STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF JULY 31, 2019

FILE NO: TSM-19-103 & SUP-19-102 **AGENDA ITEM: E-2 & E-3**

STAFF CONTACT: Hope Sullivan, AICP, Planning Manager

AGENDA TITLE:
TSM-19-103: For Possible Action: Discussion and possible action regarding a request for a Tentative Subdivision Map to create 149 single family lots on a 21.32 acre parcel on property zoned Multi-Family Duplex, located on the north side of Little Lane and west of South Saliman Road, APN 004-021-14. (Hope Sullivan, hsullivan@carson.org).

SUP-19-102: For Possible Action: Discussion and possible action regarding a Special Use Permit to allow for a maximum building height of 37 feet, 6.5 inches on property zoned Multi-Family Duplex, located on the north side of Little Lane and west of South Saliman Road, APN 004-021-14. (Hope Sullivan, hsullivan@carson.org).

STAFF SUMMARY: *The applicant is requesting to subdivide a 21.48 acre parcel into 149 detached single family residential lots, with a minimum lot size of 3,072 sq. ft. and an average lot size of 3,183 sq. ft. The proposed subdivision will also include 2.55 acres of common area, and a roadway system. The applicant is seeking to subdivide the land as a Common Open Space Development, pursuant to the provisions of Chapter 17.10 of the Carson City Municipal Code. The Board of Supervisors is authorized to approve a Tentative Subdivision Map. The Planning Commission makes a recommendation to the Board.*

The applicant is also seeking a Special Use Permit to exceed the allowable building height. The maximum allowed building height in the Multi-Family Duplex zoning district is 26 feet. The applicant is seeking a Special Use Permit to increase the maximum building heights to allow for varying heights of two and three story buildings from a minimum of 26 feet, 2.5 inches to a maximum of 37 feet 6.5 inches. The Planning Commission has the authority to approve a Special Use Permit to allow a building to exceed the maximum building height.

RECOMMENDED MOTIONS:
"I move to recommend approval of Tentative Subdivision Map TSM-19-103 based on the ability to make the required findings and subject to the conditions of approval."

"I move to approve SUP-19-102 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 home owners 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. A block wall of a minimum height of five feet is required along the northern property line to meet this condition.

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 required internal setback shall be front setback 10 feet, rear setback garage 20 feet, side setback 5 feet, and street side setback 10 feet. These setbacks shall be stated on the final map as well as in the CC&Rs.

21. The required peripheral setbacks shall be front (Little Lane) setback 20 feet, side setback 7 feet, rear setback 51 feet. These setbacks shall be stated on the final map as well as in the CC&Rs.

22. Improvements to the recreational area must be proposed at the time of final map, and improved prior to the issuance of the tenth building permit.

23. A minimum lot area shall be 3,072 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. All construction and improvements must meet the requirements of Carson City Standard Details and Development Standards including but not limited to:
    a. The 24 foot wide Alleyways must be signed “No Parking”.
    b. The extension of Elaine St. must be signed “No Parking”.
    c. Additional water gate valves must be added so that no more than fifteen (15) customers are taken out of service at any one time.
    d. The water main at the intersection of Parkland Ave and Vine Gate St. must be extended into APN 004-021-16 within the alignment of the future road at that location, within 10 feet of the centerline of Vine Gate St. The end of this extension must have a fire hydrant, and the valve on the west leg of the cross must have restrained joints.
    e. All water main valves must be located at curb returns, outside of the street intersections.
    f. The site contains a FEMA AH flood zone. The project must obtain CLOMR-F approval from FEMA. The site and the surrounding area must be modeled to ensure that the change does not negatively impact the surrounding properties.
    g. The technical drainage study for the site improvement permit must analyze for dry lane requirements.

25. The existing fence for well site #4 must be on or within the proposed parcel boundary.

26. The groundwater on this site has been observed as shallow as three feet. Home sites where groundwater is observed within 12 inches of the crawl space or slab elevation must be designed to include drains for high groundwater. A disclosure advising of high ground water must be recorded at the time of final map recordation.

27. The Water Line Easement on the east property line must be an “Exclusive Water Main and Sewer Main Easement” and must be increased in size to 30 feet wide. No slopes will be permitted within this easement.

28. The water and sewer mains adjacent to the east property line must have a 12 foot wide aggregate base access road as show, compacted to 95% relative compaction.

29. A water sampling tap must be installed in one of the common areas of the subdivision

(Kupferle Eclipse #88 or approved equal).

30. The existing municipal well may make noise 24/7. Prior to recordation of the first 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 of the development's proximity to the well which may make noise 24 hours a day. The disclosure must also be referenced on the final map.

31. The storm drain in Meadow View Place and in Common Area D should be located in a proposed public street, or should be indicated as private storm drain.

32. The water main in Elaine St must follow the street alignment.

33. The water main extension form Parkland Avenue to Ruth Street via Lupine Lane must be eliminated.

34. The detention/flood mitigation basin must be owned and maintained by the subdivision HOA, and this must be noted on the final map.

35. Reseeding areas must be irrigated until plants are established.

36. Any phasing of the subdivision must be able to stand alone, including requirements for full secondary access and looping of water mains.

37. Grading will only be allowed on phases slated for immediate development, and only as part of an overall site improvement permit.

38. Parking will not be allowed on Little Lane, which is a collector roadway.

39. Center lane turn pockets must be striped at the intersections of Little Lane/Parkland Avenue and Little Lane/Spartan Avenue.

40. Little Lane must have left and right turn lanes at South Saliman Road.

42. A pedestrian cross walk shall be installed on the west leg of the intersection of Little Lane and South Saliman Road on Little Lane.

43. On South Saliman Road at Little Lane, the distance between the right-of-way and the back of sidewalk must be determined with the site improvement application. If the City Engineer determines there is sufficient space, then a deceleration right turn lane must be installed for southbound traffic.

44. The Little Lane street section must have a five foot sidewalk with a two foot buffer.

45. The intersections of Little Lane/Parkland Avenue and Little Lane/Spartan Avenue must be improved as four-leg intersections with stop sign control at the north and south approaches.

46. The left turn pocket at the east approach of the Saliman Road/Fifth Street intersection must be restriped to accommodate a 150 foot queue length.

47. Sufficient right-of-way must be dedicated along the Little Lane frontage and at the corner of Little Lane and South Saliman Road to allow for the new and existing street

improvements to reside within the right-of-way.

48. The geotechnical report must be updated to include a minimum recommended street section, based on site exploration, prior to any permits for site work. This section may be updated if necessary after the geotechnical engineer observes site grading.

49. The intersection of Elaine Street and Vine Gate must be an All-Way stop with a "Stop Ahead" sign on Spartan Avenue.

50. The west intersection of Parkland Avenue and Village Green, at Meadow View Place, must be an All-Way stop.

51. The following street names cannot be used: Orchard Row Place, Village Green Avenue, Lupine Lane and Meadow View Place. New names must be proposed with the site improvement permit, and all street names must obtain City approval from the City Engineer prior to issuance of the site improvement permit.

52. The final map must note that the subdivision HOA is responsible for maintenance of the private streets including parking enforcement, snow removal and reconstruction.

53. The applicant will be required to match the existing Little Lane street cross section (west of the proposed development) that provides bike lanes on both sides of the street and a five foot wide concrete sidewalk separated two point five feet (2.5') from back of curb on the north side of the street. These improvements need to be coordinated with Development Engineering requirements for Little Lane.

54. Chapter 7 in the Unified Pathway Master Plan provides the City's sidewalk policies and implementation strategies for pedestrian connectivity within the development and between the project site and the City's existing sidewalk system. The project's interconnected sidewalk/private recreation area path system and pedestrian cross walks must be approved by Development Engineering and the Parks, Recreation & Open Space Department.

55. While the Carson City Parks and Recreation Master Plan identifies the need for a park in Neighborhood #13, both Mills Park and Governors Field are within walking distance of the proposed development. The applicant will be required to identify a private recreation area with outdoor recreation amenities and demonstrate that the size of the site and the amenities sufficiently address the development's on-site recreational needs for the resident's demographics. The selection of these amenities (ex. picnic tables, grills, shade structure, benches, playground equipment, and a walking path around the detention basin) will be evaluated during the site development process. This evaluation will be conducted by the Parks, Recreation & Open Space Department to confirm that the development will not be increasing the need for additional recreation amenities in the adjacent neighborhood.

56. The development will be subject to the collection of Residential Construction Tax (RCT), compliant with the Nevada Revised Statutes and Carson City Municipal Code (CCMC 15.60).

57. An HOA or similar entity will be required to maintain the project's proposed private recreation area, any outdoor recreational amenities, and path system in perpetuity.

58. An HOA or similar entity will be 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.

59. The applicant will be required to incorporate “best management practices” into their construction documents and specifications to reduce the spread of noxious weeds. The Parks, Recreation & Open Space Department is willing to assist the applicant with this aspect of their project.

60. Carson City is a Bee Friendly USA City. As a result, the applicant shall use approximately 50% pollinator friendly plant material for any required landscape or open space areas on the project site. The project’s 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.

RECOMMENDED CONDITIONS OF APPROVAL: Special Use Permit

1. All development shall be substantially in accordance with the plans presented to the Planning Commission.
2. All on and off-site improvements shall conform to city standards and requirements.
3. The use for which this permit is approved shall commence within 12 months of the date of final approval. A single, 1 year extension of time must be requested in writing to the planning and community development department 30 days prior to the 1 year expiration date. Should this permit not be initiated within 1 year and no extension granted, the permit shall become null and void.
4. The applicant must sign and return the notice of decision for conditions of approval within 10 days of receipt of notification. If the notice of decision is not signed and returned within 10 days, then the item will be rescheduled for the next planning commission meeting for further considerations.

LEGAL REQUIREMENTS: CCMC 17.05 (Tentative Maps); CCMC 17.07 (Findings); CCMC 17.10 (Common Open Space Development); CCMC 18.02.080 (Special Use Permit); NRS 278.330

MASTER PLAN DESIGNATION: High Density Residential (HDR)

ZONING DISTRICT: Multi-Family Duplex (MFD)

KEY ISSUES: Is the Tentative Map consistent with the required findings? Does the proposal meet the Tentative Map requirements and other applicable requirements? Will the Special Use Permit meet the required findings?

SURROUNDING ZONING AND LAND USE INFORMATION

NORTH: Single Family 6,000 and Neighborhood Business/Single Family Residential and Storage Units
SOUTH: Mobile Home 6,000/Mobile Homes
WEST: Multi-Family Apartment/Single Family Attached
EAST: Retail Commercial/Multi-Family Residential

ENVIRONMENTAL INFORMATION:
FLOOD ZONE: Zone X shaded (between 100 year and 500 year flood plain) and AO (100 year flood plain)
SLOPE/DRAINAGE: Generally flat
SEISMIC ZONE: Zone I (Severe)
FAULT: Beyond 500 feet

SITE DEVELOPMENT INFORMATION:
SUBJECT SITE AREA: 21.32
EXISTING LAND USE: Vacant with a well site

SITE HISTORY:
CSM-19-042: Conceptual Subdivision Map for 151 lots

CSM-19-018: Conceptual Subdivision Map for 171 lots

CPUD-18-030: Conceptual Planned Unit Development for 94 lots

BACKGROUND / DISCUSSION:
The applicant is seeking to utilize the provisions of CCMC 17.10: Common Open Space Development to subdivide 21.48 acres to create 149 single family lots, with 2.55 acres of open space. A .52 acre lot is proposed to be created to house the existing City well. Two points of access are proposed to connect to Little Lane on the south end, and two points of access are proposed on the north end, specifically connections to Elaine Street and Parkland Avenue. The site will also include a roadway connection to Arbor Villas to the west of the site. Arbor Villas will build the connection when it reaches 31 lots.

The applicant is also seeking a Special Use Permit to exceed the height limitation of 26 feet. The applicant is proposing a mix of two story and three story homes. The three story homes are proposed to be 33.5 feet and 34.5 feet.

The overall design concept is the creation of lots that are on average 3,183 square feet fronting on a public street with a back alley. The homes will front on the public street, and the garages will be accessed from the private alley. The eastern portion of the property, a 2.45 acre area, is proposed to be a common open space area, with .44 acres of the common open space area designated as a recreational area.

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. The Planning Commission is authorized to approve a Special Use Permit upon making the seven required findings of fact.

PUBLIC COMMENTS: Public notices were mailed to 248 property owners within 600 feet of the subject site pursuant to the provisions of NRS and CCMC for the Tentative Subdivision Map application and for a Special Use Permit. As of the completion of this staff report, one public comment has been received. Any additional written comments that are received after this report is completed will be submitted prior to or at the Planning Commission meeting on July 31, 2019 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 provided that the following conditions of approval are met:
General:

1. All construction and improvements must meet the requirements of Carson City Standard Details and Development Standards including but not limited to:
   a. The 24 foot wide Alleyways must be signed “No Parking”.
   a. The extension of Elaine Street must be signed “No Parking”.
   b. Additional water gate valves must be added so that no more than fifteen (15) customers are taken out of service at any one time.
   c. The water main at the intersection of Parkland Avenue and Vine Gate must be extended into APN 004-021-16 within the alignment of the future road at that location, within 10 feet of the centerline of Vine Gate Street. The end of this extension must have a fire hydrant, and the valve on the west leg of the cross must have restrained joints.
   d. All water main valves must be located at curb returns, outside of the street intersections.
   e. The site contains a FEMA AH flood zone. The project must obtain CLOMR-F approval from FEMA. The site and the surrounding area must be modeled to ensure that the change does not negatively impact the surrounding properties.
   f. The technical drainage study for the site improvement permit must analyze for dry lane requirements.

2. The existing fence for well site #4 must be on or within the proposed parcel boundary.

3. The groundwater on this site has been observed as shallow as three feet. Home sites where groundwater is observed within 12 inches of the crawl space or slab elevation must be designed to include drains for high groundwater.

Utilities:

1. The Water Line Easement on the east property line must be an “Exclusive Water Main and Sewer Main Easement” and must be increased in size to 30 feet wide. No slopes will be permitted within this easement.

2. The water and sewer mains adjacent to the east property line must have a 12 foot wide aggregate base access road as show, compacted to 95% relative compaction.

3. A water sampling tap must be installed in one of the common areas of the subdivision (Kupferle Eclipse #88 or approved equal).

4. The existing municipal well may make noise 24/7. Prior to recordation of the first 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 of the development’s proximity to the well which may make noise 24 hours a day. The disclosure must also be referenced on the final map.

5. The storm drain in Meadow View Place and in Common Area D should be located in a proposed public street, or should be indicated as private storm drain.

6. The water main in Elaine Street must follow the street alignment.

7. The water main extension form Parkland Avenue to Ruth Street via Lupine Lane must be eliminated.

Storm Drain/Flood:

1. The detention/flood mitigation basin must be owned and maintained by the subdivision HOA, and this must be noted on the final map.

2. Reseeding areas must be irrigated until plants are established.

3. Any phasing of the subdivision must be able to stand alone, including requirements for full secondary access and looping of water mains.

4. Grading will only be allowed on phases slated for immediate development, and only as part of an overall site improvement permit.

Streets:

5. Parking will not be allowed on Little Lane, which is a collector roadway.

6. Turn pockets must be striped at the intersections of Little Lane/Parkland Avenue and Little Lane/Spartan Avenue.

7. Little Lane must have left and right turn lanes at South Saliman Road.

8. On South Saliman Road at Little Lane, the distance between the right-of-way and the back of sidewalk must be determined with the site improvement application. If the City Engineer determines there is sufficient space, then a deceleration right turn lane must be installed for southbound traffic.

9. The Little Lane street section must have a five foot sidewalk with a two foot buffer.

10. The intersections of Little Lane/Parkland Avenue and Little Lane/Spartan Avenue must be improved as four-leg intersections with stop sign control at the north and south approaches.

11. The left turn pocket at the east approach of the Saliman Road/Fifth Street intersection must be restriped to accommodate a 150 queue length.

12. Sufficient right-of-way must be dedicated along the Little Lane frontage and at the corner of Little Lane and South Saliman Road to allow for the new and existing streetscape improvements to reside within the right-of-way.

13. The geotechnical report must be updated to include a minimum recommended street section, based on site exploration, prior to any permits for site work. This section may be updated if necessary after the geotechnical engineer observes site grading.

21. The intersection of Elaine Street and Vine Gate must be an All-Way stop with a “Stop Ahead” sign on Spartan Avenue.

22. The west intersection of Parkland Avenue and Village Green, at Meadow View Place, must be an All-Way stop.

23. The following street names cannot be used: Orchard Row Place, Village Green Avenue, Lupine Lane and Meadow View Place.

24. The final map must note that the subdivision HOA is responsible for maintenance of the private streets including parking enforcement, snow removal and reconstruction.

FINDINGS:

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. The proposed conditions of approval will improve the safety of the existing and proposed streets and intersections.

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 transportation and utility master plans.

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 if the above conditions of approval are met.

9. *The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.*
   The site has FEMA Zone AO. The proposed design includes flood volume mitigation and the proposed conditions of approval include a requirement for CLOMR approval.

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 and Open Space (PROS)

1. The applicant will be required to match the existing Little Lane street cross section (west of the proposed development) that provides bike lanes on both sides of the street and a five foot wide concrete sidewalk separated two point five (2.5) foot from back of curb on the north side of the street. These improvements need to be coordinated with Development Engineering requirements for Little Lane.

2. Chapter 7 in the UPMP provides the City's sidewalk policies and implementation strategies for pedestrian connectivity within the development and between the project site and the City's existing sidewalk system. The project's interconnected sidewalk/private recreation area path system and pedestrian cross walks must be approved by Development Engineering and the Parks, Recreation & Open Space Department.

3. While the Carson City Parks and Recreation Master Plan identifies the need for a park in Neighborhood #13, both Mills Park and Governors Field are within walking distance of the proposed development. The applicant will be required to identify a private recreation area with outdoor recreation amenities and demonstrate that the size of the site and the amenities sufficiently address the development's on-site recreational needs for the resident's demographics. The selection of these amenities (ex. picnic tables, grills, shade structure, benches, playground equipment, and a walking path around the detention basin) will be evaluated during the site development process. This evaluation will be conducted by the Parks, Recreation & Open Space Department to confirm that the development will not be increasing the need for additional recreation amenities in the adjacent neighborhood.

4. The development will be subject to the collection of Residential Construction Tax (RCT), compliant with the Nevada Revised Statutes and Carson City Municipal Code (CCMC 15.60).

5. The applicant will be required to maintain the project's proposed private recreation area, any outdoor recreational amenities, and path system in perpetuity.

6. The applicant will be 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.

7. The applicant will be required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The Parks, Recreation & Open Space Department is willing to assist the applicant with this aspect of their project.

8. Carson City is now a Bee Friendly USA City. As a result, the applicant shall use approximately 50% pollinator friendly plant material for any required landscape or open space areas on the project site. The Parks, Recreation & Open Space Department has provided the applicant's design team with a recommended tree and shrub species list. Also, the project's 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.

Fire Department

1. Project must comply with the currently adopted Carson City Fire Code and northern Nevada fire code amendments as adopted by Carson City.

2. Street names must be approved by City Engineering prior to Final Map.

School District
149 units would expect to generate approximately 50 kids. Ongoing concern of capacity issues: School district re-zoning needs for this project area.

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 June 20, 2019. NDEP has advised that it requires an intent to serve or a will serve letter from the municipal sewer service provider. The Public Works department has advised of adequate capacity to meet 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.

Water supplied to the development will meet applicable health standards. Carson City's water supply will not be exceeded by final approval of this development.

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.

School remains concerned about capacity, and has advised that re-zoning of the school zones may be necessary in this area.

Parks, Recreation and Open Space (PROS) has advised that both Mills Park and Governors Field are within walking distance of the proposed development. PROS has requested that the private recreational needs be met onsite, which is consistent with the requirements of the municipal code which requires that 100 square feet of common open space be designed for recreation.

A transportation network is currently available and accessible to the project. Conditions of approval are recommended to increase the safety at existing and proposed intersections.

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 Master Plan land use designation is High Density Residential. This designation is to create opportunities for higher density neighborhoods in an urban and suburban setting. The range of density is 8 – 36 units per acre. Uses are primarily apartments, condominiums, townhomes, fourplexes, and duplexes. Staff finds the proposed subdivision is consistent with the Master Plan land use designation.

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 multi-family duplex zoning district is 14.52 units per acre. The applicant proposes 6.94 units per acre.

Also, a single family dwelling is a permitted use in the multi-family duplex zoning district.

Per Division 2 of the Development Standards, the applicant must provide two parking spaces per dwelling unit provided the adjacent streets provide for on-street parking. The proposed public streets accommodate on street parking. 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 37,250 square feet (.86 acres), with 14,900 square feet designated for residential use. The applicant proposes 2.45 acres of open space, with .44 acres designated for recreational use, thus complying with the open space requirement.

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

Little Lane is a designated collector on the City's Functional Classification Plan. The applicant is proposing right-of-way dedication that will realize a 66 foot wide right-of-way, with a 34.5 foot half street section to achieve the required right-of-way width. The plan detail currently shows a nine foot area for on-street parking on Little Lane. As Little Lane is a collector roadway, staff is recommending no on-street parking, and that a middle turn lane be accommodated.

Local public streets will meet the City's street standards.

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

The proposed subdivision will take access from Little Lane, as well as have connections to Elaine Street and Parkland Avenue to the north. Existing streets will provide adequate access. However, intersection improvements of existing and new intersection are proposed to promote safety on the existing roadways.

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 AO, which is within the 100 year floodplain. The preliminary design includes flood volume mitigation. A conditional letter of map revision (CLOMR) will be required, and all improvements associated with the CLOMR will need to be incorporated into the construction plans.

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. 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 proposed tentative map includes secondary access. There are sufficient fire water flows.

12. Recreation and trail easements.

PROS finds that there are adequate public recreational facilities in the area, and is recommending that private recreational amenities meet the needs of the residents.

SPECIAL USE PERMIT FINDINGS: Staff recommends approval of the Special Use Permit based on the findings below and in the information contained in the attached reports and documents, pursuant to CCMC 18.02.080.5 (Findings), subject to the recommended conditions

of approval, and further substantiated by the applicant's written justification. In making findings for approval, the Planning Commission must consider:

1. Will be consistent with the objectives of the Master Plan elements;

The Master Plan land use designation of the subject property is High Density Residential. This designation correlates to the Multi-Family Apartment zoning district, which allows for a building height of 45 feet. The property to the west of the subject property is zoned Multi-Family Apartment, and property to the east is zoned Retail Commercial, also allowing for a height of 45 feet. High Density Residential Policy 1.4 addresses building massing and form. It states "Plain, monolithic structures should be avoided. Infill projects should be compatible with the established mass and scale of the buildings along the block. In a planned apartment community context, large buildings should be designed with a variety of wall planes and roof forms to create visual interest." Staff finds that the proposed architecture includes the variety of wall planes and roof forms to create visual interest, consistent with the Master Plan.

2. Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhoods or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, glare or physical activity;

In considering these findings, staff is primarily concerned with the impact on the single family residential properties to the north of the subject site. In large part, these are fairly low profile buildings, and staff is concerned that the three story units not compromise the light, air, and space of these properties to the north. Staff would note that in the subject zoning district, structures greater than 20 feet tall are required to have a 20 foot setback. The applicant is proposing a 51 foot setback from the property line, consisting of a 31 foot alley plus a 20 foot setback. Additionally, the applicant is proposing street trees along the northern boundary of the property. Due to the requirement for screening and buffering of adjoining development associated with the Tentative Map, staff recommends a block wall, a minimum of five feet in height, be constructed along the northern property line so as to buffer the residences to the north of the subject property from the northernmost alley.

With the condition of approval relative to the wall, and the 51 foot setback, staff finds that this finding can be made in the affirmative.

3. Will have little or no detrimental effect on vehicular or pedestrian traffic;

The applicant has provided a traffic analysis that analyzes the impact of the proposed development on various intersections. The analysis recommends certain mitigations to maintain functionality of the roadway network. Additionally, as part of the tentative map, staff has recommended in the conditions of approval improvements to various intersections to retain the safety of the intersection. From a pedestrian perspective, the proposed development will improve the safety for pedestrian travel by including a sidewalk on Little Lane, as well as sidewalks on the internal street system. With that, staff does not find that the building height will have a detrimental effect on vehicular or pedestrian traffic.

4. Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements;

The applicant is seeking a special use permit to exceed the building height. If not granted, the homes would be built at the height not to exceed 26 feet, and the impacts on public services and facilities would be the same as if built to a higher height.

5. Meets the definition and specific standards set forth elsewhere in this Title for such particular use and meets the purpose statement of that district;

The subject property is zoned Multi-Family Duplex. A single family detached use is an allowable use in this zoning district. The proposed tentative map meets the density limitation, the parking requirement, and the open space requirement.

6. Will not be detrimental to the public health, safety, convenience and welfare; and

As proposed with a 51 foot setback from the northern property line, and as proposed to be conditioned to mandate a solid wall along the north property line, staff finds that the proposed increase in height will not be detrimental to public health, safety, convenience and welfare.

7. Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.

As proposed with a 51 foot setback from the northern property line, and as proposed to be conditioned to mandate a solid wall along the north property line, staff finds that the proposed increase in height will not be detrimental to public health, safety, convenience and welfare.

Attachments

Public Comment from Craig Van Ortman
Engineering comments
Parks comments
Fire comments
Application

Craig Van Ortman
1111 Spartan Avenue
Carson City, NV 89701
July 19, 2019

Carson City Planning Division
108 E. Proctor St.
Carson City, NV 89701

RE: Special Use Permit – File No. SUP-19-102

Dear Carson City Planning Division:

I'm writing as a resident of Carson City, and as an owner of property located close to the proposed development at Saliman Road and Little Lane, to express my views regarding said development's request for Special Use Permit to increase the height of its structures.

Whereas all parties are well aware of the extreme need for additional residential properties in Carson City, there is no need to go about it the wrong way, angering many long-time residents who moved here for the wonderful small-town atmosphere with gorgeous scenery. I could question the idea to shoehorn 149 single-family residences into less than 18 ¾ acres (21.32 acres minus 2.55 common area; not accounting for roadways), resulting in lot sizes around 0.10 acre, that will rival Las Vegas's uncontrolled growth a little over a decade ago that every city planner down there wishes they could now undo. (why do we never learn our lessons?) But, no. I'm not against development, even if it is short-sighted.

However, I strongly believe the request for Special Use Permit (SUP-19-102) to increase the maximum building height by an additional eleven-feet (11') to almost 38' in height is excessive and grotesque. If this Special Use Permit is approved, the height increase will cause substantial detriment to the public good and especially to the neighboring residential neighborhood. Structures of this magnitude are not suitable for the location in question and will tower over the surrounding homes. They will impede the beautiful, scenic views long-time residents of Carson City enjoy. The quality of life for these Carson City residents will, quite literally, be overshadowed by these McMansions.

It should be pointed out that in the Carson City Development Standards, Division 1 – Land Use and Site Design – Section 1.1 – Architectural Design (Subsection 1.1.1) clearly states "the architectural style, massing and proportion of a building should be compatible with and complement its surroundings and environmental characteristics of the community." Obviously, these overly tall structures will not meet these standards. Why have these standards at all if a Special Use Permit can essentially bypass them? It is a slippery slope. Furthermore, how does having this Special Use Permit approved affect building setback laws? Will the sky exposure plane be affected? Is this how Carson City government wants to set a precedent?

Once again, I want to point out that this is in no way an angry letter, railing against development of our lovely little town, Carson City. I welcome growth opportunities. I look forward to progression. I believe every developer should be able to purchase property and build to their hearts' content. I believe every American who wishes to live in Carson City should have a beautiful house to call their own. But we can do this smartly and reasonably. I moved to Las Vegas in the 1990's and I saw first-hand how unquestioned and unchecked development can destroy a city. Please think on these things when considering Special Use Permit No. SUP-19-102. Thank you.

Sincerely

Craig Van Ortman
1111 Spartan Ave.
Carson City, NV 89701
[redacted]

Engineering Division
Planning Commission Report
File Number TPUD-19-103

TO: Hope Sullivan - Planning Department

FROM Stephen Pottéy – Development Engineering Department

DATE: July 24, 2019

SUBJECT:

Engineering Comments for TSM-19-103 Little Lane Village Subdivision, apn 004-021-14.

RECOMMENDATION:

The Engineering Division has no preference or objection to the tentative map request provided that the following conditions of approval are met:

General:

- All construction and improvements must meet the requirements of Carson City Standard Details and Development Standards including but not limited to:
    - The 24 foot wide Alleyways must be signed “No Parking”.
    - The extension of Elaine St. must be signed “No Parking”.
    - Additional water gate valves must be added so that no more than fifteen (15) customers are taken out of service at any one time.
    - The water main at the intersection of Pakland Ave and Vine Gate must be extended into apn 004-021-16 within the alignment of the future road at that location, within 10 feet of the centerline of Vine Gate St. The end of this extension must have a fire hydrant, and the valve on the west leg of the cross must have restrained joints.
    - All water main valves must be located at curb returns, outside of the street intersections.
    - The site contains a FEMA AH flood zone. The project must obtain CLOMR-F approval from FEMA. The site and the surrounding area must be modeled to ensure that the change does not negatively impact the surrounding properties.
    - The technical drainage study for the site improvement permit must analyze for dry lane requirements.
    -
- The existing fence for well site #4 must be on or within the proposed parcel boundary.
- The groundwater on this site has been observed as shallow as 3 feet. Home sites where groundwater is observed within 12 inches of the crawl space or slab elevation must be designed to include drains for high groundwater.

Utilities:

- The Water Line Easement on the east property line must be an “Exclusive Water Main and Sewer Main Easement” and must be increased in size to 30 feet wide. No slopes will be permitted within this easement.
- The water and sewer mains adjacent to the east property line must have a 12 foot wide

aggregate base access road as show, compacted to 95% relative compaction.

- A water sampling tap must be installed in one of the common areas of the subdivision (Kupferle Eclipse #88 or approved equal).
- The existing municipal well may make noise 24/7. Prior to recordation of the first 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 of the development's proximity to the well which may make noise 24 hours a day. The disclosure must also be referenced on the final map.
- The storm drain in Meadow View Place and in Common Area D should be located in a proposed public street, or should be indicated as private storm drain.
- The water main in Elaine St must follow the street alignment.
- The water main extension form Parkland Ave to Ruth St via Lupine Ln must be eliminated.

Stormdrain/Flood:

- The detention/flood mitigation basin must be owned and maintained by the subdivision HOA, and this must be noted on the final map.
- Reseeding areas must be irrigated until plants are established.
- Any phasing of the subdivision must be able to stand alone, including requirements for full secondary access and looping of water mains.
- Grading will only be allowed on phases slated for immediate development, and only as part of an overall site improvement permit.

Streets:

- Parking will not be allowed on Little Ln, which is a collector roadway.
- Turn pockets must be striped at the intersections of Little Ln/Parkland Ave and Little Ln/Spartan Ave.
- Little Ln must have left and right turn lanes at S Saliman Rd.
- On S Saliman Rd at Little Lane, the distance between the right-of-way and the back of sidewalk must be determined with the site improvement application. If the City Engineer determines there is sufficient space, then a deceleration right turn lane must be installed for southbound traffic.
- The Little Lane street section must have a 5 foot sidewalk with a 2 foot buffer.
- The intersections of Little Ln/Parkland Ave and Little Ln/Spartan Ave must be improved as four-leg intersections with stop sign control at the north and south approaches.
- The left turn pocket at the east approach of the Saliman Rd 5th St intersection must be restriped to accommodate a 150 queue length.
- Sufficient right-of-way must be dedicated along the Little Lane frontage, and at the corner of Little Lane and S. Saliman Rd, to allow for the new and existing streetscape improvements to reside within the right-of-way.
- The geotechnical report must be updated to include a minimum recommended street section, based on site exploration, prior to any permits for site work. This section may be updated if necessary after the geotechnical engineer observes site grading.
- The intersection of Elaine St and Vine Gate must be an All-Way stop with a "Stop Ahead" sign on Spartan Ave.
- The west intersection of Parkland Ave and Village Green, at Meadow View Pl, must be an All-Way stop.
- The following street names cannot be used: Orchard Row Place, Village Green Avenue, Lupine Ln, and Meadow View Place.
- The final map must note that the subdivision HOA is responsible for maintenance of the private streets including parking enforcement, snow removal, and reconstruction.

FINDINGS:

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. The proposed conditions of approval will improve the safety of the existing and proposed streets and intersections.

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 transportation and utility master plans.

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 if the above conditions of approval are met.

9. *The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.*
   The site has FEMA Zone AO. The proposed design includes flood volume mitigation and the proposed conditions of approval include a requirement for CLOMR approval.

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.

1. The applicant will be required to match the existing Little Lane street cross section (west of the proposed development) that provides bike lanes on both sides of the street and a 5’ foot wide concrete sidewalk separated 2.5' from back of curb on the north side of the street. These improvements needs to be coordinated with Development Engineering requirements for Little Lane.

2. Chapter 7 in the UPMP provides the City’s sidewalk policies and implementation strategies for pedestrian connectivity within the development and between the project site and the City’s existing sidewalk system. The project’s interconnected sidewalk/private recreation area path system and pedestrian cross walks must be approved by Development Engineering and the Parks, Recreation & Open Space Department.

3. While the Carson City Parks and Recreation Master Plan identifies the need for a park in Neighborhood #13, both Mills Park and Governors Field are within walking distance of the proposed development. The applicant will be required to identify a private recreation area with outdoor recreation amenities and demonstrate that the size of the site and the amenities sufficiently address the development’s on-site recreational needs for the resident’s demographics. The selection of these amenities (ex. picnic tables, grills, shade structure, benches, playground equipment, and a walking path around the detention basin will be evaluated during the site development process. This evaluation will be conducted by the Parks, Recreation & Open Space Department to confirm that the development will not be increasing the need for additional recreation amenities in the adjacent neighborhood.

4. The development will be subject to the collection of Residential Construction Tax (RCT), compliant with the Nevada Revised Statutes and Carson City Municipal Code (CCMC 15.60).

5. The applicant will be required to maintain the project’s proposed private recreation area, any outdoor recreational amenities, and path system in perpetuity.

6. The applicant will be 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.

7. The applicant will be required to incorporate “best management practices” into their construction documents and specifications to reduce the spread of noxious weeds. The Parks, Recreation & Open Space Department is willing to assist the applicant with this aspect of their project.

8. Carson City is now a Bee Friendly USA City. As a result, the applicant shall use approximately 50% pollinator friendly plant material for any required landscape or open space areas on the project site. The Parks, Recreation & Open Space Department has provided the applicant’s design team with a recommended tree and shrub species list. Also, the project’s 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.

Fire Department Comments

07/12/2019

Comments for TSM 19-103:

1. Project must comply with the currently adopted Carson City Fire Code and northern Nevada fire code amendments as adopted by Carson City.
2. Street names must be approved by City Engineering prior to Final Map.

