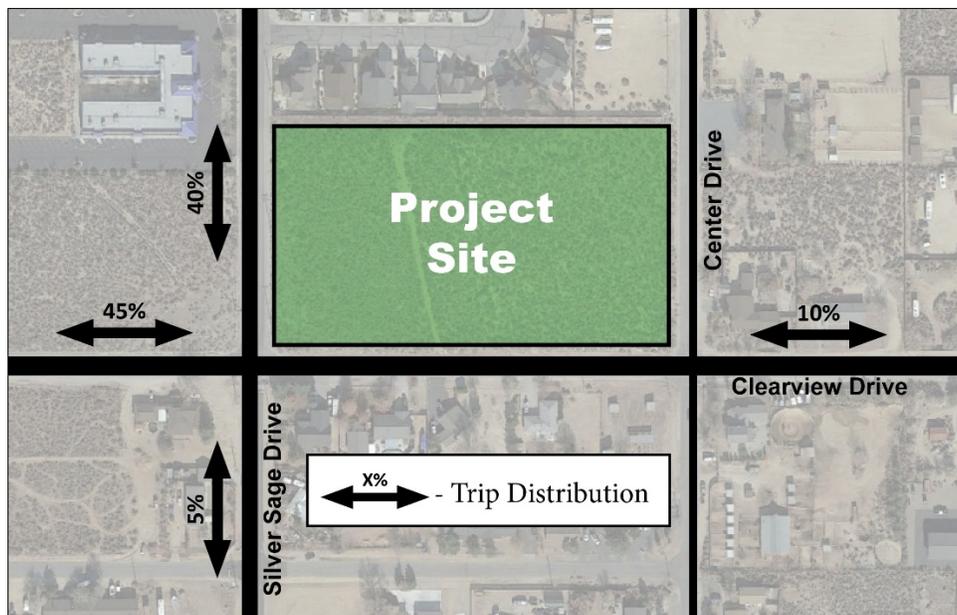
A 28-unit single-family residential project would generate approximately 264 Daily trips, 21 AM Peak Hour trips, and 28 PM Peak Hour trips.

**Trip Distribution**

Traffic generated by the project will be distributed to the road network based on the location of the project in relation to major activity centers and the existing roadway network. Anticipated trip distribution percentages are shown below (see **Figure 2**).

- ▶ 45% East/West on Clearview Drive west of Silver Sage Drive
- ▶ 40% North/South on Silver Sage Drive north of Clearview Drive
- ▶ 10% East/West on Clearview Drive east of Center Drive
- ▶ 5% North/South on Silver Sage Drive south of Clearview Drive

*Project trip distribution percentages are for informational purposes only. Project trips have not been assigned to the roadway network based on these percentages for analysis of traffic impacts due to the low-level of trip generation from the project, which falls below the threshold for a Traffic Study as required by Carson City.*



**Figure 2. Project Trip Distribution**



**Conclusion**

Carson City requires a formal traffic study if a proposed development generates more than 500 Daily trips or 80 peak hour trips. The trip generation for a single-family residential project with 28 units would be well below the Carson City requirements for a Traffic Study. Therefore, no further traffic study is recommended at this time since the low trip generation would not be expected to create any significant traffic impacts.

Please do not hesitate to contact us at (775) 322-4300 with any questions.

Sincerely,  
Headway Transportation, LLC



Loren E. Chilson, PE  
Principal

Attachments: A – Conceptual Site Plan







December 17, 2020

State Street Development LLC  
Mr. Mark B. Turner  
3075 College Drive  
Carson City, NV 89703

**Subject: Preliminary Geotechnical Investigation  
Borda Crossing  
Carson City, Nevada**

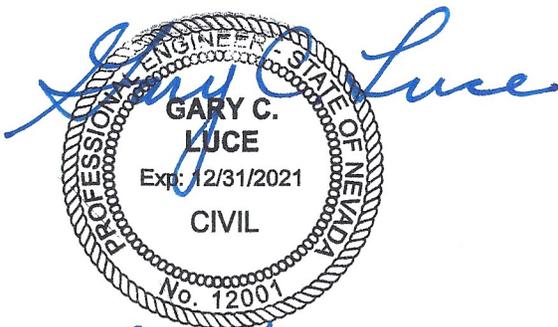
Dear Mr. Turner:

In accordance with your request, we are submitting our Geotechnical Investigation for the Clearview Subdivision project located in Carson City, Nevada. Our work is intended for the sole and exclusive use of State Street Development, LLC, their agents, or designated representatives. In our opinion, there are no significant geotechnical constraints, which would preclude the proposed construction of the project, provided the recommendations of this report are incorporated by design into the final plans and specifications.

We appreciate the opportunity to work with you on this project. Should you have questions concerning the contents of this report, or if we may be of further service, please contact the undersigned at your convenience.

Sincerely,

**WOOD RODGERS, INC.**



*12/17/2020*  
Gary Luce, P.E.  
Senior Geotechnical Engineer

Jim Koch, CEM  
Project Geologist

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### MAPS AND ILLUSTRATIONS

- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Soil Map
- Figure 4, Fault Map

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- Appendix A: Field Investigation
- Appendix B: Laboratory Testing
- Appendix C: ASCE 7-16 Hazards Report
- Appendix D: Flexible Pavement Calculations

# PRELIMINARY GEOTECHNICAL INVESTIGATION

## 1.0 INTRODUCTION

This report presents the results of our geotechnical investigation for the Borda Crossing residential subdivision project (the "Site") located in Carson City, Nevada as shown on Figure 1, the Vicinity Map. The Site is comprised of a single parcel of land identified by the Carson City Assessor by APN 009-124-03. The 5.266-acre site is located on the northeast corner of East Clearview Drive and Silver Sage Drive. It is our understanding that the proposed development will consist of 28 individual residential lots, local streets, public utilities, and associated landscaping.

The primary focus of the investigation was to evaluate the general subsurface geologic and soil conditions for the area of the Site. Based on the site characterization, laboratory testing, and engineering analysis, recommendations are provided for grading, foundation design, pavement sections, and related geotechnical concerns are provided. This report is considered preliminary until such time as site grading, and structural plans are available for review. At the time of this report Carson City Building Division has adopted the 2018 IBC and 2018 IRC.

## 2.0 SCOPE OF SERVICES

The scope of service performed to prepare this report included discussion of the project with the client and reviewing the following documents:

- *Katzer, T. (1980), Carson City Quadrangle, General Groundwater Map, Nevada Bureau of Mines and Geology, Scale 1:24,000.*
- *Manhard Consulting, Ltd., Tentative Map, Borda Crossing, APN 009-124-003, Carson City, Nevada dated December 16, 2020.*
- *Natural Resources Conservation Service Website, Soil Survey of Carson City Area, Nevada, (<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>).*
- *Resource Concepts Inc., Preliminary, Geotechnical Investigation for the Clearview Subdivision, October 21, 2019*
- *Trexler, D.T. (1977), Carson City Folio Geologic Map, Nevada Bureau of Mines and Geology, Carson City 7.5' Minute Quadrangle, Nevada, Scale 1:24,000.*
- *Trexler, D.T. and Bell, J.W., (1979), Carson City Quadrangle, Earthquake Hazards Map, Nevada Bureau of Mines and Geology, Scale 1:24,000.*
- *Review of in-house documents, and other literature pertaining to the project area to aid in evaluating geologic conditions and hazards that may be present.*

In addition, we performed the following field analysis, laboratory analyses, and document preparation tasks:

- Excavated six test pits to examine the prevailing soil conditions.
- Recovered representative samples utilizing bulk methods.
- Laboratory tests on representative soil samples recovered from the test pits to determine their engineering characteristics.



- Moisture Content\Density           ASTM D2216\D2937\D1188.
- Atterberg Limits                    ASTM D4318.
- R-value                                ASTM D2844.

Test results and descriptions of tests performed are provided in Appendix B. .0 Regional Geology

## **6.0 REGIONAL GEOLOGY**

The Site is located at the western edge of the Basin and Range geomorphic province. The Basin and Range are characterized by north-south trending mountain ranges separated by broad valleys. The valleys are down-dropped relative to the mountains along boundary normal faults. Faulting that resulted in the development of the Basin and Range topography occurred during the late Tertiary period (last seventeen million years). The faulting activity continues to the present day as evidenced by seismic activity which includes large earthquakes in the region from time to time. The Sierra Nevada geomorphic province begins a few miles west of the Site. The mountains in this area are locally referred to as the Carson Range. The Carson Range consists of granitic rocks that intruded older Mesozoic (sixty to two hundred twenty-five million years ago,) to Paleozoic (two hundred twenty-five million to six hundred million years ago,) sedimentary and volcanic rocks. The Pine Nut Mountains are located a few miles east of the Site and include rocks similar to the Carson Range but also younger Tertiary sedimentary and volcanic rocks.

The dominant fault system in western Nevada and Eastern California is the Sierra Nevada Frontal Fault System (SNFFS) that extends from Owens Valley to near Honey Lake. The Genoa Fault is the name given to the local portion of the SNFFS. The Genoa Fault is dominantly a single fault trace along the southern portion of the Carson Range within the Carson Valley. In the Carson City area (Eagle Valley), the Genoa Fault splits into a series of parallel faults that form a distributed fault system referred to as the Carson City and Kings Canyon fault zones. Distributed fault systems are characterized as having several parallel faults that tend to rupture simultaneously each moving a relatively small amount rather than all the displacement occurring on a single fault trace. The Carson City fault zone and Kings Canyon fault zone cross through Eagle Valley approximately one mile west of the Site. Many other subsidiary faults are found within Eagle Valley as well as the Carson Valley to the south and Washoe Valley to the north. A single Quaternary fault of undetermined age of last movement is mapped approximately five hundred feet west of the Site.

The geology of the project area is referenced from the Carson City Geologic Map (Trexler, 1977). Carson City lies within a large fault-bounded valley referred to as Eagle Valley. The valley area is typical of the western edge of the Great Basin geomorphic province. The geologic map indicates the project site area is predominantly underlain by Quaternary alluvial plain deposits. The alluvial plain deposits are on the order of two thousand feet deep in the Eagle Valley basin based on geophysical data.

## **7.0 SOIL AND GROUNDWATER CONDITIONS**

### **7.1 Subsurface Conditions**

Natural Resources Conservation Service mapping of the Site shows a single soil unit to be present. The NRCS data pertains only to the top five feet of soil present. The soil unit (and map number) is Sand Surpass Sandy Loam (6719). This soil unit is classified as dominantly silty to clayey sand (SM-SC). The soil map unit found on the Site is illustrated on the Soils Map, Figure 3 for reference.

The surface soil conditions to a depth of five feet observed in our borings were generally consistent with the descriptions found on the Natural Resources Conservation Service (NRCS) with the exception that no soils classified as clayey sands were observed. On-site soils as observed in our borings are generally alluvial silty sand (SM) overlying with poorly-graded silty sand mixtures (SP-SM) with traces of gravel to the total depth explored.

## **7.2 Groundwater**

Groundwater depths within the project area have been mapped on the Carson City Quadrangle by Maurer, 1992. Mapping and well data show that the groundwater surface in the vicinity of the Site is present at approximately forty feet below the existing surface. Groundwater or evidence of high groundwater was not encountered in any of our test pits. Variations in rainfall, snowmelt, temperature, and other factors can cause fluctuations in the level of groundwater. Groundwater flow in the project site area is generally to the southeast towards the Carson River.

## **8.0 GEOLOGIC HAZARDS**

### **8.1 Active Faulting**

Carson City is located near active faults which are capable of producing significant ground motions due to seismic events. Figure 4, the Fault Map for the site vicinity shows the distribution of active faults in the area taken from the U.S. Geological Survey (USGS), 2008 Quaternary fault and fold database for the United States; <http://earthquake.usgs.gov/regional/q>. Faults considered active for the type of development planned are located near the Site. Based on the USGS data and the Genoa Earthquake Hazards Map (Nevada Bureau of Mines and Geology, 1979) no faults have been mapped across the Site nor was any evidence of faulting observed in the field. The nearest active faults are located approximately five hundred feet west of the Site. Therefore, the risk of fault ground rupture at the Site is considered low.

Strong seismic shaking is considered likely during the life of the project. Ground shaking intensities for design considerations should be governed by seismic events occurring along the base of the Carson Range on the Kings Canyon fault zone. Faulting along the Carson Range has been evaluated by the Nevada Bureau of Mines and Geology to be capable of producing earthquake Richter Magnitudes on the order of 7.0 with peak ground accelerations as high as 2.0 g. These values are equivalent to Modified Mercalli Intensities of X or greater.

The seismic risk due to shaking at the Site is not considered significantly greater than that of the surrounding developments and the Carson City area in general. We recommend that the seismic design of the structures be performed in accordance with the latest version of the International Building Code (IBC). Site-specific IBC (ASCE7-16) geotechnical seismic design parameters are presented in Section 9.6 of this report.

### **8.2 Liquefaction**

Strong vibratory motions such as those generated by earthquakes may cause liquefaction of granular soils. Soils that are highly susceptible to liquefaction are loose, granular and saturated. Liquefaction of soils may cause surface distress, loss of bearing capacity, and settlement of structures. Liquefaction is generally accepted to be restricted to within fifty feet of the surface due to confining pressures.

Lateral spreading is a ground-failure phenomenon that can also occur in association with liquefaction, whereby lateral displacements occur at the ground surface. Conditions required for lateral spreading include gently sloping terrain, and, where a "free-face" (such as a creek bank) is nearby. Based on our

review of the site topography, density of site soils, depth to groundwater and lack of liquefiable layers, the potential for liquefaction and lateral spreading is considered low.

### **8.3 Landslides and Slope Stability**

We do not consider the potential for land sliding to be a hazard to the Site due to the gently sloping topography and provided that the grading recommendations presented herein are strictly adhered to.

### **8.4 Expansive Soil**

No expansive soils were identified on the Site within construction depths during our field exploration. Therefore, the risk of distress to structures from such structures is considered low.

### **8.5 Flooding**

A review of the FIRM map 3200010207F effective on June 20, 2019 indicates that the Site is not located in areas within the 1.0 percent annual chance of flooding.

### **8.6 Radon**

Radon gas is found in soil and air everywhere in varying amounts due to natural processes. According to the US Environmental Protection Agency (EPA), high radon levels have been reported in every state. Radon is generated when uranium breaks down into radium which in turn decays into radon gas. Radon gas is known to be of more concern in areas of igneous rocks and derived soils. Radon gas is odorless and transparent and not detectable except by specialized monitoring equipment. The EPA has determined based on testing that the Carson City area has a high potential to exceed the mitigation threshold level of four picocuries per liter of air (pCi/L). Mitigation strategies are discussed in Section 9.5.7.

The EPA has produced an informational guide for builders and homeowners which can be viewed on the UNR website: <https://www.unce.unr.edu/programs/sites/radon/files/pdf/CitizensGuideNV.pdf>

## **9.0 CONCLUSIONS AND RECOMMENDATIONS**

### **9.1 General Conditions- Soil Handling and Excavation Characteristics**

Our conclusions are based on our investigation conducted in October of 2020, review of previous geotechnical reports for areas near the Site and our local experience.