Dave Ruben
Fire Marshal
Carson City Fire Department
777 S. Stewart Street
Carson City, NV 89701

Direct 775-283-7153
Main 775-887-2210
FAX 775-887-2209

LITTLE LANE VILLAGE

TENTATIVE MAP
SPECIAL USE PERMIT

revised June 2019

Prepared For:

BATES HOMES
DEFINING LUXURY LIVING

9460 Double R Blvd. Suite 103 Reno NV 89521

Prepared By:

Manhard CONSULTING

241 Ridge Street, Suite 400 Reno, NV 89501

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(continued on following page)

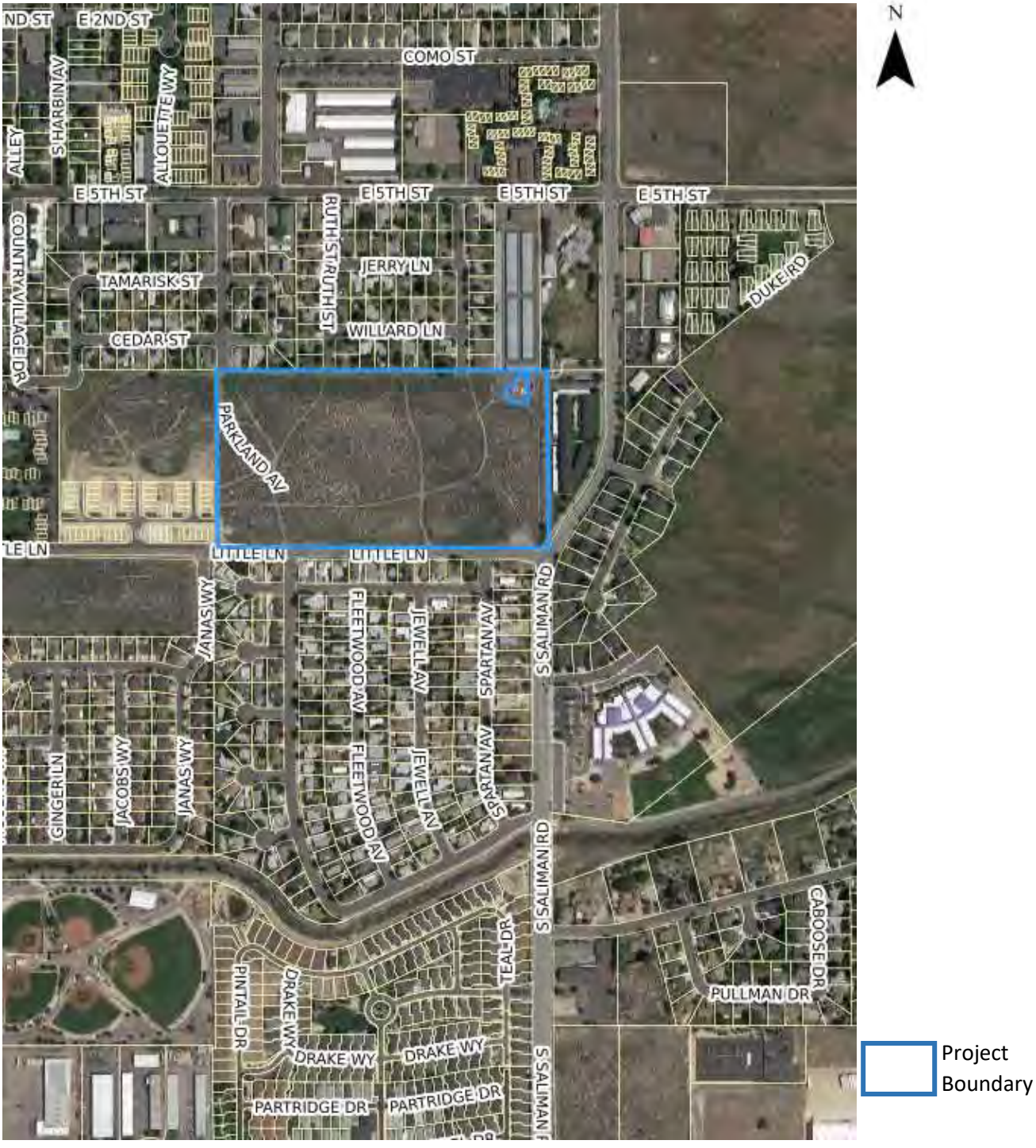
Appendices

Tentative Map Application & Supporting Information
Special Use Permit Application
Copy of Conceptual Subdivision Map Letter
Master Plan Policy Checklist
Wet Stamped Tentative Map (24” x 36”)
Reduced Tentative Map (11” x 17”)
Conceptual Drainage Study
Preliminary Geotechnical Report
Traffic Study
Preliminary Sanitary Sewer Report
Building Elevation Drawings and Floor Plans (SUP)
Project Impact Reports (SUP)

PROJECT LOCATION

The 21.32 acre project site (APN 004-021-14) is located north of Little Lane and west of S. Saliman Road, and approximately .6 miles west of Interstate 580.

Figure 1: Project Location



EXISTING CONDITIONS

The project site is undeveloped and has an existing Master Plan designation of High Density Residential and an existing zoning designation of Multi-Family Duplex (MFD).

There is an existing single family residential development north of the site, with neighborhood business (retail/storage) and Public Facilities at the northeast corner of the site. There are multi-family apartments east of the project, a mobile home park to the south (across Little Lane), and an approved single family attached residential development (Arbor Villas) west of the project.

Figure 2: Surrounding Property Designations

Direction	Current Zoning	Master Plan	Current Land Use
North	Single Family-6,000 sq. ft. Neighborhood Business Public Regional	Medium Density Residential Public/Quasi-Public	Single Family Residential Retail/Storage Public Facility
East	Retail Commercial	High Density Residential	Apartments
South	Mobilehome- 6,000 sq. ft.	Medium Density Residential	Mobile Home Park
West	Multi-Family Apartments	High Density Residential	Undeveloped Single Family Attached (Arbor Villas)

Figure 3: Existing Master Plan Designation (High Density Residential)

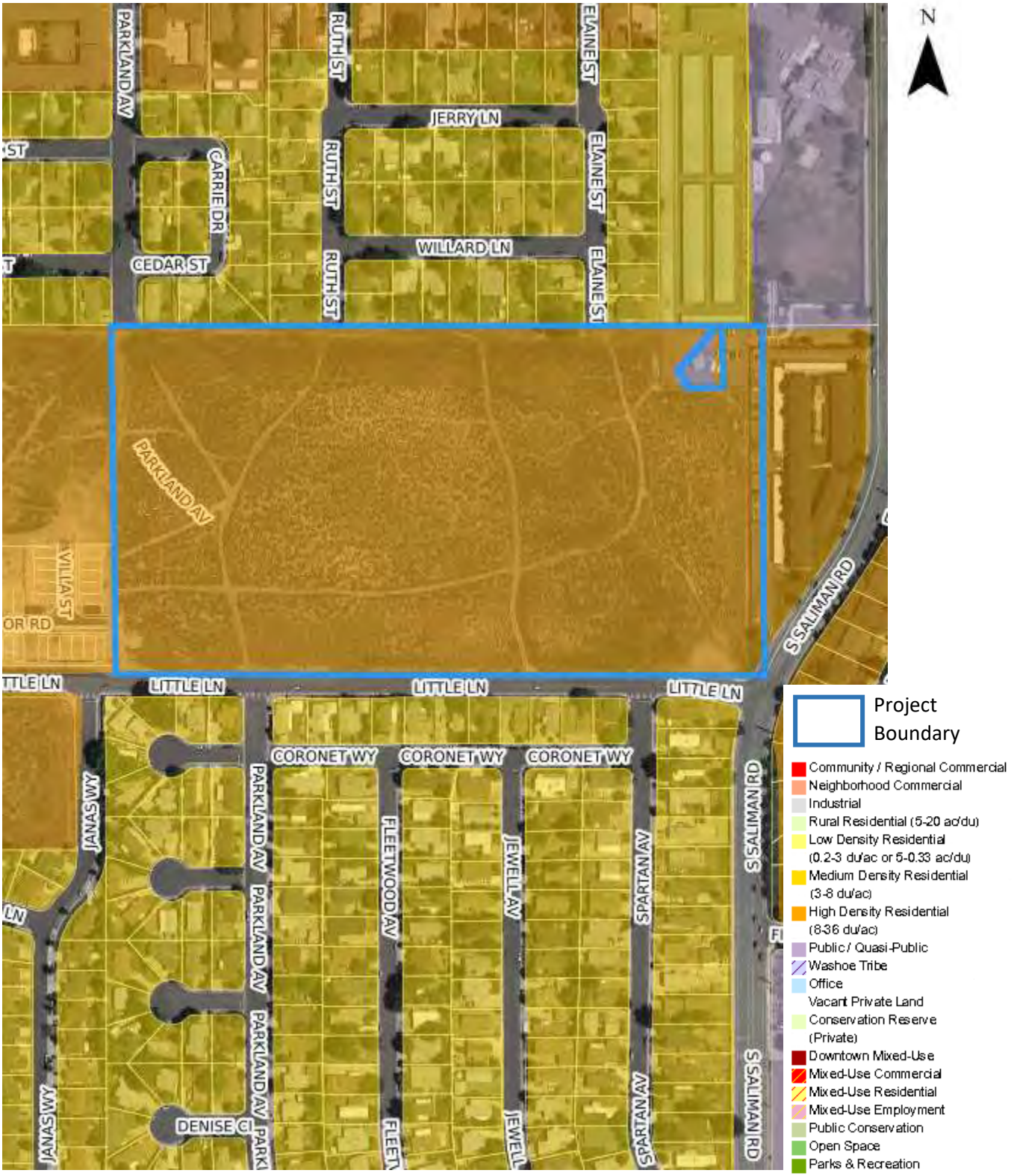
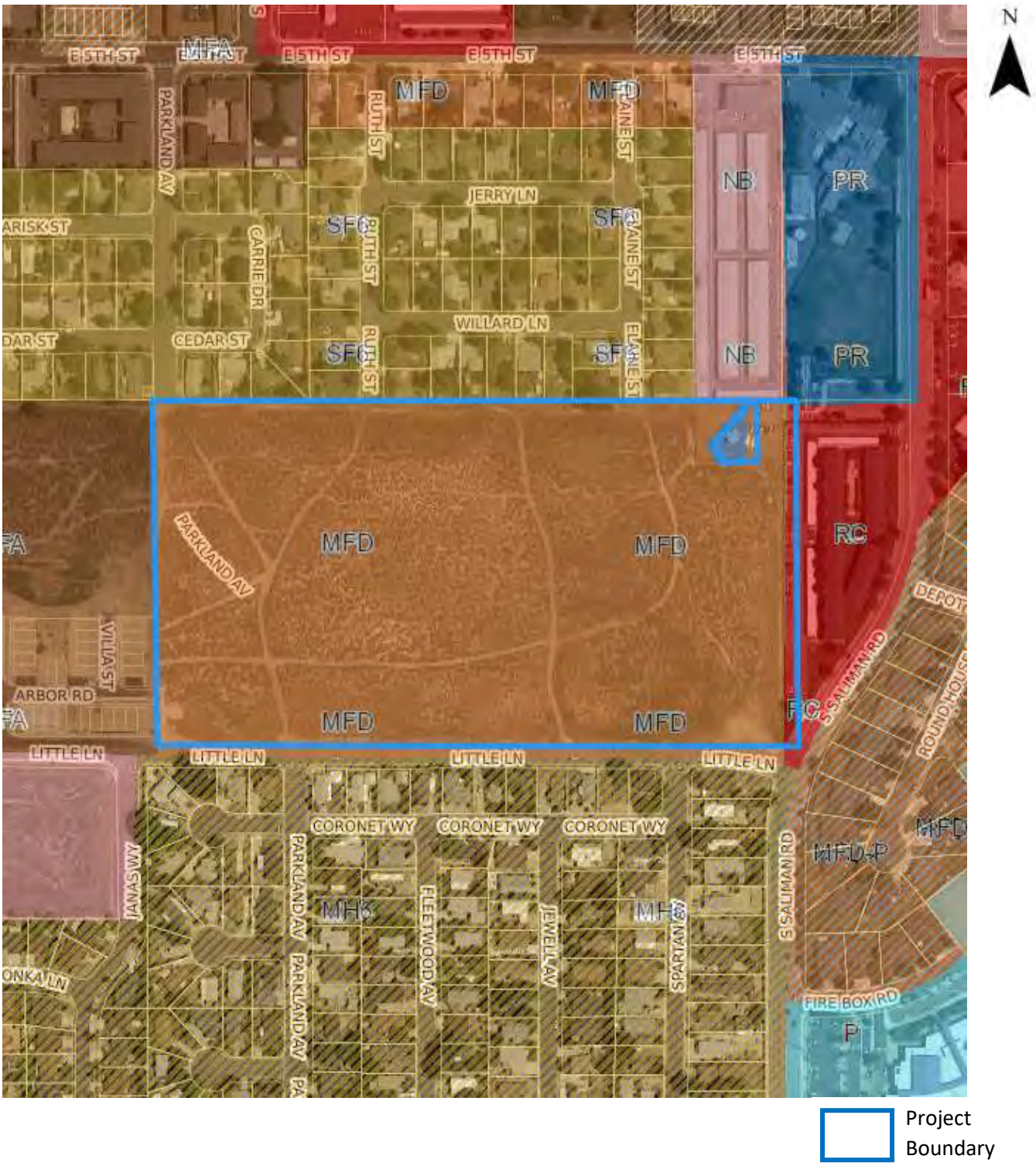


Figure 4: Existing Zoning Designation (Multifamily Duplex)



APPLICATION REQUEST

The enclosed application is a request for:

1. **A Tentative Subdivision Map to create 149 single family residential lots. The TSM is presented as a Common Open Space Development and meets the established requirement of Chapter 17.10 Common Open Space Development.**
2. **A Special Use Permit to allow the maximum building height to exceed 26 ft. in the MFD zone.**

PROJECT DESCRIPTION

Little Lane Village is proposed as a single family residential subdivision with 149 residential lots, with a minimum lot size of 3,072 sq. ft. and an average lot size of 3,183 sq. ft. The homes are proposed to be a mix of two-story and three-story buildings. In order to provide open space, protect natural resources, achieve a more efficient use of land, and encourage a stable cohesive neighborhood, this project is presented as a Common Open Space Development, pursuant to Chapter 17.10 in the Carson City Municipal Code and meets the established requirements including residential density, lot area, setbacks, parking, and open space. A Special Use Permit is requested to allow the maximum building height to exceed 26 feet (see pg. 10 for additional information).

The project has been designed so that the primary entrance of each home fronts onto a public street, with garage access from a private alley. This will maintain a pedestrian-oriented street frontage. A varied streetscape will be provided with 4 separate floor plans proposed, and each floor plan available with three elevations; Farmhouse, Traditional, and Craftsman. The homes range from 1,671 to 2,492 sq. ft. and each have 3 or 4 bedrooms, 2½ or 3½ baths, and a two-car garage.

Figure 5: Conceptual Streetscape

In accordance with Common Open Space Development requirements, open space is provided through a combination of private open space and common open space available throughout the development. As you will see detailed on the Site Plan, the project includes 2.52 acres of common open space area to provide outdoor recreation opportunities. Additionally, each lot will include private open space, with a minimum of 320 sq. ft. front yard area (32' minimum lot width x 10' setback) and 640 sq. ft. in the yard area off the alley (32' minimum lot width x 20' setback). The total private open space provided is +/- 4.24 acres.

All common areas, including private streets, landscaping, and open space areas will be maintained by an HOA or similar entity as approved by Carson City. Alleys will include easements for utilities and public access.

There is an existing well site (Carson City Well #4; APN 004-021-09) located within the project area, with existing easements around the well on the project site. As shown on the Site Plan (Well Site/Parcel 1), the well site parcel has been increased accommodate Carson City's needs.

Figure 6: Project Summary

Project Summary	
Total Area	+/- 21.32 acres
Total Number of Lots	149
Maximum Density	14.52 units per acre (1 or 2 units per 6,000 sq. ft. parcel)
Project Density	6.99 units per acre (149 units/21.32 acres)
Parking Required	298 (149 x 2; 2 spaces per dwelling unit)
Parking Provided	298 (off-street/garage) *There are an additional 298 driveway spaces and 279 on-street parking spaces available that are not counted towards required parking.*
Open Space Required	37,250 sq. ft. (250 sq. ft. req. per unit x 149 units); must include 100 sq. ft. of recreation area
Open Space Provided	TOTAL: +/- 6.76 acres • Private Open Space: +/- 4.24 acres • Common Open Space: +/- 2.52 acres (includes .44 acre recreation area)

Special Use Permit

The homes in Little Lane Village are proposed to be a mix of two-story and three-story buildings. The three story buildings exceed the 26' maximum height allowed in the MFD zone. The maximum heights (as defined in the Carson City Municipal Code) of the two different three-story building plans are:

- Plan 3: +/- 33.5' (exceeds maximum building height by +/- 7.5')
- Plan 4: +/- 34.5' (exceeds maximum building height by +/- 8.5')

The proposed building heights are appropriate for this project because this product will result in the provision of open space and a more efficient use of land. It will allow for the provision of additional floor plans with greater square footage. The proposed heights are below the 45' maximum height permitted on the adjacent properties east (zoned RC) and west (zoned MFA) of the project site. The maximum height on the property north of the project is 26' (SF6, NB). The nearest lot to the north is 51' from the proposed structure. This includes a minimum 5' landscape buffer along the northern boundary of the project, private alley, and 20' rear setback. This will provide an appropriate buffer and ensure that the adjacent single family development is not impacted by the increased building height.

The project exceeds the periphery setbacks established through the Common Open Space Development requirements (CCMC Section 17.10.030 (4)). In particular, the required rear periphery setback (between the project and the existing single family homes to the north) is 10'; a minimum of 51' is provided (includes the landscape buffer, private alley, and 20' setback). The permitted height-to-periphery-setback ratio, is 2.6:1 (maximum height of 26' to a 10' periphery setback). As proposed, the height-to-periphery-setback ratio is significantly reduced at .67:1 (maximum height of 34.5' to a 51' periphery setback).

Special Use Permit Findings are included on pg. 29.

Figure 7: Preliminary Site Plan (11" x 17" Site Plan provided in application package)

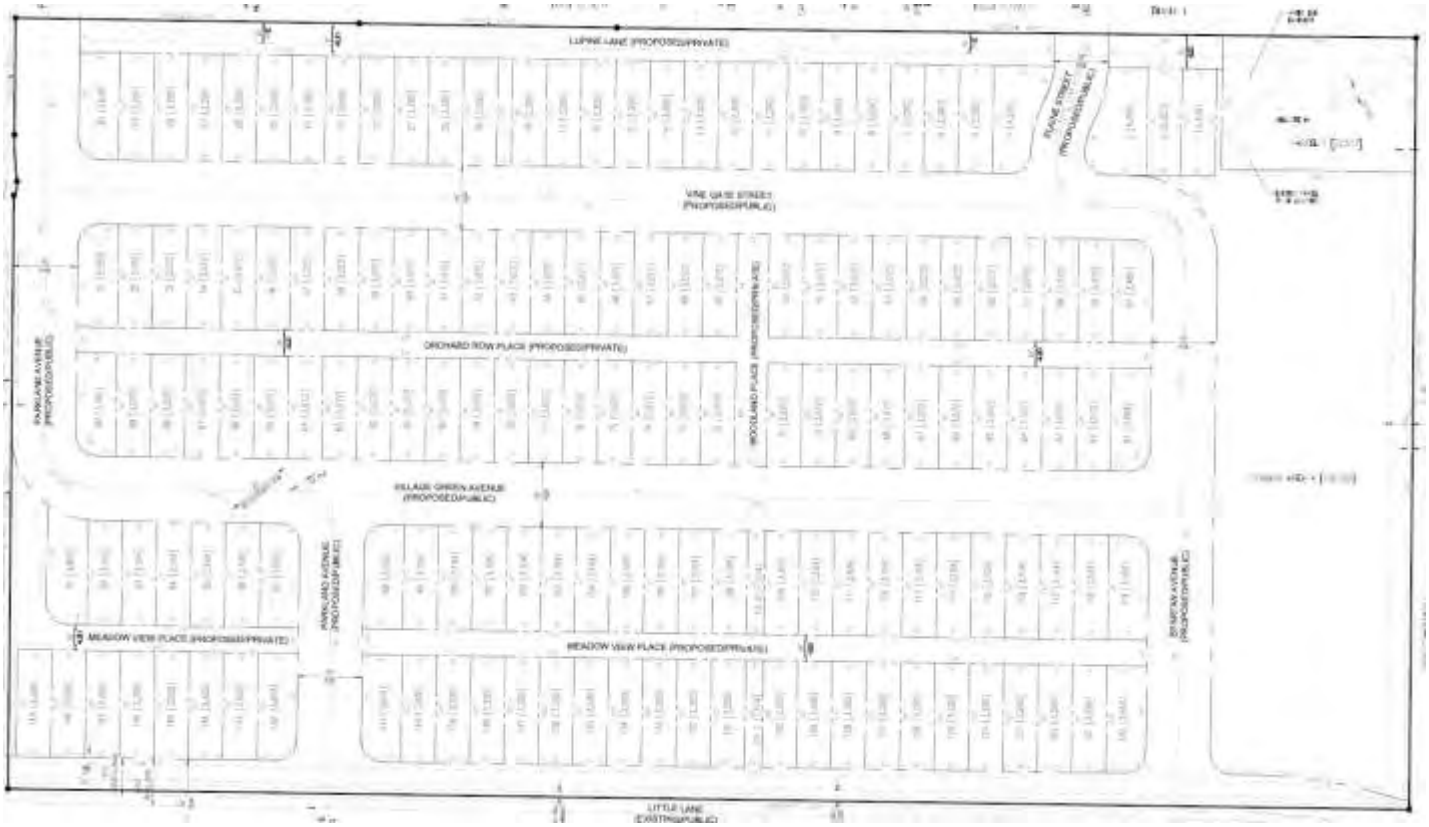
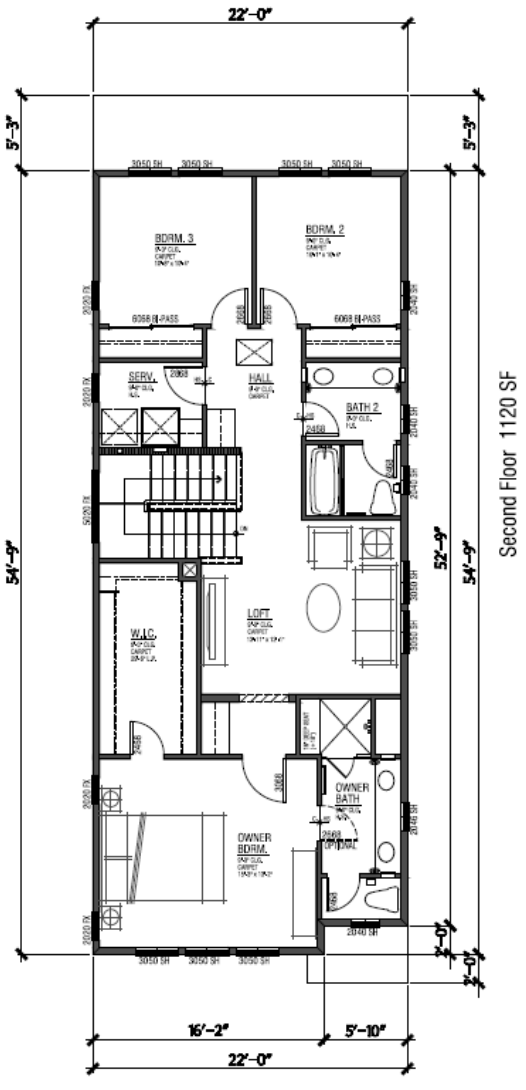
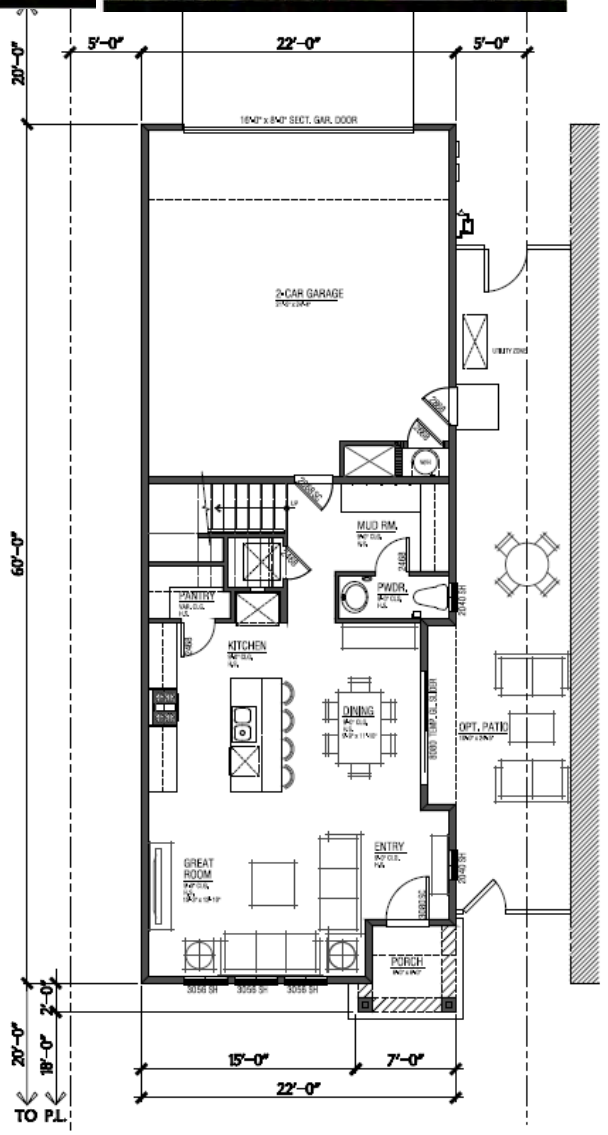


Figure 8a: Conceptual Elevations and Floor Plans- Plan 1

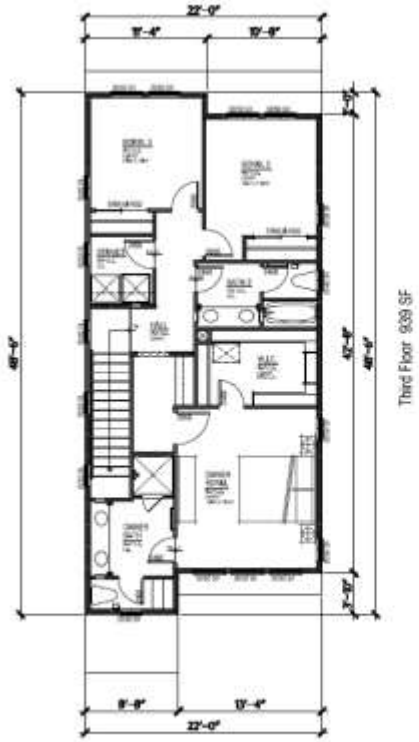
Figure 8b: Conceptual Elevations and Floor Plans- Plan 2

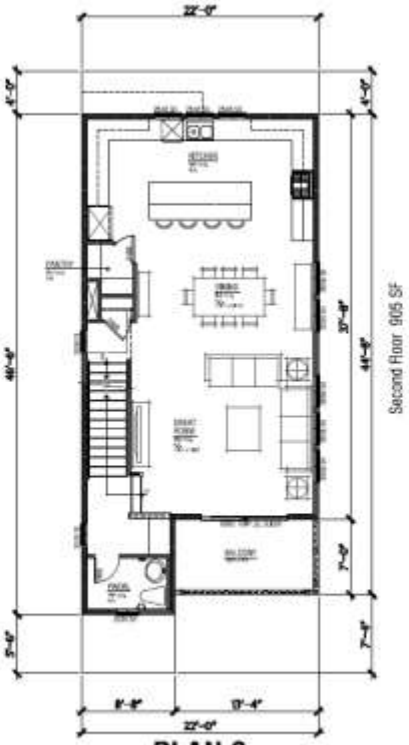




PLAN 2
1845 SF
3 Bdrm | 2.5 Bath | Loft
2- Car Garage

Figure 8c: Conceptual Elevations and Floor Plans- Plan 3





PLAN 3
2323 SF
4 Bdrm | 3.5 Bath
2- Car Garage

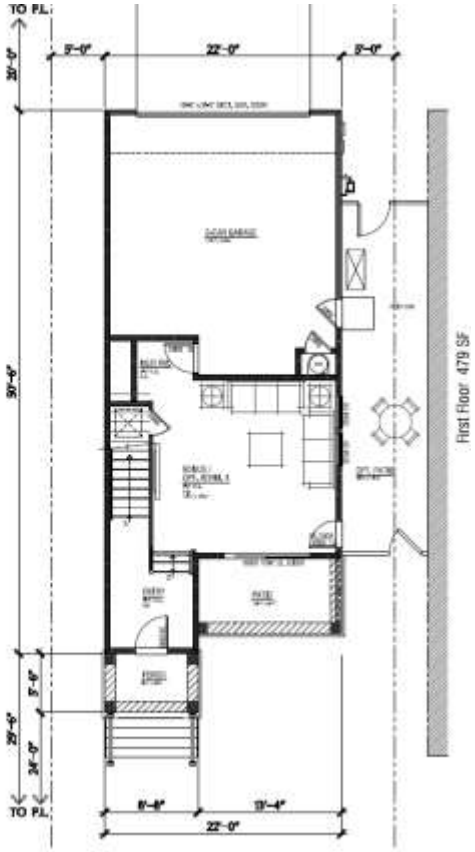
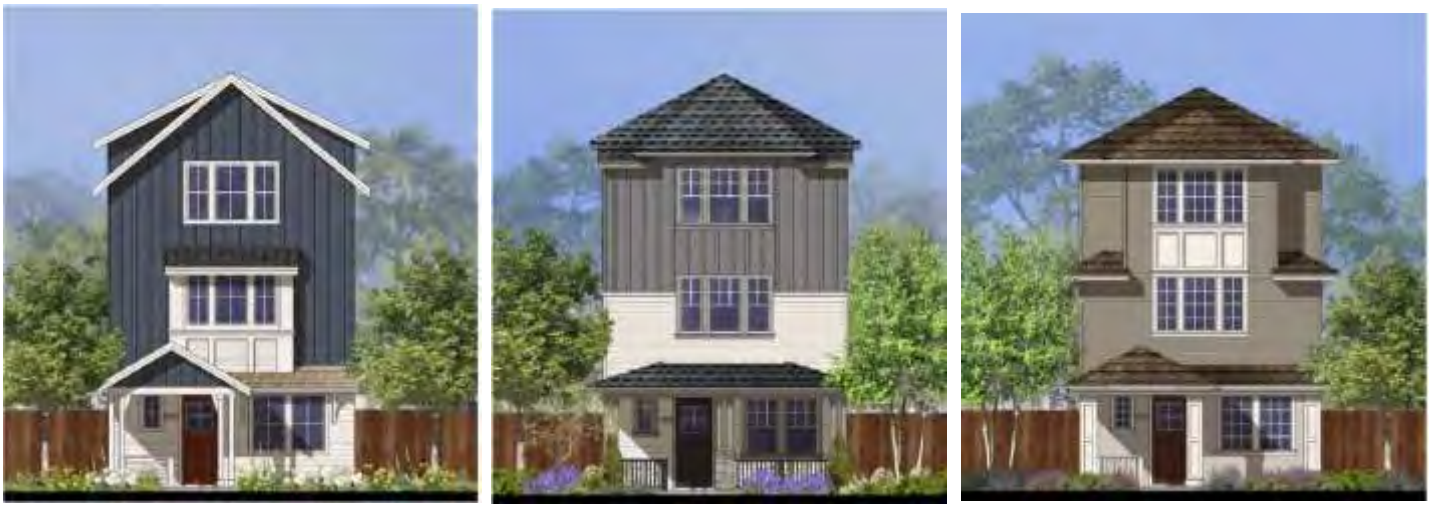
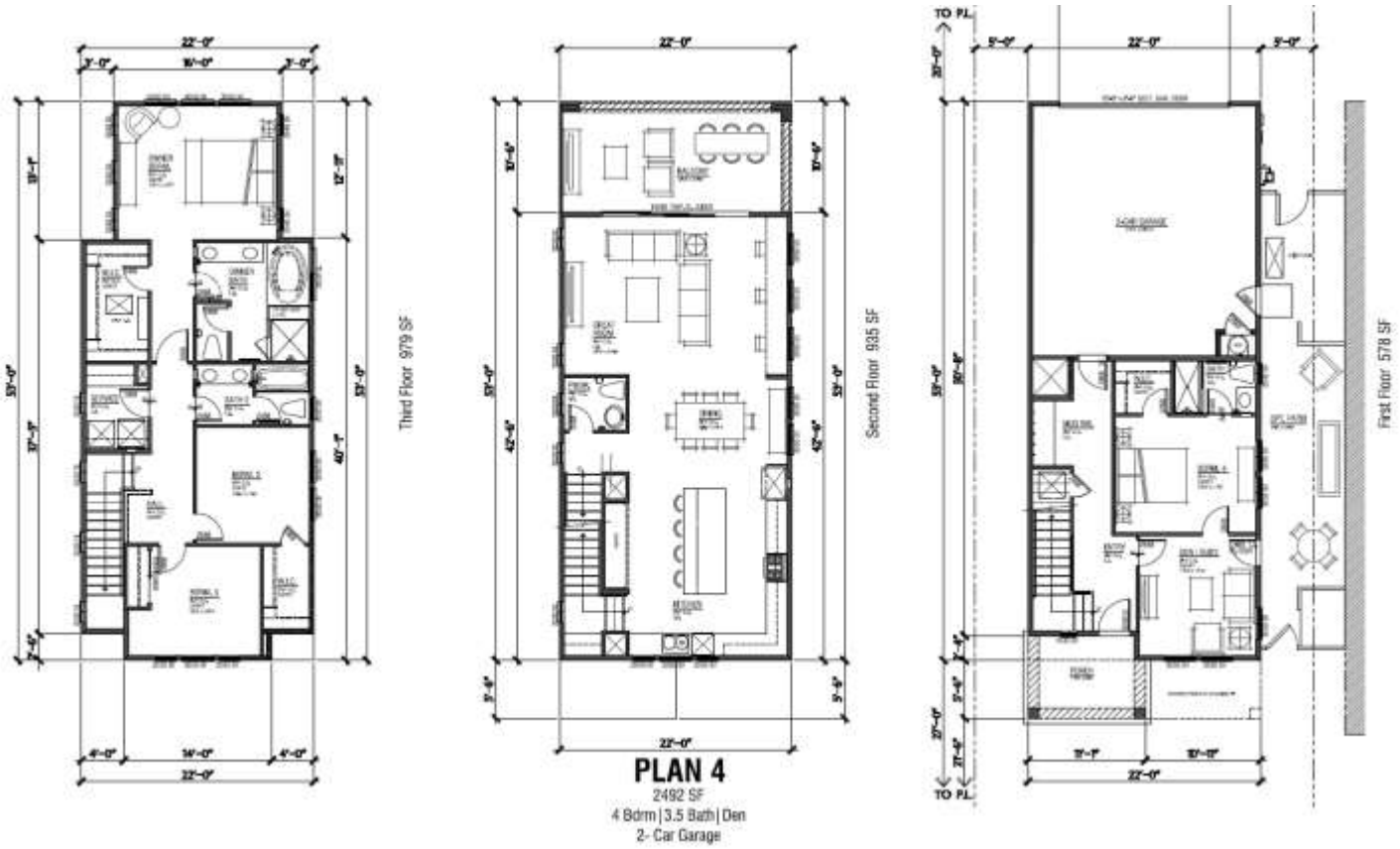


Figure 8d: Conceptual Elevations and Floor Plans- Plan 4





Landscaping

Although a Landscape Plan is not required for a single family subdivision, a conceptual Landscape Plan is provided to demonstrate that the project meets Common Open Space Development requirements. As

designed, landscaping will improve the aesthetic appearance of the neighborhood and will improve the appearance of the street, complement the buildings, and enhance property values.

In addition to private yards, project landscaping will include landscaped areas and native areas. Because Carson City is designated as Bee Friendly USA City #76, the Landscape Plan includes the requirement that 50% of the plan material is to be specified as pollinator-friendly.

Figure 9: Preliminary Landscaping (11" x 17" copy included in application package)

COMMON OPEN SPACE DEVELOPMENT

Common Open Space and Recreation Area

Pursuant to CCMC Section 17.10.046, a minimum of 250 square feet of open space per dwelling unit is required to be provided as open space (includes private open space and common open space) for a Common Open Space Development. A total of 6.76 acres of open space is included in this project (+/- 1,976 sq. ft. per unit); this total amount includes +/- 4.24 acres of private open space and +/- 2.52 acres of common open space. The minimum amount of private open space provided per lot is 640 sq. ft. per lot (yard off alley). Additional private open space is available on each lot, that is not included in the open space calculations because it may not meet the minimum size requirements. The common open space (Common Area A) includes a .44 acre recreation area with amenities, which may include picnic tables, grills, shade structures, benches, and/or a play area in accordance with CCCMC Section 17.10.046.

The project is within walking distance of both Mills Park (51 acre community park) and Governors Field (sports complex with a variety of sports fields and playground equipment). The Carson City Parks and Recreation Master Plan (PRMP) indicates that there should be an emphasis on natural parks, rather than formal neighborhood parks (PRMP Section 2.3). The 5.2 acre common area provides additional natural open space and recreation opportunities for the neighborhood.

Based on a Level of Service of providing 5 acres of parkland per 1,000 population (PRMP Table 6.2 LOS Levels) and assuming a 2.36 average household size (US Census 2017 ACS 5-year survey); 1.76 acres of parkland would serve the recreation needs of the project. The project is providing 5.2 acres of open space, including a .44 acre recreation area, well exceeding the Level of Service.

Figure 10: Carson City Recreation Facilities Near Project Site

Figure 11: Common Open Space Development Requirements

	Required	Provided
Density	1 or 2 units per 6,000 sq. ft. parcel = 7.26 units/acre (1 unit per parcel) to 14.52 units/acre (2 units per parcel)	6.98 units/acre (149 units/21.32 acres)
Lot Area	No minimum	Lots range from +/- 3,072 sq. ft. to +/- 4,216 sq. ft., with an average lot size of 3,183 sq. ft.
Setbacks-Internal	No minimum provided that a minimum of 10 feet between structures is maintained.	Front (public street)- 10' Front (garage)- 20' Side- 5' (min of 10' between structures) Street Side- 10'
Setbacks-Periphery	Front- 20' Side- 5' Street Side- 10' Rear- 10'	Front (Little Lane)- 20' Side- 7' (minimum) to 60' Street Side- N/A Rear- 51' (31' (alley) plus 20' setback)
Height	26'; **additional height allowed by Special Use Permit**	The homes in Little Lane Village are proposed to be a mix of two-story and three-story buildings. The three story buildings exceed the 26' maximum height allowed in the MFD zone. **A Special Use Permit application is included.** The maximum heights (as defined in the Carson City Municipal Code) of the two different three-story building plans are: • Plan 3: +/- 33.5' • Plan 4: +/- 34.5'
Parking	298 (149 x 2) 2 spaces per dwelling unit	298 (off-street/garage) There are an additional 298 driveway spaces and 279 on-street parking spaces available that are not counted towards required parking.
Open Space	37,250 sq. ft. (250 sq. ft. per unit x 149 units); may be common or private open space. At least 100 sq. ft. of common open space per residential unit shall be designed for recreation.	TOTAL: 6.76 acres = +/- 1,976 sq. ft. per unit • Private open space: +/- 4.24 acres (minimum of 640 sq. ft. per unit) • Common open space: +/- 2.52 acres, = +/- 738 sq. ft. per unit. Includes .44 acres designed for recreation, = +/- 128 sq. ft. per unit

VEHICLE AND PEDESTRIAN ACCESS

Vehicular access to the site is primarily provided from Little Lane at Parkland Avenue and Spartan Avenue. Access is also available at Parkland Avenue and Elaine Street along the northern boundary of

the project. Pedestrian access will be provided throughout the project site through sidewalks, with a minimum width of 5'.

Within the project area, access is proposed as a mix of public streets, with private alleys providing direct access to each home. As shown in Figure 12, the typical 60' ROW street sections will include 5' sidewalks on both sides of the street, on-street parking (one side), curb and gutter, and two travel lanes. There is also a 50' ROW section shown to connect to Elaine Street (existing). The private alleys are proposed to be 24', with two 12' travel lanes. Little Lane will be improved to match the street section to the west along the entire frontage, as shown in the 66' ROW Half-Street Section below.

A 60' ROW section has been provided, as requested by the Fire Department to provide adequate access to three-story buildings. Should the three-story product not be built, the applicant reserves the right to construct 50' ROW sections, as included below, in accordance with Carson City standards.

Proposed Vine Gate Street has been designed so that it will align with the future connection through Arbor Villas, with the Arbor Villas Final Map.

Figure 12: Typical Street Sections

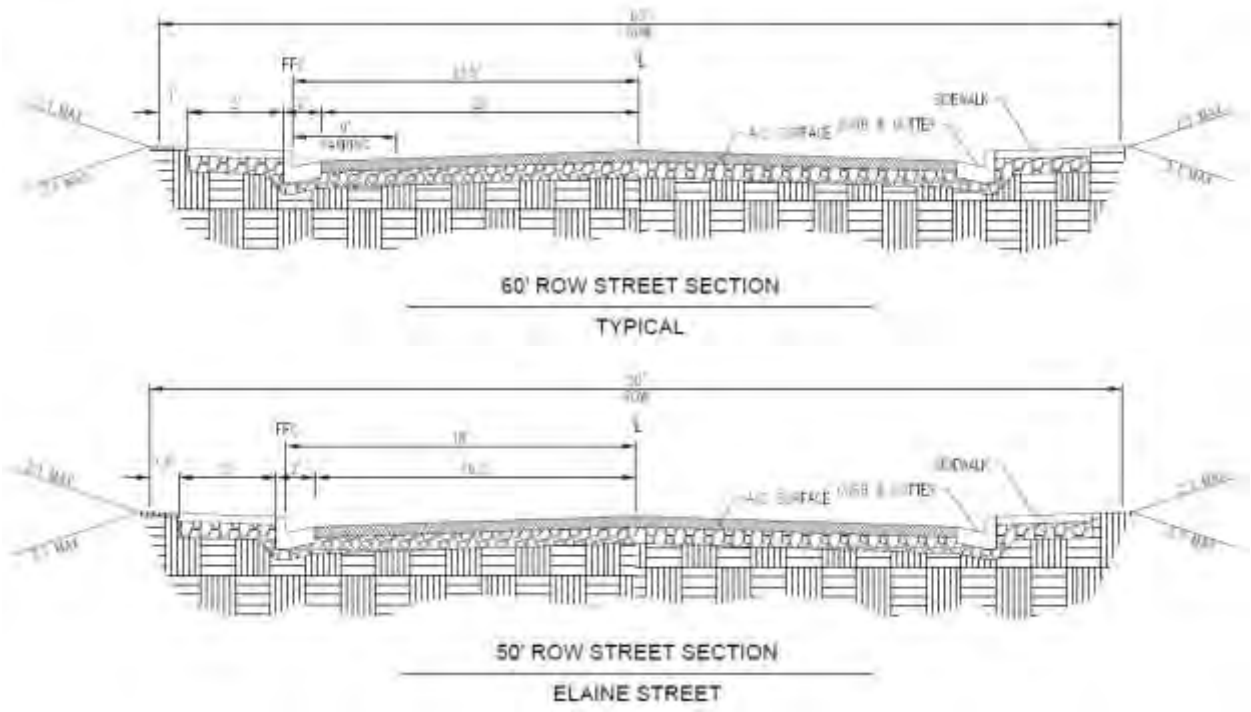
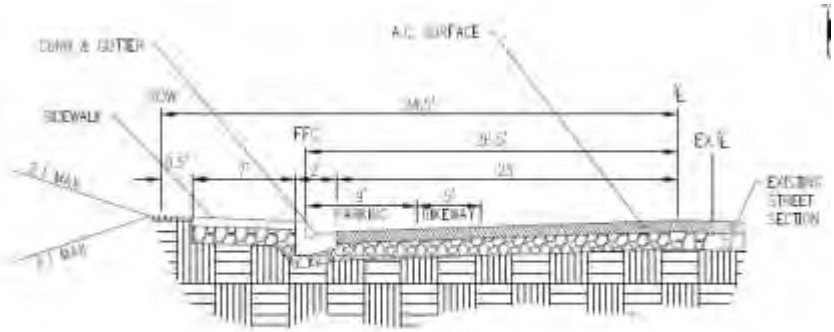
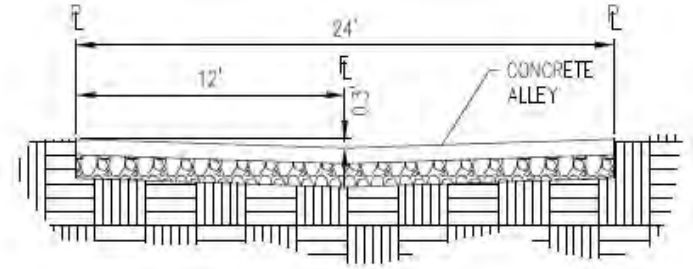


Figure 12: Typical Street Sections (continued)





Parking

The CCMC off-street parking is two spaces per dwelling, totaling 298 spaces (149 x 2). Off-street parking for each lot will be provided through two-car garages (298 spaces) and minimum 20' driveways (298 spaces; not counted towards the off-street parking requirement). There is also additional on-street parking that is not counted towards the off-street parking requirement.

TRAFFIC

The proposed development is anticipated to generate 1,425 average weekday trips with 112 trips occurring during the AM peak hour and 149 trips occurring during the PM peak hour. Traffic generated by the Little Lane Village development will have some impact on the adjacent street network. The following recommendations, as further described in the Traffic Study prepared for this project, are made to mitigate project traffic impacts:

1. It is recommended that any required signing, striping, or traffic control improvements comply with Carson City requirements.
2. It is recommended that the Little Lane/Parkland Avenue intersection be improved as a four-leg intersection and contain stop sign control and single ingress and egress lanes at the north and south approaches.

3. It is recommended that the Little Lane/Spartan Avenue intersection be improved as a four-leg intersection and contain stop sign control and single ingress and egress lanes at the north and south approaches.
4. It is recommended that the segment of Little Lane adjacent to the project site be improved to match the existing segment of Little Lane directly to the west of the site.
5. It is recommended that the on-site streets be constructed per Carson City Street standards.

Trip generation has been analyzed in the Traffic Study and is summarized in the following table.

Figure 13: Trip Generation

Land Use	Dwelling Units	ADT	AM Peak Hour	PM Peak Hour
Single Family Homes	151	1,425	112	149

UTILITIES AND PUBLIC SERVICES

Water

Carson City currently provides water service to the property. The proposed development will connect to the existing Carson City water main that is currently available in Elaine Street, Ruth Street, Spartan Avenue, and Parkland Avenue. Details are included in the Utility Plan.

Sewer

Carson City operates and maintains the City's sewer collection system and provides service to the site. This includes preventive and emergency maintenance, line replacement, line extensions and connection, development permitting and inspections. The proposed 149 new units would connect to the City sewer system that is currently available in Little Lane. Details are included in the Utility Plan.

Solid Waste

Waste Management currently provides solid waste service and curbside recycling to the site. Carson City provides landfill, recycling, and hazardous waste services.

SITE ANALYSIS TO DETERMINE COMMON OPEN SPACE AND LOT SIZE VARIATION

CCMC Section 17.10.036 requires a site analysis to include information and maps, describing all significant physical and contextual features or factors which may affect the development of the property. The text below coupled with the Tentative Map included in this application package is intended to meet the requirements of CCMC Section 17.10.036.

Figure 14: Site Analysis Location Map

Land Use and Zoning

The figures below depict current land use and adopted zoning on the site (Figure 15) and adjacent zoning and current, planned and approved, but unbuilt land uses (Figure 16).

Figure 15: Site Analysis Land Use and Zoning- Map

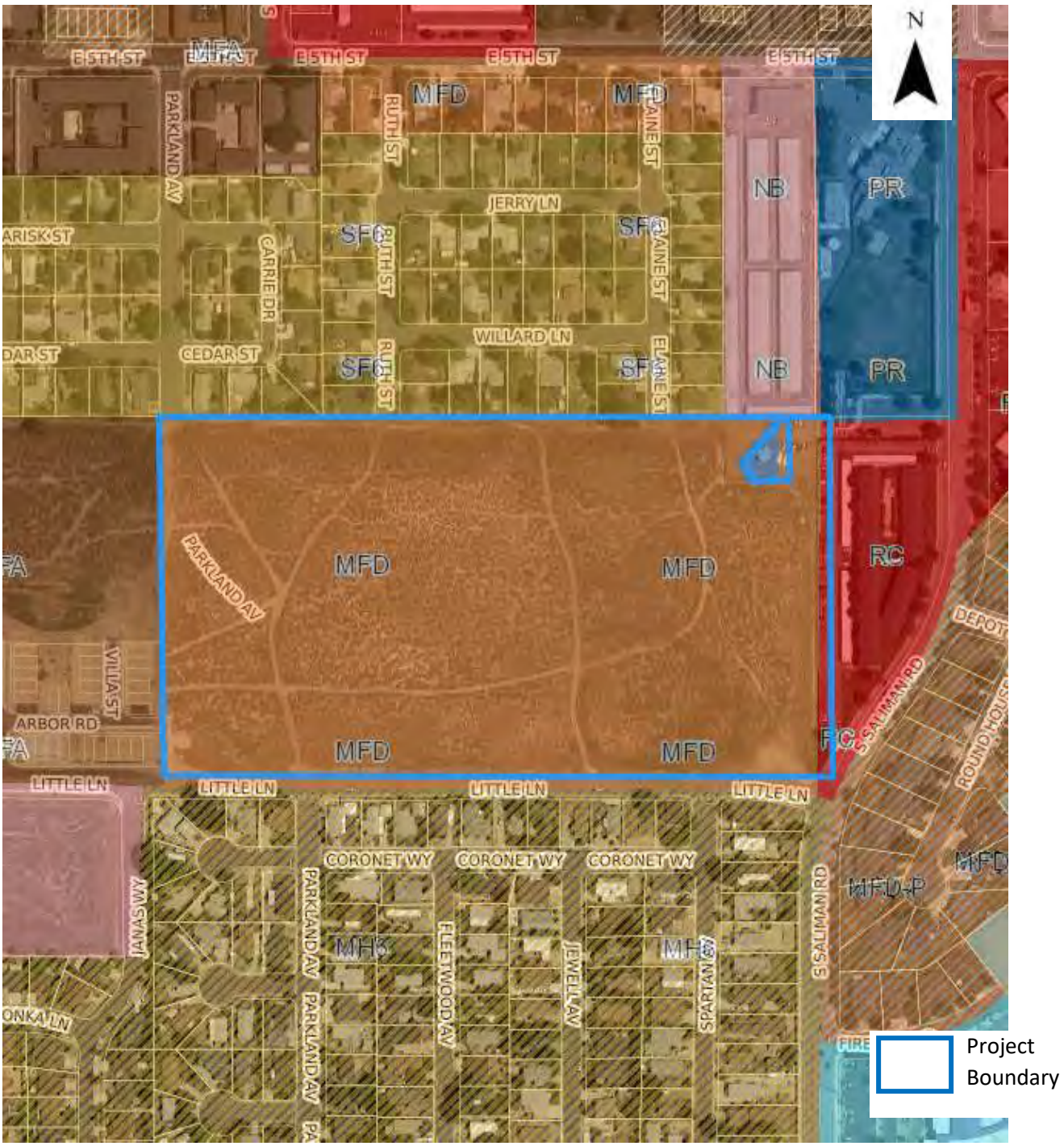


Figure 16: Site Analysis Land Use and Zoning- Table

Direction	Current Zoning	Master Plan	Current Land Use
North	Single Family-6,000 sq. ft. Neighborhood Business Public Regional	Medium Density Residential Public/Quasi-Public	Single Family Residential Retail/Storage Public Facility
East	Retail Commercial	High Density Residential	Apartments
South	Mobilehome- 6,000 sq. ft.	Medium Density Residential	Mobile Home Park
West	Multi-Family Apartments	High Density Residential	Undeveloped Single Family Attached (Arbor Villas)

Existing Structures

The project site is undeveloped. There are no existing structures.

Figure 17: Existing Structures

Existing Vegetation

Mature sagebrush and other low shrubs cover the undisturbed portions of the project area. Disturbed areas of the site are along the existing roadways, where direct vehicle "trails" cross the site and where construction of adjacent developments impacted the site.

Topography

Topography can be described as gentle to moderate slopes to the east. Elevations in the area of the proposed project site range from approximately 4,655 feet to 4,643 feet. Maximum cut and fill depths are anticipated to be approximately three feet. Due to the low lying nature of the site, it is anticipated that most of the project area will be raised from one to three feet to facilitate drainage improvements.

Soil

A "Preliminary Geotechnical Investigation" has been completed for this project and is attached. The NRCS Web Soil Survey maps the site as Heybourne Loam (CL). Exploration of the site identified a range from lean clays to clayey sands with lessor amounts of silty sands.

Natural Drainageways

There are no natural drainageways on the site.

Wetlands and Water Bodies

There are no wetlands or water bodies on the site.

Flood Hazards

The site contains a FEMA AH flood zone and it is expected that the project will need a CLOMR-F approval as part of this process. Hydrologic analyses were performed to determine the conceptual peak discharge for the 5-year and 100-year peak flow events. The site will be designed to accommodate peak flow events.

Figure 18: FEMA Flood Zone

Seismic Hazards

There are no faults adjacent to or through the project site.

Easements

Easements are identified on the Tentative Map.

Utilities

Utilities are addressed on the Tentative Map. There are existing gas, water, and sewer utilities adjacent to the project site.

Appropriate Access Points

Vehicular access to the site is primarily provided from Little Lane at Parkland Avenue and Spartan Avenue. Access is also available at Parkland Avenue and Elaine Street along the northern boundary of the project. Pedestrian access will be provided throughout the project site through sidewalks, with a minimum width of 5'. Proposed Vine Gate Street has been designed so that it will align with the future connection through Arbor Villas, with the Arbor Villas Final Map.

MASTER PLAN POLICY CHECKLIST

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 TPUD application. This project complies with the Master Plan and accomplishes the following objectives:

Chapter 3: A Balanced Land Use Pattern

1. It is consistent with the Master Plan Land Use Map in location and density. (1.1a)
2. It promotes growth within areas already served by community water and wastewater facilities as it is already served by existing infrastructure. (1.1b)
3. It meets the provisions of the Growth Management Ordinance. (1.1d, Municipal Code 18.12)
4. The builder, where feasible, will encourage the use of sustainable building materials and construction techniques to promote energy efficient, sustainable buildings. (1.1e)
5. The project site is not adjacent to State or Federal lands. (1.5b)
6. The proposed project encourages cluster development techniques. (1.4b, 3.2a)
7. It is located to be adequately served by city services including fire and sheriff services, and coordinated with the School District to ensure adequate provision of schools. (1.5d)
8. Friction Zones are not created. (2.1d)
9. It provides 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)
10. It protects environmentally sensitive areas through proper setbacks, dedication, or other mechanisms in accordance with Carson City Municipal Code standards. (3.1b)
11. It is sited outside the primary floodplain (through the CLOMR-F process) and away from geologic hazards area. (3.3d,e)

12. It provides for levels of services consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions).
13. Does not create land use conflicts, it provides for transition between the adjacent single family, attached single family residential, and multi-family residential neighborhoods and retail commercial development with appropriate buffers.

Chapter 4: Equitable Distribution of Recreational Opportunities

1. A 2.52 acre common open space area is provided, including a .44 acre recreation area. Additional private open space is provided in accordance with CCMC Section 17.10.046. (4.1b)

Chapter 5: Economic Vitality

1. The project provides a housing mix consistent with the labor force and non-labor force populations of the City. (BS-SPA 5.1j)

Chapter 6: Livable Neighborhoods and Activity Centers

1. Durable materials will be used in construction. (6.1a)
2. The project will promote variety and visual interest through the incorporation of building styles and colors, garage orientation, and other features in accordance with the Carson City Municipal Code (6.1b).
3. The project will provide variety and visual interest through the incorporation of well-articulated building facades, pedestrian-oriented streetscape, landscaping and other features consistent with the Development Standards. (6.1c)
4. It provides appropriate height (with SUP), density, and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill project in accordance with the Carson City Municipal Code. (6.2a, 9.3b, 9.4a)
5. The proposed project is compatible with the surrounding development of residential homes. (9.1a)
6. The proposed project is not spot zoned.

Chapter 7 A Connected City

1. The goals and policies contained in the city's Transportation, Transit, and Unified Pathway Master Plans are incorporated in this project as appropriate. (11.1a)
2. Little Lane will be improved to match the existing street section to the west of the project, which will include sidewalks and bike lanes. (12.1a, 12.1c)

TENTATIVE SUBDIVISION MAP FINDINGS

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.

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 and 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.**

Educational services will be met by Carson City School District. Police services will be provided by the Carson City Sheriff's Department. The Regional Transportation Commission is responsible for transportation in and around the project area. Carson City Parks Department will provide recreational and parks services (in addition to the common open space and recreation area provided with the project).

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.**

N/A- 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 proposed project is in conformance with the existing Master Plan designation of High Density Residential and the existing zoning designation of Multi-Family Duplex.

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

The proposed project is in conformance with the Carson City streets and highways master plan. In additional the project is providing half-street improvements along the entire frontage of Little Lane.

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

The project is providing half-street improvements to Little Lane that match the street section to the west along the entire frontage. New street connections are proposed at Elaine Street (existing) and Parkland Avenue (existing) along the northern boundary of the project. Public streets are proposed throughout the subdivision in accordance with Carson City requirements. A traffic study is included with this application. The following recommendations, as further described in the Traffic Study, are made to mitigate project traffic impacts:

- It is recommended that any required signing, striping, or traffic control improvements comply with Carson City requirements.
- It is recommended that the Little Lane/Parkland Avenue intersection be improved as a four-leg intersection and contain stop sign control and single ingress and egress lanes at the north and south approaches.

- It is recommended that the Little Lane/Spartan Avenue intersection be improved as a four-leg intersection and contain stop sign control and single ingress and egress lanes at the north and south approaches.
- It is recommended that the segment of Little Lane adjacent to the project site be improved to match the existing segment of Little Lane directly to the west of the site.
- It is recommended that the on-site streets be constructed per Carson City Street standards.

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

Topography can be described as gentle to moderate slopes to the east. Elevations in the area of the proposed project site range from approximately 4,655 feet to 4,643 feet. Maximum cut and fill depths are anticipated to be approximately three feet. Due to the low lying nature of the site, it is anticipated that most of the project area will be raised from one to three feet to facilitate drainage improvements.

The site contains a FEMA AH flood zone and it is expected that the project will need a CLOMR-F approval as part of this process. Hydrologic analyses were performed to determine the conceptual peak discharge for the 5-year and 100-year peak flow events. The site will be designed to accommodate peak flow events.

A "Preliminary Geotechnical Investigation" has been completed for this project and is attached. The NRCS Web Soil Survey maps the site as Heybourne Loam (CL). Exploration of the site identified a range from lean clays to clayey sands with lessor amounts of silty sands. A complete geotechnical investigation is also included as part of this request.

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.

Recreation and trail easements are not applicable to this subdivision.

SPECIAL USE PERMIT FINDINGS

In accordance with Carson City Municipal Code Section 18.02.080(5), this project has been designed to consider the following:

1. Will be consistent with the objectives of the Master Plan elements.

The single family development is consistent with the objectives of the Carson City Master Plan elements because it is an approved use in the Master Plan for the High Density Residential Master Plan

designation. The Master Plan Policy Checklist is included in this application package with additional information. The Special Use Permit to allow height greater than 26' is consistent with the Master Plan because it will allow for higher density residential development, the provision of open space, and a more efficient use of land.

2. **Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhoods or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, glare or physical activity.**

The surrounding neighborhood is comprised of single family residential, single family attached residential, multi-family residential, mobile homes, retail/public storage and public facilities. Therefore, the use proposed will provide a transition between housing types. The use will not be a detriment to the present and proposed surrounding land uses and will enhance the desirability of the residential area. The higher density residential product provides a transition between the residential product types and the commercial development. The proposed building heights are compatible with the neighborhood because they are below the 45' maximum height permitted on the adjacent properties east (zoned RC) and west (zoned MFA) of the project site. An appropriate buffer is provided (+/- 51'), including a landscape buffer, is provided between the proposed homes and the existing single family homes north of the project site. The project exceeds the periphery setbacks established through the Common Open Space Development requirements (CCMC Section 17.10.030 (4)). Landscaping and open space are proposed in accordance with Carson City requirements related to Common Open Space Development requirements. Landscape/open space areas are shown on the Site Plan.

3. **Will have little or no detrimental effect on vehicular or pedestrian traffic.**

There will be minimal additional impact on traffic from the proposed single family dwellings. A traffic study is included with this application, that includes a trip generation analysis. New street connections are proposed at Elaine Street (existing) and Parkland Avenue (existing) along the northern boundary of the project. Public streets are proposed throughout the subdivision in accordance with Carson City requirements. The following recommendations, as further described in the Traffic Study, are made to mitigate project traffic impacts:

- It is recommended that any required signing, striping, or traffic control improvements comply with Carson City requirements.
- It is recommended that the Little Lane/Parkland Avenue intersection be improved as a four-leg intersection and contain stop sign control and single ingress and egress lanes at the north and south approaches.
- It is recommended that the Little Lane/Spartan Avenue intersection be improved as a four-leg intersection and contain stop sign control and single ingress and egress lanes at the north and south approaches.
- It is recommended that the segment of Little Lane adjacent to the project site be improved to match the existing segment of Little Lane directly to the west of the site.
- It is recommended that the on-site streets be constructed per Carson City Street standards.

4. **Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.**

Public utilities are currently available, or are proposed to be extended, to serve the proposed project. Educational requirements will be met by the Carson City School District. Police services will be provided by the Carson City Sheriff's Department. The Regional Transportation Commission is responsible for transportation in and around the project area. Carson City Parks Department will provide recreational and parks services. The project is providing half-street improvements to Little Lane that match the street section to the west along the entire frontage.

5. **Meets the definition and specific standards set forth elsewhere in Carson City Municipal Code, Title 18 for such particular use and meets the purpose statement of that district.**

Single family dwellings are permitted in the MFD zone. With the approval of a Special Use Permit for building height, the project meets the specific standards set forth in Title 18, CCMC 18.04.100, Multifamily Duplex (MFD) residential district and the standards of Section 17.10, Common Open Space Development.

6. **Will not be detrimental to the public health, safety, convenience and welfare.**

Providing single family dwellings in a residentially developed area will not be detrimental to the public health, safety, and welfare because it conforms with surrounding uses and will be a beneficial addition to the surrounding properties and housing stock within the community. Allowing an increase in height (above the maximum 26' height in the MFD zone) will not be detrimental to the public health, safety, convenience, and welfare because the proposed building heights are appropriate for this project and this product will result in the provision of open space and a more efficient use of land. The proposed heights are below the 45' maximum height permitted on the adjacent properties east (zoned RC) and west (zoned MFA) of the project site. The maximum height on the property north of the project is 26' (SF6, NB). However, the nearest lot to the north is 51' from the proposed structure. This will provide an appropriate buffer, including a landscape buffer, and will ensure that the adjacent single family development is not impacted by building height. The project exceeds the periphery setbacks established through the Common Open Space Development requirements (CCMC Section 17.10.030 (4)).

7. **Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.**

There are existing residential (single family, single family attached, multi-family, and mobile homes) and commercial uses in the neighborhood. The development of a similar residential use will not result in material damage or prejudice to other property in the vicinity.

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

FOR OFFICE USE ONLY:

CCMC 17.06 and 17.07

TENTATIVE SUBDIVISION MAP

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

FILE # TSM - -

APPLICANT **PHONE #**
Fred Bates

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9460 Double R Blvd. Ste. 103 Reno, NV 89521

EMAIL

PROPERTY OWNER **PHONE #**
Andersen Family Associates

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

EMAIL

APPLICANT AGENT/REPRESENTATIVE **PHONE #**
Karen Downs, Manhard Consulting 775-321-6538

MAILING ADDRESS, CITY, STATE, ZIP
241 Ridge Street Reno, NV 89501

EMAIL
kdowns@manhard.com

Project's Assessor Parcel Number(s)
004-02-114

Project's Street Address

Nearest Major Cross Street(s)
S. Saliman Rd.

Project's Master Plan Designation
High Density Residential

Project's Current Zoning
MFD

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

Application Reviewed and Received By:

Submittal Deadline: Refer to the Planning Commission application submittal schedule.

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

Project Name
Little Lane Village

Total Project Area	Number of Lots	Smallest Parcel Size
21.32	151	3200 sf

Please provide a brief description of your proposed project below. Provide additional pages to describe your request in more detail.
A Tentative Subdivision Map for 151 single family detached homes on a 21.32 acre parcel.

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

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

Applicant's Signature

10/3/19
Date

PROPERTY OWNER'S AFFIDAVIT

I, Frederick M Bates, being duly deposed, do hereby affirm that I am the record owner of the
(Print Name)

subject property located at _____, and that I have knowledge of, and I agree to, the
(Property Address and APN)

filing of this Tentative Subdivision Map application.

Frederick M Bates — Signature

9400 Double R Blvd Ste 103 — Address

6/3/19 — Date

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

STATE OF NEVADA)
COUNTY Washoe)

On June 3rd, 2019, personally appeared before me, a notary public, Frederick M. Bates, 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.

Lauren K Holdway
Notary Public

LAUREN K. HOLDWAY
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 01-67935-2 - Expires August 12, 2020

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

FILE # SUP - -

APPLICANT: Fred Bates
PHONE #:
MAILING ADDRESS, CITY, STATE, ZIP: 9460 Double R Blvd. Ste. 103 Reno, NV 89521
EMAIL ADDRESS:

PROPERTY OWNER: Andersen Family Associates
PHONE #:
MAILING ADDRESS, CITY, STATE, ZIP: P O BOX 1746 Carson City, NV 89702
EMAIL ADDRESS:

APPLICANT AGENT/REPRESENTATIVE: Karen Downs, Manhard Consulting
PHONE #: 775-321-6538
MAILING ADRESS, CITY STATE, ZIP: 241 Ridge Street Reno, NV 89501
EMAIL ADDRESS: kdowns@manhard.com

FOR OFFICE USE ONLY:

CCMC 18.02.080

SPECIAL USE PERMIT

FEE*: **$2,450.00 MAJOR**
$2,200.00 MINOR (Residential zoning districts)
+ noticing fee
***Due after application is deemed complete by staff**

- [ ] **SUBMITTAL PACKET – 4 Complete Packets (1 Unbound Original and 3 Copies) including:**
  - [ ] Application Form
  - [ ] Detailed Written Project Description
  - [ ] Site Plan
  - [ ] Building Elevation Drawings and Floor Plans
  - [ ] Special Use Permit Findings
  - [ ] Master Plan Policy Checklist
  - [ ] Applicant's Acknowledgment Statement
  - [ ] Documentation of Taxes Paid-to-Date
  - [ ] Project Impact Reports (Engineering)
- [ ] **CD or USB DRIVE with complete application in PDF**

Application Received and Reviewed By:

Submittal Deadline: Refer to the Planning Commission application submittal schedule.

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

Project's Assessor Parcel Number(s):	Street Address	
004-02-114		
Project's Master Plan Designation	**Project's Current Zoning**	**Nearest Major Cross Street(s)**
High Density Residential	MFD	S. Saliman Rd.

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

A Special Use Permit to allow for the maximum building height to exceed 26 ft.

PROPERTY OWNER'S AFFIDAVIT

I, Frederick M Bates, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have knowledge of, and I agree to, the filing of this application.

Frederick M Bates — Signature
9460 Double R. Blvd #103 — Address
6/3/19 — Date

Use additional page(s) if necessary for additional owners.

STATE OF NEVADA)
COUNTY Washoe)

On June 3rd, 2019, Frederick M Bates, personally appeared before me, a notary public, 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.

Lauren K Holdway — Notary Public

LAUREN K. HOLDWAY
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 01-67995-2 - Expires August 12, 2020

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

If there is any additional information that would provide a clearer picture of your proposal that you would like to add for presentation to the Planning Commission, please be sure to include it in your detailed description.

Please type and sign the statement on the following page at the end of your findings response.

ACKNOWLEDGMENT OF APPLICANT

I certify that the forgoing statements are true and correct to the best of my knowledge and belief. I agree to fully comply with all conditions as established by the Planning Commission. I am aware that this permit becomes null and void if the use is not initiated within one-year of the date of the Planning Commission's approval; and I understand that this permit may be revoked for violation of any of the conditions of approval. I further understand that approval of this application does not exempt me from all City code requirements.

Applicant's Signature	Print Name	Date
Frederick M Bates	FREDERICK BATES	6-3-19

Carson City Planning Division
108 E. Proctor Street
Carson City, Nevada 89701
(775) 887-2180 – Hearing Impaired: 711
planning@carson.org
www.carson.org/planning

Date: May 6, 2019

Fred Bates
9460 Double R Blvd., Suite
103
Reno, NV 89521

SITE INFORMATION:

Location:	Northside of Little Lane
APN:	004-021-14
Master Plan Designation:	High Density Residential (HDR)
Approved Zoning:	Multi-Family Duplex (MFD)
Parcel size:	21.32 acres
Subject:	CSM-19-018

PROJECT DESCRIPTION: A subdivision of land for the creation of 151 lots, with a proposed lot size ranging from 3200 square feet to 3700 square feet.

The following is a summary of the comments prepared by City staff regarding the proposed project. The Conceptual Map Review meeting was held on April 16, 2019.

PLANNING DIVISION – Contact Hope Sullivan, 775-283-7922

1. Clarify the street sections to determine if on-street parking will be accommodated.

2. The modified plan should clearly delineate the open space, and demonstrate compliance with the open space requirement. Note 100 square feet per unit must be designed for recreation.

FIRE DEPARTMENT – Contact Dave Ruben, Fire Marshall, 283-7153

1. Project must comply with the 2018 International Fire Code (IFC) and the northern Nevada fire code amendments.

2. Civil layout is acceptable as presented.

PARKS AND RECREATION- Contact Vern Krahn, Senior Park Planner, 283-7343

1. The applicant will be required to match the existing Little Lane street cross section (west of the proposed development) that provides bike lanes on both sides of the street and a 7' foot wide concrete sidewalk separated 3' from back of curb. The design for these

bicycle and pedestrian facilities needs to be coordinated with Development Engineering requirements for Little Lane.

2. Chapter 7 in the UPMP provides the City's sidewalk policies and implementation strategies for pedestrian connectivity within the development and between the project site and the City's existing sidewalk system. The design for the project's internal sidewalk system, including pedestrian cross walks must be approved by Development Engineering and the Parks, Recreation & Open Space Department.

3. While the Carson City Parks and Recreation Master Plan identifies the need for a park in Neighborhood #13, both Mills Park and Governors Field are within walking distance of the proposed development. The applicant will be required to identify the outdoor recreation amenities being proposed for the half acre park and demonstrate that the size of the park and the amenities sufficiently address the development's on-site recreational needs for the resident's demographics. The selection of these additional amenities (ex. picnic tables, grills, shade structure, benches, playground equipment) and the park size will be evaluated during the Conceptual Subdivision Map's re-submittal and review process. This evaluation will be conducted by the Parks, Recreation & Open Space Department to confirm that the development will not be increasing the need for additional recreation amenities in the adjacent neighborhood.

4. The development will be subject to the collection of Residential Construction Tax (RCT), compliant with the Nevada Revised Statutes and Carson City Municipal Code (CCMC 15.60).

5. The applicant will be required to maintain the project's proposed park and any outdoor recreational amenities in perpetuity.

6. The applicant will be required to maintain all common landscape and open space areas within the development, including any landscaping in the street(s) right-of-ways.

7. The applicant will be required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The Parks, Recreation & Open Space Department is willing to assist the applicant with this aspect of their project.

8. Carson City is now Bee Friendly USA City #76. As a result, the applicant shall use approximately 50% pollinator friendly plant material for any required landscape or open space areas on the project site. The Parks, Recreation & Open Space Department is willing to provide the applicant's design team with a recommended tree and shrub species list. Also, the project's 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.