- 9.1.1 Based on the results of our investigation, the Site is geotechnically well suited for the proposed commercial uses, provided the recommendations presented herein are implemented in the design and construction of the project.
- 9.1.2 Our field investigation indicates that native soils to what are considered typical construction depths on the Site are characterized by stratified layers of silty, and silty poorly graded sands.
- 9.1.3 Potential seismic hazards at the Site will likely be associated with possible moderate to strong ground shaking from an event along the regional active faults. No faults are known on the Site and therefore the risk of fault rupture is considered low. Structures should be designed in accordance with 2018 IBC seismic requirements.
- 9.1.4 Soil Conservation Service data, laboratory analysis, and our local experience indicate that soils are not aggressive for either Type II or Type IP concrete. However, soils are aggressive (corrosive) for uncoated steel. The project structural engineer should consider the use of coatings or other cathodic protection where uncoated steel may be in contact with native soils.

- 9.1.5 A preconstruction conference should be held at the Site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance. Soil handling, grading requirements, scheduling, and testing requirements can be discussed at that time.
- 9.1.6 Site preparation should begin with the removal of brush, organic matter, and debris if any. Prior to the commencement of grading, all domestic debris, if any, and refuse should be removed from the Site and disposed of as appropriate.
- 9.1.7 It is estimated that soil grubbing will range from four to six inches in depth. The depth of removal should be such that material exposed in the cut areas or soils to be used as fill is relatively free of organic matter. Soil and organic material generated during stripping is not suitable for use in structural areas but may be placed in landscaped or other non-structural areas if deemed suitable for the specific application.
- 9.1.8 All references to relative compaction and optimum moisture content in this report are based on the ASTM D1557-12 Test Procedure.
- 9.1.9 Earthwork operations should be observed, and compacted fill tested by our representative.
- 9.1.10 In our opinion, grading and excavations may be accomplished with light to moderate effort with conventional heavy-duty grading/excavation equipment. Excavations in native soils are not anticipated to generate significant quantities of oversized material (greater than six inches in dimension) that will require special handling or exporting from the Site.
- 9.1.11 Excavated native granular soils (including clayey sands), free of organic matter or debris, generated from cut operations, after clearing and grubbing is complete, are anticipated to be suitable for use as engineered fill.
- 9.1.12 Where structural fill material is required, it should meet the Standard Specifications for Public Works (304.03). Structural fill is defined herein as all fill within three feet laterally outside of building perimeter foundations. In addition, all fill placed beneath pavement sections should also be considered structural. Import structural fill material where required should be certified within the past year for public works usage or sampled and approved by WRI prior to its transportation to the Site.
- 9.1.13 During or immediately following wet weather, the near-surface soil may deflect or pump under heavy equipment loads. Yielding soil conditions can typically be stabilized using one of the methods listed below. However, soil conditions and mitigation methods should be reviewed and approved by WRI when encountered.
- **Option 1.** Deeply scarify (ten to twelve inches) allow to air dry to near optimum moisture content and re-compact.
  - **Option 2.** Remove unstable (wet) soils to a firm base and allow the wet subgrade soil to dry to near optimum moisture content and re-compact. Replace the removed soils with drier soil meeting the structural fill specifications.

Other stabilization alternatives such as the use of geosynthetic fabrics or grids, rock stabilization layers, and soil chemical treatments may be appropriate depending on the situation. Consultation with us is crucial for expedient and appropriate mitigation.

## **9.2 Grading – Building Pads**

The following discussion and recommendations are intended for mass grading of structural areas and finish grading for foundation, driveway areas, and flatwork. Due to the lack of a grading plan at the time of this report, these recommendations are subject to review prior to plan submittal to Carson City.

- 9.2.1 Building pad areas, or in soil areas to receive fill, should be scarified to a depth of eight to ten inches and granular soils compacted to at least 90% relative compaction near optimum moisture content.
- 9.2.2 Structural fill should then be compacted in horizontal layers and brought to final subgrade elevations. Structural fill should be placed in level eight-inch loose lifts. Each lift should be moisture conditioned at or near optimum moisture content and then compacted to a minimum of 90% relative compaction.
- 9.2.3 The cut portion of cut-fill transition building pads or pavements should be undercut at least one foot vertically for five feet laterally into the cut face from the point of transition and replaced with properly compacted structural fill.
- 9.2.4 Where cut and fill soil slopes are required, they should be constructed at a maximum gradient of 2:1 (horizontal to vertical).

## **9.3 Grading – Underground Utilities**

- 9.3.1 Temporary excavations, such as utility trench sidewalls excavated within undisturbed native soils or structural fill should remain near-vertical to depths of at least three feet. Some minor sloughing should be expected within some of the cleaner surficial sand lenses or during periods of high precipitation. Native granular soils within ten feet of the existing surface should be considered Soil Type C by OSHA Standards. If the contractor is uncertain about the soil designation the engineer should be contacted or the more conservative approach utilized by treating the excavation in question as Soil Type C. It is the contractor's responsibility to provide sufficient and safe excavation support per OSHA Standards as well as protecting nearby utilities, structures, and other improvements, which may be damaged by earth movements.
- 9.3.2 Should any large precipitation events be forecast, it is imperative that open excavations be protected from flooding. Tarping, daylighting to drain or temporary backfilling should be considered by the contractor to prevent flooding damage and erosion in general.
- 9.3.3 Bedding and pipe zone backfill should extend from the bottom of the trench excavation to a minimum of twelve inches above the crown of the pipe. Pipe bedding material should consist of Class A backfill material as defined by the Standard Specifications for Public Works (Orange Book). Bedding and pipe zone material should be hand compacted in six-inch maximum lifts.
- 9.3.4 Trench backfill above the pipe zone should meet Orange Book Class E backfill requirements at a minimum and be compacted to a minimum of 90% relative density in structural areas and a minimum of 85% in landscape areas.
- 9.3.5 Underground utility trenches within structural areas (building pads and streets) should be backfilled with properly compacted material. Granular material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation, or rock larger than six inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding eight inches. The lifts should be compacted to a minimum of 90% relative compaction at or near optimum moisture content.

#### **9.4 Grading – Pavement and Flatwork Areas**

- 9.4.1 Pavement and flatwork subgrade areas underlain by native soil materials should be scarified to a depth of eight to ten inches and moisture conditioned at or near optimum moisture content. The upper six inches of pavement subgrade soils should be compacted to a minimum of 90% relative compaction at or near optimum moisture content.
- 9.4.2 The subgrade soils for pavements should be finished to a compacted smooth unyielding surface. We recommend proof-rolling the subgrade with a loaded water truck (or similar equipment) to verify the stability of the subgrade prior to placing aggregate base.
- 9.4.3 Aggregate base used to support pedestrian and vehicular pavements should consist of Type II Class B material compacted to a minimum of 95% relative compaction

#### **9.5 Preliminary Foundation Design Criteria**

The following foundation information is intended to provide preliminary structural design criteria. When final grading plans are completed, they should be reviewed by the geotechnical engineer and recommendations amended if necessary.

- 9.5.1 Conventional foundations should consist of continuous perimeter strip footings and isolated interior spread footings. Minimum strip footing width should not be less than twelve inches; isolated spread footings should be at least sixteen inches square.
- 9.5.2 Perimeter footings should extend at least twenty-four inches below lowest adjacent exterior grade bearing on compacted native soils or structural fill. Interior footings should extend at least eight inches below lowest adjacent grade. These embedment recommendations are crucial for frost protection, to develop bearing capacity, to inhibit surface water intrusion into crawl spaces and to provide lateral force resistance. Final surface grading should provide for positive drainage away from the structure per the 2018 IBC or 2018 IRC as appropriate. Footing and foundation backfill should be compacted to at least 90% below paving, concrete slabs or flatwork.
- 9.5.3 Adjacent utilities should not be constructed in the zone of influence parallel to footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom of the footing. Utility penetrations into the building envelope should be made perpendicular to the building stem wall where possible.
- 9.5.4 Shallow foundations proportioned as recommended above may be designed based on an allowable bearing capacity of 3,000 psf. Bearing capacity may be increased by one-third for transient events such as wind and earthquake loading.
- 9.5.5 A lateral passive pressure of 350 psf is recommended for resistance of foundation elements to sliding. A coefficient of friction of 0.35 for foundation elements in contact with native soils is appropriate for native sandy soils. A coefficient of friction of 0.40 is appropriate for concrete underlain by a minimum of six inches of aggregate base.
- 9.5.6 It is estimated that total and differential settlement of footings under the recommended allowable bearing capacity to be less than one inch and three-quarter inch respectively.
- 9.5.7 EPA recommends that homes that have radon levels of four picocuries per liter of air (pCi/L) be mitigated. Mitigations can consist of passive, active or combined passive and active mitigations. Typical mitigations consist of a gravel layer (typically four to six inches) placed below a vapor retarder either under slabs or in crawls spaces. Should a gravel layer be considered for raised floor construction, building pad subgrade elevations will need to be adjusted to accommodate

the minimum crawl space clearance considering the depth of gravel. Installation of a vent pipe to the roof is recommended at the time of initial construction in the event that high levels are subsequently determined. If radon levels are found to be elevated post-construction, a fan can be added at that time. Passive venting (no fan) or mechanical venting has a high success rate in mitigating radon.

- 9.5.8 The mitigation methods have the potential to provide added value by decreasing moisture and other adverse soil gases such as methane and volatile organic compounds should they be encountered beneath structures. The reduction of moisture in crawl spaces discourages molds and mildew which has also been found to be a significant problem in portions of Carson City.

**9.6 Seismic Design Criteria**

The Site is located near faults capable of generating strong seismic shaking during the life of the project. In accordance with ASCE 7-16 and the Northern Nevada Amendments of the 2018 IBC, Site Class D and Seismic Design Category D2 (or E depending on structural considerations) have been assigned to the project. Site Class D is assigned to the project assuming the structures have fundamental periods of vibration equal to or less than 0.5 seconds. Seismic design values were determined based on a representative latitude and longitude of 39.1290°N and -119.7628°E, respectively. Per ASCE 7-16, the site’s modified Peak Ground Acceleration to be used for engineering analyses is equal to 0.929g. The ASCE 7 Hazards report is presented in Appendix C.

**9.7 Retaining Walls**

At the time of this report, retaining walls are not shown on conceptual site plans. Final plans for retaining structures, if any, should be submitted to WRI for review to ensure that the following generalized recommendations are appropriate to the specific wall being designed.

- 9.7.1 Allowable bearing capacities for retaining wall foundations may be assumed as indicated in Section 9.5 above. Earth pressures are dependent on the backfill and should be considered on a case-by-case basis. However, for preliminary planning of retaining walls less than six feet tall and assuming level structural fill backfill at least three feet behind the wall the values in Table 9.7.1 are recommended.

**TABLE 9.7.1  
PRELIMINARY EARTH PRESSURE VALUES FOR RETAINING WALLS**

Passive Pressure	At Rest Pressure	Active Pressure
350 psf/f	55 psf/f	35 sf/f

- 9.7.2 Positive drainage is essential behind any earth retaining structure to prevent the backfill from becoming saturated. Saturated backfill can result in significant (a factor of two or more) increases in the lateral wall pressures above the previously recommended values. Positive drainage for retaining walls should consist of a vertical layer of permeable material positioned between the retaining wall and the soil backfill. The permeable material may be composed of a composite drainage fabric, or a natural permeable material, such as coarse sand or pea gravel at least six inches in thickness, with a synthetic, geotextile filter fabric between it and the soil backfill.

## **9.8 Slabs-On-Grade**

- 9.8.1 Conventional concrete slab-on-grade floors are suitable for the building pads prepared as recommended in Section 9.5. A minimum 10-mil-thick vapor retarder meeting ASTM E1745-97 Class C requirements may be placed below the slab where interior moisture is considered undesirable. The vapor retarder may be covered by an optional two-inch layer of medium sand as a cushion. To reduce the potential for punctures, a higher quality vapor retarder (fifteen mil, Class A or B) may be used. The vapor retarder, if used, should extend to the edges of the slab, and should be sealed at all seams and penetrations. Slabs should be underlain by a minimum of four inches of compacted (95% minimum relative density) aggregate base. Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading.
- 9.8.2 If a significant amount of time has passed since building pad grading and the soil surface of the building pad has become dry, then it should be re-moistened prior to placing the moisture retarding system. The building pad should be moistened by soaking or sprinkling such that the upper twelve inches of soil is near optimum moisture, as determined by our representative at least forty-eight hours before concrete placement.
- 9.8.3 Some floor coverings, such as tile or linoleum, are sensitive to moisture that can be transmitted from and through the slab. Slab floors should be moist cured for a minimum of seven days prior to placing any floor coverings. Floor coverings should be installed in accordance with the manufacturer's recommendations including any moisture transmissivity testing requirements.
- 9.8.4 Crack control spacing should be determined by the project structural engineer based on slab thickness and intended usage.
- 9.8.5 All exterior concrete should be air entrained from 4.5% to 7.0% air content. The water cement ratio for all exterior concrete should be 0.45 or less. The use of mid-range plasticizer is recommended to facilitate the finishing process while maintaining the desired water cement ratio.
- 9.8.6 Exterior concrete should be placed and finished in accordance with American Concrete Institute (ACI) recommendations for concrete placed in areas subject to freeze-thaw environments.
- 9.8.7 Recommendations presented herein are intended to reduce the potential for cracking of slabs caused by differential movement. However, even with the incorporation of the recommendations presented herein, slabs-on-grade will still exhibit some cracking. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of concrete, the use of crack control joints and proper concrete placing and curing. Adherence to ACI and Portland Concrete Association (PCA) recommendations including those for low humidity, freeze thaw conditions and wind, if applicable, should be incorporated into project construction practices.
- 9.8.8 Should post-tensioned slabs be considered, a representative of WRI should be contacted for additional recommendations.

## **9.9 Pavements**

- 9.9.1 Pavement sections are provided for interior streets, on-site parking and driveway use only. Pavement sections are based on Carson City Design Standards and Asphalt Institute methodology.

- 9.9.2 It is recommended that the use of AC 64-28NV (polymerized asphalt oil) be considered as we have found that it substantially reduces cracking due to thermal stresses prevalent in the freeze thaw environment of this area. The savings in long term maintenance of the pavement including crack sealing is in our opinion worth the extra expense. However, this asphalt oil recommendation should be considered optional in that it is relative to frequency of maintenance only and does not affect structural calculations.
- 9.9.3 The following preliminary Asphalt Concrete (AC) pavement sections are recommended for design to establish subgrade elevations for local streets, parking, and driveways.

**TABLE 9.9.3  
PRELIMINARY AC PAVEMENT SECTIONS**

Facility	AC Thickness (inches)	AB Thickness (inches)
Local Streets	3.0	6.0
Driveways and Parking Areas	3.0	6.0
Dumpster Areas	4.0	6.0

The pavement sections are based on the following assumptions:

- All pavements have a twenty-year design life.
  - The subgrade soil has an R-Value of sixty or higher.
  - The ADT for the single local street was assumed to be five hundred which is substantially more than ITE estimates would indicate (280 based on ten trips per day per residence).
  - The Type 2, Class B Aggregate Base (AB) has a minimum R-Value of seventy and meets the requirements of the Standard Specifications for Public Works as adopted by Carson City.
  - The AB is compacted to 95% or higher relative compaction at or near optimum moisture content.
  - Soil subgrade has been prepared as previously recommended.
  - Asphalt concrete should conform to Section 320 of Orange Book for design, production, preparation for placement, and placement of HMA.
- 9.9.4 If Portland Concrete Cement (PCC) driveways or trash enclosures are required, they should be constructed as shown in Table 9.9.4 below.