ENGINEERING AND UTILITIES – Contact Stephen Pottey, Project Manager

Surface Improvements and Transportation:

1. The public street network must connect to Little Lane and Parkland Ave as shown, and must also connect to Elaine St.
2. The public streets must meet the standard detail for urban local streets with parking on both sides.
3. Parking will not be allowed in alleys at the width shown. The alleys must be privately owned and maintained with easements for utilities and public access. Maintenance of private streets will include parking enforcement, snow removal, reconstruction, etc, and must be noted on the Final Map.
4. Alleys must have their own street names, and units will be addressed off of these private streets.
5. Driveways and garages must be able to accommodate minimum required parking without tandem parking, and each "space" must be at least 20 feet long.
6. "Street A" must align with the future connection to Arbor Villas to the extent practicable.
7. Little Lane must be improved to match the street section to the west along the entire frontage, including off-set sidewalk. This will necessitate dedication of approximately 15 feet of right of way along the frontage.
8. Right-of-way at the intersection of Little Lane and S Saliman Road will need to be dedicated to adjust the lot line to match the existing alignment of S Saliman Rd.
9. A geotechnical report will be required to be submitted with the permit application. Site soils have performed poorly in the past as subgrade. The geotechnical engineer must provide recommendations for an improved street section over the minimum standard.
10. A sidewalk or paved path must be installed in the common areas between parcels where units do not front on an existing or proposed City street.
11. A traffic impact study will be required. The traffic impact study must analyze the following:
    a. LOS and the potential need for a dedicated left turn lane at Little Lane and S Saliman Road, and the potential need for a deceleration lane on south-bound S Saliman Road.
    b. Pedestrian safety and the potential need for an improved crossing at Little Lane and Saliman Rd.
    c. LOS and the potential need for dedicated left/through lanes at Parkland Ave and Little Lane as well as at Elaine Street and Little Lane.
    d. Left turn pocket lengths at E 5th Street and S Saliman Road as well as at S Saliman Road and Fairview Drive.
    e. Stop sign warrants at Parkland Avenue and E 5th Street, and Parkland Avenue and Little Lane.

f. Sight triangles at all intersections within and adjacent to the project.

Water and Sewer Improvements:

12. There are currently waterline easements on the property around Carson City Well 4 and the east side of the subject property. These easements must be separated out as their own parcel and given to the City; the parcel area must be increased in size to include the area within 5 feet of the existing well fence. On the east side of the property the parcel must be wide enough to provide 10 feet of clearance between the existing mains and the edge of the parcel. In lieu of a separate parcel, the existing easement may be made into an exclusive water main and sewer main easement for the well, this easement must be at least 30 feet wide and include a 12 foot wide compacted base access road.
13. Connections will not be allowed to the 12" main connecting Well 48 and the Arsenic Treatment Plant fronting the parcel.
14. The 8" water main ending at about Parkland Ave must be extended across the full frontage and tied in to the 12" DI main in Spartan Ave.
15. Water mains must be looped to Parkland, Elaine, and into the existing and future water main network of Arbor Villas.
16. A sampling tap is requested to be included in a common area of the project near one of the entrances. Our standard for sampling taps is the Kupferle Eclipse #88 or approved equal.
17. The sewer main on the east side of the parcel is in poor condition and may need to be repaired or replaced, at the City's expense, with this project.
18. The existing municipal well may make noise 24/7. Prior to the recordation of the first 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 of the development's proximity to the well which may make noise 24 hours a day. The disclosure must also be referenced on the final map.
19. A wet stamped water main analysis must be submitted in accordance with CCDS 15.3.1(a) to show that adequate pressure will be delivered to the meter and fire flows meet the minimum requirements of the Carson City Fire Department. Please see the attached fire flow test data.
20. 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.

Flood and Storm Drain:

21. The site contains a FEMA AH flood zone. The project must provide free draining flood water storage equal in volume to any that is removed by filling the site. The project will need CLOMR-F approval as part of this process. The site and surrounding area must be modeled to ensure that the change does not negatively impact the surrounding properties. The City's Flow 2D model may be utilized in this analysis.
22. A storm drain DI should be installed on Little Lane to handle gutter flows.

23. Detention will be required to mitigate the increase in peak storm runoff. Peak flow for post development must be equal to or less than the peak flow predevelopment for a 5 year 24-hour event. Detention basins must have metered outlets at the bottom and must have overflows that are protected from erosion. If storm drain infrastructure is too shallow for this, retention basins must be designed using percolation test data to drain within 24 hours. Basins and storm drains must be accessible for private/public maintenance.

24. An underground storm drain system may be necessary to maintain the dry-lane requirement.

25. The drainage study submitted states that no development is proposed. A new drainage study must be done for the tentative map. Also, the drainage study submitted mentions cost sharing. A few notes on the submitted study:

    a. The City does not agree that the City's limited system is causing flooding in the area. The city's drainage criteria only requires development to handle the 5-year storm event. Only in the 1990's did the city place this requirement on development. Prior to this 1990 there was no real criteria established for system design. The area is very flat and the linear ditch is the low point in the urban part of the city.

    b. Floodplain mapping: It is somewhat true that the floodplain FIRM would not have to change if no alteration of the watercourse is made but the development is altering the existing watercourse by building the development. A CLOMR-F study would be needed to show how the development is not impacting the surrounding properties. Also, the 1:1 volume mitigation would have to be accommodated. Any structure in the floodplain would meet the 2-feet freeboard, have an elevation certificate and pay flood insurance. The flood ordinance requires the development to pay for a LOMR.

    c. Cost-sharing: Any request by the development for cost sharing would be decided by the Planning Commission and Board of Supervisors. Engineering staff is available if the applicant would like to discuss instances where cost sharing has been applied in the past and where it has not. Manhard consulting is also familiar with some recent examples and the reasoning used to justify the cost sharing or lack thereof.

General Comments:

26. 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.

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

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

29. Fresh water must be used for Dust control. Contact Rit Palmer at Public Works at 283-7382 for more information.

30. 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.
31. An erosion control plan meeting section 13 of CCDS will be required in the plan set.
32. New electrical service must be underground.
33. Please show gas and electric connections for this project.
34. Any work performed in the street right of way will require a traffic control plan and a time line type schedule to be submitted before the work can begin. A minimum of one week notice must be given before any work can begin in the street right of way.
35. Please show all easements on the construction drawings.
36. A Construction Storm water Permit from the Nevada Division of Environmental Protection (NDEP) will be required for the construction.
37. A Dust Control Permit from NDEP will be required for the project.

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.

Thank you for the opportunity to comment on your project. Please be advised that the 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 by the Planning Commission and Board of Supervisors.

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 this office at 775-283-7922.

Sincerely,

Hope Sullivan
Planning Manager

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: Little Lane Village

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)?
- N/A ☐ 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)?
- N/A ☐ 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)?
- N/A ☐ 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)?
- N/A ☐ 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)?
- N/A ☐ 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:

- N/A ☐ 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)?
- N/A ☐ Promote revitalization of the Downtown core (5.6a)?
- N/A ☐ 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)?
- N/A ☐ 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)?
- N/A ☐ 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
Capital of Nevada

Treasurer Home | Assessor Data Inquiry | Back to Last Page

Secured Tax Inquiry Detail for Parcel # 004-021-14

Property Location: LITTLE LN
Billed to: ANDERSEN FAMILY ASSOCIATES
P O BOX 1746
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 000530
District: 1.0
Tax Service:
Land Use Code: 382

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
Current Year					**No Taxes Owing**
08/20/18	3,946.95		3,946.95	3,946.95	.00
10/01/18	3,946.00	157.84	4,103.84	4,103.84	.00
01/07/19	3,946.00	157.84	4,103.84	4,103.84	.00
03/04/19	3,946.00	157.84	4,103.84	4,103.84	.00
Totals:	**15,784.95**	**473.52**	**16,258.47**	**16,258.47**	

Payment Cart | History

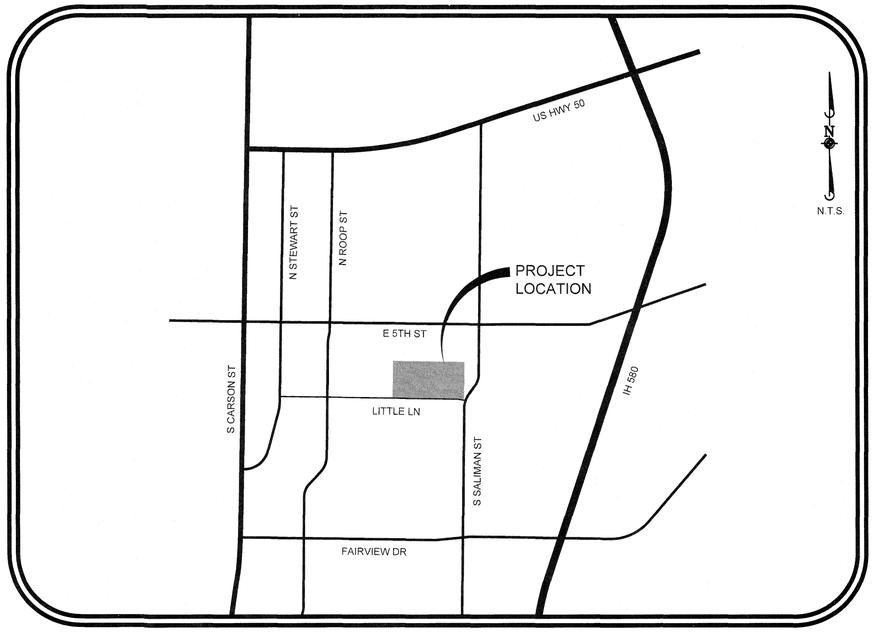
Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0
Abatement Amount	8,942.47	9,579.94	5,562.82	2,158.37	2,711.26

TENTATIVE MAP
FOR
LITTLE LANE VILLAGE
CARSON CITY, NEVADA

ABBREVIATIONS

AGG.	AGGREGATE GRAVEL
B.A.M.	BIT. AGG. MIXTURE
B-B	BACK TO BACK
BC	BEGINNING OF CURB
BFC	BACK FACE OF CURB
BIT.	BITUMINOUS CONCRETE
BM	BENCHMARK
B.O.	BY OTHERS
B/P	BOTTOM OF PIPE
BVC	BEGINING OF VERTICAL CURVE
BW	BOTTOM OF WALL
CB	CATCH BASIN
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CNTRL	CONTROL
CONC.	CONCRETE
CY	CUBIC YARD
D	DITCH
DIA.	DIAMETER
DIP	DUCTILE IRON PIPE
DIWM	DUCTILE IRON WATER MAIN
DT	DRAIN TILE
EL	ELECTRIC
EC	END OF CURVE
E-E	EDGE TO EDGE
ELEV.	ELEVATION
EP	EDGE OF PAVEMENT
EVC	END OF VERTICAL CURVE
EX.	EXISTING
F-F	FACE TO FACE
FES	FLARED END SECTION
FF	FINISHED FLOOR
FL	FLOW LINE
FLG	FLANGE
FM	FORCE MAIN
FG	FINISH GRADE
GAS	GAS
GW	GUY WIRE
HDWL	HEADWALL
HH	HANDHOLE
HP	HIGH POINT
HWL	HIGH WATER LEVEL
HYD.	HYDRANT
INL	INLET
INV.	INVERT
I.E.	INVERT ELEVATION
IP	IRON PIPE
LP	LOW POINT
MAX.	MAXIMUM
MB	MAILBOX
MIN.	MINIMUM
MJ	MECHANICALLY RESTRAINED JOINT
NWL	NORMAL WATER LEVEL
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PO	PUSH ON
PP	POWER POLE
PROP.	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
P	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
RR	RAILROAD
SS	SANITARY SEWER
SF	SQUARE FOOT
SHLD.	SHOULDER
SL	STREET LIGHT
SSMH	SANITARY SEWER MANHOLE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
STA.	STATION
SY	SQUARE YARDS
TBR	TO BE REMOVED
T	TELEPHONE
TC	TOP OF CURB
T/P	TOP OF PIPE
TW	TOP OF WALL
TRANS	TRANSFORMER
VB	VALVE BOX
VV	VALVE VAULT
WL	WATER LEVEL
WM	WATER MAIN



VICINITY MAP

INDEX OF SHEETS

1 TITLE SHEET
2 PRELIMINARY SITE PLAN
3 PRELIMINARY GRADING PLAN
4 PRELIMINARY UTILITY PLAN
5 PRELIMINARY EROSION CONTROL PLAN

PROJECT DATA

ASSESSOR'S PARCEL #:	004-021-09, 004-021-14
TOTAL PROJECT AREA:	21.48 ACRES
LOT AREA:	10.88 ACRES
RIGHT-OF-WAY AREA:	5.46 ACRES
PRIVATE STREET AREA:	2.07 ACRES
COMMON AREA:	2.55 ACRES
WELL SITE / PARCEL 1 AREA:	0.52 ACRES
TOTAL LOTS:	149
MIN. LOT SIZE:	3,072 S.F.
MAX. LOT SIZE:	4,785 S.F.
AVERAGE LOT SIZE:	3,183 S.F.
ON-STREET PARKING:	279
EXISTING ZONING:	MFD
EXISTING MASTER PLAN DESIGNATION:	HDR
PROPOSED DENSITY:	6.94 UNITS/AC

UTILITY PROVIDERS

CABLE TV:	CHARTER SPECTRUM
ELECTRIC:	NV ENERGY
GAS:	SOUTHWEST GAS
SEWER:	CARSON CITY PUBLIC WORKS
SOLID WASTE:	CAPITOL SANITATION
TELEPHONE:	A.T.&T.
WATER:	CARSON CITY PUBLIC WORKS

OWNER/DEVELOPER
BATES HOMES
9460 DOUBLE R BVLD., SUITE 103
RENO, NV 89521
MR. FRED BATES
VOICE: (775) 297-4822
EMAIL: fred@bateshomes.com

CIVIL ENGINEER
MANHARD CONSULTING, L.T.D.
241 RIDGE ST., SUITE 400
RENO, NV 89521
CONTACT: DANIEL BIRCHFIELD
(775) 746-3500 PHONE
(775) 746-3520 FAX

LAND SURVEYOR
MANHARD CONSULTING, L.T.D.
241 RIDGE ST., SUITE 400
RENO, NV 89501
CONTACT: JERRY JUAREZ
(775) 746-3500 PHONE
(775) 746-3520 FAX

SOILS ENGINEER
RESOURCE CONCEPTS INC
340 NORTH MINNESOTA ST
CARSON CITY, NV 89703-4152
(775) 883-1600 PHONE
(775) 883-1656 FAX

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241 Ridge St., Suite 400 Reno, Nevada 89501 tel: (775) 746-3500 fax: (775) 746-3520 www.manhard.com
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BASIS OF BEARINGS

GRID NORTH, MODIFIED NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994 (NAD 83/94) DETERMINED USING REAL TIME KINEMATIC GPS (RTK GPS) OBSERVATIONS OF CARSON CITY CONTROL MONUMENTS CC021 AND CC018 AS SHOWN ON RECORD OF SURVEY MAP NO. 2749 RECORDED AUGUST 11, 2010 IN THE OFFICIAL RECORDS OF CARSON CITY NEVADA, AS FILE NO. 403425. COMBINED GRID TO GROUND FACTOR = 1.0002. ALL DISTANCES SHOWN HEREIN ARE GROUND VALUES.

BASIS OF ELEVATION

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS TAKEN FROM CARSON CITY CONTROL MONUMENT CC021, HAVING A PUBLISHED ELEVATION OF 4650.70 U.S. FEET. CC021 IS DESRIBED AS A 2 INCH BRASS DISK STAMPED "CC021 2010" LOACTED AT THE BACK OF CURB OF A HANDICAP RAMP, ON THE WEST SIDE OF THE NORTH ENTRANCE TO THE POST OFFICE, APPROXIMATELY 170 FEET EAST OF THE INTERSECTION OF SOUTH ROOP STREET AND LITTLE LANE.

LEGAL DESCRIPTION

A PORTION OF THE LAND BEING, SITUATE WITHIN THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 17, TOWNSHIP 15 NORTH, RANGE 20 EAST, MOUNT DIABLO BASE & MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL B AS SHOWN ON THE PARCEL MAP FOR ANDERSEN FAMILY ASSOCIATES, AS MAP NO. 2866, FILED IN BOOK 10, PAGE 2866, AS FILE NO. 466342, FILED JULY 20, 2016 IN THE OFFICIAL RECORDS OF CARSON CITY, NEVADA.

CONTAINING 21.32 ACRES, MORE OR LESS.

A PORTION OF THE LAND AS DESCRIBED IN DOCUMENT NO. 412747, FILED JUNE 10, 2011, IN THE OFFICIAL RECORD OF CARSON CITY, NEVADA, AS SITUATE WITHIN THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 17, TOWNSHIP 15 NORTH, RANGE 20 EAST, MOUNT DIABLO BASE & MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF PARCEL B AS SHOWN ON THE PARCEL MAP FOR ANDERSEN FAMILY ASSOCIATES, AS MAP NO. 2866, FILED IN BOOK 10, PAGE 2866, AS FILE NO. 466342, FILED JULY 20, 2016 IN THE OFFICIAL RECORDS OF CARSON CITY, NEVADA. THENCE, ALONG THE NORTH LINE OF SAID PARCEL B NORTH 89°16'42" WEST, 79.89 FEET; THENCE, LEAVING THE NORTH LINE OF SAID PARCEL B, AND ALONG THE NORTHERLY LINE OF PARCEL B, SOUTH 00°37'28" WEST, 125.00 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY LINE OF PARCEL B, NORTH 89°16'42" WEST, 73.54 FEET, TO THE POINT OF CUSP AND THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT FROM WHICH THE RADIUS POINT OF SAID CURVE BEARS NORTH 89°16'42" WEST; THENCE, CONTINUING ALONG SAID NORTHERLY LINE OF PARCEL B, NORTHWESTERLY, 37.18 FEET ALONG THE ARC OF A CURVE, HAVING A RADIUS OF 40.00 FEET AND THROUGH A CENTRAL ANGLE OF 53°15'23"; THENCE, CONTINUING ALONG SAID NORTHERLY LINE OF PARCEL B, NORTH 41°13'34" EAST, 122.24, FEET, TO THE ABOVEMENTIONED NORTH LINE OF SAID PARCEL B; THENCE, ALONG THE PROLONGATION OF THE NORTH LINE OF PARCEL B, SOUTH 89°16'42" EAST, 10.00 FEET, TO THE ABOVEMENTIONED POINT OF BEGINNING

CONTAINING 7,138 SQUARE FEET, MORE OR LESS.

FOR A TOTAL AREA CONTAINING 21.48 ACRES, MORE OR LESS.

DATE	REVISIONS	DRAWN BY	CHECK BY

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

LITTLE LANE VILLAGE
CARSON CITY, NEVADA
TITLE SHEET

PROFESSIONAL ENGINEER STATE OF NEVADA
DANIEL C. BIRCHFIELD
Exp. 12-31-20 CIVIL
No. 20844
6/27/19

PROJ. MGR.:	DCM
PROJ. ASSOC.:	CMB
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	AS SHOWN

SHEET 1 OF 5
BHO.CCNV

TENTATIVE MAP

June 20, 2019 - 10:28 Dwg Name= P:\Bhccnv01\dwg\Eng\Final Drawings\Plan Set\Tentative Map\TITLE SHEET.dwg, Updated By: dMillows

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
60' ROW STREET SECTION
TYPICAL
50' ROW STREET SECTION
ELAINE STREET
66' ROW HALF STREET SECTION
LITTLE LANE
24' ALLEYWAY SECTION
TYPICAL
LEGEND
PROJECT BOUNDARY
31 LOT NUMBER
[3,200] LOT AREA IN SQUARE FEET
NOTE:
1) BLANKET PUBLIC UTILITY AND DRAINAGE EASEMENTS ARE PROPOSED ON ALL COMMON AREAS.
2) ALL RETURNS HAVE A RADIUS OF 20'.
LUPINE LANE (PROPOSED/PRIVATE)
VINE GATE STREET (PROPOSED/PUBLIC)
ORCHARD ROW PLACE (PROPOSED/PRIVATE)
VILLAGE GREEN AVENUE (PROPOSED/PUBLIC)
MEADOW VIEW PLACE (PROPOSED/PRIVATE)
WOODLAND PLACE (PROPOSED/PRIVATE)
PARKLAND AVENUE (PROPOSED/PUBLIC)
PARKLAND AVENUE (EXISTING/PUBLIC)
SPARTAN AVENUE (PROPOSED/PUBLIC)
SPARTAN AVENUE (EXISTING/PUBLIC)
ELAINE STREET (PROPOSED/PUBLIC)
ELAINE STREET (EXISTING/PUBLIC)
RUTH STREET (EXISTING/PUBLIC)
LITTLE LANE (EXISTING/PUBLIC)
S SALIMAN ROAD (EXISTING/PUBLIC)
COMMON AREA A [106,762]
PARCEL 1 [22,517]
WELL SITE #4
EXISTING PARCEL TO BE ADJUSTED
APN 004-044-08 SMITH, KYLE R
APN 004-045-09 POTTS, THOMAS L & BRENDA S
APN 004-045-10 FOULENFONT, WILLIAM & ET AL
APN 004-045-17 HARRISON, NATHAN W & BETH A
APN 004-045-16 % J N & C M BRUGGER MANAGERS
APN 004-032-11 ROBINSON, MATHEW T
APN 004-035-02 WENINGER, JIM REV TRUST 2/19/14
APN 004-035-03 CRAFTON REVOCABLE TRUST 4/29/98
APN 004-035-04 CLEMENS, WENDYLYN
APN 004-035-05 OLSON-CURRY, CAROL A FAM TRUST
APN 004-035-06 WALDREN, MICHAEL D & ANN E
APN 004-035-07 BRECKENRIDGE PROP FUND 2016 LLC
APN 004-035-09 WARREN FAMILY TRUST 11/29/17
APN 004-034-11 MEDINA RENTERIA, THANIA Y
APN 004-021-08 CARSON CITY STORAGE LLC & ET AL
APN 004-021-10 MANAGEMENT, CARSON CITY
APN 004-021-16 ARBOR VILLAS LLC
APN 004-371-22 ARBOR VILLAS LLC
APN 010-041-24 COVEC, STEVEN W TR & COVEC, TR
EXISTING COUNTRY CLUB ESTATES (NOT A PART)
20' EMERGENCY SECONDARY ACCESS AND UTILITY EASEMENT
TYPICAL LOT SETBACKS
TYPICAL LOT PUE
Manhard CONSULTING LTD
LITTLE LANE VILLAGE
CARSON CITY, NEVADA
PRELIMINARY SITE PLAN
DANIEL C. BIRCHFIELD Exp: 12-31-20 CIVIL No. 20844
6/27/19
PROJ. MGR.: DCM
PROJ. ASSOC.: CMB
DRAWN BY: SDF
DATE: JUN 2019
SCALE: AS SHOWN
SHEET 2 OF 5
BHO.CCNV
TENTATIVE MAP

GRAPHIC SCALE

50 0 25 50 100 200

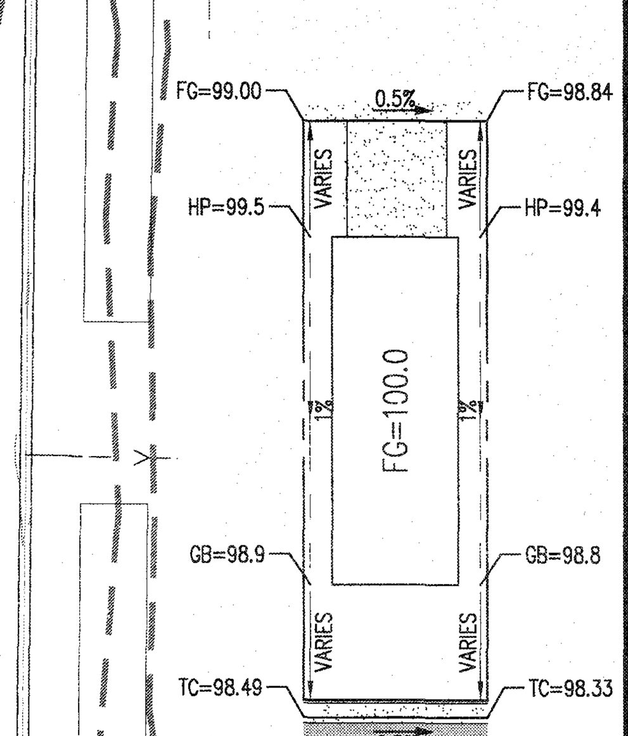
(IN FEET)
1 inch = 50 ft.

NOTE:
1) ADD 4600 FEET TO ALL SPOT ELEVATIONS
2) FEMA PANEL 32031C3445G. EFFECTIVE ON 12/22/2016
3) CLOMR REQUIRED FOR THE DETENTION POND TO PROVIDE STORAGE OF FREE DRAINING FLOOD WATER

LEGEND

- SD — STORM DRAIN W/ DIRECTION INDICATOR (DASHED IF EXISTING)
- MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- A.C. PAVEMENT AREA
- CONCRETE AREA
- AGGREGATE BASE AREA
- GRADE BREAK
- FG=47.0 — PROPOSED LOT EXTERNAL FINISHED GRADE ELEVATION
- 4300 — EXISTING CONTOUR LINE
- 45.0 EP — PROPOSED ELEV. @ EDGE OF PAVEMENT
- 45.0 GB — PROPOSED ELEV. @ GRADE BREAK
- 45.0 HP — PROPOSED ELEV. @ HIGH POINT
- 45.0 LP — PROPOSED ELEV. @ LOW POINT
- 45.0 FL — PROPOSED ELEV. @ FLOW LINE
- 45.0 FG — PROPOSED ELEV. @ FINISHED GRADE
- PROPOSED PEDESTRIAN RAMP
- CUT OR FILL SLOPE

APN 004-044-08 SMITH, KYLE R
PARKLAND AVENUE
APN 004-045-09 POTTS, THOMAS L & BRENDA S
APN 004-045-10 FOULENFONT, WILLIAM & ET AL
APN 004-045-17 HARRISON, NATHAN W & BETH A
APN 004-045-16 J N & C M BRUGGER MANAGERS
APN 004-032-11 ROBINSON, MATHEW T
RUTH STREET
APN 004-035-02 WENINGER, JIM REV TRUST 2/19/14
APN 004-035-03 CRAFTON REVOCABLE TRUST 4/29/98
APN 004-035-04 CLEMENS, WENDYLYN
APN 004-035-05 OLSON-CURRY, CAROL A FAM TRUST
APN 004-035-06 WALDREN, MICHAEL D & ANN E
APN 004-035-07 BRECKENRIDGE PROP FUND 2016 LLC
APN 004-035-09 WARREN FAMILY TRUST 11/29/17
ELAINE STREET
APN 004-034-11 MEDINA RENTERIA, THANIA Y
APN 004-021-08 CARSON CITY STORAGE LLC & ET AL
FEMA FLOOD AREA ZONE X (SHADED)
FEMA FLOOD AREA ZONE AO (1F)
EX. FENCE
LUPINE LANE
PARCEL 1
VINE GATE STREET
12'-WIDE ACCESS ROAD
PARK AREA (0.44 AC)
CREST ELEV. = 4642.1
ORCHARD ROW PLACE
WOODLAND PLACE
APN 004-021-16 ARBOR VILLAS LLC
VILLAGE GREEN AVENUE
FEMA FLOOD AREA ZONE AO (2F)
DETENTION POND (1.60 AC)
V REQUIRED = 3.98 AC-FT
V PROVIDED = 4.08 AC-FT
100-YR WATER SURFACE ELEVATION = 4641.0
OVERFLOW OUTLET = 4641.1
APN 004-371-22 ARBOR VILLAS LLC
MEADOW VIEW PLACE
SPARTAN AVENUE
APN 010-041-24 COVEC, STEVEN W TR & COVEC, TR
S SALIMAN ROAD (EXISTING-PUBLIC)
5' WIDE BIKE PATH
LITTLE LANE
EXISTING COUNTRY CLUB ESTATES (NOT A PART)



TYPICAL LOT GRADING

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LITTLE LANE VILLAGE
CARSON CITY, NEVADA
PRELIMINARY GRADING PLAN

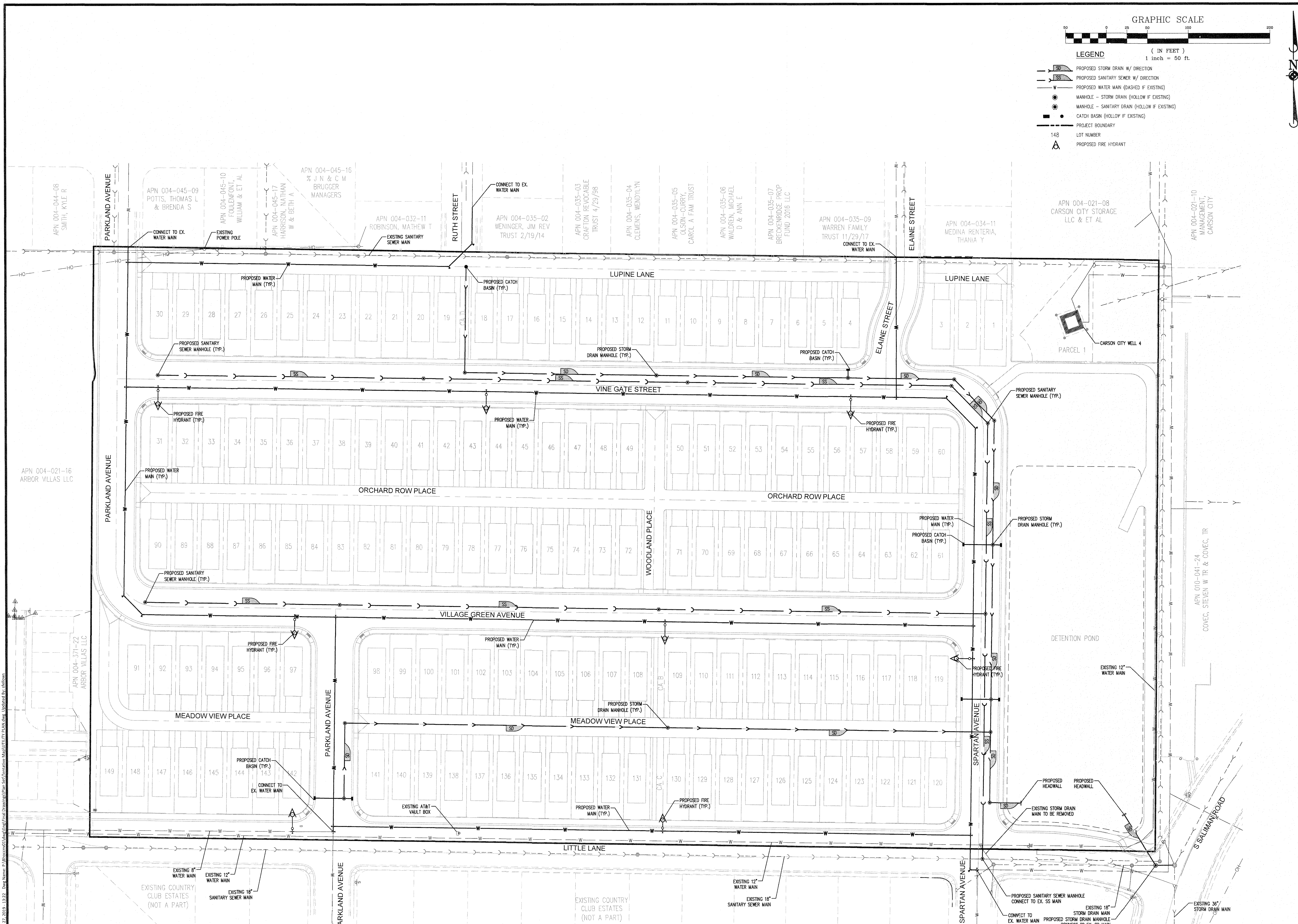
PROFESSIONAL ENGINEER STATE OF NEVADA
DANIEL C. BIRCHFIELD
Exp: 12-31-20
CIVIL
No. 20844
6/27/19

PROJ. MGR.:	DCM
PROJ. ASSOC.:	CMB
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	AS SHOWN

SHEET 3 OF 5

BHO.CCNV

TENTATIVE MAP


GRAPHIC SCALE
50
0
25
50
100
200
(IN FEET)
1 inch = 50 ft.
LEGEND
PROPOSED STORM DRAIN W/ DIRECTION
PROPOSED SANITARY SEWER W/ DIRECTION
PROPOSED WATER MAIN (DASHED IF EXISTING)
MANHOLE - STORM DRAIN (HOLLOW IF EXISTING)
MANHOLE - SANITARY DRAIN (HOLLOW IF EXISTING)
CATCH BASIN (HOLLOW IF EXISTING)
PROJECT BOUNDARY
148
LOT NUMBER
PROPOSED FIRE HYDRANT
N
LUPINE LANE
VINE GATE STREET
ORCHARD ROW PLACE
VILLAGE GREEN AVENUE
MEADOW VIEW PLACE
LITTLE LANE
PARKLAND AVENUE
RUTH STREET
ELAINE STREET
WOODLAND PLACE
SPARTAN AVENUE
S SALIMAN ROAD
DETENTION POND
PARCEL 1
CARSON CITY WELL 4
APN 004-044-06 SMITH, KYLE R
APN 004-045-09 POTTS, THOMAS L & BRENDA S
APN 004-045-10 FOULENFONT, WILLIAM & ET AL
APN 004-045-17 HARRISON, NATHAN W & BETH A
APN 004-045-16 % J N & C M BRUGGER MANAGERS
APN 004-032-11 ROBINSON, MATHEW T
APN 004-035-02 WENINGER, JIM REV TRUST 2/19/14
APN 004-035-03 CRAFTON REVOCABLE TRUST 4/29/98
APN 004-035-04 CLEMENS, WENDYLYN
APN 004-035-05 OLSON-CURRY, CAROL A FAM TRUST
APN 004-035-06 WALDREN, MICHAEL D & ANN E
APN 004-035-07 BRECKENRIDGE PROP FUND 2016 LLC
APN 004-035-09 WARREN FAMILY TRUST 11/29/17
APN 004-034-11 MEDINA RENTERIA, THANIA Y
APN 004-021-08 CARSON CITY STORAGE LLC & ET AL
APN 004-021-10 MANAGEMENT, CARSON CITY
APN 004-021-16 ARBOR VILLAS LLC
APN 004-371-22 ARBOR VILLAS LLC
APN 010-041-24 COVEC, STEVEN W TR & COVEC, TR
EXISTING COUNTRY CLUB ESTATES (NOT A PART)
CONNECT TO EX. WATER MAIN
EXISTING POWER POLE
EXISTING SANITARY SEWER MAIN
PROPOSED WATER MAIN (TYP.)
PROPOSED CATCH BASIN (TYP.)
PROPOSED SANITARY SEWER MANHOLE (TYP.)
PROPOSED STORM DRAIN MANHOLE (TYP.)
PROPOSED FIRE HYDRANT (TYP.)
EXISTING AT&T VAULT BOX
EXISTING 8" WATER MAIN
EXISTING 12" WATER MAIN
EXISTING 18" SANITARY SEWER MAIN
PROPOSED HEADWALL
EXISTING STORM DRAIN MAIN TO BE REMOVED
PROPOSED SANITARY SEWER MANHOLE CONNECT TO EX. SS MAIN
CONNECT TO EX. WATER MAIN
EXISTING 18" STORM DRAIN MAIN
PROPOSED STORM DRAIN MANHOLE CONNECT TO EX. SD MAIN
EXISTING 36" STORM DRAIN MAIN
CA A
CA B
CA C

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LITTLE LANE VILLAGE

CARSON CITY, NEVADA

PRELIMINARY UTILITY PLAN

PROFESSIONAL ENGINEER STATE OF NEVADA
DANIEL C. BIRCHFIELD
Exp 12-31-20
CIVIL
No. 20844
6/27/19

PROJ. MGR.:	DCM
PROJ. ASSOC.:	CMB
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	AS SHOWN

SHEET 4 OF 5

BHO.CCNV

TENTATIVE MAP

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

N

LEGEND

- PROPOSED STORM DRAIN W/ DIRECTION
- MANHOLE – STORM DRAIN (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- PROJECT BOUNDARY
- 148 LOT NUMBER
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- SILT FENCE

APN 004-044-08 SMITH, KYLE R

APN 004-045-09 POTTS, THOMAS L & BRENDA S

APN 004-045-10 FOULENFONT, WILLIAM & ET AL

APN 004-045-17 HARRISON, NATHAN W & BETH A

APN 004-045-16 % J N & C M BRUGGER MANAGERS

APN 004-032-11 ROBINSON, MATHEW T

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APN 004-021-16 ARBOR VILLAS LLC

APN 004-371-22 ARBOR VILLAS LLC

APN 010-041-24 COVEC, STEVEN W TR & COVEC, TR

PARKLAND AVENUE

RUTH STREET

ELAINE STREET

WOODLAND PLACE

SPARTAN AVENUE

S SALIMAN ROAD

LUPINE LANE

VINE GATE STREET

ORCHARD ROW PLACE

VILLAGE GREEN AVENUE

MEADOW VIEW PLACE

LITTLE LANE

EXISTING COUNTRY CLUB ESTATES (NOT A PART)

PARCEL 1

DETENTION POND

CONSTRUCTION ENTRANCE

PROPOSED CATCH BASIN (TYP.)

PROPOSED STORM DRAIN MANHOLE (TYP.)

INLET PROTECTION (TYP.)

SILT FENCE

CONCRETE WASHOUT AREA

PROPOSED HEADWALL

CONNECT TO EXISTING STORM DRAIN MANHOLE

EXISTING STORM DRAIN MAIN TO BE REMOVED

CA.B.

SD

REVISIONS	DATE	DRAWN BY	CHECK BY

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LITTLE LANE VILLAGE
CARSON CITY, NEVADA
PRELIMINARY EROSION CONTROL PLAN

TENTATIVE MAP

PROFESSIONAL ENGINEER STATE OF NEVADA
DANIEL C. BIRCHFIELD
Exp 12-31-20
CIVIL
No. 20844
6/27/19

PROJ. MGR.:	DCM
PROJ. ASSOC.:	CMB
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	AS SHOWN

SHEET 5 OF 5

BHO.CCNV

June 27, 2019 - 13:21 Dwg Name: P:\Bhocnv01\Live\Eng\Final Drawings\Plan Set\Tentative Maps\EROSION CONTROL PLAN.dwg Updated By: dfellows

Overall Landscape Plan

STREET TREES / OPEN SPACE TREES

OPEN SPACE EVERGREEN TREES

Legend

- Recreation Area
- Stormwater Seed Mix or Equal (with Cover Crop)
- Native Seed Mix / Rock Material
- Xeriscaping (Gravel / Rock Material)

Typical Lot Landscaping per Lot

- LANDSCAPING TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUBS
- ORNAMENTAL GRASSES
- PERENNIAL SHRUB AREAS
- PRIVATE YARD AREA

Note: Housing footprints vary on each lot, each lot landscaping around the houses will vary in the location of plant material

OVERALL LANDSCAPE PLAN

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

NORTH

Carson City Required Landscaping

OPEN SPACE DATA

Per CCMC Section 17.10.046
Required: A minimum of 250 sq. ft. of open space per dwelling unit shall be provided which may include private open space and/or common open space. At least 100 sq. ft of common open space per residential unit shall be designated for recreation.

POLLINATOR PLANT MATERIAL
Requirement: 50% of the plant material is to be specified as Pollinator friendly plant material

LANDSCAPE DATA

TOTAL SITE AREA: 21.48 acres

OPEN SPACE AREA

Open Space Required: 250 sq. ft. of Open Space per Unit
149 Units x 250 sq. ft. = 37,250 sq. ft. (0.86 ac.)

Private Open Space Provided: +/- 1,240 sq. ft. of Private Open Space Proposed per Unit
149 Units x 1,240 sq. ft. = 184,760 sq. ft. (4.24 ac.) of Private Open Space

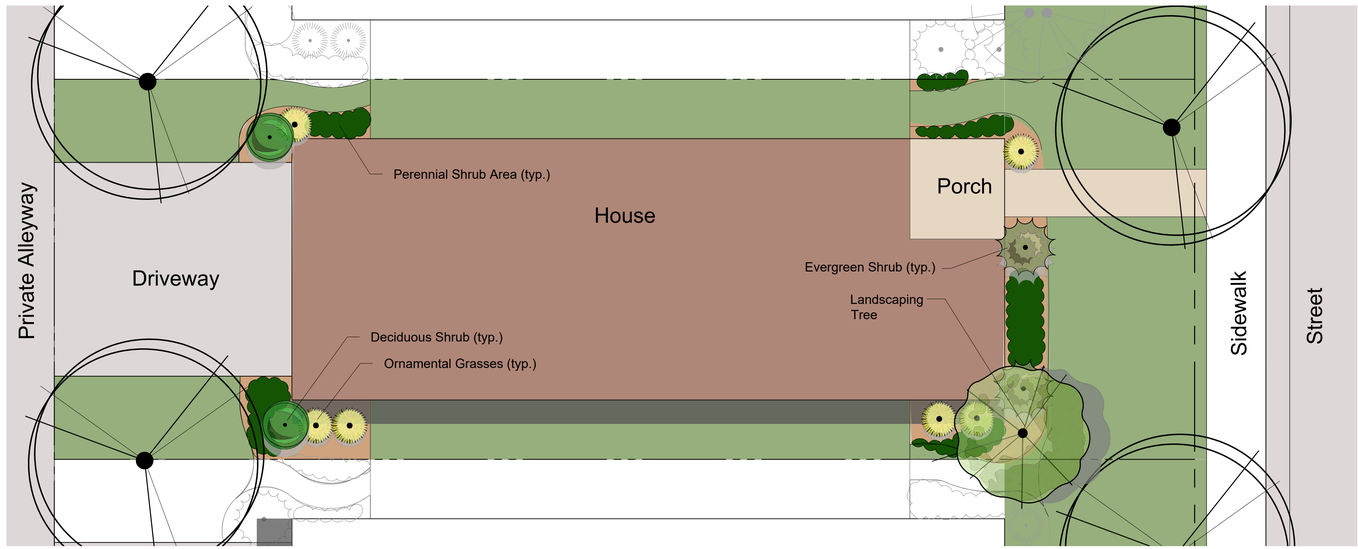
Common Open Space Provided: +/- 2.52 acres (including 0.44 acres of Recreational Area)

TOTAL OPEN SPACE PROVIDED: +/- 6.76 Ac.

OPEN SPACE RECREATION AREA

Open Space Designated for Recreation Required: 100 sq. ft. per Unit
149 Units x 100 = 14,900 sq. ft. (0.34 ac.)

Open Space Designated for Recreation Provided: 19,166 sq. ft. (+/- 0.44 ac)



TYPICAL LOT LANDSCAPE PLAN

GRAPHIC SCALE
6 0 3 6 12 24
(IN FEET)
1/6" inch = 1 ft.

NORTH

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

DRAWN BY | CHECK BY
REVISIONS
DATE

LITTLE LANE DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY LANDSCAPE PLAN

REGISTERED LANDSCAPE ARCHITECT
James Matthew Norris
993
Expires: 06/30/19
STATE OF NEVADA

PROJ. MGR.:	KED
PROJ. ASSOC.:	MN
DRAWN BY:	JBD
DATE:	6-18-19
SCALE:	1"=60'

SHEET
L1 OF L1
BHOCCNV01

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June 28, 2019 - 10:23 Dwg Name: \\nvd-sh-nas\Projects-RI\BHOccnv01\dwg\Landplan\Preliminary\Rendered Preliminary Landscape Plan 6.28.19.dwg Updated By: bdeitchler

CONCEPTUAL STREETSCENE

LITTLE LANE VILLAGE

CARSON CITY, NV

SS

BATES HOMES
DEFINING LUXURY LIVING

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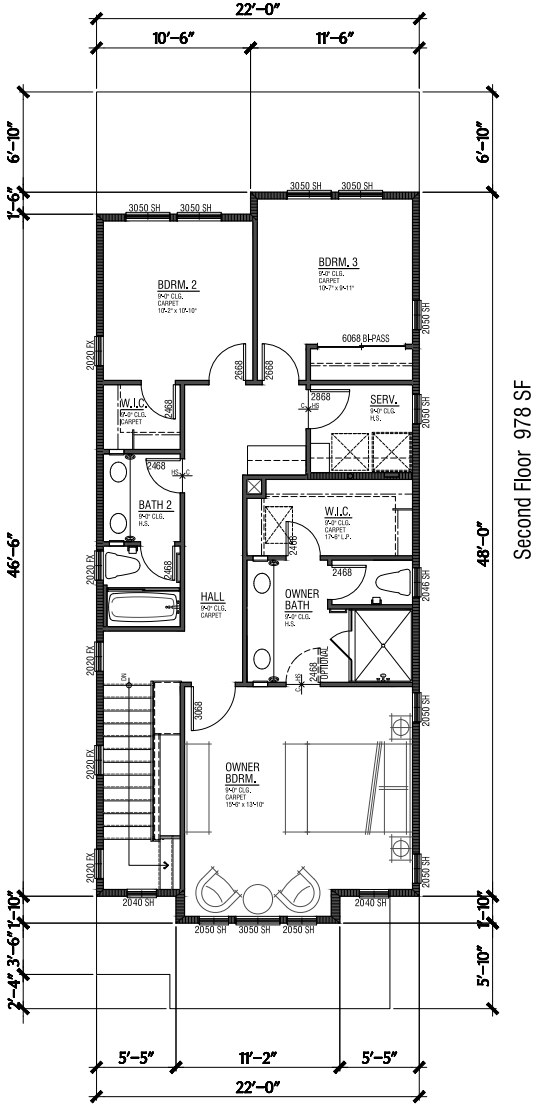

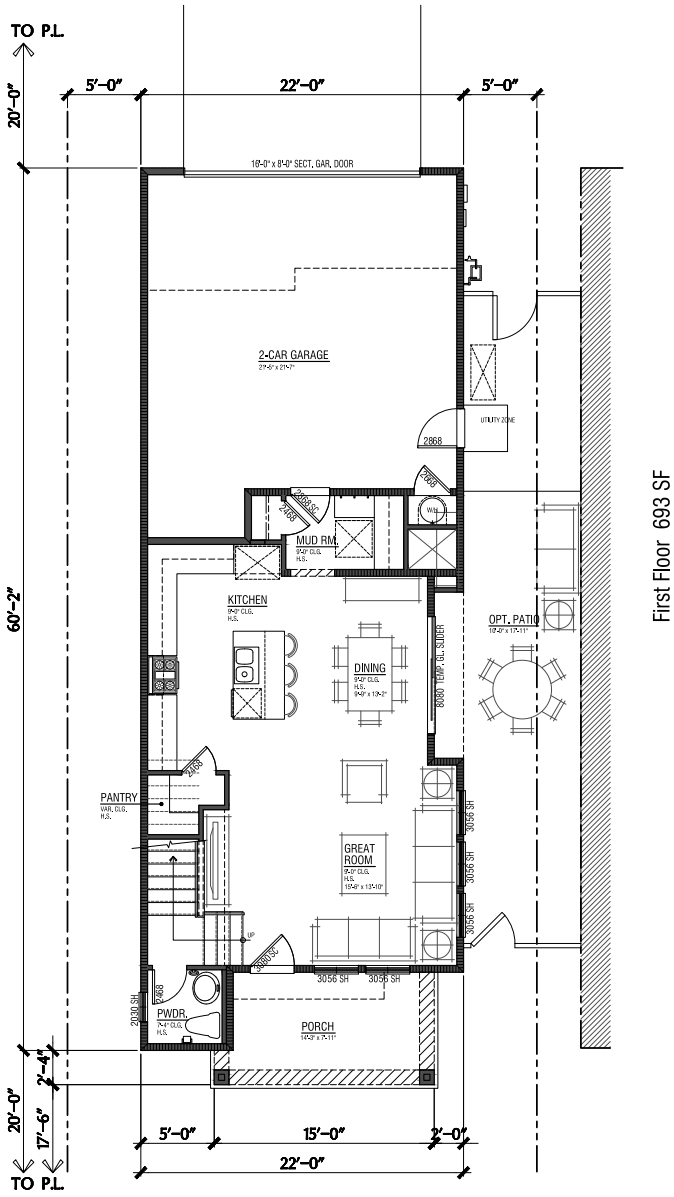

PLAN 1

1671 SF
3 Bdrm | 2.5 Bath
2- Car Garage

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CARSON CITY, NV

A1.1

0 2 4 8

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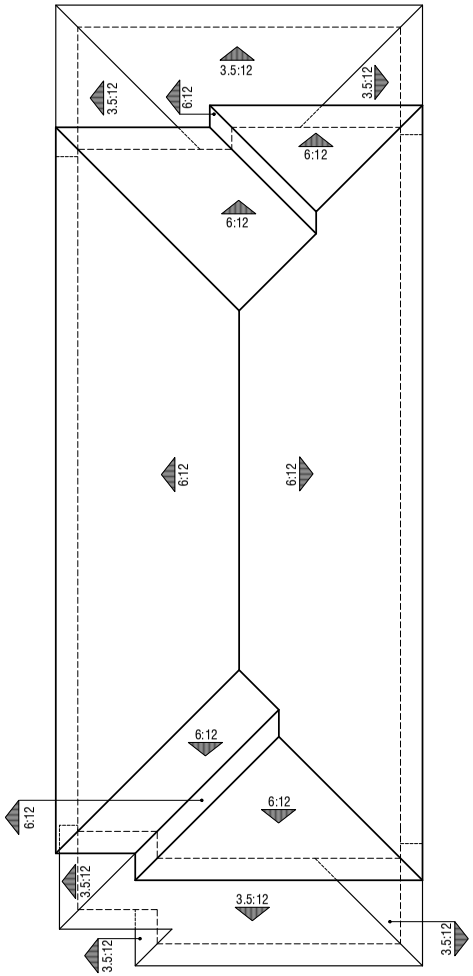
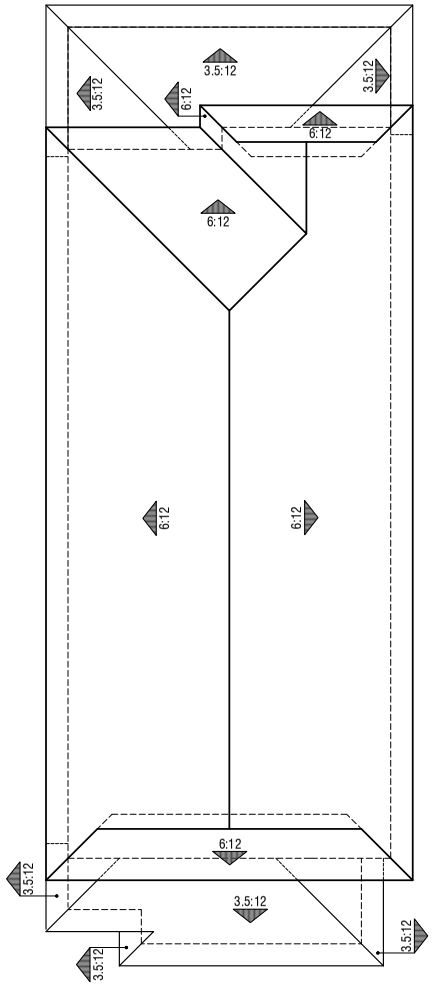
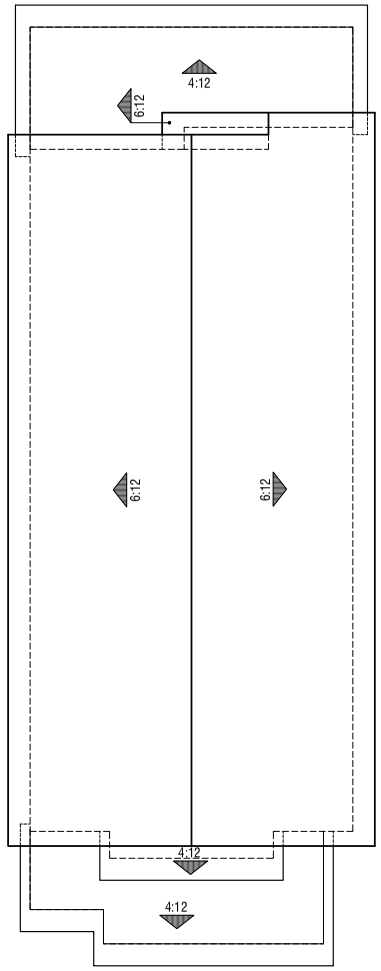


Elevation C
Traditional



Elevation B
Craftsman



Elevation A
Farmhouse

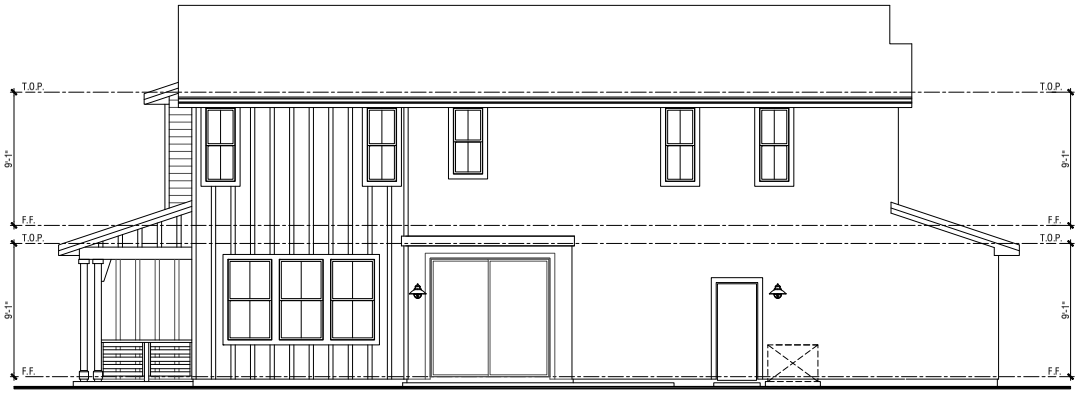
PLAN 1
Roof Plans

Elevation A
Farmhouse

Elevation C
Traditional

Elevation B
Craftsman

PLAN 1
Front Elevations



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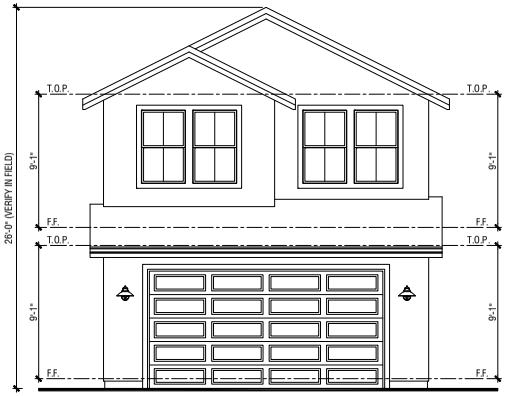

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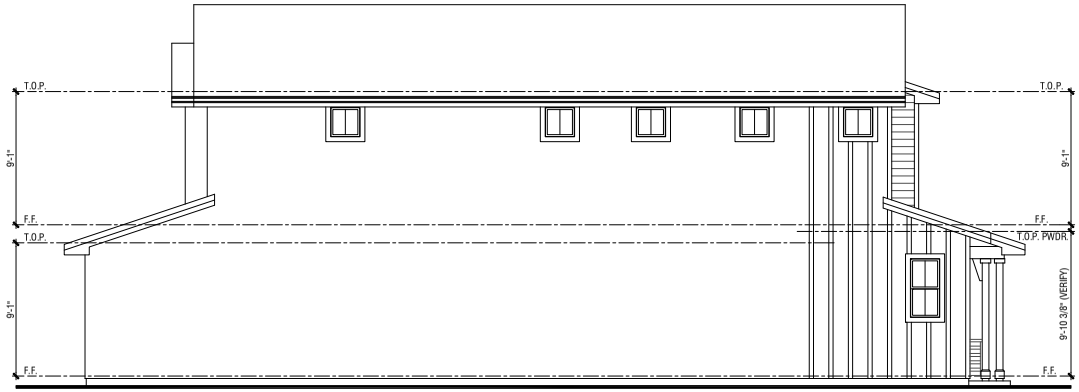

Left

Front

PLAN 1

Elevation A - Farmhouse

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CARSON CITY, NV

A1.4

0 2 4 8

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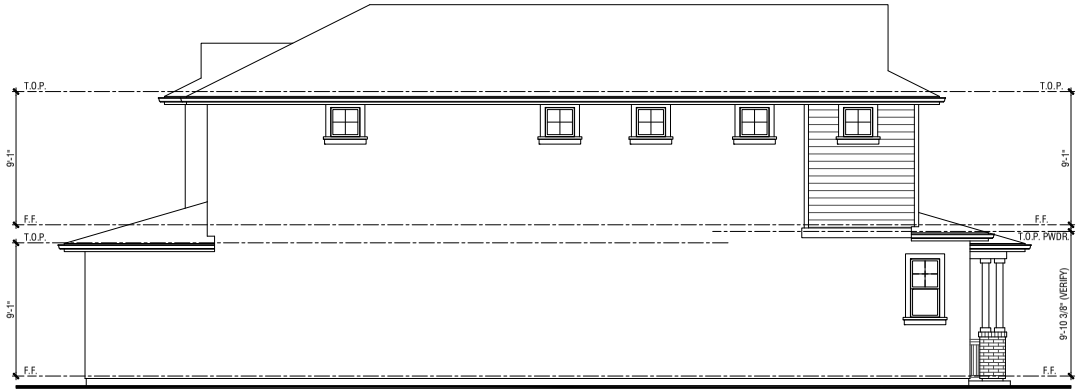
Right

Rear



Left

Front

PLAN 1

Elevation B - Craftsman

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LITTLE LANE VILLAGE

CARSON CITY, NV

A1.5

0 2 4 8

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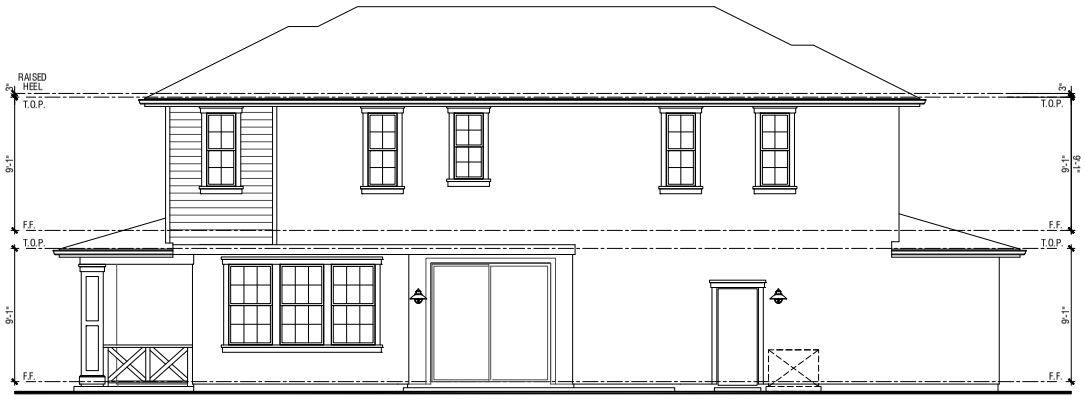

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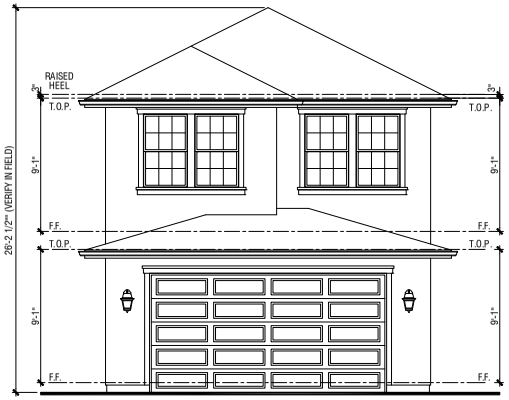

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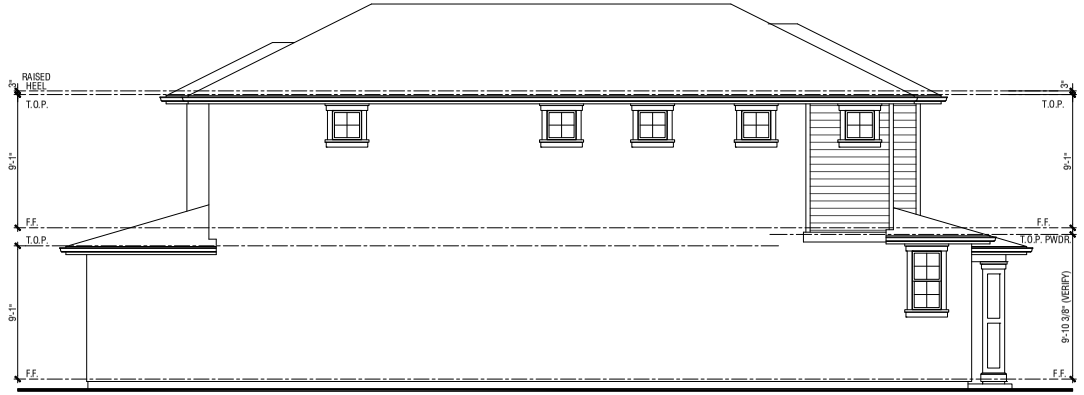
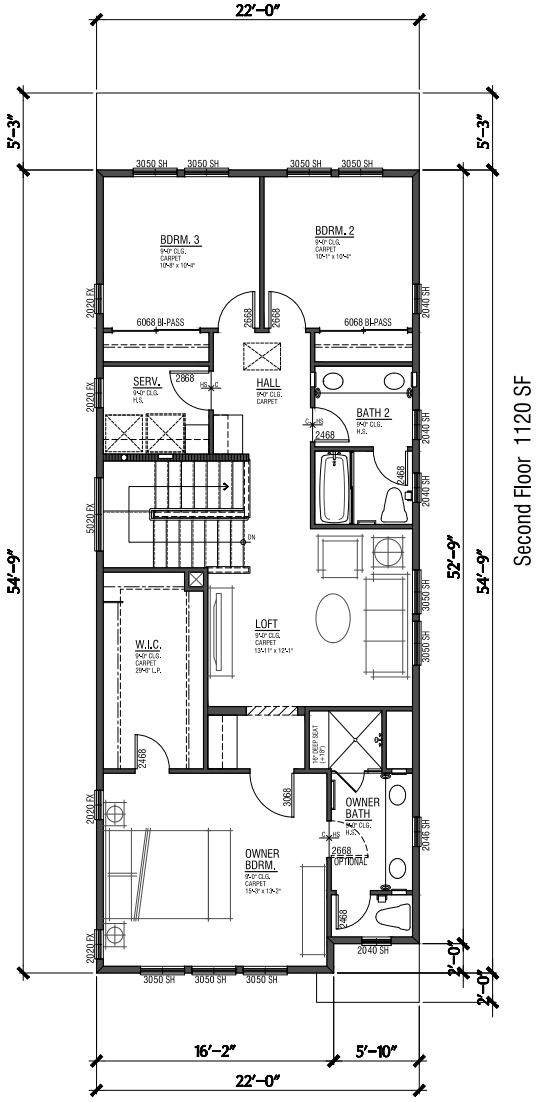


Left

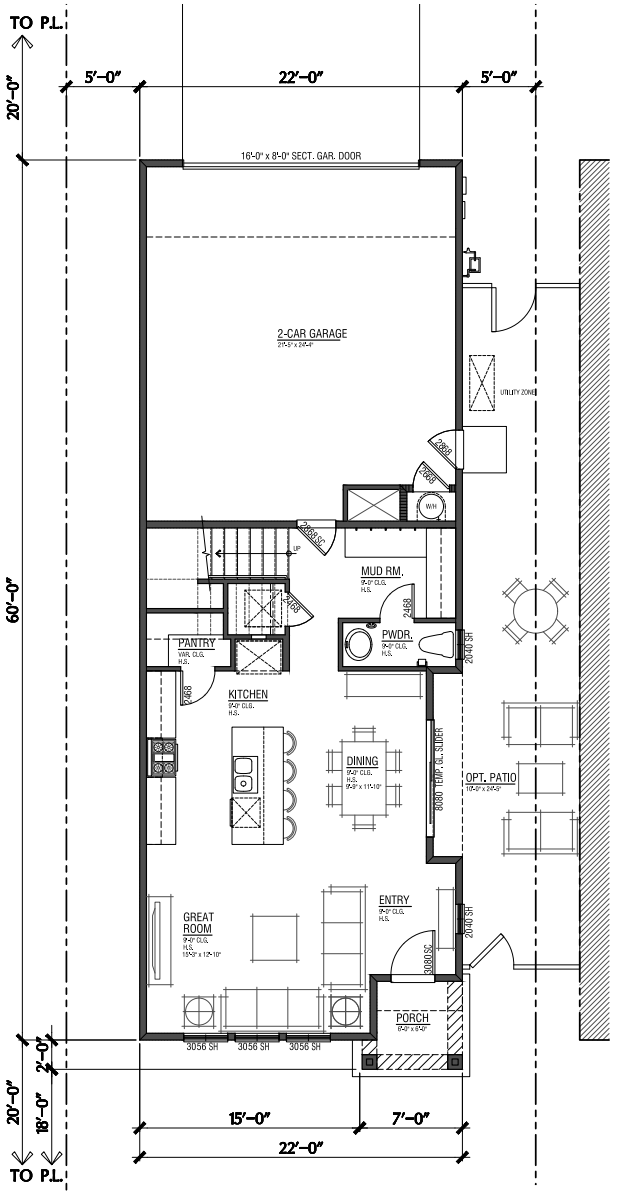
Front

PLAN 1

Elevation C - Traditional



Second Floor 1120 SF



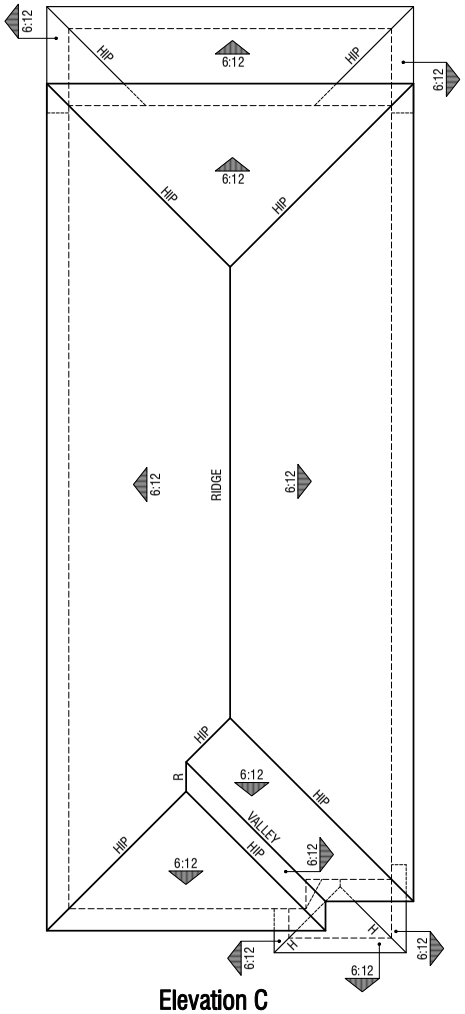
First Floor 725 SF

PLAN 2

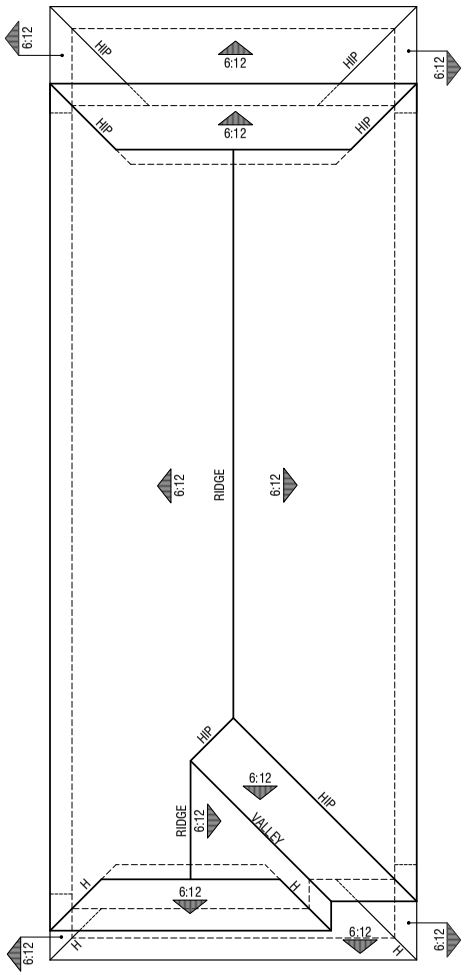
1845 SF

3 Bdrm | 2.5 Bath | Loft

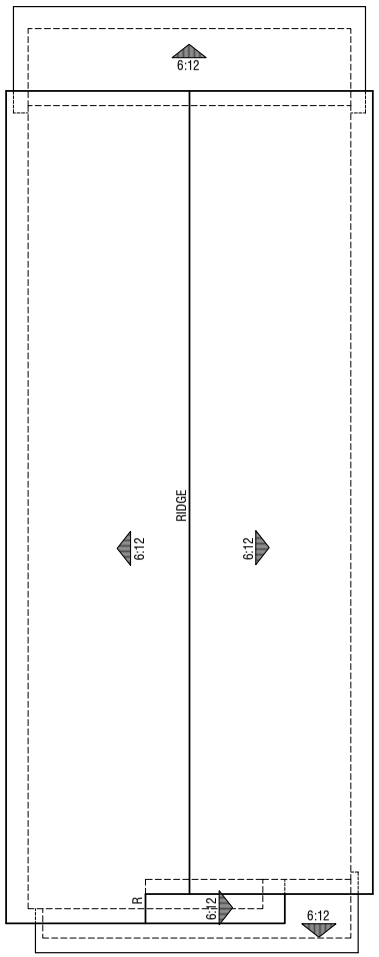
2- Car Garage



Elevation C
Traditional



Elevation B
Craftsman



Elevation A
Farmhouse

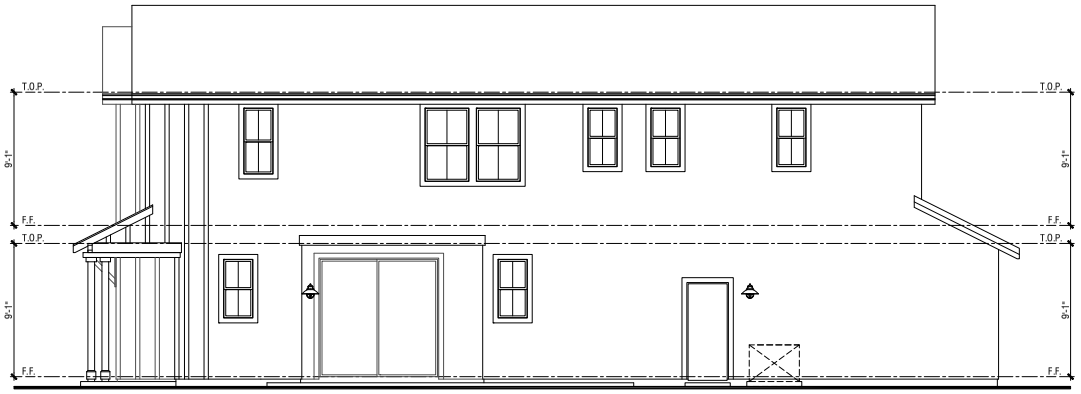
PLAN 2
Roof Plans

Elevation A
Farmhouse

Elevation C
Traditional

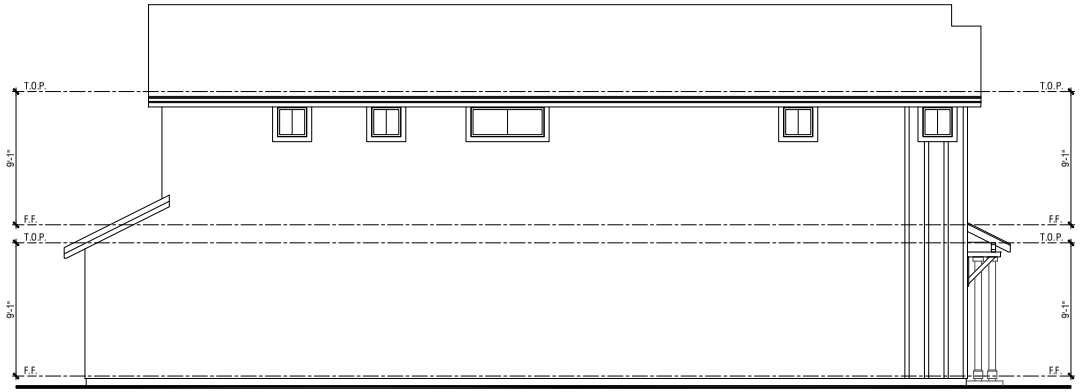
Elevation B
Craftsman

PLAN 2
Front Elevations



Right

Rear



Left

Front

PLAN 2

Elevation A - Farmhouse

BATES HOMES
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LITTLE LANE VILLAGE