**TABLE 9.9.4  
MINIMUM PCC PAVEMENT SECTIONS**

Alternate	PCC Thickness (inches)	AB Thickness (inches)
Automobile Parking Areas and Driveways	4.0	6.0

Areas Subject to Semi Truck Traffic or Dumpster Areas	5.0	6.0
---	-----	-----

- The minimum compressive strength (twenty-eight day) should be at least 4,000 psi and meet the requirements stated in Section 9.9 as appropriate for exterior concrete. Traffic on the slab should be avoided until at least 80% of the design strength has been verified by testing.
- Reinforcement of the PCC driveways should be specified by the project structural (or civil) engineer.
- Construction (or crack control) joints should also be as recommended by the project structural (or civil) engineer.

### **9.10 Site Drainage**

- 9.10.1 Adequate drainage is crucial to reduce the potential for differential soil movement, erosion, and subsurface seepage. The Site should be graded and maintained such that surface drainage is directed away from structures and the top of slopes into swales or other controlled drainage devices.
- 9.10.2 Soil slopes constructed steeper than recommended in Section 9.2 (2H:1V) or where subject to concentrated flows in excess of four feet per second should be stabilized with riprap, slope netting or other mechanical methods as designed by the project civil engineer.
- 9.10.3 Temporary erosion control during construction should be as required in the approved storm water pollution prevention plan (SWPPP).
- 9.10.4 Landscape irrigation should be kept at least three feet away from all building foundations. We recommended that drip irrigation be installed near foundations wherever feasible.
- 9.10.5 Under no circumstances should water be allowed to pond adjacent to footings.

## **10.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS**

The recommendations of this report pertain only to the Site investigated and are based upon the assumption that soil and groundwater conditions do not deviate from those disclosed in the investigation. It is strongly recommended that WRI review final grading plans to ensure compliance with the recommendations of this report. Our professional services were performed and prepared in accordance with generally accepted geotechnical engineering principles and practices used in Carson City at this time.

No guarantee or warranty as to the continuity of soil conditions on the Site is implied or intended. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, WRI should be notified so that supplemental recommendations can be given. It is strongly recommended that WRI review final grading plans to ensure compliance with the recommendations of this report. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by WRI.

This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to

the attention of the architect and engineer for the project and incorporated into the plans and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of two years.

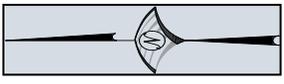
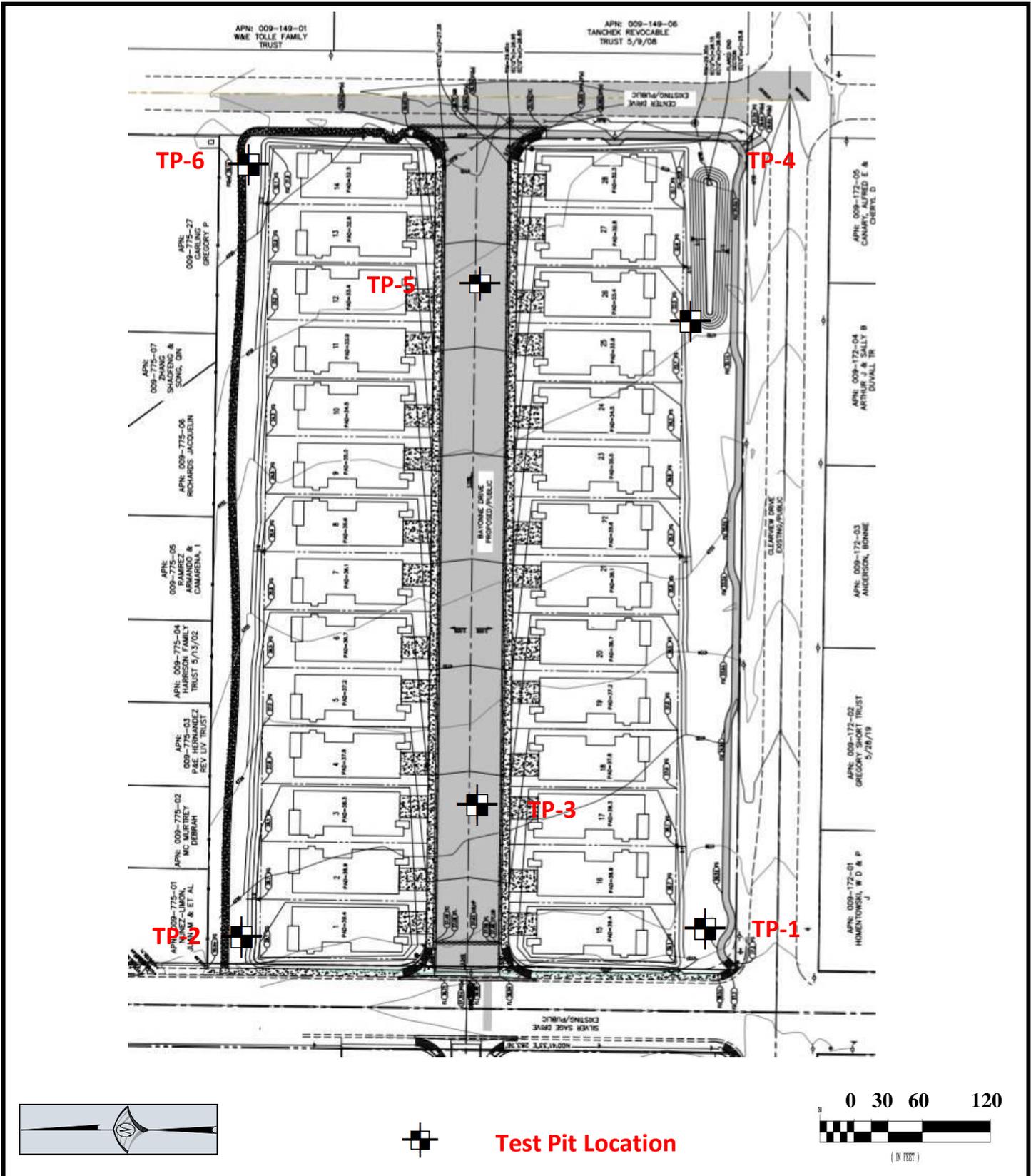
## 11.0 REFERENCES

1. Katzer, T. (1980), Carson City Quadrangle, General Groundwater Map, Nevada Bureau of Mines and Geology, Scale 1:24,000.
2. Manhard Consulting Ltd., Tentative Map, Borda Crossing, APN 009-124-003, Carson City, Nevada dated December 16, 2020.
3. Resource Concepts Inc., Preliminary, Geotechnical Investigation for the Clearview Subdivision, October 21, 2019
4. Trexler, D.T. (1977), Carson City Folio Geologic Map, Nevada Bureau of Mines and Geology, Carson City 7.5' Minute Quadrangle, Nevada, Scale 1:24,000.
5. Trexler, D.T. and Bell, J.W., (1979), Carson City Quadrangle, Earthquake Hazards Map, Nevada Bureau of Mines and Geology, Scale 1:24,000.
6. Natural Resources Conservation Service Website, accessed November, 2020: (<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>).
7. Standard Specifications for Public Works Construction, Regional Transportation Commission of Washoe County, Washoe County, City of Sparks, City of Reno, Carson City, City of Yerington, 2012.
8. U.S. Geological Survey, Quaternary fault and fold database for the United States, accessed March 1, 2017, from USGS web site: <http://earthquake.usgs.gov/regional/qfaults/>.

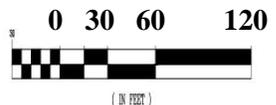


  
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 GCL      3948.001

**VICINITY MAP**  
**Borda Crossing Subdivision**  
**Geotechnical Investigation**  
**CARSON CITY, NEVADA**  
**FIGURE 1**

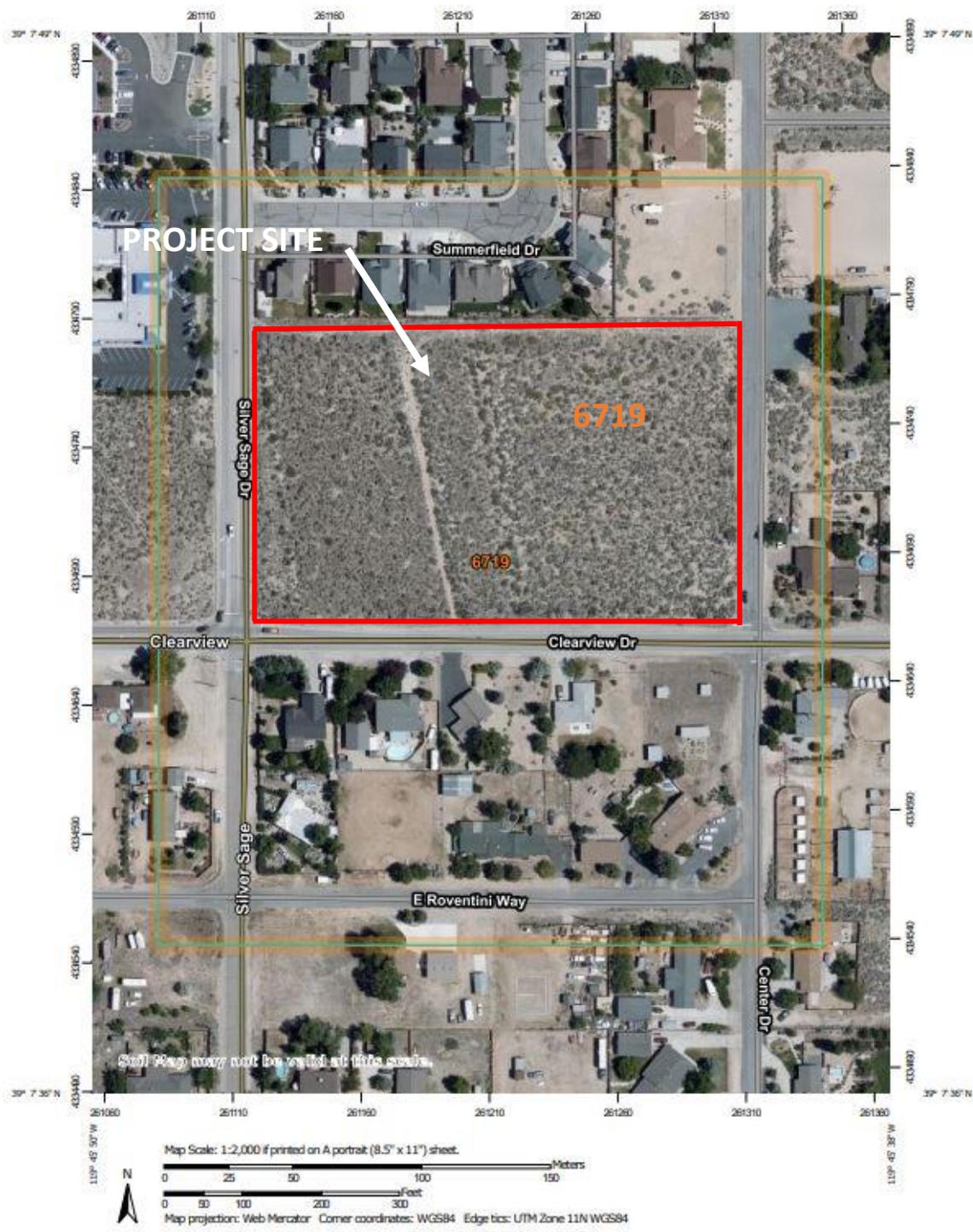


**Test Pit Location**



  
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**SITE PLAN**  
**Borda Crossing Subdivision**  
**Geotechnical Investigation**  
**CARSON CITY, NEVADA**  
**FIGURE 2**



Summary by Map Unit — Carson City Area, Nevada (NV629)

Summary by Map Unit — Carson City Area, Nevada (NV629)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6719	Surpass gravelly sandy loam, 0 to 2 percent slopes	SC-SM	19.1	100.0%
<b>Totals for Area of Interest</b>			<b>19.1</b>	<b>100.0%</b>



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SOILS MAP

Borda Crossing Subdivision  
Geotechnical Investigation  
CARSON CITY, NEVADA

FIGURE 3



————— Quaternary Fault of Indeterminate Age  
 ————— Holocene Age Fault (Active)

Google Earth 2020, USGS  
 Quaternary Fault Data Base

  
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**FAULT MAP**  
**Borda Crossing Subdivision**  
**Geotechnical Investigation**  
**CARSON CITY, NEVADA**  
 FIGURE 4



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# APPENDIX A FIELD INVESTIGATION



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 Fax: 775-823-4066

# TEST PIT NUMBER TP-2

<b>CLIENT</b> _____ <b>PROJECT NUMBER</b> <u>3948001</u> <b>DATE STARTED</b> <u>10/13/20</u> <b>COMPLETED</b> <u>10/13/20</u> <b>EXCAVATION CONTRACTOR</b> <u>Coons Construction</u> <b>EXCAVATION METHOD</b> <u>Backhoe</u> <b>LOGGED BY</b> <u>Seth Barton</u> <b>CHECKED BY</b> <u>Gary Luce</u> <b>NOTES:</b> _____	<b>PROJECT NAME</b> <u>E. Clearview Drive</u> <b>PROJECT LOCATION</b> <u>Carson City, Nevada</u> <b>GROUND ELEVATION</b> <u>4737 ft</u> <b>TEST PIT SIZE</b> <u>24 inches</u> <b>GROUND WATER LEVELS:</b> <b>AT TIME OF EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u> <b>AT END OF EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u> <b>AFTER EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u>
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DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		TOPSOIL										
		SILTY SAND, (SM) medium dense, dry, light brown, nonplastic	GB BA									
		Very dense, slightly cemented	GB BB									
		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brown, nonplastic	GB BC									
		Tan	GB BD									
10.0		Bottom of Test Pit at 10.0 Feet.										





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# TEST PIT NUMBER TP-5

PAGE 1 OF 1

<b>CLIENT</b> _____ <b>PROJECT NUMBER</b> <u>3948001</u> <b>DATE STARTED</b> <u>10/13/20</u> <b>COMPLETED</b> <u>10/13/20</u> <b>EXCAVATION CONTRACTOR</b> <u>Coons Construction</u> <b>EXCAVATION METHOD</b> <u>Backhoe</u> <b>LOGGED BY</b> <u>Seth Barton</u> <b>CHECKED BY</b> <u>Gary Luce</u> <b>NOTES:</b> _____	<b>PROJECT NAME</b> <u>E. Clearview Drive</u> <b>PROJECT LOCATION</b> <u>Carson City, Nevada</u> <b>GROUND ELEVATION</b> <u>4731 ft</u> <b>TEST PIT SIZE</b> <u>24 inches</u> <b>GROUND WATER LEVELS:</b> <b>AT TIME OF EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u> <b>AT END OF EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u> <b>AFTER EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u>
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DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		TOPSOIL										
		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brown, nonplastic										
		Very dense, slightly cemented	GB EA					1.97				14.1
2.5		Medium dense										
5.0		Tan										

Bottom of Test Pit at 6.5 Feet.

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# TEST PIT NUMBER TP-6

PAGE 1 OF 1

<b>CLIENT</b> _____ <b>PROJECT NUMBER</b> <u>3948001</u> <b>DATE STARTED</b> <u>10/13/20</u> <b>COMPLETED</b> <u>10/13/20</u> <b>EXCAVATION CONTRACTOR</b> <u>Coons Construction</u> <b>EXCAVATION METHOD</b> <u>Backhoe</u> <b>LOGGED BY</b> <u>Seth Barton</u> <b>CHECKED BY</b> <u>Gary Luce</u> <b>NOTES:</b> _____	<b>PROJECT NAME</b> <u>E. Clearview Drive</u> <b>PROJECT LOCATION</b> <u>Carson City, Nevada</u> <b>GROUND ELEVATION</b> <u>4731 ft</u> <b>TEST PIT SIZE</b> <u>24 inches</u> <b>GROUND WATER LEVELS:</b> <b>AT TIME OF EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u> <b>AT END OF EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u> <b>AFTER EXCAVATION</b> <u>--- NO FREE WATER ENCOUNTERED</u>
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DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		TOPSOIL										
2.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brown, nonplastic	GB FA					1.42				9.91
5.0		Tan										
7.5												
10.0			GB FB					1.64				8.96

Bottom of Test Pit at 10.0 Feet.



WOOD RODGERS

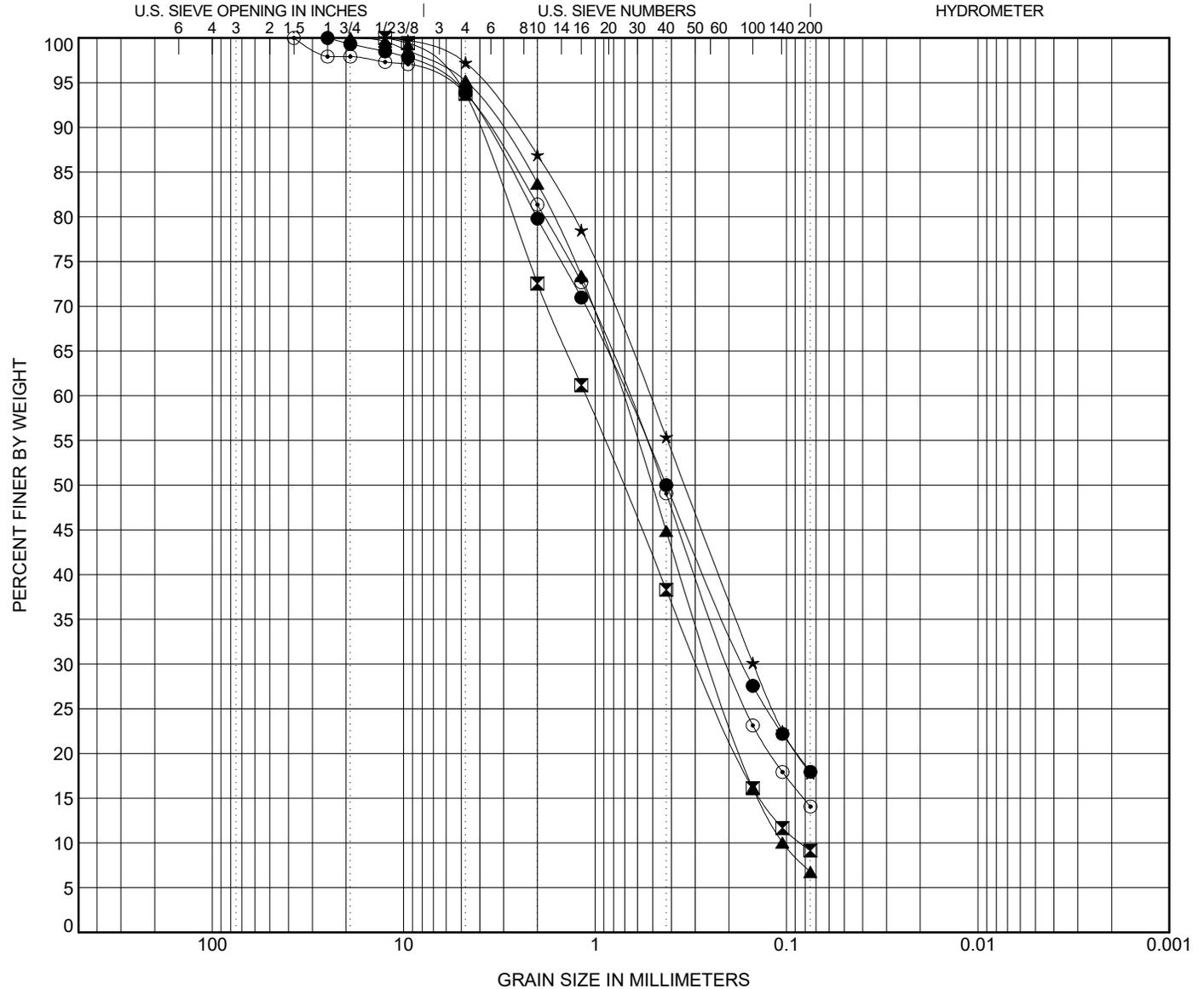
## APPENDIX B LABORATORY TESTING



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# GRAIN SIZE DISTRIBUTION

CLIENT \_\_\_\_\_ PROJECT NAME E. Clearview Drive  
 PROJECT NUMBER 3948001 PROJECT LOCATION Carson City, Nevada



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

TEST PIT	DEPTH	Classification					LL	PL	PI	Cc	Cu
● TP-1	2.0	<b>SILTY SAND(SM)</b>									
☒ TP-1	3.5	<b>POORLY GRADED SAND with SILT(SP-SM)</b>								<b>0.88</b>	<b>13.30</b>
▲ TP-1	8.0	<b>POORLY GRADED SAND with SILT(SP-SM)</b>								<b>0.81</b>	<b>6.99</b>
★ TP-3	1.0	<b>SILTY SAND(SM)</b>									
⊙ TP-5	0.5	<b>POORLY GRADED SAND with SILT(SP-SM)</b>									
TEST PIT	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
● TP-1	2.0	25	0.691	0.168		6.1	76.0		17.9		
☒ TP-1	3.5	12.5	1.119	0.288	0.084	6.2	84.6	9.1			
▲ TP-1	8.0	19	0.73	0.248	0.104	4.8	88.5	6.8			
★ TP-3	1.0	12.5	0.521	0.149		2.8	79.5		17.8		
⊙ TP-5	0.5	37.5	0.682	0.198		6.2	79.7		14.1		

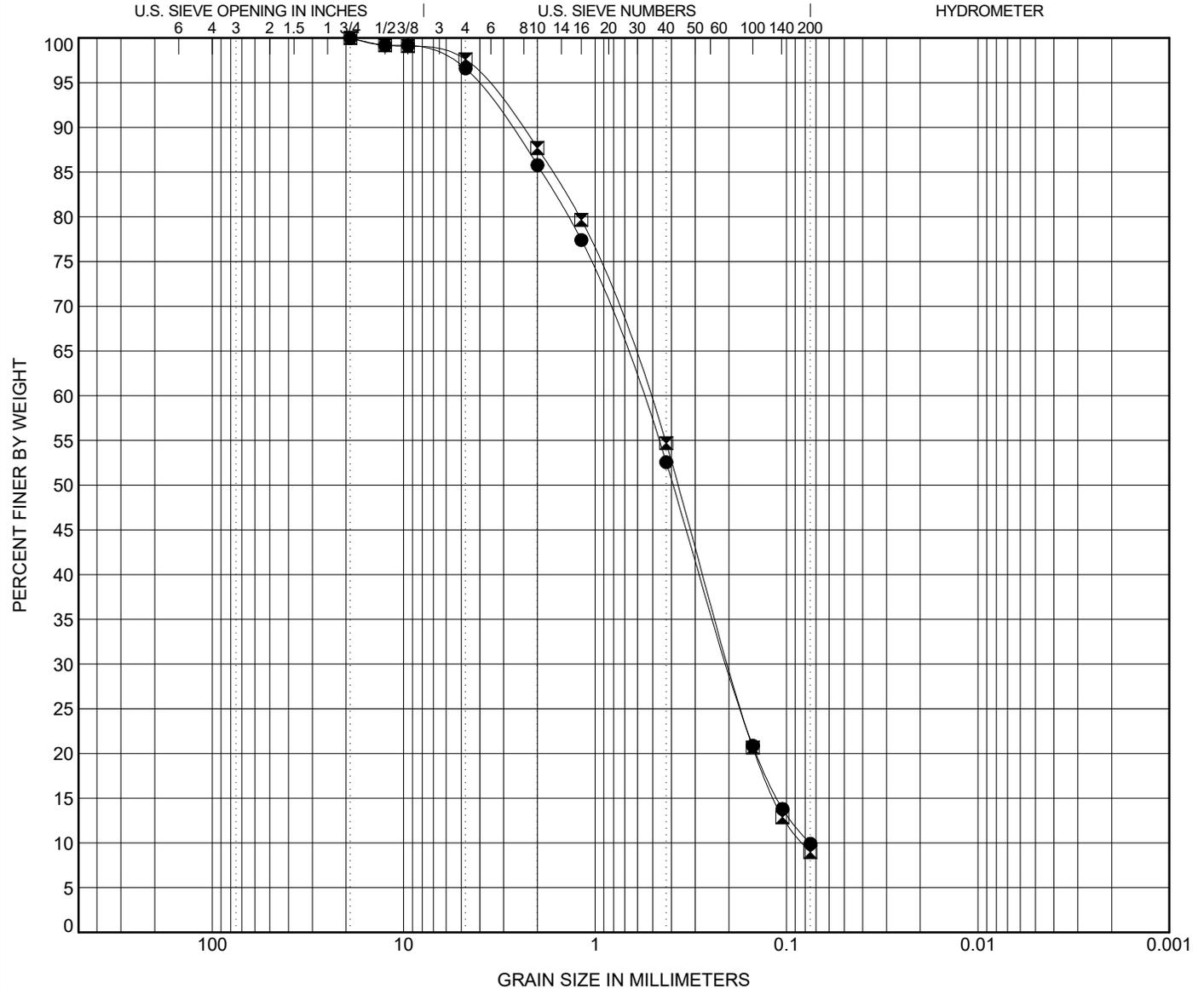
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# GRAIN SIZE DISTRIBUTION

CLIENT \_\_\_\_\_ PROJECT NAME E. Clearview Drive  
 PROJECT NUMBER 3948001 PROJECT LOCATION Carson City, Nevada

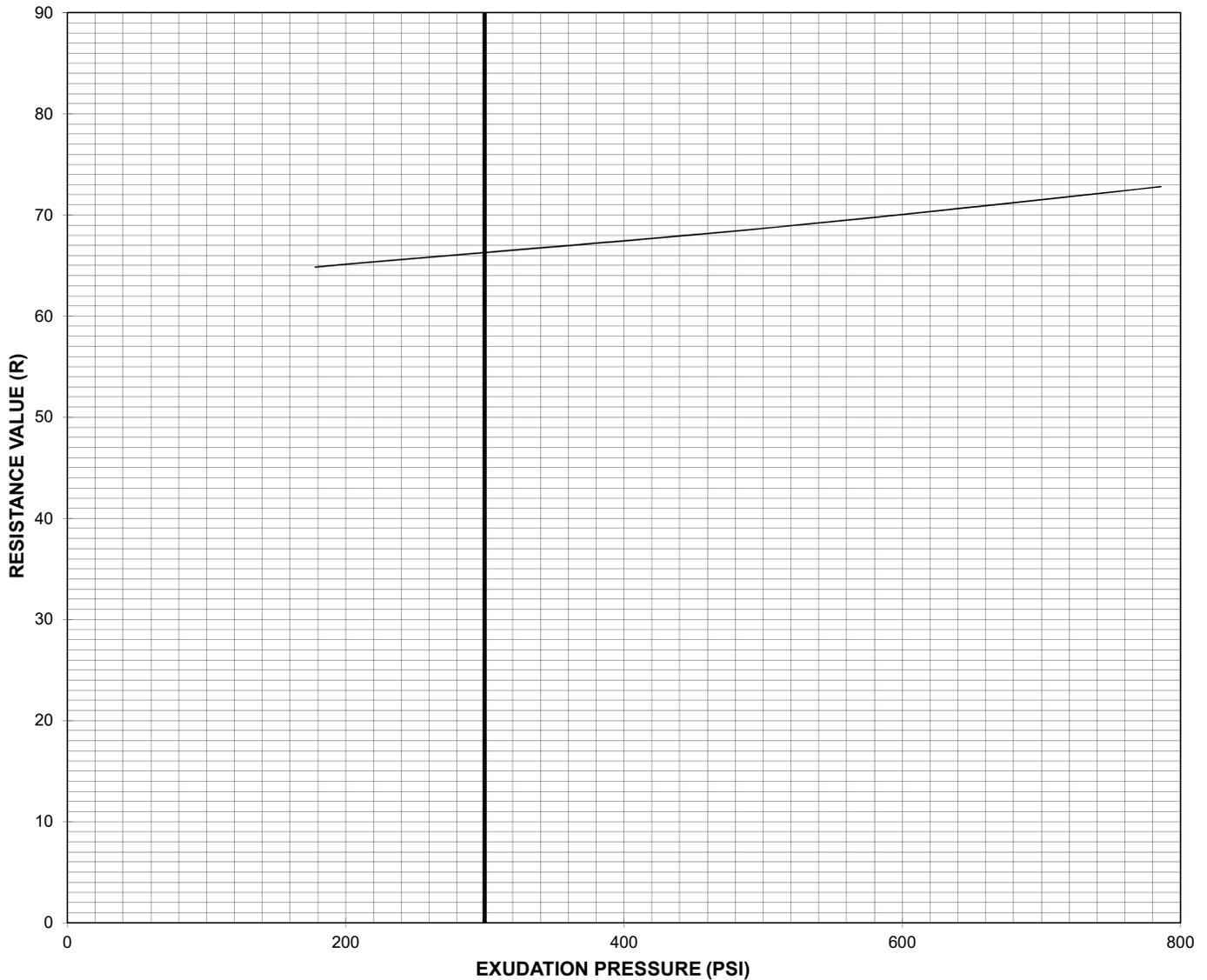


COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

TEST PIT	DEPTH	Classification					LL	PL	PI	Cc	Cu
● TP-6	1.0	<b>POORLY GRADED SAND with SILT(SP-SM)</b>								<b>0.94</b>	<b>7.63</b>
■ TP-6	8.0	<b>POORLY GRADED SAND with SILT(SP-SM)</b>								<b>0.92</b>	<b>6.44</b>
TEST PIT	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
● TP-6	1.0	19	0.577	0.202	0.076	3.4	86.7	9.9			
■ TP-6	8.0	19	0.528	0.2	0.082	2.4	88.7	9.0			

GRAIN SIZE - GINT STD US LAB.GDT - 10/27/20 16:00 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3948\_CLEARVIEW\_SUBDIVISIONS\GEO\GEO\GINTIE\_CLEARVIEW\_DRIVE.GPJ