CARSON CITY, NV

A2.4

0 2 4 8

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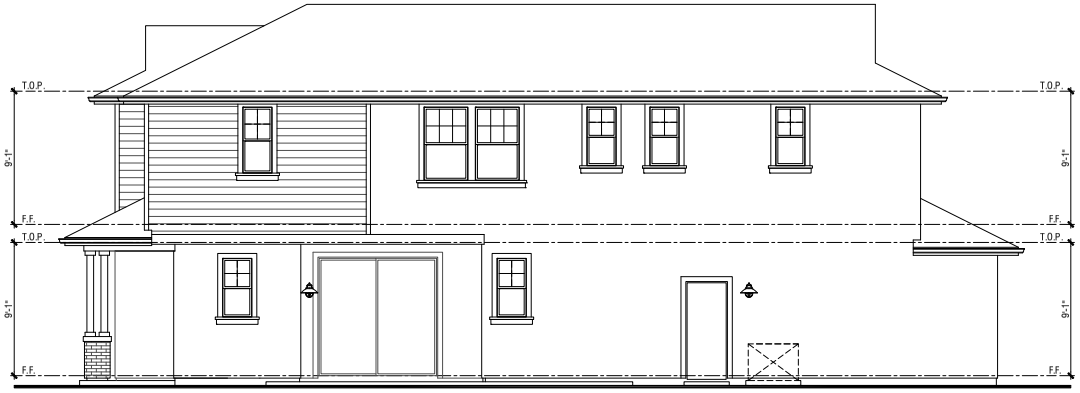
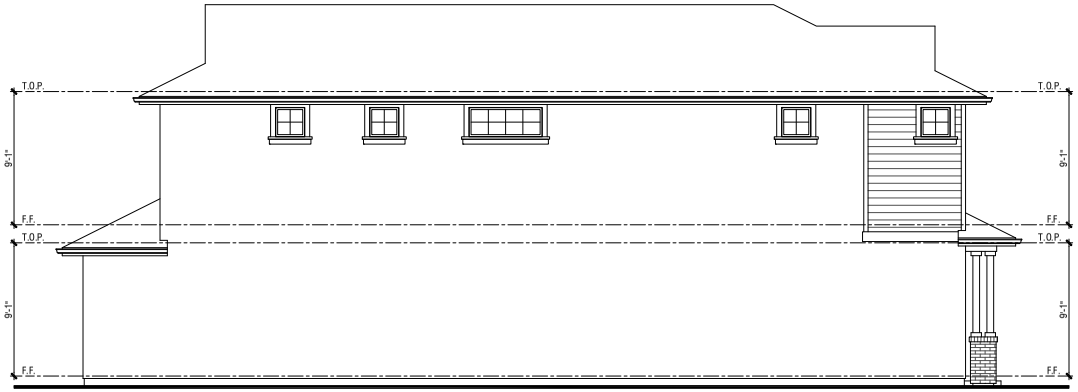


Right

Rear



Left

Front

PLAN 2

Elevation B - Craftsman

BATES HOMES
DEFINING LUXURY LIVING

LITTLE LANE VILLAGE

CARSON CITY, NV

A2.5

0 2 4 8

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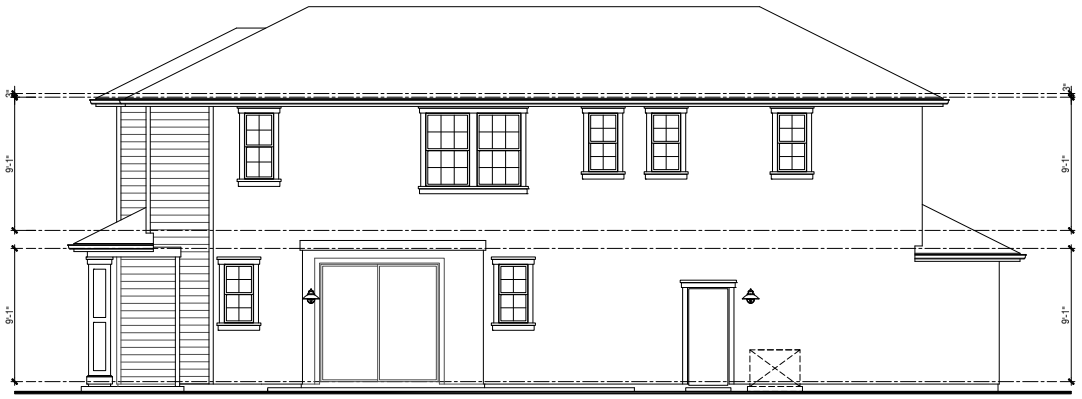
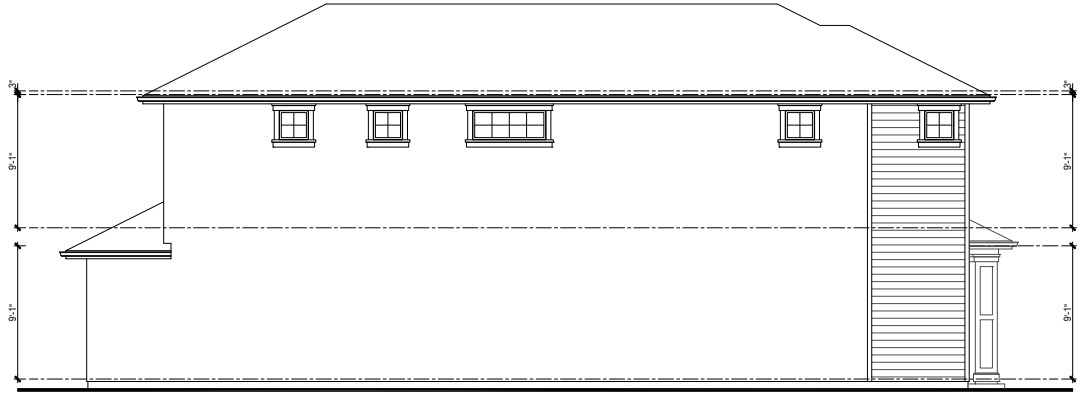


Right

Rear



Left

Front

PLAN 2

Elevation C - Traditional

BATES HOMES
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LITTLE LANE VILLAGE

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A2.6

0 2 4 8

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LITTLE LANE VILLAGE

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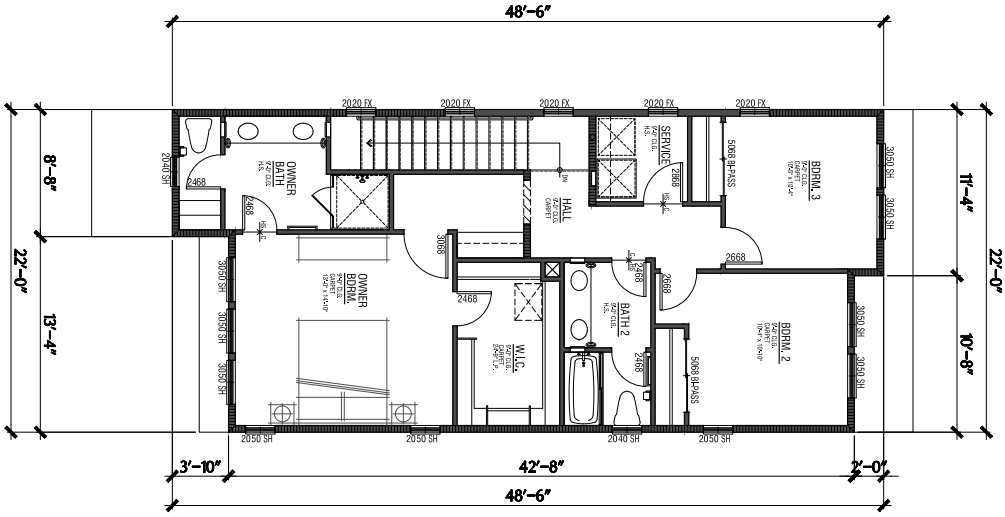
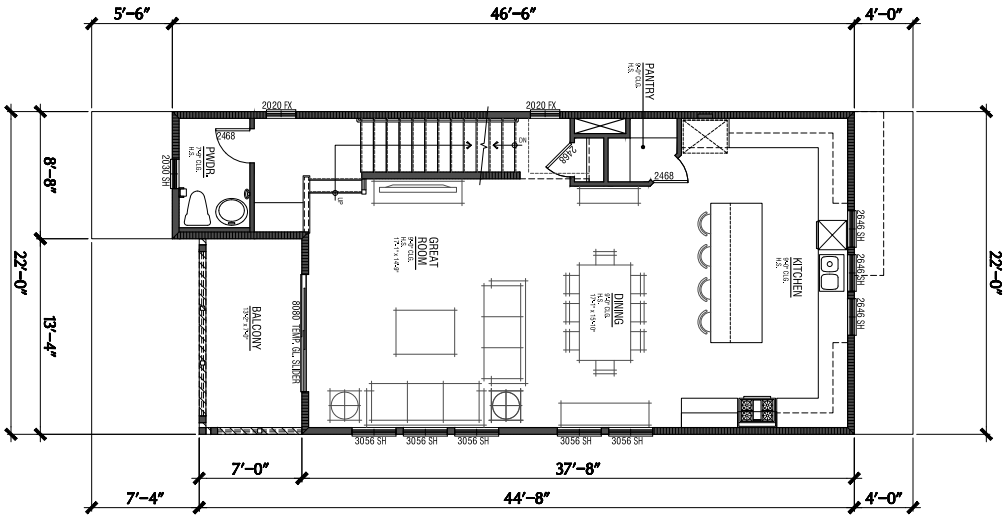
PLAN 3

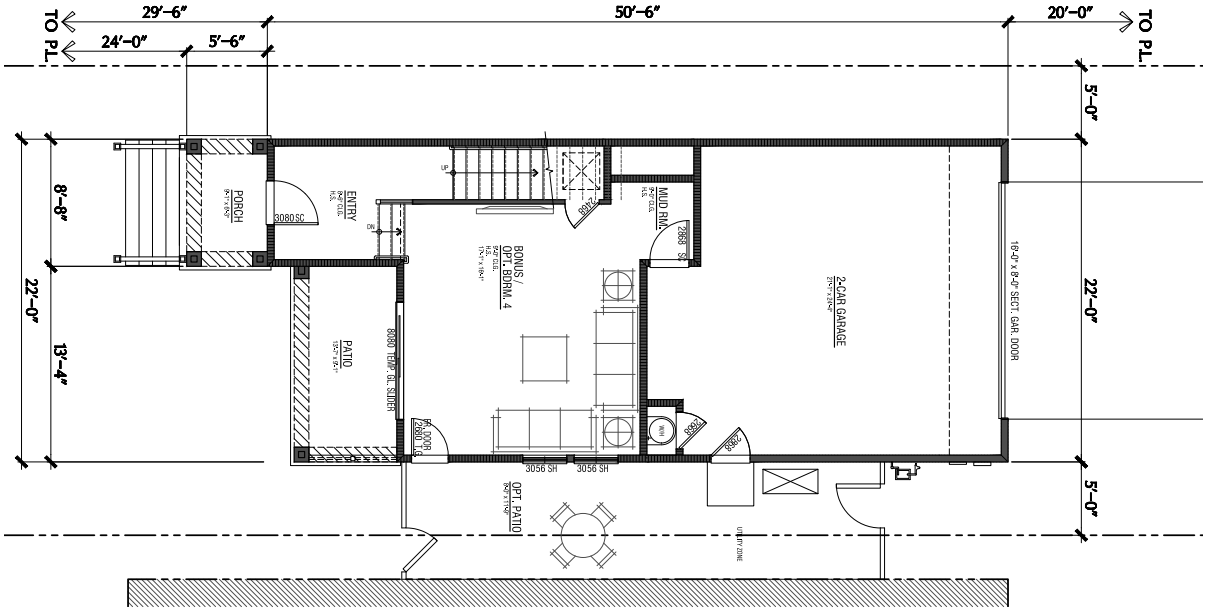
2323 SF
4 Bdrm | 3.5 Bath
2- Car Garage



Third Floor 939 SF



Second Floor 905 SF



First Floor 479 SF

A3.1.1

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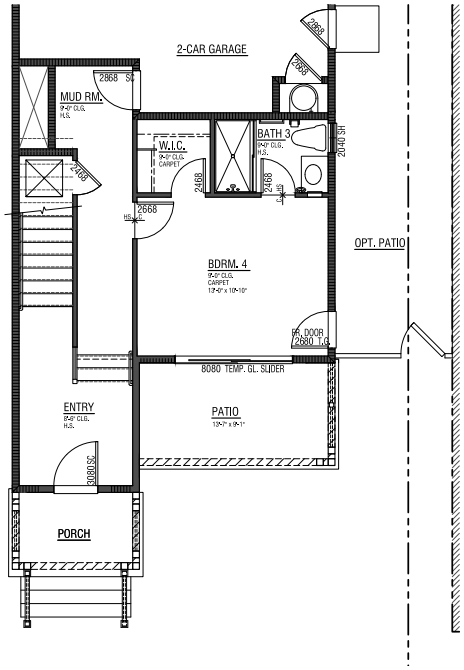
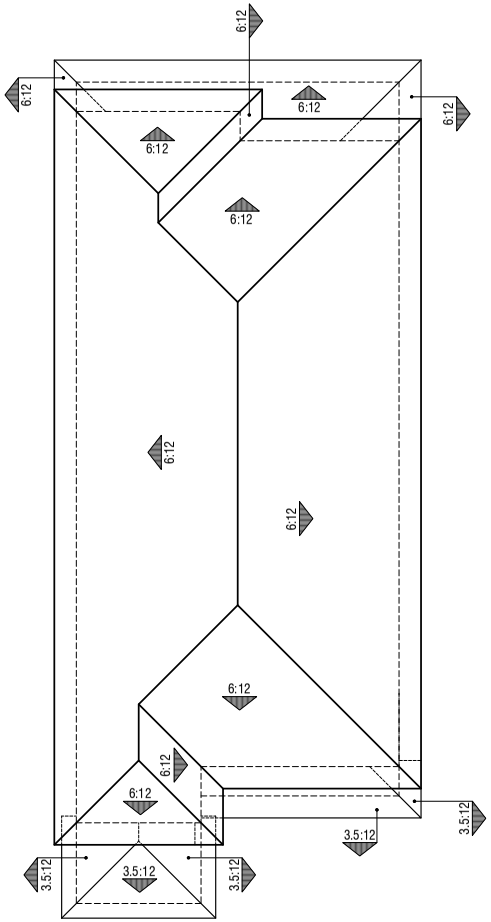


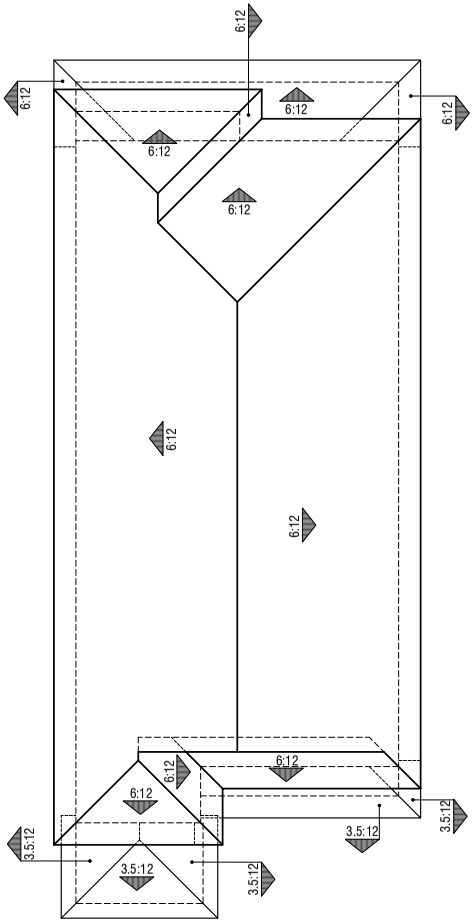
Optional Bedroom @ First Floor

PLAN 3

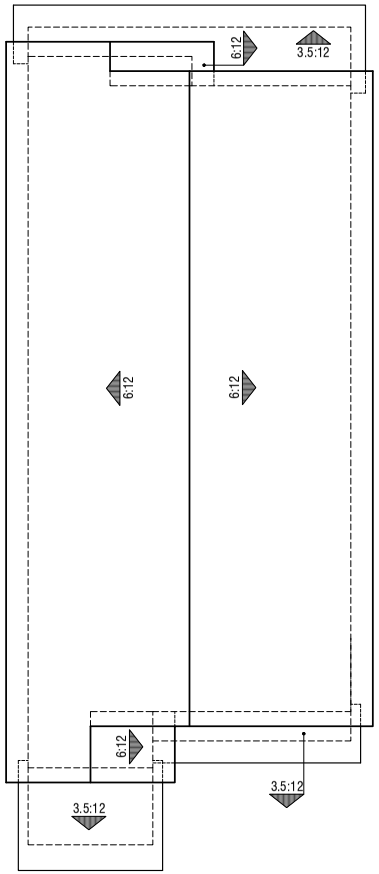
Options



Elevation C
Traditional



Elevation B
Craftsman



Elevation A
Farmhouse

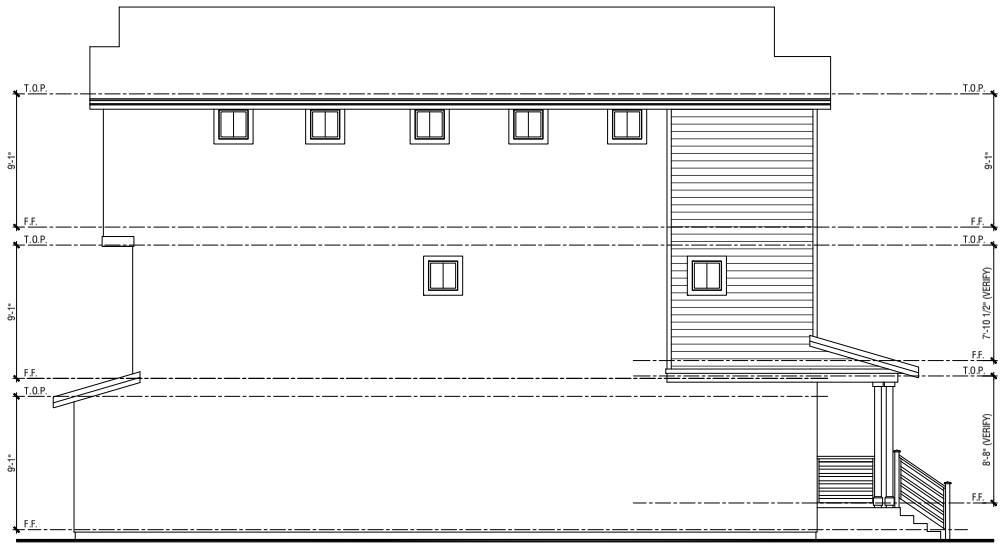
PLAN 3
Roof Plans

Elevation C
Traditional

Elevation B
Craftsman

Elevation A
Farmhouse

PLAN 3
Front Elevations



Left

Front

PLAN 3

Elevation A - Farmhouse

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LITTLE LANE VILLAGE

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A3.4.1

0 2 4 8

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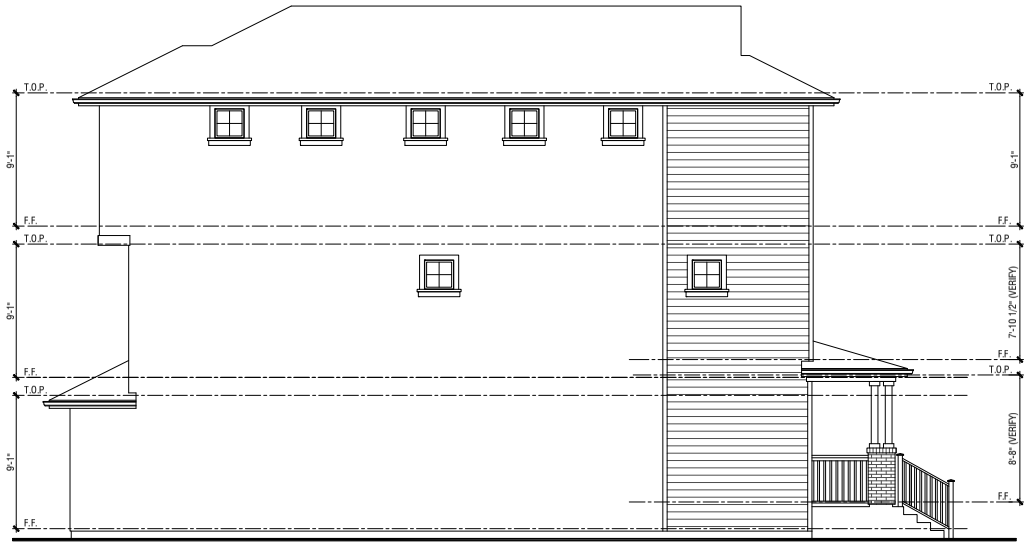
Right

Rear

PLAN 3

Elevation A - Farmhouse



Left

Front

PLAN 3

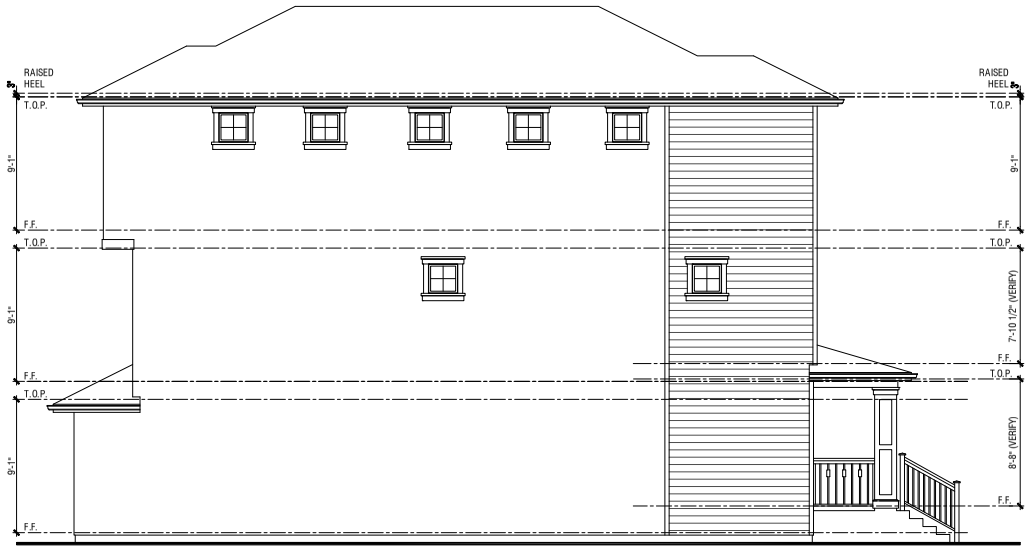
Elevation B - Craftsman

Right

Rear

PLAN 3

Elevation B - Craftsman



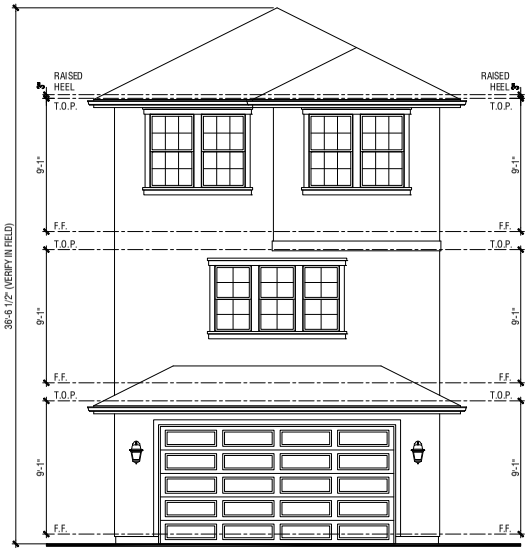
Left

Front

PLAN 3

Elevation C - Traditional

Right



Rear

PLAN 3

Elevation C - Traditional

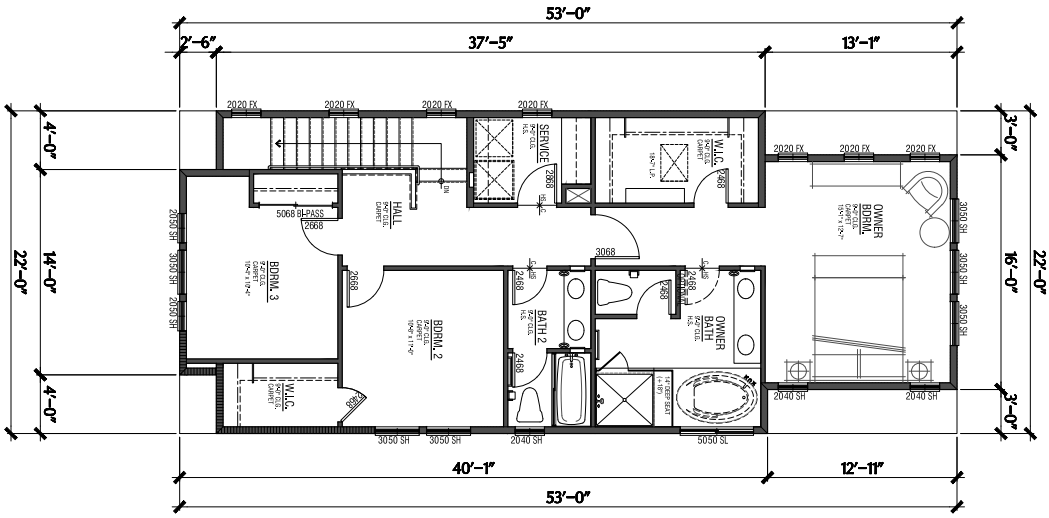
BATES HOMES
DEFINING LUXURY LIVING

LITTLE LANE VILLAGE

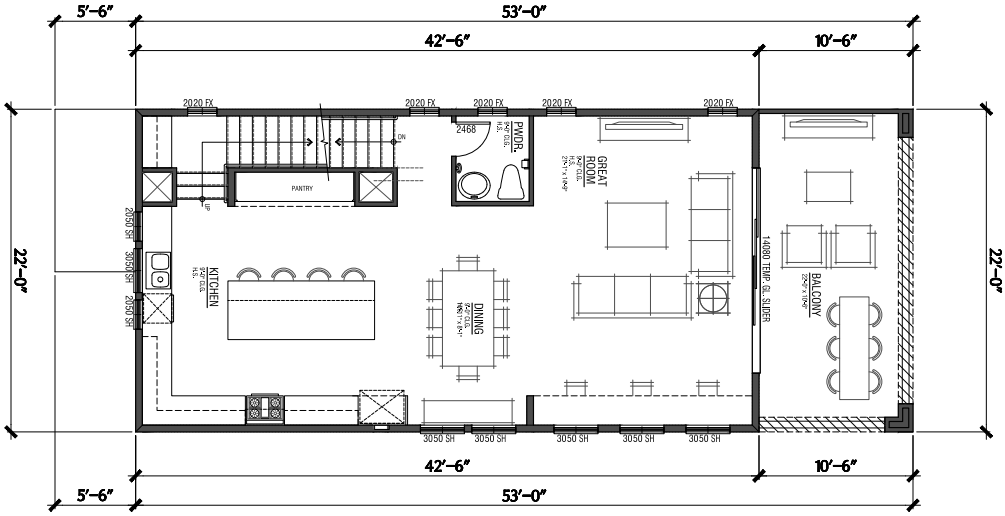
CARSON CITY, NV

PLAN 4

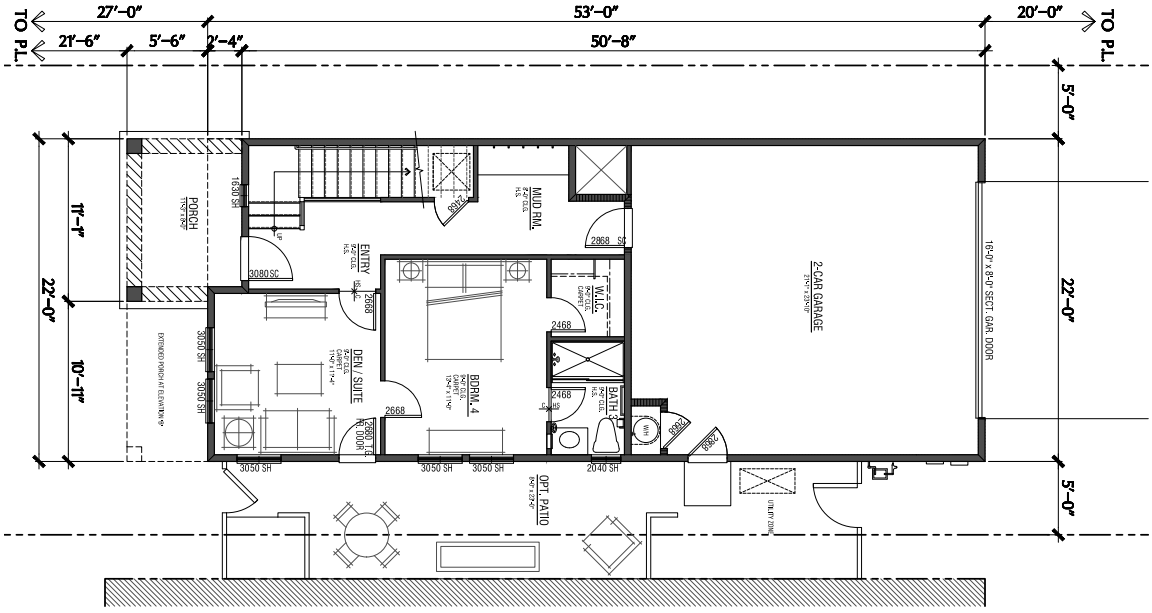
2492 SF
4 Bdrm | 3.5 Bath | Den
2- Car Garage



Third Floor 979 SF



Second Floor 935 SF



First Floor 578 SF

A4.1

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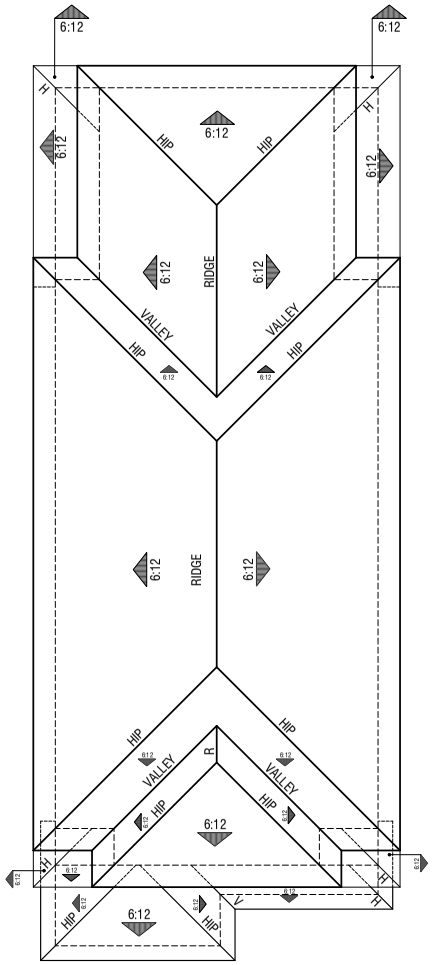
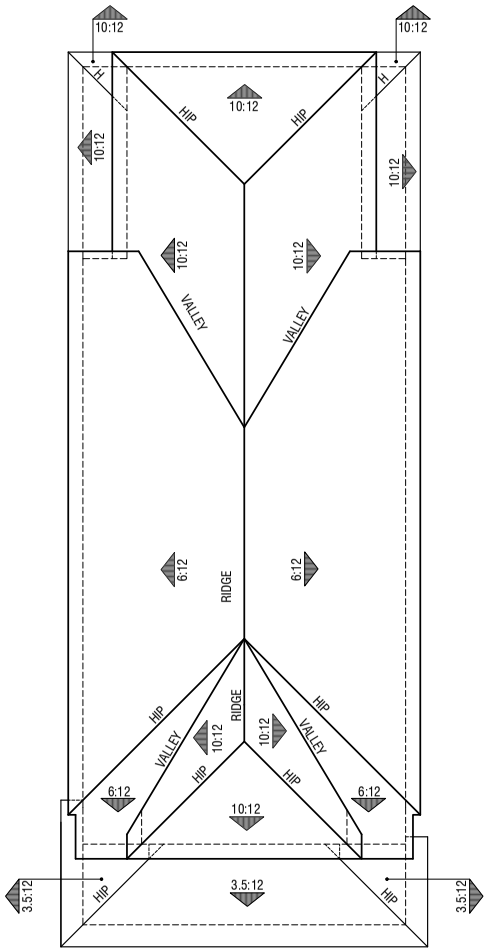
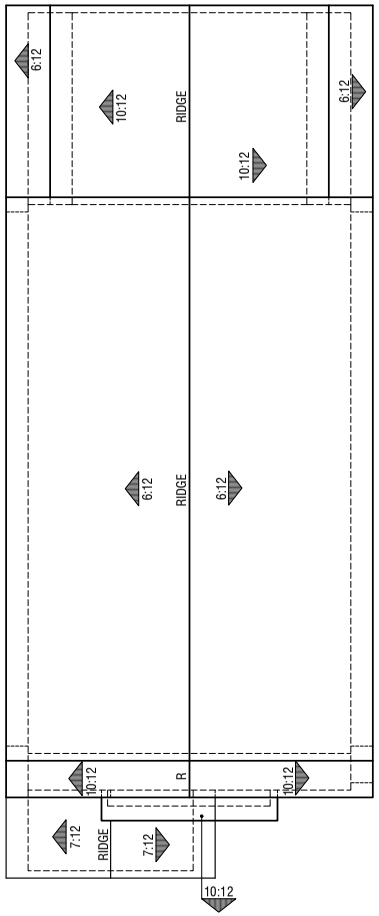


Elevation C
Traditional



Elevation B
Craftsman

PLAN 4
Roof Plans



Elevation A
Farmhouse

Elevation C
Traditional

Elevation B
Craftsman

Elevation A
Farmhouse

PLAN 4
Front Elevations

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A4.3

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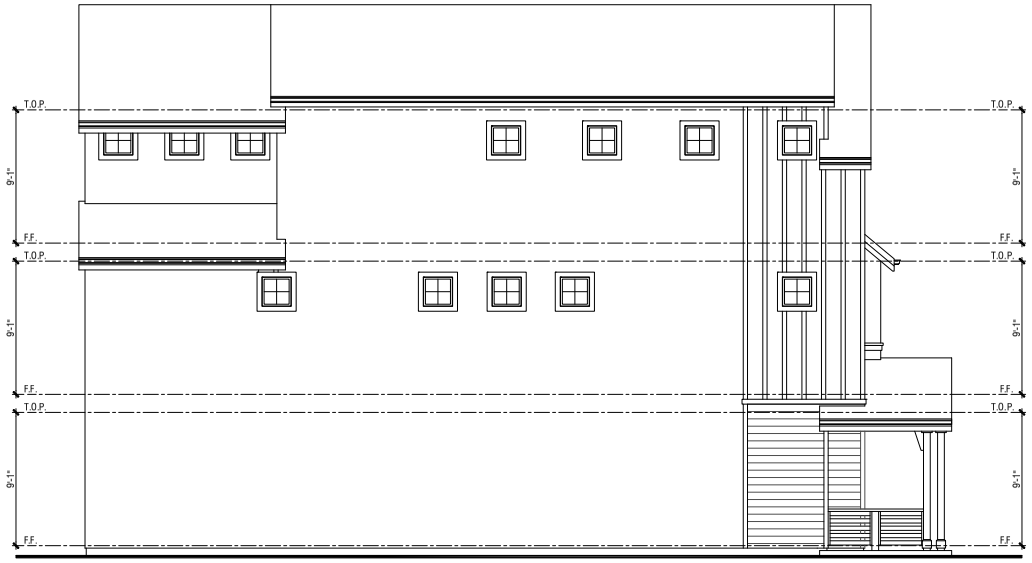