**R-Value and Expansion Pressure of Compacted Soils    AASHTO T190 / ASTM D2844**



Lab Log #	Sample Source	Material	Expansion Pressure (psf) @ 300 (psi)	R-Value @ 300 (psi)
5561	TP - 3 @ 1' - 3'	0	0	66

POINT #	WATER CONTENT (%)	DRY DENSITY (PCF)	EXUDATION PRESS. (PSI)	EXPANSION PRESS. (PSF)	RESISTANCE VALUE (R)
1	10.4	125.5	178	0	65
2	9.9	125.2	511	0	69
3	9.3	125.6	786	0	73
4					
5					

 <b>WOOD RODGERS</b> <small>BUILDING RELATIONSHIPS ONE PROJECT AT A TIME</small> <small>1361 Corporate Boulevard    Tel: 775.823.4068</small> <small>Reno, NV 89502                      Fax: 775.823.4066</small>	<b>E. Clearview Dr.</b> <b>0</b>	 <b>AASHTO</b> <small>ACCREDITED</small>
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TESTED BY BL	JOB NUMBER 3948001	APPROVED	DATE 10/19/20	REVISED	DATE
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WOOD RODGERS

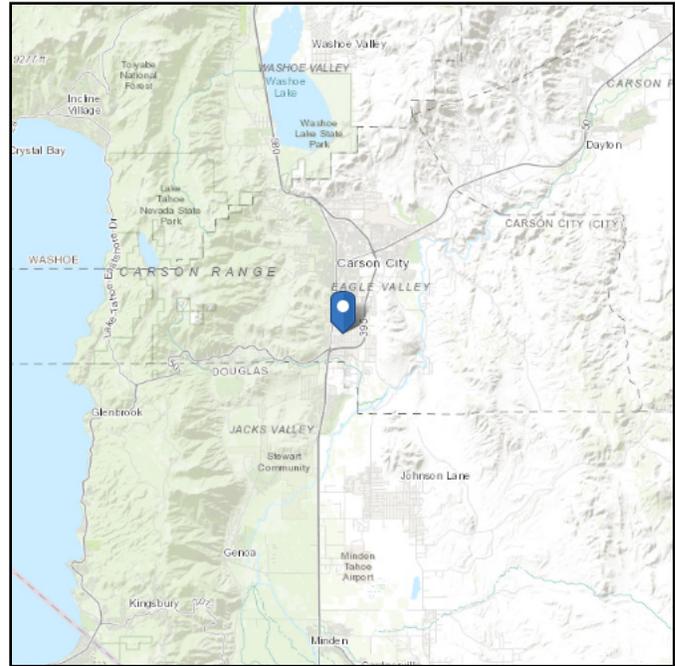
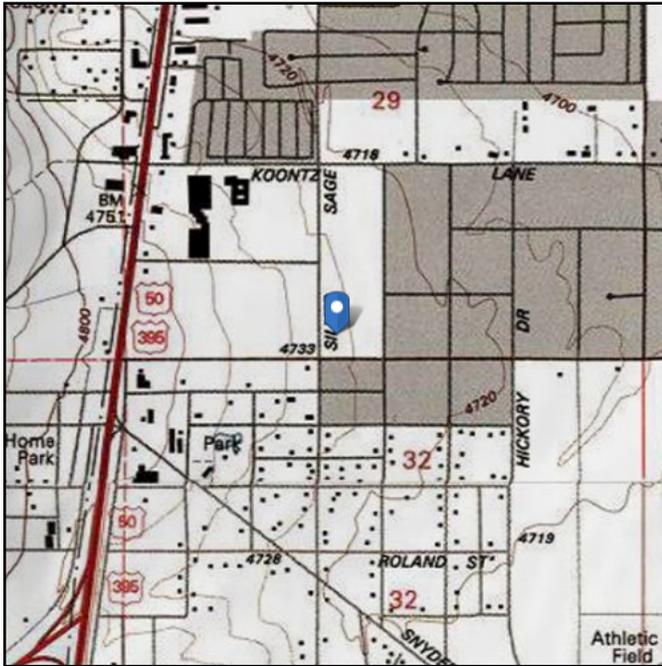
APPENDIX C  
ASCE 7-16 HAZARD REPORT

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Stiff Soil

**Elevation:** 4735.87 ft (NAVD 88)  
**Latitude:** 39.12901  
**Longitude:** -119.762778



**Site Soil Class:** D - Stiff Soil

**Results:**

$S_s$ :	1.973	$S_{D1}$ :	N/A
$S_1$ :	0.712	$T_L$ :	6
$F_a$ :	1	PGA :	0.845
$F_v$ :	N/A	PGA <sub>M</sub> :	0.929
$S_{MS}$ :	1.973	$F_{PGA}$ :	1.1
$S_{M1}$ :	N/A	$I_e$ :	1
$S_{DS}$ :	1.315	$C_v$ :	1.495

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

**Data Accessed:** Fri Oct 16 2020

**Date Source:** [USGS Seismic Design Maps](#)

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.



WOOD RODGERS

# APPENDIX D PAVEMENT SECTION CALCULATIONS

DETERMINATION OF EQUIVALENT AXLE LOAD  
AND STRUCTURAL NUMBER

PROJECT: **Borda Crossing** DATE: 12/17/20  
JOB #: 3849

LOCATION	Local Street
ADT 2020	500
GROWTH RATE (%)	3.00
DESIGN LIFE (YRS)	20
GROWTH FACTOR	26.870
TOTAL VEHICLES (DESIGN LIFE)	4.90E+06
PER CENT TRUCKS	100
DIRECTIONAL SPLIT (%)	50
DESIGN LANE (%)	100
TRUCKS IN DESIGN LANE	2451922

DETERMINE EQUIVALENT SINGLE AXLE LOAD (ESAL's)

	%	TRUCK FACTOR	EASL
2-AXLE 4-TIRE	88.75	0.0004	870
BUSES	0.33	1.2120	9807
2-AXLE 6-TIRE	3.6	0.2214	19543
3-AXLE SINGLE UNIT	0.7	0.9390	16116
4-AXLE SEMI-TRUCK	0.69	1.3250	22417
5-AXLE SEMI-TRUCK	5.22	1.2490	159860
6-AXLE SEMI-TRUCK	0.28	1.2950	8891
5-AXLE MULTIPLE TRLR	0.43	2.6780	28235
6-AXLE MULTIPLE TRLR	0	0.9410	0
7 AXLE MULTIPLE TRLR	0	1.8730	0
	100		265739
----> DESIGN ESAL (1,000,000)			0.27

DETERMINE STRUCTURAL NUMBER

RELIABILITY:	0.90
STD DEVIATE(4.1):	-1.282
STD DEVIATION(So):	0.45
TERM SERVICEABILITY:	2.5
CBR	
Rvalue	60
Subgrade Modulus,Mr	34455

----> REQUIRED Structural Number, SN 1.53

-----> CALCULATED ESAL (1,000,000) 0.27

PAVEMENT TYPICAL SECTION:

MATERIAL	COEF.	DEPTH	SN
Asphalt	0.35	3.0	1.1
Aggregate Base	0.10	6.0	0.6
Sub-base	0.07	0.0	0.0
			0.0

-----> CALCULATED Struc Number,SN 1.7

Corporate Office: 3301 C Street, Bldg. 100-B Sacramento, CA 95816 916.341.7760 Fax: 916.341.7767  
Reno Office: 1361 Corporate Boulevard, Reno, NV 89502 775.823.4068 Fax: 775.823.4066



# Manhard™

CONSULTING LTD

## PRELIMINARY DRAINAGE REPORT

FOR

### BORDA CROSSING

CARSON CITY, NEVADA

Prepared for:

State Street Development  
508 North Curry Street  
Carson City, NV 89703

Prepared by:

Manhard Consulting Ltd.  
241 Ridge Street, Suite 400  
Reno, NV 89501



12-16-20

Project: LILCCNV04

Date: 12/16/20

## Table of Contents

1	INTRODUCTION .....	1
2	METHODOLOGIES AND ASSUMPTIONS .....	1
3	EXISTING HYDROLOGIC CONDITIONS .....	2
4	PROPOSED HYDROLOGIC CONDITIONS .....	3
5	HYDRAULIC ANALYSIS .....	3
6	CONCLUSION.....	4

## Appendices

Appendix A – Supporting Data

## List of Figures

Figure 1 – Vicinity Display  
Figure 2 – Existing Hydrologic Conditions Display  
Figure 3 – Proposed Hydrologic Conditions Display

## List of Tables

Table 1 - Existing Conditions Rational Method Model Summary  
Table 2 - Proposed Conditions Rational Method Model Summary

## **1 INTRODUCTION**

### **1.1 Purpose of Analysis**

This report presents the data, hydrologic and hydraulic analyses, and conclusions of a preliminary technical drainage study performed for Borda Crossing to support the proposed development in Carson City, Nevada. In addition, in the interest of brevity and clarity, this report will defer to figures, tables, and the data and calculations contained in the appendices, whenever possible.

### **1.2 Project Location and Description**

The Borda Crossing development is approximately 5.27 acres in size and is located in the southern portion of Carson City at the intersection of Silver Sage and Clearview. It is east of Silver Sage Drive and north of Clearview Drive. This site is situated within the Southwest  $\frac{1}{4}$  of Section 29 Township 15 North, and Range 20 East of the Mount Diablo Meridian (refer to Figure 1, Vicinity Map). The project site is within the existing parcel 009-124-03.

### **1.3 Project Description**

The Borda Crossing development is a proposed subdivision which consists of 28 single-family residential townhome units on a 5.27-acre parcel. The project site is currently zoned within the SF-1A zoning district and is proposed to change to an SF6 zoning.

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community-Panel Number 3200010094F, effective date December 22, 2016 the subject property is located in unshaded Zone X (Appendix A).

The purpose of this report is to analyze the existing and proposed conditions of the subject property based on the 5-year and 100-year peak flow events. The report contains the following sections: (1) Methodologies and Assumptions, (2) Existing Hydrology, (3) Proposed Hydrology, and (4) Conclusion.

## **2 METHODOLOGIES AND ASSUMPTIONS**

### **2.1 Hydrologic Modeling Methods**

Hydrologic analyses were performed to determine the peak discharge for the 5-year and 100-year peak flow events. The *Rational Method* analysis to model the hydrologic basins that contribute in the existing and proposed conditions.

Parameters for peak storm flow and runoff volume estimates presented herein were determined using the data and methodologies presented in the *Carson City Municipal Code, Division 14 – Storm Drainage* section. In instances where the Carson City

Municipal Code, Division 14 (CCMC-14) was lacking information or specificity, the *Truckee Meadows Regional Drainage Design Manual (2009)* and/or the other appropriate sources and software user manuals were referenced.

For the existing and proposed on-site hydrologic conditions, the Rational Method was utilized in accordance with the CCMC-14. A minimum time of concentration of 10-minutes was used for all sub-basins for a conservative analysis.

The rainfall characteristics were modeled using the NOAA database ([http://dipper.nws.noaa.gov/hdsc/pfds/sa/nv\\_pfds.html](http://dipper.nws.noaa.gov/hdsc/pfds/sa/nv_pfds.html)) to determine site specific depth of precipitation (Appendix A).

Rational Formula:  $Q=CiA$

$Q$ =Peak Discharge (cfs)

$C$ =Runoff Coefficient (dimensionless)

$i$ =Precipitation Intensity (in/hr)

$A$ =Watershed Area (Acres)

### **3 EXISTING HYDROLOGIC CONDITIONS**

#### **3.1 Existing On-Site Drainage**

For the existing catchment a time of concentration ( $T_c$ ) of 10 minutes and the Rational Method coefficients were selected, taking into consideration the catchment characteristics, which include catchment area and land cover. A 5-year intensity of 1.46 in/hr and 100-year intensity of 3.53 in/hr were used. Table 1 and Figure 2 summarize the characteristics of on-site catchment of the study area. Reference Figure 2 (Existing Hydrologic Conditions) for existing hydrology drainage map and the associated hydrologic sub-areas.

**Table 1 – Existing Conditions Rational Method Model Summary for the Borda Crossing, Carson City, Nevada.**

Sub-Basin	Area (Ac.)	Rational Method Coefficient ( $C_5/C_{100}$ )	Time of Concentration (min)	Rainfall Intensity ( $I_5/I_{100}$ ) (in/hr)	5-Year Peak Flows (cfs)	100-Year Peak Flows (cfs)
EX1	5.278	0.30/0.50	10.00	1.46/3.53	2.31	9.32
<b>TOTAL</b>	<b>5.278</b>	-----	-----	-----	<b>2.31</b>	<b>9.32</b>

The 5-year and 100-year peak flows from on-site catchment in the existing condition are 2.31 cfs and 9.32 cfs, respectively. The existing flow from area EX1 discharges to Center Drive, and the flow north in the shoulder of Center Drive.

## 4 PROPOSED HYDROLOGIC CONDITIONS

### 4.1 Proposed On-Site Drainage

The sub-areas took into account the proposed on-site flows that affect the site. The associated calculated 5-year and 100-year peak flows can be found in Table 2 and Figure 3, the detention facility can be referenced in Table 3. Both pipe sizes and catch basins have been sized to accommodate the proposed flows. Reference Figure 3 for the associated hydrologic sub-areas and the proposed catch basins. A 5-year intensity of 1.46 in/hr and 100-year intensity of 3.53 in/hr were used. All drainage for the site will be contained in swales and the roadway and will travel to the storm drain inlets. From the inlets, the flow will be routed through the proposed storm drain system to the detention/retention basin(s).

**Table 2 – Proposed Conditions Rational Method Model Summary for the Borda Crossing Project, Carson City, Nevada.**

Sub-Basin	Area (Ac.)	Rational Method Coefficient (C <sub>5</sub> /C <sub>100</sub> )	Time of Concentration (min)	Rainfall Intensity (I <sub>5</sub> /I <sub>100</sub> ) (in/hr)	5-Year Peak Flows (cfs)	100-Year Peak Flows (cfs)
P1	0.069	0.65/0.78	10.00	1.46/3.53	0.07	0.19
P2	4.629	0.65/0.78	10.00	1.46/3.53	4.39	12.75
P3	0.580	0.65/0.78	10.00	1.46/3.53	0.55	1.60
<b>TOTAL</b>	<b>5.278</b>	-----	-----	-----	<b>2.59</b>	<b>14.54</b>

## 5 HYDRAULIC ANALYSIS

### 5.1 Proposed Drainage Conditions

All onsite storm drainage pipes and/or drainage features shall be designed to intercept the 100-year storm flows and convey them to the proposed detention/retention facility. All proposed storm drainage facilities shall be privately owned and maintained.

Each of the proposed developed sub-basins are will collect the developed storm flows in the following manner;

**Area P1** – These areas are collected and conveyed as minor flow to Silver Sage Drive.

**Area P2** – These areas are collected into a storm drainage system and conveyed to the retention pond in Area P2.

Area P2 utilizes an overland flow and storm drain to convey flows to the on-site retention facility. The on-site retention facility collects all the flows from Area P2 and does not allow them to exit the site. The retention pond has an infiltration rate of 1.48

inches per minute at a 3' depth and 3.38 inches per minute at a 6' depth. These values are based on field percolation tests conducted by RCI.