Left

Front

PLAN 4

Elevation A - Farmhouse

BATES HOMES
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LITTLE LANE VILLAGE

CARSON CITY, NV

A4.4.1

0 2 4 8

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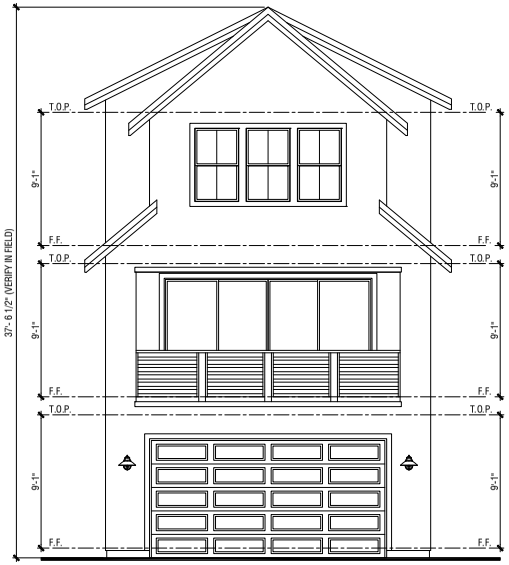
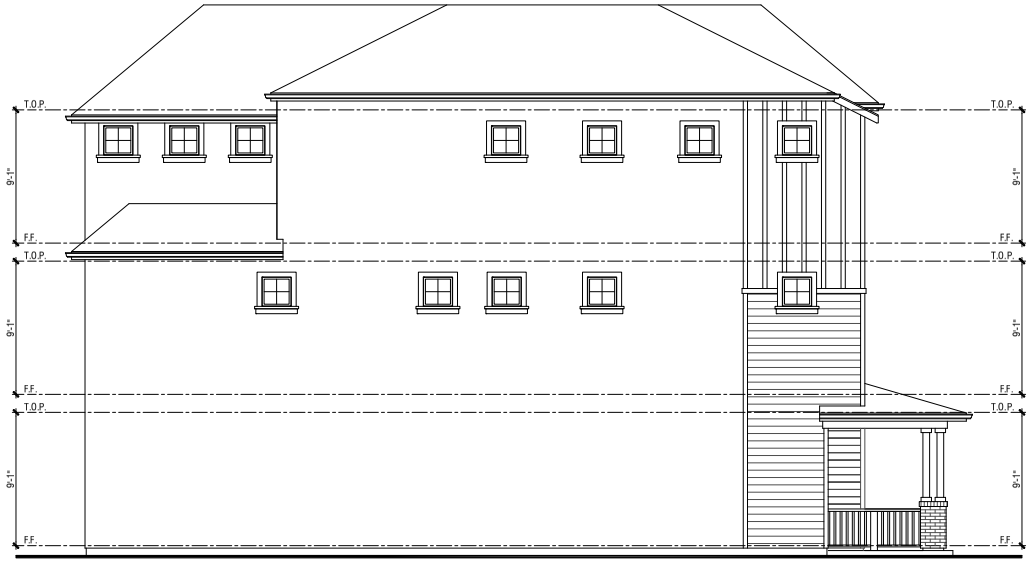
Right



Rear

PLAN 4

Elevation A - Farmhouse



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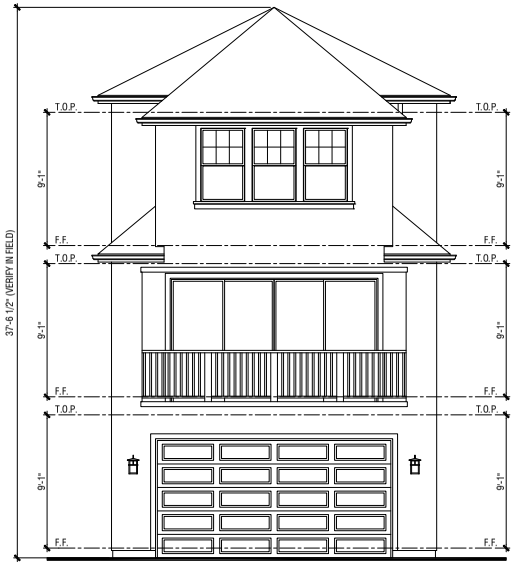
Front

PLAN 4

Elevation B - Craftsman

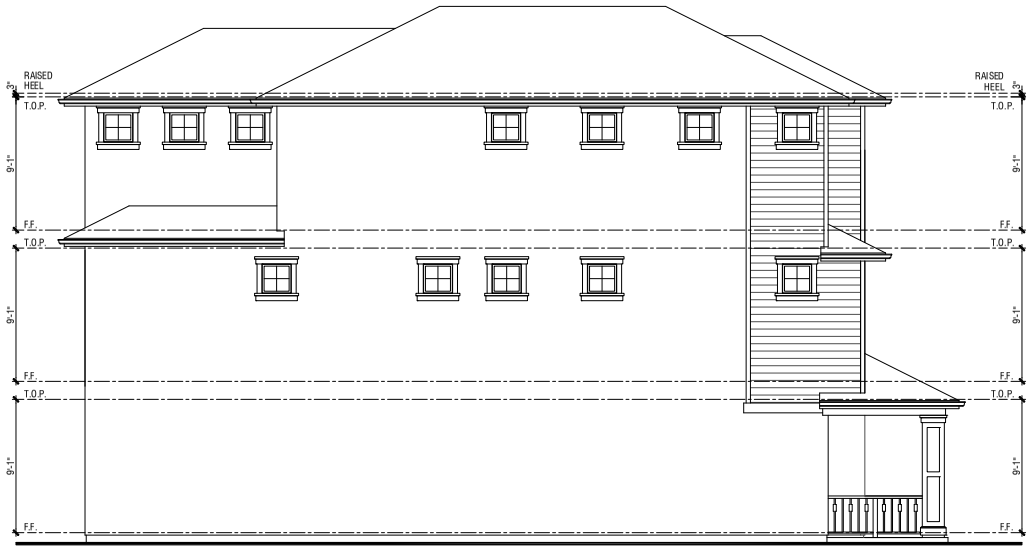
Right



Rear

PLAN 4

Elevation B - Craftsman



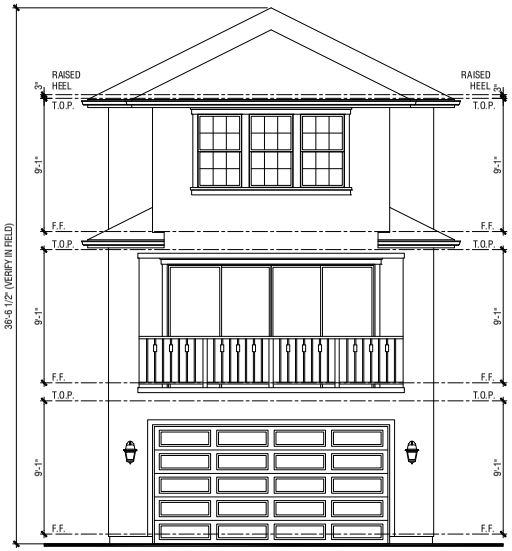
Left

Front

PLAN 4

Elevation C - Traditional

Right



Rear

PLAN 4

Elevation C - Traditional

Manhard CONSULTING LTD

CONCEPTUAL DRAINAGE STUDY

FOR

LITTLE LANE VILLAGE

APN:004-021-09 & 004-021-14

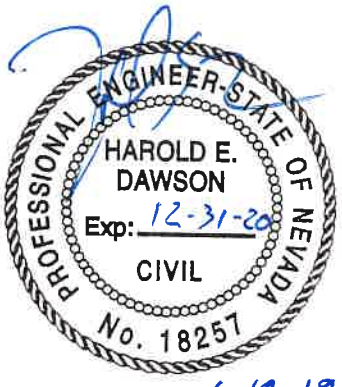
CARSON CITY, NEVADA 89702

Prepared for:

Mr. Fred Bates
Bates Homes
9460 Double R Boulevard, Suite 103
Reno, NV 89521

Prepared by:

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



6-19-19

Project: BHO.CCNV01

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III. PROPOSED DRAINAGE FACILITIES

IV. CONCLUSIONS

V. EXHIBITS

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FIGURE 2 – EXISTING HYDROLOGIC CONDITIONS

FIGURE 3 – PROPOSED HYDROLOGIC CONDITIONS

VI. APPENDICES

APPENDIX A – SUPPORTING CALCULATION DATA

I. INTRODUCTION

B. The following report is a Conceptual Drainage Study for Little Lane Village dated June 2019.

C. The contact person for the preparation of this report is Harold E. Dawson, P.E. at Manhard Consulting, 775-746-3500.

D. The project consists of 149 single family units, a community park, and associated roadways.

E. The existing Little Lane Village parcel numbers are APN 004-021-09 & 004-021-14 and are 21.48 acres in combined size. The parcel slopes from the northwest to the southeast at approximately 0.7% within the confines of the project site. The property lies within South ½ of Southeast ¼ of Section 17, Township 15 North, Range 20 East, M.D.B. & M. in Carson City, Nevada. Currently, the parcel is undeveloped and is proposed to be fully developed.

The subject property is currently zoned MFD within Carson City and is adjacent to developed areas:

North: Monson-Larsen Subdivision, zoned SF6/NB/PR
South: Country Club Estates Subdivision, zoned MH6
East: Saliman Manor Apartments, zoned RC
West: Arbor Villas, zoned MFA

F. Reference the included Vicinity Map (Figure #1).

II EXISTING AND PROPOSED HYDROLOGY

A. The intent of this hydrology study is to set a basis for the existing conditions for comparison to the proposed conditions, show the free draining flood water storage is preserved on site, and prove that the discharge created by the proposed development was

alleviated via a detention structure prior to discharging into the existing storm drain main located at the southeast corner of the proposed project site. There are a total of 1 existing drainage basin, 9 proposed drainage basins, and 1 detention pond for the proposed project. Basins are represented by their boundary as well as existing and proposed conditions. Reference Figure 2 (Existing Hydrologic Conditions) and Figure 3 (Proposed Hydrologic Conditions) for a visual representation of existing basins, proposed basins, and detention pond.

B. The Rational Method was used to determine storm flow discharge. Data used for the Rational Method was derived from the following: NOAA Atlas 14 precipitation intensity values for a 10-minute time of concentration and runoff coefficients are from the 2009 Truckee Meadows Regional Drainage Manual.

The SCS Curve Number Method was used to determine the storage volume required for the free draining flood water and increase of peak storm runoff. Data used for the SCS Curve Number Method was derived from the following: NOAA Atlas 14 precipitation depth values for the 5-year 24-hour storm, FEMA Flood Map Service Center for the flood plain limits and depths of flooding during the 100-year storm, USDA Web Soil Survey for the soil classification, and runoff curve numbers are from the 2009 Truckee Meadows Regional Drainage Manual.

The following is a description of each basin and its data characteristics. EX. represents the existing basin and P. represents the proposed basin.

BASIN EX-1 – The basin is 21.52 find acres in size. A runoff coefficient of 0.20 was used for the 5-year storm event, and a runoff coefficient value of 0.50 was used for the 100-year storm event (based on undeveloped range area) for the existing conditions. Using a 10-minute time of concentration, the intensity value for the 5-year storm event is 1.45 inches/hour, and the intensity value for the 100-year storm event is 3.52 inches/hour, respectively. Discharge sheet flows across the proposed project site in the existing condition in a northwest to southeast at approximately 0.7% discharging into the existing storm drain system.

BASINS P-1 TO P-9 – The basins total 21.52 acres in size. A runoff coefficient of 0.60 was used for the 5-year storm event, and a runoff coefficient value of 0.78 was used for the 100-year storm event (based 1/8-acre or Less (Multi-Unit)) for the proposed conditions of P-1 to P-8. A runoff coefficient of 0.05 was used for the 5-year storm event, and a runoff coefficient value of 0.30 was used for the 100-year storm event (based Open Space: Parks)) for the proposed conditions of P-9. Using a 10-minute time of concentration, the intensity value for the 5-year storm event is 1.45 inches/hour, and the intensity value for the 100-year storm event is 3.52 inches/hour, respectively. Discharge flows along the proposed roads at a slope of 0.5% and 2.4% and enters the proposed storm drain network at various catch basin locations and ends up at the proposed detention basin located in the southeast corner of the proposed project. The discharge will exit the detention basin at a rate that equals the discharge in the existing conditions ending up in the existing storm drain main located in the southeast corner of the proposed project site.

Below are the analyzed values for the existing and proposed 5-yr and 100-yr storm events.

	AREA (acres)	EXISTING (5-YR)	EXISTING (100-YR)	PROPOSED (5-YR)	PROPOSED (100-YR)
EX-1	21.52	6.2	37.9		
P-1	0.73			0.6	2.0
P-2	2.77			2.4	7.6
P-3	0.71			0.6	2.0
P-4	6.69			5.8	18.38
P-5	0.25			1.9	6.1
P-6	0.90			0.2	0.7
P-7	4.85			4.2	13.3
P-8	0.33			0.3	0.9
P-9	2.94			0.2	3.1
P-Total	21.52			14.9	49.6

C. The downsteam drainage consists of a 24-inch storm drain pipe followed by a 36-inch storm pipe, which follows Saliman Road. The storm drain system outlets into Linear Park and then leads to the Carson River.

D. There is an existing drainage problem for the proposed project site as the site is currently in a localized low point which contributes to the parcel being in a floodplain Zone AO. There is a 12-inch pipe on site that serves as an outlet structure; however, there may be some backflow from downstream that causes ponding. The proposed detention pond will decrease the overall area of the floodplain and be able to provide the flood water storage currently on the parcel.

E. The project site lies in Unshaded Zone X, Shaded Zone X (area of minimal flood hazard (500-yr floodplain)), and Zone AO (area of 1 and 2 feet of flood water depth during 100-yr storm).

F. There is no existing irrigation on the proposed site.

G. Reference Figure 2 (Existing Hydrologic Conditions) and Figure 3 (Proposed Hydrologic Conditions) for the tributary areas of existing basins, proposed basins, and detention pond.

III. PROPOSED DRAINAGE FACILITIES

A. The project site will be graded to allow drainage to flow toward catch basins that enter manholes, and discharge through a proposed storm drain network and into a proposed detention facility located in the southeast corner of the project site. Discharge will then exit the detention basin in a condition less than or equal to the existing condition and enter the existing storm drain network. (Reference Figure 3, Proposed Hydrologic Conditions for a graphical interpretation of the proposed flow direction).

B. Detention will be accomplished by meeting the requirements set forth in Division 14 of the Title 18 Appendix - Carson City Development Standards. Based on the proposed verses existing conditions, the following table dictates the required detention for all storm events as per Section 14.4 of the Carson City Development Standards Table 3 illustrates

the overall increase in all storm events for the entire 21.52-acre property in the existing verses the proposed conditions.

TABLE 3 - STORM EVENT INCREASE (V-AC-FT)

Storm Event	Existing Volume (AC-ft)	Proposed Volume (AC-ft)	Net increase (AC-ft)	Volume to be used (AC-ft)
5	1.21	1.23	0.02	0.02
100	3.23	3.27	0.04	
FEMA		3.96		3.96
Total				3.98

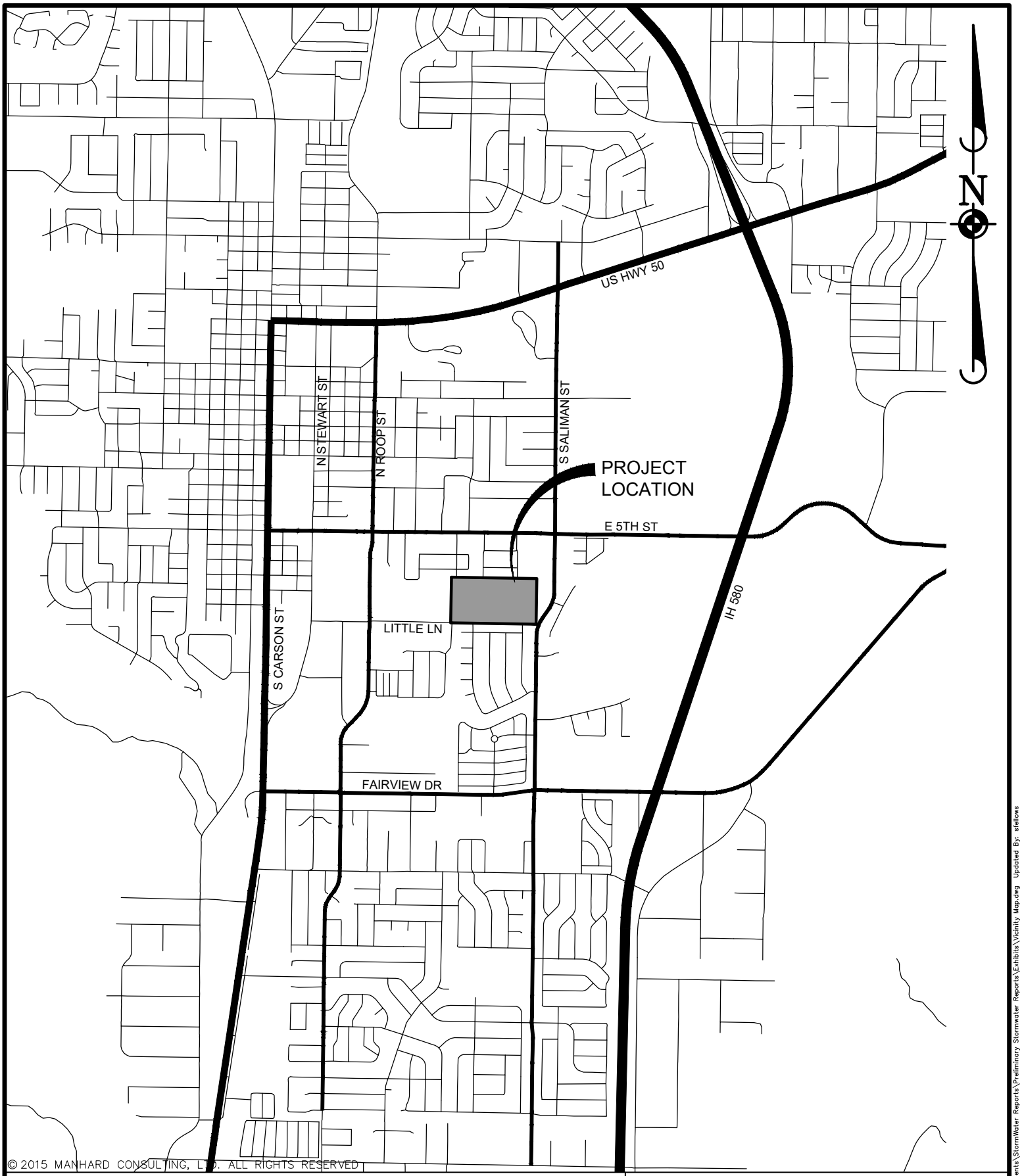
Sizing was performed using the SCS Curve Number Method for a 5-year and 100-year 24-hour storm to find the net increase of runoff and using FEMA flood maps to calculate the current free draining water storage on-site. The water storage was calculated by multiplying the area of Zone AO by the median depth and dividing by acres (See Detention Pond Calculations in Appendix A). Using the more conservative numbers, the volume of the proposed detention basin will need to be at least 3.98 acre-ft and have an additional one-foot of freeboard.

IV. CONCLUSIONS

A. This report has been prepared in compliance with Division 14 of the Title 18 Appendix - Carson City Development Standards.

B. This report is compliant with the most current FEMA standards. A CLOMR will need to be completed with the project as the floodplain limits of Zone AO will be redefined on the parcel. FEMA flood hazard designators have been labeled in the included Figures 2 and 3. Reference the included FEMA FIRMette from map #32031C3445G included in Appendix A.

C. According to the analysis contained within this report, the addition of a detention facility will detain the required amount of discharge in the required storm event with no negative impact to downstream facilities and surrounding areas.



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Civil Engineers - Surveyors - Water Resources Engineers - Water & Wastewater Engineers
Construction Managers - Environmental Scientists - Landscape Architects - Planners

LITTLE LANE VILLAGE
CARSON CITY, NEVADA
VICINITY MAP

PROJ. MGR.:	CMB
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	1"=2000'

SHEET
EXHIBIT 1
BHO.CCNV01

Dwg Name: P:\Bhoccnv01\Documents\StormWater Reports\Preliminary Stormwater Reports\Exhibits\Vicinity Map.dwg Updated By: sfellows 08:30

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

FLOW DIRECTION

N

APN 004-044-08
SMITH, KYLE R

PARKLAND AVENUE

APN 004-045-09
POTTS, THOMAS L
& BRENDA S

APN 004-045-10
FOULENFONT,
WILLIAM & ET AL

APN 004-045-17
HARRISON, NATHAN
W & BETH A

APN 004-045-16
J N & C M
BRUGGER
MANAGERS

APN 004-032-11
ROBINSON, MATHEW T

RUTH STREET

APN 004-035-02
WENINGER, JIM REV
TRUST 2/19/14

APN 004-035-03
CRAFTON REVOCABLE
TRUST 4/29/98

APN 004-035-04
CLEMENS, WENDLYN

APN 004-035-05
OLSON-CURRY,
CAROL A FAM TRUST

APN 004-035-06
WALDREN, MICHAEL
D & ANN E

APN 004-035-07
BRECKENRIDGE PROP
FUND 2016 LLC

APN 004-035-09
WARREN FAMILY
TRUST 11/29/17

ELAINE STREET

APN 004-034-11
MEDINA RENTERIA,
THANIA Y

APN 004-021-08
CARSON CITY STORAGE
LLC & ET AL

PROJECT BOUNDARY

FEMA FLOOD AREA
ZONE X (SHADED)

EXISTING BUILDING

FEMA FLOOD AREA
ZONE AO (1F)

APN 004-021-16
ARBOR VILLAS LLC

PROJECT BOUNDARY

EX-1
AREA = 21.52 AC
Q5 = 6.24 cfs
Q100 = 37.88 cfs

FEMA FLOOD AREA
ZONE AO (1F)

FEMA FLOOD AREA
ZONE AO (2F)

PROJECT BOUNDARY

FEMA FLOOD AREA
ZONE AO (2F)

FEMA FLOOD AREA
ZONE AO (1F)

APN 010-041-24
COVEC, STEVEN W TR & COVEC, TR

APN 004-371-22
ARBOR VILLAS LLC

ONSITE FLOOD
WATER STORAGE
3.96 AC-FT

PROJECT BOUNDARY

LIMITS OF DISTURBANCE

EX. OUTLET

LITTLE LANE

EXISTING COUNTRY
CLUB ESTATES
(NOT A PART)

PARKLAND AVENUE

EXISTING COUNTRY
CLUB ESTATES
(NOT A PART)

FEMA FLOOD AREA
ZONE AO (1F)

FEMA FLOOD AREA
ZONE X (SHADED)

SPARTAN AVENUE

S SALIMAN ROAD

DRAWN BY | CHECK BY

DATE | REVISION

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

LITTLE LANE VILLAGE

CARSON CITY, NEVADA

EXISTING HYDROLOGIC CONDITIONS

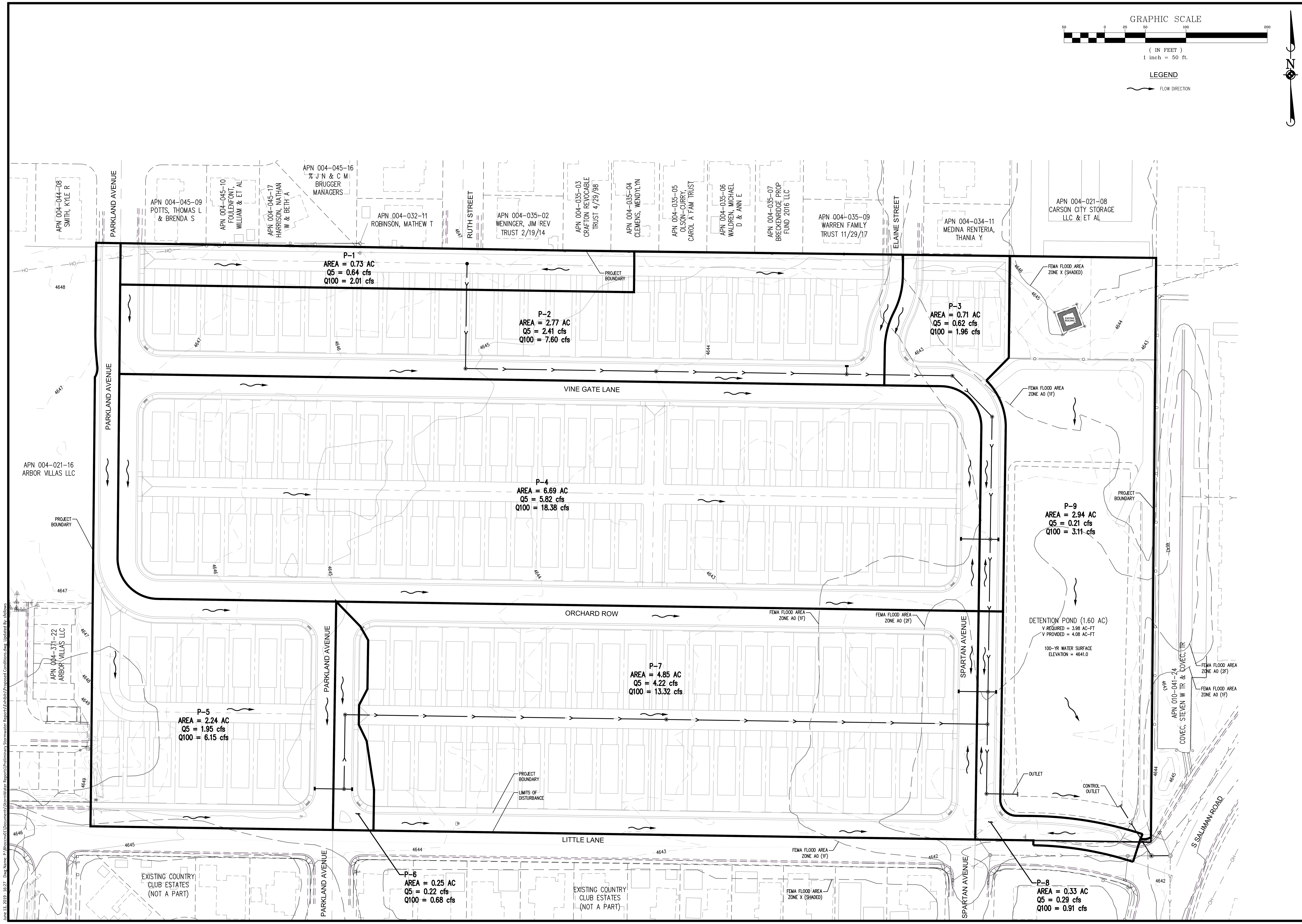
PROJ. MGR.:	DCM
PROJ. ASSOC.:	HED
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	AS SHOWN

SHEET 2 OF 3

BHO.CCNV

EXHIBIT

June 11, 2019 - 15:59 Dwg Name: P:\Bho\ccnv01\Document\5StormWater Reports\Preliminary Stormwater Reports\Exhibits\Existing Conditions.dwg Updated By: dfillmore



GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
LEGEND
FLOW DIRECTION
APN 004-044-08 SMITH, KYLE R
APN 004-045-09 POTTS, THOMAS L & BRENDA S
APN 004-045-10 FOULENFONT, WILLIAM & ET AL
APN 004-045-17 HARRISON, NATHAN W & BETH A
APN 004-045-16 % J N & C M BRUGGER MANAGERS
APN 004-032-11 ROBINSON, MATHEW T
APN 004-035-02 WENINGER, JIM REV TRUST 2/19/14
APN 004-035-03 CRAFTON REVOCABLE TRUST 4/29/98
APN 004-035-04 CLEMENS, WENDYLYN
APN 004-035-05 OLSON-CURRY, CAROL A FAM TRUST
APN 004-035-06 WALDREN, MICHAEL D & ANN E
APN 004-035-07 BRECKENRIDGE PROP FUND 2016 LLC
APN 004-035-09 WARREN FAMILY TRUST 11/29/17
APN 004-034-11 MEDINA RENTERIA, THANIA Y
APN 004-021-08 CARSON CITY STORAGE LLC & ET AL
APN 004-021-16 ARBOR VILLAS LLC
APN 004-371-22 ARBOR VILLAS LLC
APN 010-041-24 COVEC, STEVEN W TR & COVEC, TR
PARKLAND AVENUE
RUTH STREET
ELAINE STREET
VINE GATE LANE
ORCHARD ROW
SPARTAN AVENUE
LITTLE LANE
S SALIMAN ROAD
P-1
AREA = 0.73 AC
Q5 = 0.64 cfs
Q100 = 2.01 cfs
P-2
AREA = 2.77 AC
Q5 = 2.41 cfs
Q100 = 7.60 cfs
P-3
AREA = 0.71 AC
Q5 = 0.62 cfs
Q100 = 1.96 cfs
P-4
AREA = 6.69 AC
Q5 = 5.82 cfs
Q100 = 18.38 cfs
P-5
AREA = 2.24 AC
Q5 = 1.95 cfs
Q100 = 6.15 cfs
P-6
AREA = 0.25 AC
Q5 = 0.22 cfs
Q100 = 0.68 cfs
P-7
AREA = 4.85 AC
Q5 = 4.22 cfs
Q100 = 13.32 cfs
P-8
AREA = 0.33 AC
Q5 = 0.29 cfs
Q100 = 0.91 cfs
P-9
AREA = 2.94 AC
Q5 = 0.21 cfs
Q100 = 3.11 cfs
DETENTION POND (1.60 AC)
V REQUIRED = 3.98 AC-FT
V PROVIDED = 4.08 AC-FT
100-YR WATER SURFACE ELEVATION = 4641.0
PROJECT BOUNDARY
LIMITS OF DISTURBANCE
FEMA FLOOD AREA ZONE X (SHADED)
FEMA FLOOD AREA ZONE AO (1F)
FEMA FLOOD AREA ZONE AO (2F)
EXISTING BUILDING
OUTLET
CONTROL OUTLET
EXISTING COUNTRY CLUB ESTATES (NOT A PART)

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

LITTLE LANE VILLAGE

CARSON CITY, NEVADA

PROPOSED HYDROLOGIC CONDITIONS

PROJ. MGR.:	DCM
PROJ. ASSOC.:	HED
DRAWN BY:	SDF
DATE:	JUN 2019
SCALE:	AS SHOWN

SHEET 3 OF 3

BHO.CCNV

EXHIBIT

APPENDIX A

SUPPORTING CALCULATION DATA

LITTLE LANE VILLAGE DETENTION POND CALCULATIONS

SCS Runoff Curve Number Method

Ia= Initial Abstraction (in)
S= Potentail Maximum retention after Runoff begins (in)
P= Rainfall (in)
Q= Runoff (in)
CN= Curve Number
Vr= Runoff Volume (acre-ft)
Am= Drainage Area (mi^2)

Existing Area (5 yr)		Existing Area (100 yr)	
Am	0.03	Am	0.03
P	1.84	P	3.27
CN	85	CN	85
S	1.76	S	1.76
Ia	0.35	Ia	0.35
Q	0.68	Q	1.82
Vr	1.21	Vr	3.23

NOAA https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=nv
TMRDM Sagebrush with grass understory, Poor soil, Class D (Table 702)

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S} \qquad S = \frac{1000}{CN} - 10$$

$$V_r = 53.33 * Q * A_m \qquad I_a = 0.2S$$

Total Project (5 yr)

Residential Area		Open Space		
Am	0.03	Am	0.00	
P	1.84	P	1.84	
CN	85	CN	86	
S	1.76	S	1.63	
Ia	0.35	Ia	0.33	
Q	0.68	Q	0.73	
Vr	1.05 AC-ft	Vr	0.18	AC-ft

NOAA https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=nv
TMRDM Residential Districts by Average Lot Size: 1/8 acre, Class B (Table 702)
TMRDM Open Space, Poor Condition, Class C (Table 702)

Total	Difference
1.23 AC-ft	0.02 AC-ft

Total Project (100 yr)

Residential Area		Open Space		
Am	0.03	Am	0.00	
P	3.27	P	3.27	
CN	85	CN	86	
S	1.76	S	1.63	
Ia	0.35	Ia	0.33	
Q	1.82	Q	1.90	
Vr	2.81 AC-ft	Vr	0.46	AC-ft

Total	Difference
3.27 AC-ft	0.03 AC-ft

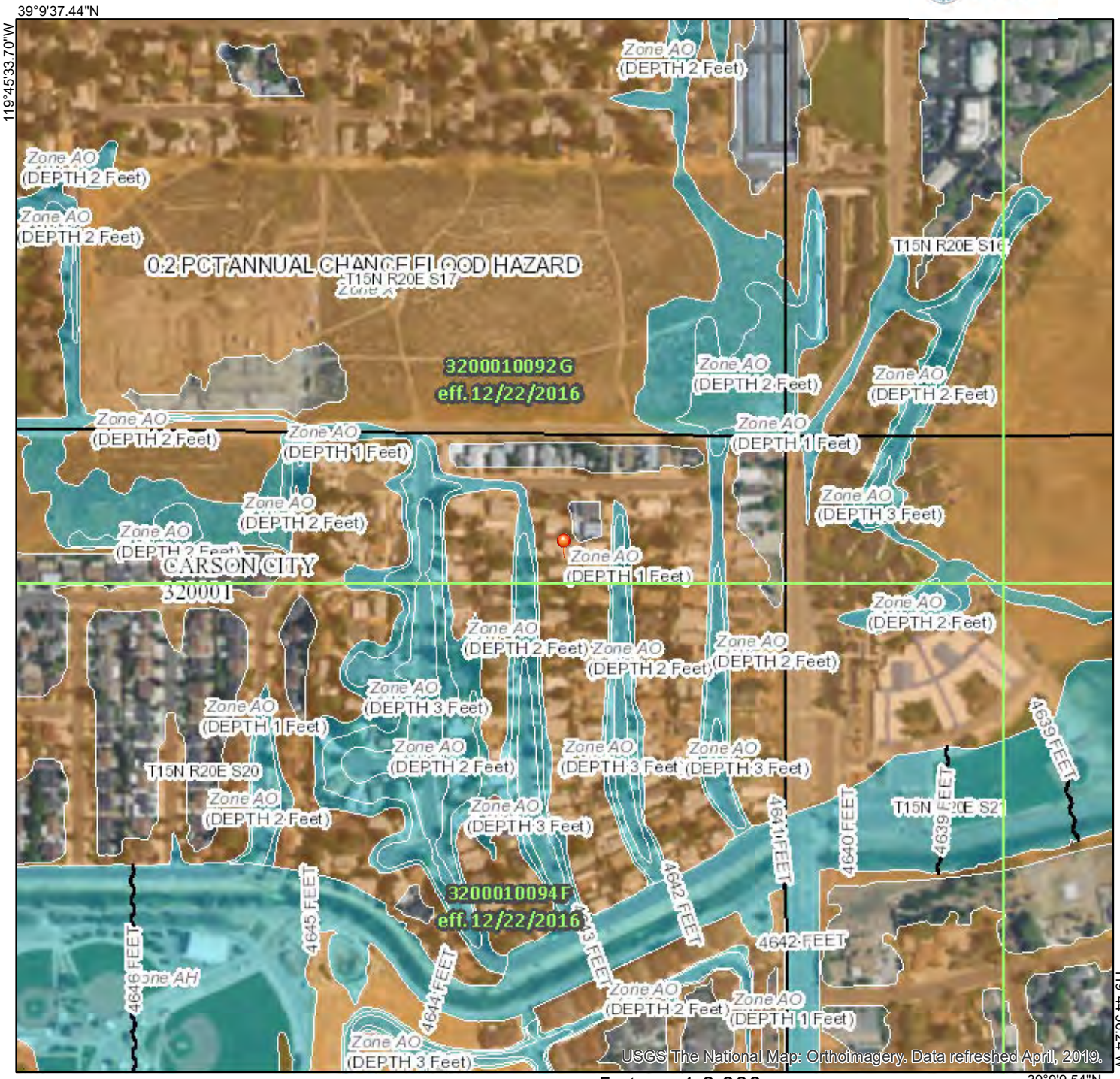
FEMA Flood Map Calculations		
Zone AO (ft)	Area (AC)	Volume (AC-ft)
1	2.41	1.21
2	1.84	2.76
Total	4.25	3.96

RATIONAL METHOD DISCHARGE RESULTS

BASIN	RUNOFF COEFFICIENT (5-YEAR)	RUNOFF COEFFICIENT (100-YEAR)	INTENSITY (5-YEAR)	INTENSITY (100-YEAR)	AREA	Q5	Q100
EX-1	0.20	0.50	1.45	3.52	21.52	6.24	37.88
P-1	0.60	0.78	1.45	3.52	0.73	0.64	2.01
P-2	0.60	0.78	1.45	3.52	2.77	2.41	7.60
P-3	0.60	0.78	1.45	3.52	0.71	0.62	1.96
P-4	0.60	0.78	1.45	3.52	6.69	5.82	18.38
P-5	0.60	0.78	1.45	3.52	2.24	1.95	6.15
P-6	0.60	0.78	1.45	3.52	0.25	0.22	0.68
P-7	0.60	0.78	1.45	3.52	4.85	4.22	13.32
P-8	0.60	0.78	1.45	3.52	0.33	0.29	0.91
P-9	0.05	0.30	1.45	3.52	2.94	0.21	3.11
P-Total					21.52	16.37	54.11

Equations: $Q = CiA$

National Flood Hazard Layer FIRMette



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, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 6/11/2019 at 3:30:50 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 unmodernized areas cannot be used for regulatory purposes.