**Area P3** – These areas are collected and conveyed as minor flow to Center Drive.

## **5.2 Retention/Detention**

According to the existing and proposed hydrologic analysis, the existing 5-year and 100-year condition flows are 2.31 cfs and 9.32 cfs, respectively, and the proposed 5-year and 100-year condition flows are 5.01 cfs and 14.54 cfs. This is a 5-year increase of 2.7 cfs and a 100-year increase of 5.22 cfs. Given that there is not any existing public storm drain adjacent to the site, it is proposed that the majority of the 5 and 100- year runoff volumes be retained onsite and the small remainder flow be allowed to discharge to the public streets. The 5-year retention volume is 1,620 cubic feet and the 100-year retention volume is 3,132 cubic feet.

The pond volume shown in the tentative map has approximately 4,338 cf of storage with an additional 1 foot of freeboard. This volume alone is enough to retain the 100-year storm event.

The geotechnical engineer indicates an infiltration rate for the area of the retention basin. The retention pond has an infiltration rate of 1.48 inches per minute (7.4'/hour) at a 3' depth and 3.38 inches per minute (16.9'/hour) at a 6' depth. These values are based on field percolation tests conducted by RCI. At these rates, the proposed pond with a bottom of 740 sq-ft would have an approximate infiltration rate of 2.50 cfs

When you take the infiltration rate into consideration, the 5-year and the 100-year event is being infiltrated while it is entering the pond and the required storage volume is reduced to approximately 120 cubic feet for the 5-year storm and 1,632 cubic feet for the 100-year events. This volume will take approximately an additional 11 minutes to infiltrate and empty the pond after the 100-year storm event is over.

## **5.3 Street Capacities**

In the 5-year storm event, the streets have a capacity of 5.28 cfs, and in the 100-year storm event, the streets have a capacity of 21.55 cfs. None of the proposed drainage areas convey more than the street capacities to the proposed street sections. Area P8 does not convey more than the capacity, because most of area P8 is in the open space and not directed to the curb and gutter.

# **6 CONCLUSION**

## **6.1 Regulations and Master Plans**

The proposed improvements and the analyses presented herein are in accordance with drainage regulations presented in *Carson City Municipal Code, Division 14 – Storm Drainage* section. In instances where the Carson City Municipal Code, Division 14 (CCMC-14) was lacking information or specificity, the *Truckee Meadows Regional Drainage Design Manual (2009)* and/or the other appropriate sources and software user manuals were referenced.

## **6.2 Impacts to Adjacent Properties**

The performance of the proposed project improvements, roadways, detention/retention, and storm water conveyance facilities, once constructed, will not adversely impact

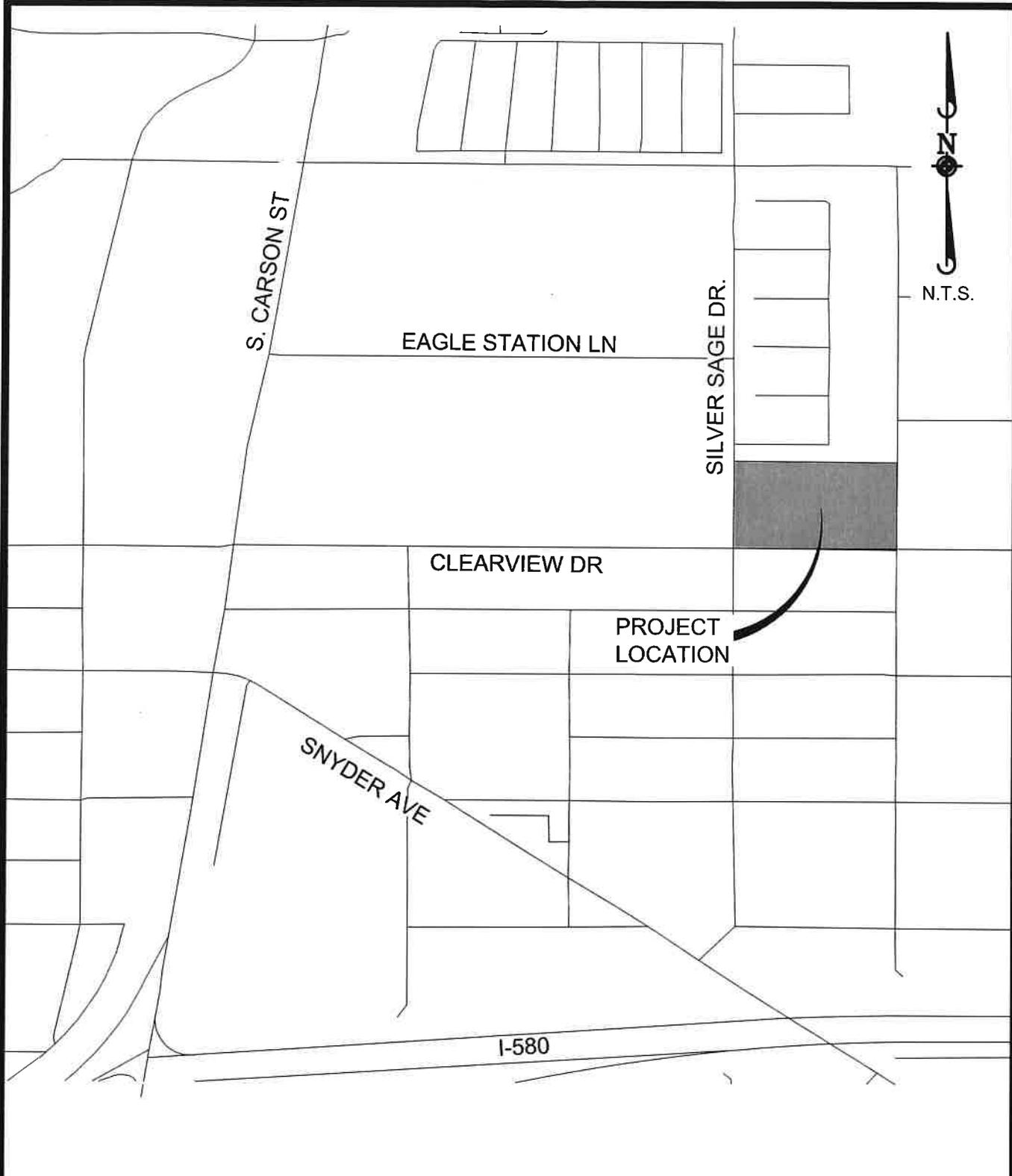
upstream or downstream properties adjacent to this site. The development of this site for the uses proposed will decrease downstream storm flow runoff rates, volumes, velocities, depths, and will not influence floodplain boundaries.

With the utilization of the on-site retention pond, the volume of water being released from the site in the 5-year storm is reduced from 2.31 cfs to 0.62cfs and in the 100-year storm from 9.32 cfs to 1.79 cfs. This will have a positive impact to downstream properties by providing extra capacity in the storm water conveyance systems. Additionally, it provides for groundwater recharge in the valley.

### **6.3 Standards of Practice**

This study was prepared using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable professional engineers practicing in this and similar localities.

**APPENDIX A**  
**SUPPORTING DATA**



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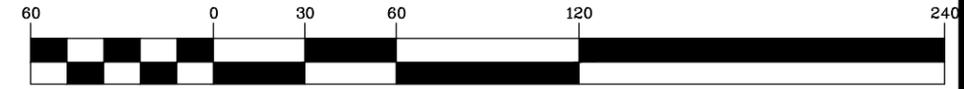


241 Ridge Street, Suite 400, Reno, NV 89501 ph:775-746-3500 hc:775-746-3520 manhard.com  
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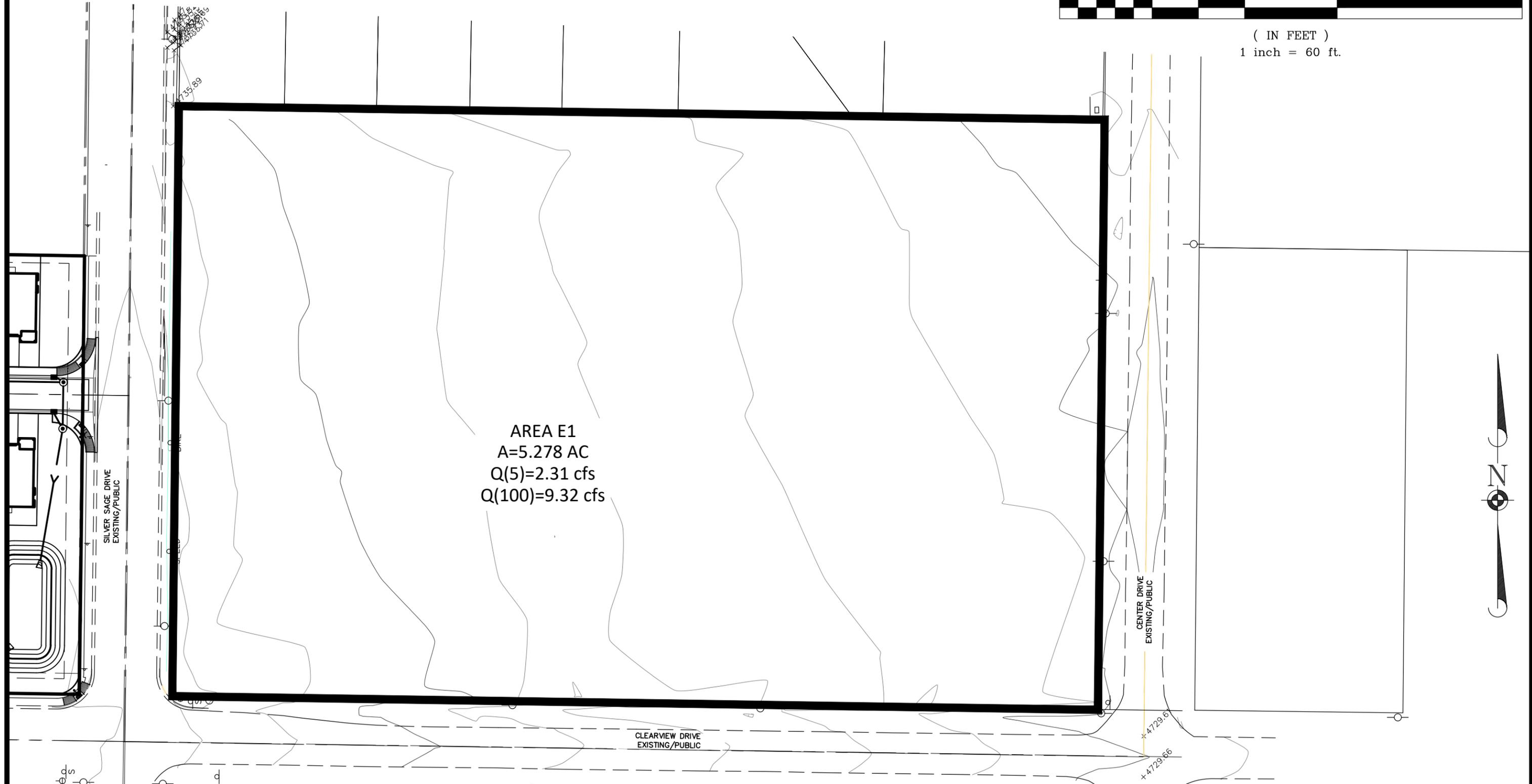
<b>BORDA CROSSING</b>	
<b>CARSON CITY, NEVADA</b>	
<b>VICINITY MAP</b>	
PROJ. MGR.: <u>DMK</u>	SHEET
DRAWN BY: <u>IJB</u>	<b>1</b> OF <b>3</b>
DATE: <u>11-20-2020</u>	<b>LILCCNV04</b>
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GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.



AREA E1  
A=5.278 AC  
Q(5)=2.31 cfs  
Q(100)=9.32 cfs

SILVER SAGE DRIVE  
EXISTING/PUBLIC

CLEARVIEW DRIVE  
EXISTING/PUBLIC

CENTER DRIVE  
EXISTING/PUBLIC



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DATE	REVISIONS	DRAWN BY	CHECK BY



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Construction Managers | Environmental Scientists | Landscape Architects | Planners

**BORDA CROSSING**  
**CARSON CITY, NEVADA**  
**EXISTING HYDROLOGY**

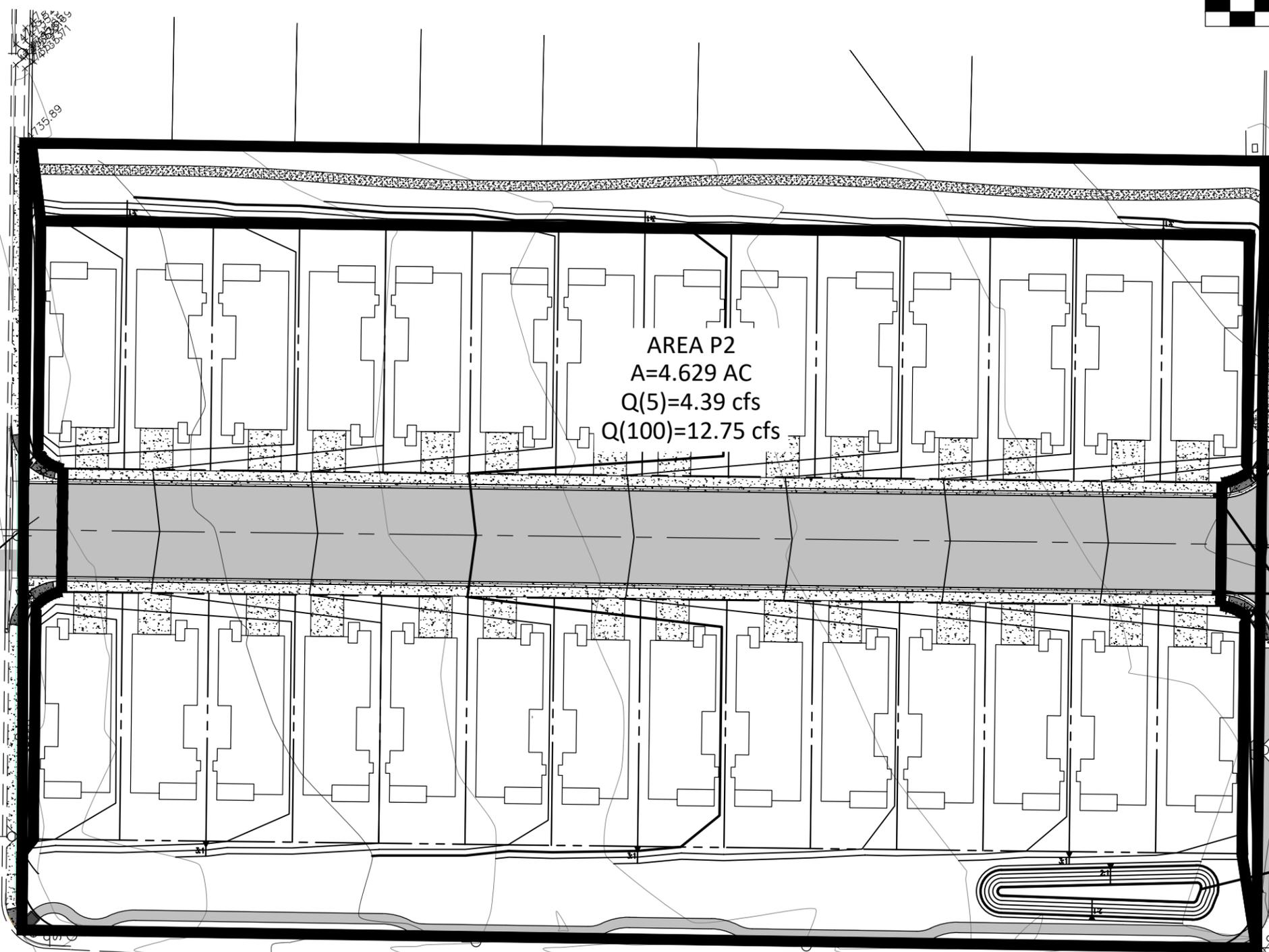
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GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.