NOAA Atlas 14, Volume 1, Version 5
Location name: Carson City, Nevada, USA*
Latitude: 39.1583°, Longitude: -119.7542°
Elevation: 4646.86 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**1.14** (0.984-1.34)	**1.42** (1.22-1.68)	**1.90** (1.62-2.24)	**2.35** (2.00-2.78)	**3.11** (2.56-3.68)	**3.79** (3.02-4.54)	**4.62** (3.56-5.57)	**5.59** (4.15-6.86)	**7.15** (5.00-8.95)	**8.56** (5.70-10.9)
10-min	**0.864** (0.744-1.02)	**1.08** (0.930-1.28)	**1.45** (1.24-1.72)	**1.79** (1.52-2.12)	**2.36** (1.94-2.81)	**2.89** (2.30-3.45)	**3.52** (2.71-4.24)	**4.26** (3.16-5.23)	**5.44** (3.80-6.82)	**6.51** (4.34-8.30)
15-min	**0.716** (0.616-0.844)	**0.892** (0.772-1.06)	**1.19** (1.02-1.42)	**1.48** (1.26-1.76)	**1.95** (1.61-2.32)	**2.38** (1.90-2.85)	**2.90** (2.24-3.50)	**3.52** (2.61-4.32)	**4.50** (3.15-5.64)	**5.38** (3.58-6.86)
30-min	**0.482** (0.416-0.570)	**0.600** (0.520-0.712)	**0.802** (0.688-0.954)	**0.996** (0.848-1.18)	**1.32** (1.08-1.56)	**1.61** (1.28-1.92)	**1.95** (1.51-2.36)	**2.37** (1.76-2.91)	**3.03** (2.12-3.79)	**3.62** (2.41-4.62)
60-min	**0.299** (0.257-0.352)	**0.371** (0.322-0.440)	**0.497** (0.426-0.590)	**0.617** (0.525-0.732)	**0.814** (0.670-0.966)	**0.994** (0.794-1.19)	**1.21** (0.934-1.46)	**1.47** (1.09-1.80)	**1.87** (1.31-2.35)	**2.24** (1.49-2.86)
2-hr	**0.202** (0.180-0.232)	**0.252** (0.224-0.288)	**0.320** (0.283-0.366)	**0.382** (0.334-0.437)	**0.475** (0.404-0.546)	**0.558** (0.464-0.648)	**0.651** (0.526-0.764)	**0.764** (0.598-0.910)	**0.959** (0.717-1.19)	**1.14** (0.822-1.44)
3-hr	**0.161** (0.144-0.181)	**0.201** (0.181-0.227)	**0.252** (0.225-0.285)	**0.294** (0.260-0.331)	**0.354** (0.308-0.401)	**0.406** (0.347-0.463)	**0.463** (0.387-0.534)	**0.536** (0.439-0.628)	**0.655** (0.520-0.798)	**0.770** (0.594-0.971)
6-hr	**0.112** (0.101-0.125)	**0.140** (0.126-0.157)	**0.174** (0.155-0.194)	**0.201** (0.178-0.225)	**0.237** (0.208-0.267)	**0.266** (0.230-0.301)	**0.295** (0.250-0.337)	**0.329** (0.274-0.381)	**0.378** (0.307-0.445)	**0.422** (0.334-0.505)
12-hr	**0.073** (0.065-0.082)	**0.092** (0.082-0.104)	**0.116** (0.103-0.131)	**0.135** (0.119-0.152)	**0.160** (0.140-0.181)	**0.179** (0.155-0.205)	**0.199** (0.169-0.230)	**0.220** (0.183-0.256)	**0.247** (0.200-0.294)	**0.269** (0.214-0.325)
24-hr	**0.048** (0.044-0.053)	**0.061** (0.055-0.067)	**0.077** (0.070-0.084)	**0.089** (0.081-0.098)	**0.107** (0.097-0.118)	**0.122** (0.109-0.134)	**0.136** (0.121-0.151)	**0.152** (0.134-0.168)	**0.173** (0.150-0.193)	**0.189** (0.162-0.213)
2-day	**0.029** (0.026-0.032)	**0.036** (0.033-0.041)	**0.046** (0.042-0.052)	**0.054** (0.049-0.061)	**0.065** (0.058-0.074)	**0.074** (0.066-0.084)	**0.084** (0.073-0.095)	**0.094** (0.081-0.107)	**0.107** (0.091-0.123)	**0.118** (0.099-0.137)
3-day	**0.021** (0.019-0.024)	**0.027** (0.024-0.030)	**0.034** (0.031-0.038)	**0.040** (0.036-0.045)	**0.049** (0.043-0.055)	**0.056** (0.049-0.063)	**0.063** (0.055-0.071)	**0.070** (0.061-0.080)	**0.081** (0.069-0.093)	**0.090** (0.075-0.104)
4-day	**0.017** (0.015-0.019)	**0.022** (0.019-0.025)	**0.028** (0.025-0.032)	**0.033** (0.029-0.038)	**0.040** (0.036-0.046)	**0.046** (0.040-0.052)	**0.052** (0.045-0.060)	**0.059** (0.050-0.067)	**0.068** (0.057-0.078)	**0.075** (0.062-0.088)
7-day	**0.011** (0.010-0.013)	**0.015** (0.013-0.016)	**0.019** (0.017-0.021)	**0.022** (0.020-0.025)	**0.027** (0.024-0.030)	**0.031** (0.027-0.035)	**0.035** (0.030-0.039)	**0.039** (0.033-0.044)	**0.045** (0.038-0.051)	**0.049** (0.041-0.057)
10-day	**0.009** (0.008-0.010)	**0.011** (0.010-0.013)	**0.014** (0.013-0.016)	**0.017** (0.015-0.019)	**0.021** (0.018-0.023)	**0.023** (0.020-0.026)	**0.026** (0.023-0.030)	**0.029** (0.025-0.033)	**0.033** (0.028-0.038)	**0.036** (0.030-0.042)
20-day	**0.005** (0.005-0.006)	**0.007** (0.006-0.008)	**0.009** (0.008-0.010)	**0.010** (0.009-0.011)	**0.012** (0.011-0.014)	**0.014** (0.012-0.015)	**0.015** (0.013-0.017)	**0.017** (0.015-0.019)	**0.019** (0.016-0.021)	**0.020** (0.017-0.023)
30-day	**0.004** (0.004-0.004)	**0.005** (0.005-0.006)	**0.007** (0.006-0.007)	**0.008** (0.007-0.009)	**0.009** (0.008-0.010)	**0.010** (0.009-0.011)	**0.011** (0.010-0.013)	**0.012** (0.011-0.014)	**0.014** (0.012-0.016)	**0.015** (0.013-0.017)
45-day	**0.003** (0.003-0.004)	**0.004** (0.004-0.004)	**0.005** (0.005-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.009** (0.008-0.010)	**0.009** (0.008-0.010)	**0.010** (0.009-0.012)	**0.011** (0.010-0.012)
60-day	**0.003** (0.002-0.003)	**0.003** (0.003-0.004)	**0.004** (0.004-0.005)	**0.005** (0.005-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.008** (0.007-0.009)	**0.009** (0.008-0.010)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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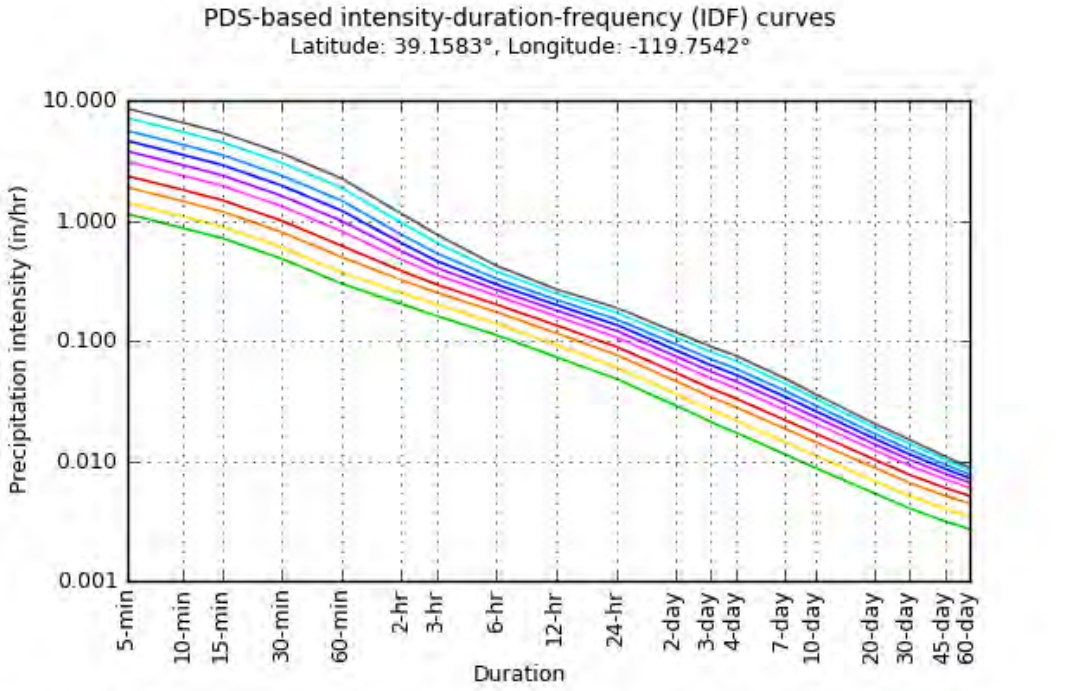
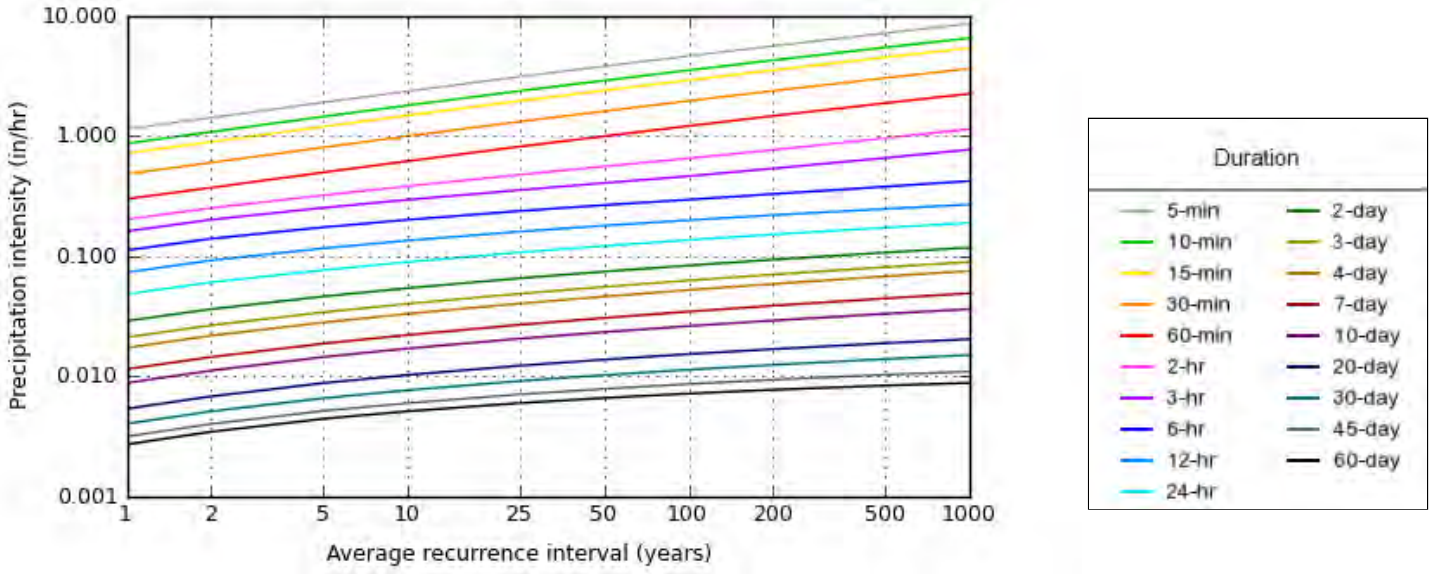
PF graphical





NOAA Atlas 14, Volume 1, Version 5

Created (GMT): Fri Jun 7 16:11:25 2019

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Maps & aerials

Small scale terrain

NOAA Atlas 14, Volume 1, Version 5
Location name: Carson City, Nevada, USA*
Latitude: 39.1583°, Longitude: -119.7542°
Elevation: 4646.86 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.095** (0.082-0.112)	**0.118** (0.102-0.140)	**0.158** (0.135-0.187)	**0.196** (0.167-0.232)	**0.259** (0.213-0.307)	**0.316** (0.252-0.378)	**0.385** (0.297-0.464)	**0.466** (0.346-0.572)	**0.596** (0.417-0.746)	**0.713** (0.475-0.909)
10-min	**0.144** (0.124-0.170)	**0.180** (0.155-0.213)	**0.241** (0.206-0.286)	**0.299** (0.254-0.354)	**0.394** (0.324-0.468)	**0.481** (0.384-0.575)	**0.586** (0.452-0.706)	**0.710** (0.526-0.871)	**0.907** (0.634-1.14)	**1.09** (0.723-1.38)
15-min	**0.179** (0.154-0.211)	**0.223** (0.193-0.264)	**0.298** (0.256-0.354)	**0.370** (0.315-0.439)	**0.488** (0.402-0.580)	**0.596** (0.476-0.712)	**0.726** (0.560-0.875)	**0.880** (0.652-1.08)	**1.13** (0.787-1.41)	**1.35** (0.896-1.72)
30-min	**0.241** (0.208-0.285)	**0.300** (0.260-0.356)	**0.401** (0.344-0.477)	**0.498** (0.424-0.591)	**0.658** (0.542-0.781)	**0.803** (0.642-0.959)	**0.977** (0.754-1.18)	**1.19** (0.878-1.45)	**1.51** (1.06-1.90)	**1.81** (1.21-2.31)
60-min	**0.299** (0.257-0.352)	**0.371** (0.322-0.440)	**0.497** (0.426-0.590)	**0.617** (0.525-0.732)	**0.814** (0.670-0.966)	**0.994** (0.794-1.19)	**1.21** (0.934-1.46)	**1.47** (1.09-1.80)	**1.87** (1.31-2.35)	**2.24** (1.49-2.86)
2-hr	**0.405** (0.361-0.464)	**0.503** (0.447-0.576)	**0.641** (0.566-0.733)	**0.764** (0.667-0.874)	**0.950** (0.808-1.09)	**1.12** (0.927-1.30)	**1.30** (1.05-1.53)	**1.53** (1.20-1.82)	**1.92** (1.43-2.37)	**2.28** (1.65-2.89)
3-hr	**0.484** (0.433-0.545)	**0.604** (0.543-0.682)	**0.758** (0.676-0.855)	**0.884** (0.782-0.995)	**1.06** (0.926-1.20)	**1.22** (1.04-1.39)	**1.39** (1.16-1.60)	**1.61** (1.32-1.89)	**1.97** (1.56-2.40)	**2.31** (1.78-2.92)
6-hr	**0.670** (0.602-0.749)	**0.837** (0.752-0.939)	**1.04** (0.931-1.16)	**1.20** (1.07-1.35)	**1.42** (1.25-1.60)	**1.59** (1.38-1.80)	**1.77** (1.50-2.02)	**1.97** (1.64-2.28)	**2.27** (1.84-2.67)	**2.53** (2.00-3.02)
12-hr	**0.884** (0.788-0.993)	**1.11** (0.991-1.25)	**1.40** (1.24-1.57)	**1.63** (1.44-1.83)	**1.93** (1.68-2.18)	**2.16** (1.87-2.47)	**2.40** (2.04-2.77)	**2.65** (2.21-3.09)	**2.98** (2.42-3.54)	**3.24** (2.57-3.91)
24-hr	**1.16** (1.06-1.27)	**1.46** (1.32-1.60)	**1.84** (1.67-2.02)	**2.15** (1.95-2.36)	**2.58** (2.33-2.84)	**2.92** (2.62-3.21)	**3.27** (2.91-3.61)	**3.64** (3.21-4.04)	**4.14** (3.60-4.63)	**4.54** (3.89-5.12)
2-day	**1.39** (1.25-1.55)	**1.74** (1.57-1.95)	**2.22** (1.99-2.48)	**2.60** (2.33-2.91)	**3.14** (2.79-3.53)	**3.57** (3.15-4.02)	**4.02** (3.52-4.54)	**4.49** (3.89-5.12)	**5.14** (4.38-5.91)	**5.66** (4.76-6.57)
3-day	**1.52** (1.36-1.71)	**1.92** (1.72-2.16)	**2.46** (2.20-2.77)	**2.90** (2.58-3.26)	**3.51** (3.10-3.96)	**4.00** (3.51-4.53)	**4.52** (3.93-5.14)	**5.07** (4.36-5.79)	**5.83** (4.93-6.72)	**6.45** (5.37-7.50)
4-day	**1.66** (1.48-1.87)	**2.10** (1.87-2.36)	**2.69** (2.40-3.05)	**3.19** (2.83-3.60)	**3.88** (3.41-4.39)	**4.43** (3.87-5.04)	**5.02** (4.34-5.73)	**5.65** (4.83-6.46)	**6.52** (5.48-7.53)	**7.23** (5.98-8.43)
7-day	**1.93** (1.72-2.17)	**2.44** (2.18-2.75)	**3.15** (2.80-3.55)	**3.72** (3.30-4.19)	**4.51** (3.99-5.11)	**5.15** (4.51-5.84)	**5.81** (5.05-6.62)	**6.51** (5.61-7.44)	**7.48** (6.35-8.63)	**8.26** (6.90-9.61)
10-day	**2.12** (1.89-2.38)	**2.69** (2.40-3.02)	**3.48** (3.09-3.91)	**4.10** (3.63-4.61)	**4.94** (4.36-5.57)	**5.61** (4.91-6.33)	**6.29** (5.47-7.12)	**7.00** (6.02-7.94)	**7.96** (6.77-9.14)	**8.71** (7.32-10.1)
20-day	**2.59** (2.32-2.88)	**3.28** (2.94-3.67)	**4.22** (3.79-4.71)	**4.94** (4.42-5.51)	**5.90** (5.25-6.58)	**6.62** (5.85-7.40)	**7.36** (6.46-8.27)	**8.10** (7.06-9.12)	**9.07** (7.82-10.3)	**9.80** (8.36-11.2)
30-day	**2.91** (2.62-3.23)	**3.70** (3.33-4.11)	**4.75** (4.27-5.27)	**5.54** (4.97-6.15)	**6.59** (5.89-7.32)	**7.39** (6.56-8.22)	**8.19** (7.22-9.16)	**8.99** (7.86-10.1)	**10.1** (8.69-11.4)	**10.8** (9.30-12.4)
45-day	**3.42** (3.09-3.79)	**4.35** (3.92-4.81)	**5.58** (5.03-6.16)	**6.48** (5.84-7.16)	**7.65** (6.86-8.46)	**8.51** (7.60-9.44)	**9.34** (8.32-10.4)	**10.1** (8.99-11.3)	**11.1** (9.79-12.5)	**11.9** (10.4-13.4)
60-day	**3.92** (3.54-4.34)	**4.99** (4.50-5.53)	**6.40** (5.77-7.07)	**7.39** (6.66-8.16)	**8.64** (7.76-9.55)	**9.53** (8.53-10.6)	**10.4** (9.26-11.5)	**11.2** (9.93-12.4)	**12.1** (10.7-13.5)	**12.7** (11.2-14.3)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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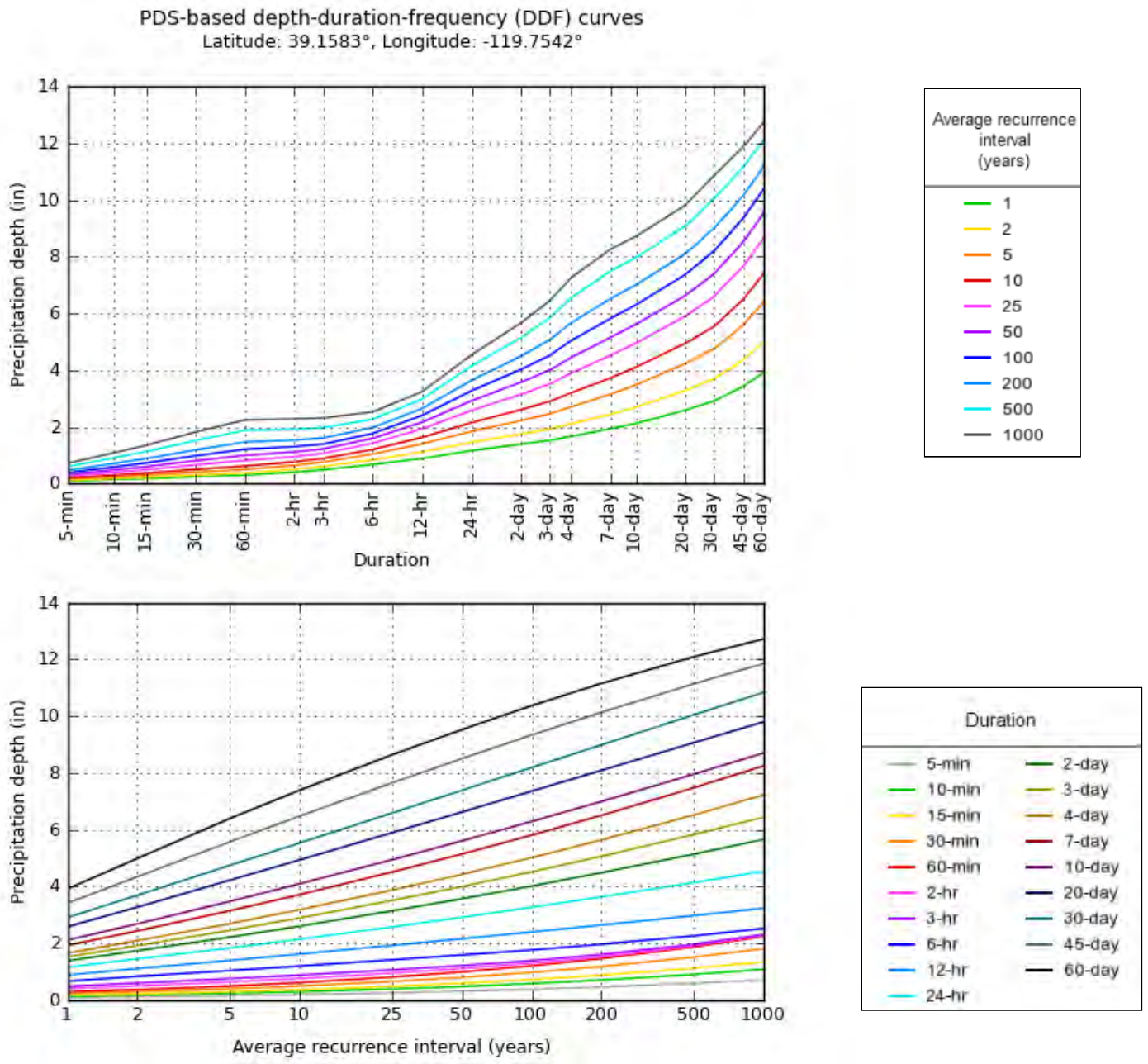
PF graphical



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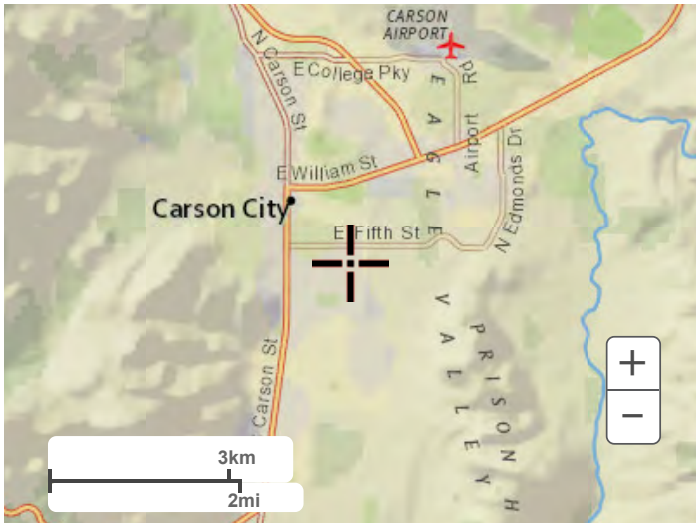
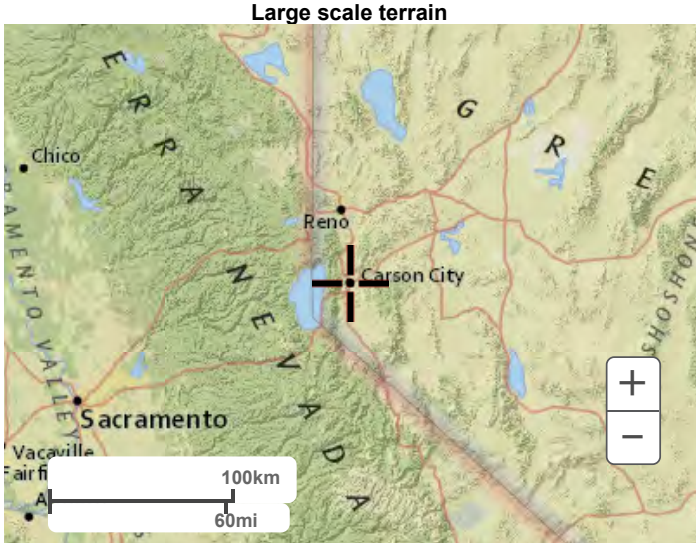
Maps & aerials

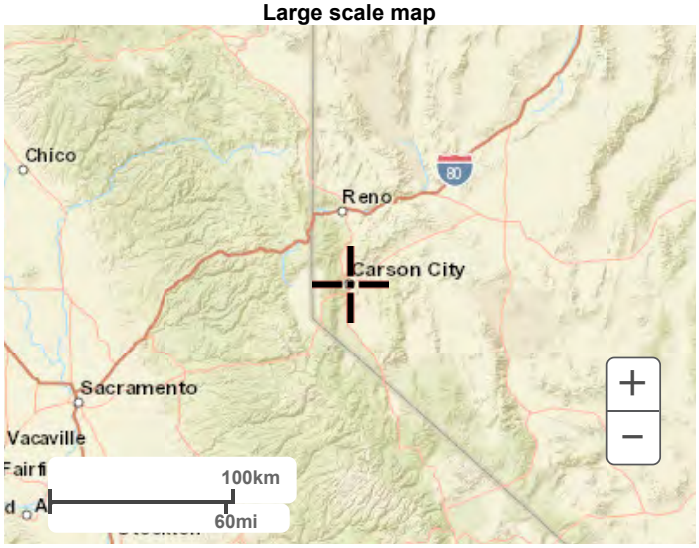
Small scale terrain



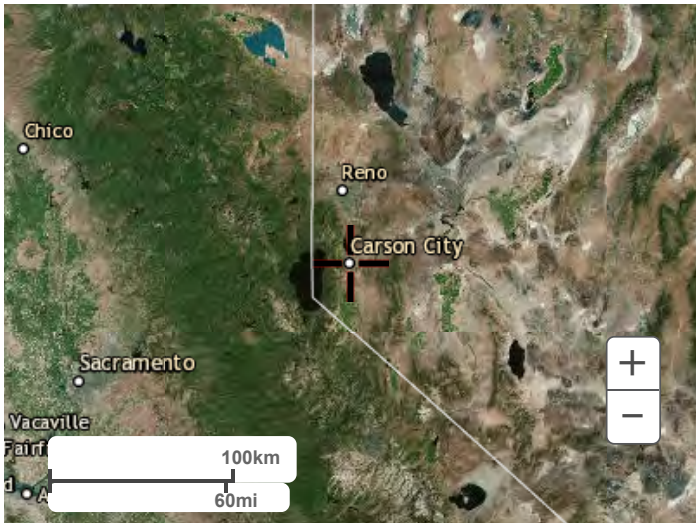
Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Map Scale: 1:3,020 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Carson City Area, Nevada
Survey Area Data: Version 12, Sep 17, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 1, 2018—Jun 30, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Bishop loam, saline	32.6	71.4%
71	Urban land	13.1	28.6%
Totals for Area of Interest		**45.7**	**100.0%**

Carson City Area, Nevada

4—Bishop loam, saline

Map Unit Setting

National map unit symbol: 2nnnd
Elevation: 4,500 to 4,700 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 49 to 50 degrees F
Frost-free period: 100 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Bishop and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bishop

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

H1 - 0 to 28 inches: loam
H2 - 28 to 60 inches: stratified sandy loam to clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 13.0
Available water storage in profile: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: C/D
Ecological site: WET MEADOW 10-14 P.Z. (R026XY003NV)
Hydric soil rating: No

Minor Components

Voltaire

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: WET SODIC BOTTOM (R026XY002NV)
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Carson City Area, Nevada
Survey Area Data: Version 12, Sep 17, 2018

Carson City Area, Nevada

71—Urban land

Map Unit Composition

Urban land: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Valleys

Down-slope shape: Convex

Across-slope shape: Convex

Data Source Information

Soil Survey Area: Carson City Area, Nevada

Survey Area Data: Version 12, Sep 17, 2018

Worksheet for Alleyway 5yr Storm

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Left Side Slope	40.00	ft/ft (H:V)
Right Side Slope	40.00	ft/ft (H:V)
Discharge	1.27	ft^3/s

Results

Normal Depth	0.15	ft
Flow Area	0.89	ft^2
Wetted Perimeter	11.93	ft
Hydraulic Radius	0.07	ft
Top Width	11.93	ft
Critical Depth	0.14	ft
Critical Slope	0.00592	ft/ft
Velocity	1.43	ft/s
Velocity Head	0.03	ft
Specific Energy	0.18	ft
Froude Number	0.92	
Flow Type	Subcritical	

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	0.15	ft
Critical Depth	0.14	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00592	ft/ft

Worksheet for Alleyway 100yr Storm

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Left Side Slope	40.00	ft/ft (H:V)
Right Side Slope	40.00	ft/ft (H:V)
Discharge	4.03	ft^3/s

Results

Normal Depth	0.23	ft
Flow Area	2.11	ft^2
Wetted Perimeter	18.37	ft
Hydraulic Radius	0.11	ft
Top Width	18.36	ft
Critical Depth	0.23	ft
Critical Slope	0.00507	ft/ft
Velocity	1.91	ft/s
Velocity Head	0.06	ft
Specific Energy	0.29	ft
Froude Number	0.99	
Flow Type	Subcritical	

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	0.23	ft
Critical Depth	0.23	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00507	ft/ft

Worksheet for 50 ROW 5yr Storm

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Channel Slope	0.02440	ft/ft
Normal Depth	0.34	ft

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.63
0+01.50	0.60
0+06.50	0.50
0+07.00	0.50
0+07.08	0.00
0+08.50	0.13
0+25.00	0.46

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.63)	(0+25.00, 0.46)	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	6.87	ft³/s
Elevation Range	0.00 to 0.63 ft	
Flow Area	1.54	ft²
Wetted Perimeter	12.36	ft
Hydraulic Radius	0.12	ft
Top Width	12.06	ft

Worksheet for 50 ROW 5yr Storm

Results

Normal Depth		0.34	ft
Critical Depth		0.43	ft
Critical Slope		0.00455	ft/ft
Velocity		4.46	ft/s
Velocity Head		0.31	ft
Specific Energy		0.65	ft
Froude Number		2.20	
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	0.43	ft
Channel Slope	0.02440	ft/ft
Critical Slope	0.00455	ft/ft

Worksheet for 50 ROW 100yr Storm

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Channel Slope	0.02440	ft/ft
Normal Depth	0.63	ft

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.63
0+01.50	0.60
0+06.50	0.50
0+07.00	0.50
0+07.08	0.00
0+08.50	0.13
0+25.00	0.46
0+41.50	0.13
0+42.92	0.00
0+43.00	0.50
0+43.50	0.50
0+48.50	0.60
0+50.00	0.63

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.63)	(0+50.00, 0.63)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for 50 ROW 100yr Storm

Results

Discharge		102.50	ft³/s
Elevation Range	0.00 to 0.63 ft		
Flow Area		13.74	ft²
Wetted Perimeter		50.87	ft
Hydraulic Radius		0.27	ft
Top Width		50.00	ft
Normal Depth		0.63	ft
Critical Depth		0.86	ft
Critical Slope		0.00320	ft/ft
Velocity		7.46	ft/s
Velocity Head		0.86	ft
Specific Energy		1.49	ft
Froude Number		2.51	
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	0.63	ft
Critical Depth	0.86	ft
Channel Slope	0.02440	ft/ft
Critical Slope	0.00320	ft/ft

Worksheet for 60 ROW 5yr Storm

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Channel Slope	0.00500	ft/ft
Normal Depth	0.45	ft

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.62
0+01.00	0.60
0+06.00	0.50
0+06.50	0.50
0+06.58	0.00
0+08.00	0.13
0+30.00	0.57

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.62)	(0+30.00, 0.57)	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	7.87	ft³/s
Elevation Range	0.00 to 0.62 ft	
Flow Area	3.12	ft²
Wetted Perimeter	17.88	ft
Hydraulic Radius	0.17	ft
Top Width	17.49	ft

Worksheet for 60 ROW 5yr Storm

Results

Normal Depth		0.45	ft
Critical Depth		0.45	ft
Critical Slope		0.00447	ft/ft
Velocity		2.52	ft/s
Velocity Head		0.10	ft
Specific Energy		0.54	ft
Froude Number		1.05	
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	0.45	ft
Critical Depth	0.45	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00447	ft/ft

Worksheet for 60 ROW 100yr Storm

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Channel Slope	0.00500	ft/ft
Normal Depth	0.62	ft

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.62
0+01.00	0.60
0+06.00	0.50
0+06.50	0.50
0+06.58	0.00
0+08.00	0.13
0+30.00	0.57
0+52.00	0.12
0+53.42	0.00
0+53.50	0.50
0+54.00	0.50
0+59.00	0.60
0+60.00	0.62

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.62)	(0+60.00, 0.62)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for 60 ROW 100yr Storm

Results

Discharge		45.58	ft³/s
Elevation Range	0.00 to 0.62 ft		
Flow Area		14.61	ft²
Wetted Perimeter		60.87	ft
Hydraulic Radius		0.24	ft
Top Width		60.00	ft
Normal Depth		0.62	ft
Critical Depth		0.64	ft
Critical Slope		0.00393	ft/ft
Velocity		3.12	ft/s
Velocity Head		0.15	ft
Specific Energy		0.77	ft
Froude Number		1.12	
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	0.62	ft
Critical Depth	0.64	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00393	ft/ft