AREA P2  
A=4.629 AC  
Q(5)=4.39 cfs  
Q(100)=12.75 cfs

AREA P3  
A=0.580 AC  
Q(5)=0.55 cfs  
Q(100)=1.60 cfs

AREA P1  
A=0.069 AC  
Q(5)=0.07 cfs  
Q(100)=0.19 cfs

SILVER SAGE DRIVE  
EXISTING/PUBLIC

CLEARVIEW DRIVE  
EXISTING/PUBLIC

CENTER DRIVE  
EXISTING/PUBLIC



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Construction Managers | Environmental Scientists | Landscape Architects | Planners

<b>BORDA CROSSING CARSON CITY, NEVADA PROPOSED HYDROLOGY</b>			
DRAWN BY: DMK	DATE: #####	SCALE: ##	CODE: LIL.CCNV04

December 16, 2020 - 10:36 Dwg Name: \\mcl-re-nas\Projects-RE\Lilicnv04\Documents\StormWater Reports\Preliminary Stormwater Reports\HYDRO\_DISPLAYS.dwg Updated By: dkitchner

# National Flood Hazard Layer FIRMette



39°7'56.54"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

### SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)  
Zone A, V, VE
- With BFE or Depth Zone AC, AO, AH, VE, VP
- Regulatory Floodway

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile

- Future Conditions 1% Annual Chance Flood Hazard Zone A
- Area with Reduced Flood Risk due to Levee. See Notes, Zone X
- Area with Flood Risk due to Levee Zone X

### OTHER AREAS OF FLOOD HAZARD

- Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone X

### OTHER AREAS

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

### GENERAL STRUCTURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transact
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transact Baseline
- Profile Baseline
- Hydrographic Feature

### OTHER FEATURES

- Digital Data Available
- No Digital Data Available
- Unmapped

### MAP PANELS

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/13/2016 09:50:42 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and undetermined areas cannot be used for regulatory purposes.



NOAA Atlas 14, Volume 1, Version 5  
 Location name: Carson City, Nevada, USA\*  
 Latitude: 39.1288°, Longitude: -119.7639°  
 Elevation: 4740.49 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 Tryppaluk, 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**

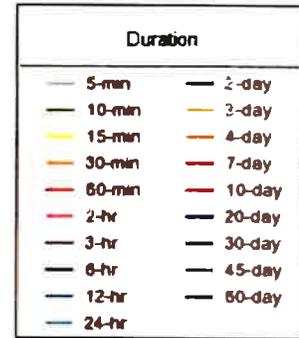
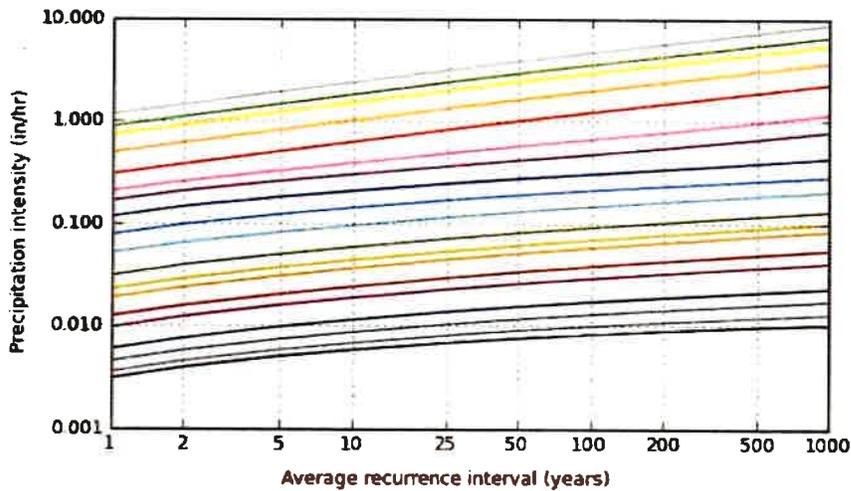
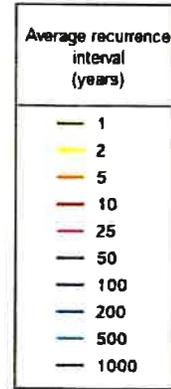
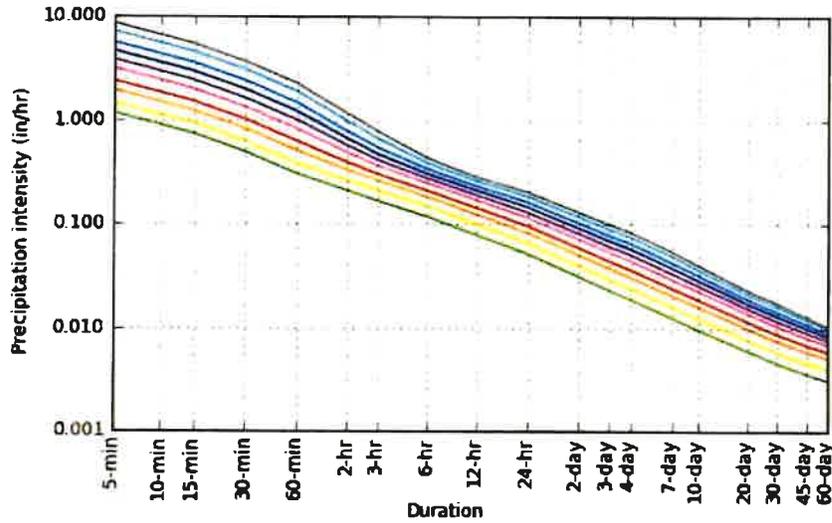
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) <sup>1</sup>										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.16 (0.996-1.37)	1.44 (1.25-1.70)	1.93 (1.66-2.28)	2.38 (2.03-2.82)	3.13 (2.59-3.71)	3.83 (3.06-4.56)	4.64 (3.59-5.59)	5.63 (4.18-8.89)	7.19 (5.03-8.98)	8.59 (5.72-10.9)
10-min	0.882 (0.762-1.04)	1.10 (0.954-1.30)	1.46 (1.26-1.73)	1.81 (1.55-2.15)	2.39 (1.97-2.83)	2.91 (2.33-3.47)	3.53 (2.74-4.25)	4.28 (3.18-5.24)	5.47 (3.83-6.83)	6.54 (4.36-8.33)
15-min	0.728 (0.628-0.856)	0.908 (0.788-1.07)	1.21 (1.04-1.43)	1.50 (1.28-1.77)	1.97 (1.63-2.34)	2.40 (1.92-2.86)	2.92 (2.26-3.51)	3.54 (2.63-4.33)	4.52 (3.16-5.65)	5.40 (3.60-6.88)
30-min	0.490 (0.422-0.578)	0.610 (0.530-0.722)	0.816 (0.700-0.964)	1.01 (0.860-1.19)	1.33 (1.10-1.57)	1.62 (1.30-1.93)	1.97 (1.52-2.37)	2.38 (1.77-2.92)	3.04 (2.13-3.80)	3.64 (2.43-4.64)
60-min	0.303 (0.262-0.357)	0.378 (0.328-0.447)	0.504 (0.433-0.596)	0.624 (0.533-0.738)	0.821 (0.679-0.973)	1.00 (0.802-1.19)	1.22 (0.942-1.46)	1.47 (1.09-1.80)	1.88 (1.32-2.35)	2.25 (1.50-2.87)
2-hr	0.207 (0.185-0.237)	0.256 (0.229-0.294)	0.326 (0.289-0.372)	0.389 (0.341-0.444)	0.482 (0.412-0.553)	0.566 (0.472-0.655)	0.660 (0.536-0.773)	0.774 (0.606-0.918)	0.987 (0.726-1.19)	1.15 (0.832-1.45)
3-hr	0.166 (0.149-0.186)	0.206 (0.187-0.233)	0.259 (0.231-0.291)	0.301 (0.267-0.338)	0.362 (0.316-0.409)	0.413 (0.354-0.471)	0.471 (0.395-0.542)	0.544 (0.447-0.636)	0.662 (0.528-0.800)	0.778 (0.603-0.974)
6-hr	0.116 (0.105-0.130)	0.145 (0.131-0.162)	0.180 (0.161-0.201)	0.208 (0.185-0.231)	0.245 (0.215-0.274)	0.274 (0.237-0.309)	0.303 (0.259-0.346)	0.338 (0.282-0.390)	0.387 (0.315-0.454)	0.430 (0.342-0.514)
12-hr	0.078 (0.069-0.087)	0.098 (0.087-0.110)	0.123 (0.109-0.138)	0.142 (0.126-0.160)	0.169 (0.147-0.191)	0.189 (0.163-0.215)	0.210 (0.178-0.241)	0.231 (0.193-0.269)	0.260 (0.211-0.308)	0.282 (0.224-0.340)
24-hr	0.052 (0.047-0.057)	0.065 (0.059-0.071)	0.082 (0.074-0.090)	0.096 (0.087-0.105)	0.115 (0.103-0.127)	0.130 (0.116-0.143)	0.146 (0.129-0.161)	0.162 (0.143-0.180)	0.185 (0.160-0.207)	0.203 (0.173-0.229)
2-day	0.031 (0.028-0.035)	0.039 (0.035-0.044)	0.050 (0.045-0.056)	0.059 (0.052-0.066)	0.071 (0.063-0.080)	0.081 (0.071-0.091)	0.091 (0.080-0.103)	0.102 (0.088-0.117)	0.117 (0.100-0.135)	0.130 (0.109-0.151)
3-day	0.023 (0.020-0.026)	0.029 (0.026-0.033)	0.037 (0.033-0.042)	0.044 (0.039-0.049)	0.053 (0.047-0.060)	0.061 (0.053-0.069)	0.069 (0.060-0.078)	0.077 (0.066-0.088)	0.089 (0.075-0.103)	0.099 (0.082-0.115)
4-day	0.019 (0.017-0.021)	0.024 (0.021-0.027)	0.031 (0.027-0.035)	0.036 (0.032-0.041)	0.044 (0.039-0.050)	0.051 (0.044-0.058)	0.057 (0.049-0.066)	0.065 (0.055-0.074)	0.075 (0.063-0.087)	0.083 (0.069-0.097)
7-day	0.012 (0.011-0.014)	0.016 (0.014-0.018)	0.020 (0.018-0.023)	0.024 (0.021-0.027)	0.029 (0.026-0.033)	0.034 (0.029-0.038)	0.038 (0.033-0.043)	0.043 (0.037-0.049)	0.049 (0.041-0.057)	0.054 (0.045-0.063)
10-day	0.010 (0.009-0.011)	0.012 (0.011-0.014)	0.016 (0.014-0.018)	0.019 (0.017-0.021)	0.023 (0.020-0.026)	0.026 (0.023-0.029)	0.029 (0.025-0.033)	0.032 (0.028-0.037)	0.037 (0.031-0.042)	0.040 (0.034-0.047)
20-day	0.006 (0.005-0.007)	0.008 (0.007-0.009)	0.010 (0.009-0.011)	0.012 (0.010-0.013)	0.014 (0.012-0.015)	0.015 (0.014-0.017)	0.017 (0.015-0.019)	0.019 (0.016-0.021)	0.021 (0.018-0.024)	0.023 (0.020-0.026)
30-day	0.005 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.007-0.008)	0.009 (0.008-0.010)	0.010 (0.009-0.012)	0.012 (0.010-0.013)	0.013 (0.011-0.014)	0.014 (0.012-0.016)	0.016 (0.014-0.018)	0.017 (0.015-0.020)
45-day	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.011 (0.010-0.012)	0.012 (0.010-0.014)	0.013 (0.011-0.015)
60-day	0.003 (0.003-0.003)	0.004 (0.004-0.004)	0.005 (0.005-0.005)	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.010 (0.009-0.012)

<sup>1</sup> 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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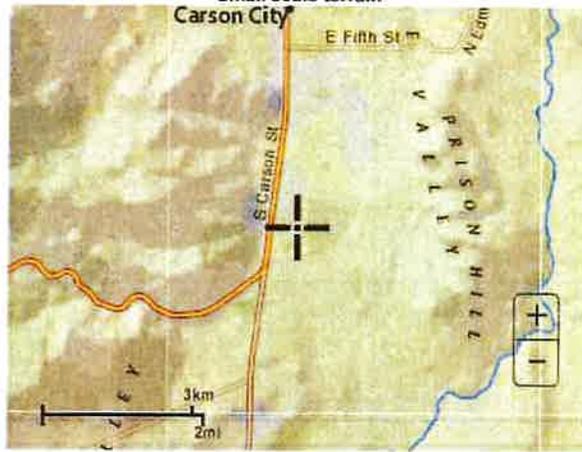
## PF graphical

**PDS-based intensity-duration-frequency (IDF) curves**  
Latitude: 39.1288°, Longitude: -119.7639°



## Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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[National Weather Service](#)  
[National Water Center](#)  
1325 East West Highway  
Silver Spring, MD 20910  
Questions?: [HDSC.Questions@noaa.gov](mailto:HDSC.Questions@noaa.gov)

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**RATIONAL FORMULA METHOD  
RUNOFF COEFFICIENTS**

Land Use or Surface Characteristics	Aver. % Impervious Area	Runoff Coefficients	
		5-Year (C <sub>5</sub> )	100-Year (C <sub>100</sub> )
<b>Business/Commercial:</b>			
Downtown Areas	85	.82	.85
Neighborhood Areas	70	.65	.80
<b>Residential:</b> (Average Lot Size)			
→ ¼ Acre or Less (Multi-Unit)	65	.60	.78
¼ Acre	38	.50	.65
½ Acre	30	.45	.60
¾ Acre	25	.40	.55
1 Acre	20	.35	.50
<b>Industrial:</b>			
	72	.68	.82
<b>Open Space:</b> (Lawns, Parks, Golf Courses)			
	5	.05	.30
<b>Undeveloped Areas:</b>			
→ Range	0	.20	.50
Forest	0	.05	.30
<b>Streets/Roads:</b>			
Paved	100	.88	.93
Gravel	20	.25	.50
<b>Drives/Walks:</b>			
	95	.87	.90
<b>Roof:</b>			
	90	.85	.87

**Notes:**

- Composite runoff coefficients shown for Residential, Industrial, and Business/Commercial Areas assume irrigated grass landscaping for all pervious areas. For development with landscaping other than irrigated grass, the designer must develop project specific composite runoff coefficients from the surface characteristics presented in this table.

VERSION: April 30, 2009

W/R/C ENGINEERING INC

**REFERENCE:**

USDCM, DROCOG, 1969  
(with modifications)

TABLE  
701



---

## 5-year street capacity

---

### Results

Critical Slope	0.00464	ft/ft
Velocity	3.32	ft/s
Velocity Head	0.17	ft
Specific Energy	0.51	ft
Froude Number	1.64	
Flow Type	Supercritical	

### GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

### GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.34	ft
Critical Depth	0.39	ft
Channel Slope	0.01330	ft/ft
Critical Slope	0.00464	ft/ft

## 100-year street capacity

### Project Description

Friction Method                      Manning Formula  
 Solve For                              Discharge

### Input Data

Channel Slope    0.01330    ft/ft  
 Normal Depth    0.52        ft  
 Section Definitions

Station (ft)	Elevation (ft)
0+00	0.58
0+23	0.13
0+24	0.00
0+25	0.42
0+30	0.52

### Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00, 0.58)	(0+30, 0.52)	0.013

### Options

Current Roughness Weighted Method              Pavlovskii's Method  
 Open Channel Weighting Method                  Pavlovskii's Method  
 Closed Channel Weighting Method                Pavlovskii's Method

### Results

Discharge    21.55    ft<sup>3</sup>/s  
 Elevation Range                                      0.00 to 0.58 ft  
 Flow Area    5.05     ft<sup>2</sup>  
 Wetted Perimeter                                      27.39    ft  
 Hydraulic Radius                                      0.18     ft  
 Top Width    27.25    ft  
 Normal Depth    0.52     ft  
 Critical Depth    0.61     ft

---

## 100-year street capacity

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### Results

Critical Slope	0.00394	ft/ft
Velocity	4.27	ft/s
Velocity Head	0.28	ft
Specific Energy	0.80	ft
Froude Number	1.75	
Flow Type	Supercritical	

### GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

### GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.52	ft
Critical Depth	0.61	ft
Channel Slope	0.01330	ft/ft
Critical Slope	0.00394	ft/ft



# Manhard™

CONSULTING LTD

## PRELIMINARY SEWER REPORT

FOR

### BORDA CROSSING

CARSON CITY, NEVADA

Prepared for:

State Street Development  
508 North Curry Street  
Carson City, Nevada 89703

Prepared by:

Manhard Consulting Ltd.  
241 Ridge Street, Suite 400  
Reno, Nevada 89501



12-16-20

Project: LILCCNV04

Date: 12/16/20

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FIGURE 2 – SEWER DISPLAY MAP

## Appendices

APPENDIX A - FLOWMASTER FLOW DATA

## **1 INTRODUCTION**

### **1.1 Purpose of Analysis**

This report represents a detailed analysis of the proposed sanitary sewer system for Borda Crossing. The purpose of this analysis is to establish peak flow rates and evaluate proposed sanitary sewer sizes for the subject property.

### **1.2 Project Location and Description**

The Borda Crossing development is approximately 5.27 acres in size and is located in the southern portion of Carson City at the intersection of Silver Sage and Clearview. It is east of Silver Sage Drive and north of Clearview Drive. This site is situated within the Southwest ¼ of Section 29 Township 15 North, and Range 20 East of the Mount Diablo Meridian (refer to Figure 1, Vicinity Map). The project site is within the existing parcel 009-124-03.

Figure 2, the *Proposed Sewer Display*, illustrates the location and orientation of the project and its proposed lots and roadway locations.

### **1.3 Project Description**

The Borda Crossing Development is a proposed subdivision which consists of 28 single-family residential units. The project site is currently zoned within the SF-1A zoning district and is proposed to change to an SF6 zoning.

## **2 PROPOSED ALIGNMENT AND QUANTITY OF SERVICE**

### **2.1 Project Wastewater Collection System**

Sewage flow from Borda Crossing will be conveyed via public 8" diameter PVC SDR-35 sewer mains that ultimately discharge into the existing 8" sanitary sewer main located in Silver Sage Drive. The proposed sizes and locations of the sanitary sewers can be found on the *Proposed Sewer Display*, which is included in this report.

### **2.2 Estimated Peak Sewage Flows**

Calculations for the design of the sewer system were performed in accordance with Chapter 10, Section 11.243 of the Recommended Standards for Wastewater Facilities, 2004 Edition and Division 15, Section 15.3.2 of the Carson City Development Standards and Carson City's Sewer Flow Monitoring Analysis (CCSFMA). According to CCSFMA, the actual per capita flow ranges from 125 – 150 gal/cap/day with a peaking factor ranging from 3.5 – 3.8. For this analysis, the flow factors used in the calculations are 2.5 capita per dwelling unit for a single-family residential lot and 150 gal/cap/day to calculate average daily flow. A peaking factor of 3.8 is then applied to the daily average flow to compute the peak flow used in the design of the sanitary sewer. Complete peak flow calculations for Borda Crossing are included within this report. This analysis is considered to be conservative based on the CCSMA results. The

following table summarizes the results of the calculations of the peak daily flows for the residential subdivision:

Units	Capita/DU	GPD/ Capita	Peaking Factor	Peak Flow (gpd)	Peak Flow (cfs)
28	2.5	150	3.80	39,900	0.062
			<b>Total</b>	<b>39,900</b>	<b>0.062</b>

### 2.3 Proposed Sewer Mains

Basic normal depth calculations for the proposed 8-inch sewer mains were done using open-channel pipe flow theory, the Manning’s Formula, and *Bentley FlowMaster® V8i® (FlowMaster)* software. A Manning’s Coefficient of 0.013 (assuming PVC pipe material) was used in all of these calculations. The *FlowMaster* worksheets that demonstrate these calculations are included within this report (Appendix A).

Per Carson City Development Standards, sewer mains are considered at capacity when peak flow is at  $d/D=0.75$  (Div. 15, Section 15.3.2.a.). In addition, the minimum velocity of 2 fps and the maximum velocity of 10 fps are required design conditions (Div 15, Section 15.3.2.e.). The *FlowMaster* calculations included within this report demonstrate that the various velocities of PVC sewer pipe at a  $d/D$  of 20% at the slope mentioned above is within the requirements for Carson City. The velocity of an 8-inch sewer main is 1.36 fps for a pipe slope of 0.40%. These velocity calculations can be found in the *FlowMaster* calculations included within this report.

In addition to evaluating the sewer velocities within this development, this report also analyzes maximum capacity within the proposed sewer pipes. As described above, the peak flow within the sewer main must remain at or below a normal depth of 75%. As shown in the *FlowMaster* calculations included within this report, an 8-inch PVC sewer at 0.40% can convey 450,420 gpd (0.70 cfs) at a maximum depth of 75%. The size and locations of the proposed sanitary sewers mentioned above can be found on the *Proposed Sewer Display*, which is included in this report.

### 3 CONCLUSION

The 8-inch sanitary sewer mains proposed herein will adequately serve the project as planned. The attached *FlowMaster* worksheets calculates the maximum capacity of the proposed 8-inch sewer mains at a minimum slope of 0.40% in accordance with the requirements of Carson City. The 8-inch sewers at 0.40% have a capacity of 39,900 gpd (0.062 cfs) at a maximum depth of 20%, which will be able to adequately serve Silver View Townhomes.

The proposed sanitary sewerage system within this report for the Silver View Townhomes development has adequate capacity to carry the subject property’s peak sewage flow in conformance with the guidelines outlined in the Carson City Development Standards and the Recommended Standards for Wastewater Facilities.



## SANITARY SEWER CALCULATIONS FOR SILVER VIEW TOWNHOMES

The following calculations were performed in accordance with Chapter 10, Section 11.243 of the Recommended Standards for Wastewater Facilities, 2004 ed. (Ten-States Standards), and the Carson City Development Standards:

2.5 capita/dwelling unit  
150 gal/capita/day

The site will consist of 28 dwelling units; therefore the following equations are used:

Average flow = num. of dwellings \* capita/dwelling \* GPCD

Average flow =  $28 * 2.5 * 150 = 10,500 \text{ gpd} = 0.016 \text{ cfs}$

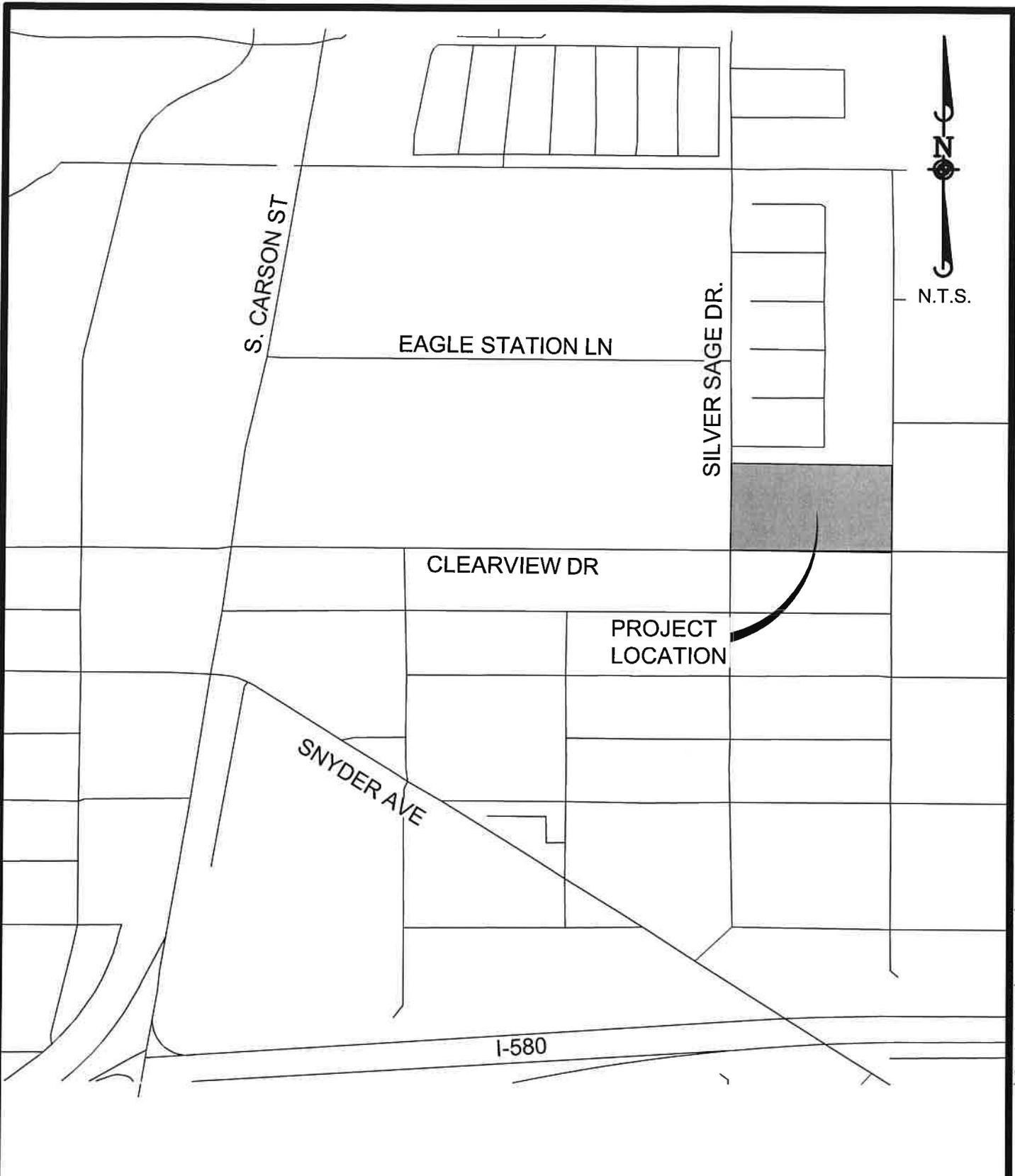
Peak flow = Average flow \* peaking factor

Peaking Factor =  $(18 + P^{1/2}) / (4 + P^{1/2})$  where P = population in thousands (i.e. dwelling units x 3.5 divided by 1,000). Maximum peaking factor is 4.0. However, according CCSFMA a peaking factor of 3.8 is acceptable.

Calculated peaking factor = 3.80

Peak flow =  $10,500 * 3.8 = 39,900 \text{ gpd} = 0.062 \text{ cfs}$

The design shall be for the peak flow; therefore the design flow is 0.062 cfs.



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**BORDA CROSSING**  
**CARSON CITY, NEVADA**  
**VICINITY MAP**

PROJ. MGR.: <b>DMK</b>	SHEET	
DRAWN BY: <b>ljb</b>	<b>1</b>	<b>2</b>
DATE: <b>11-20-2020</b>		
SCALE: <b>N.T.S.</b>	<b>LILCCNV02</b>	

19:47 Dwg Name: \\mcl-re-nas\Projects-RE\Lilccnv04\Documents\Sewer Report\Preliminary\1-Vicinity Map.dwg Updated By: ibugbee



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DATE	REVISIONS	DRAWN BY	CHECK BY

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<b>BORDA CROSSING</b>			
<b>CARSON CITY, NEVADA</b>			
<b>PROPOSED SEWER DISPLAY</b>			
DRAWN BY: IJB	DATE: 12/11/20	SCALE: 1"=60'	CODE: LILCCNV04

## **APPENDIX A**

### **FlowMaster Flow Data**

## Worksheet for 8" Sewer at 0.40%

### Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

### Input Data

Roughness Coefficient	0.013
Channel Slope	0.00400 ft/ft
Diameter	8.00 in
Discharge	0.07 ft <sup>3</sup> /s

### Results

Normal Depth	1.64 in
Flow Area	0.05 ft <sup>2</sup>
Wetted Perimeter	0.63 ft
Hydraulic Radius	0.98 in
Top Width	0.54 ft
Critical Depth	0.12 ft
Percent Full	20.4 %
Critical Slope	0.00670 ft/ft
Velocity	1.36 ft/s
Velocity Head	0.03 ft
Specific Energy	0.17 ft
Froude Number	0.78
Maximum Discharge	0.82 ft <sup>3</sup> /s
Discharge Full	0.76 ft <sup>3</sup> /s
Slope Full	0.00003 ft/ft
Flow Type	SubCritical

### GVF Input Data

Downstream Depth	0.00 in
Length	0.00 ft
Number Of Steps	0

### GVF Output Data

Upstream Depth	0.00 in
Profile Description	
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.00 %
Normal Depth Over Rise	20.45 %
Downstream Velocity	Infinity ft/s

---

## Worksheet for 8" Sewer at 0.40%

---

### GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.64	in
Critical Depth	0.12	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00670	ft/ft

**Heather Ferris**

---

**From:** Louis Cariola <lcariola@manhard.com>  
**Sent:** Wednesday, January 13, 2021 9:55 AM  
**To:** Heather Ferris  
**Subject:** Borda Crossing - xeriscape

Hi Heather.

Thank you for discussing the Borda Crossing tentative map application with me this morning. After a closer review of the cost of installing and maintaining turf within the common area of the proposed subdivision, the applicant is proposing xeriscape instead. As you know, each lot will have fenced and private yards that will provide areas for turf, but the HOA will not be responsible for privately-installed landscaping. The sidewalks and walking paths that surround the site for active recreation may be supplemented by sitting and/or picnic benches.

Feel free to follow up if you need any additional information. Thank you.

-Louis

**Louis Cariola | Senior Planner**

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d: 775.321.6548 | [manhard.com](http://manhard.com)



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