WASHOE COUNTY

"Dedicated To Excellence in Public Service"
www.washoecounty.us

CM/ACM_____
Finance_____
DA_____
Risk Mgt. N/A
HR. N/A
Comptroller_____

STAFF REPORT
BOARD MEETING DATE: April 12, 2016

DATE: March 18, 2016

TO: Board of County Commissioners

FROM: Kelly Mullin, Planner, Planning and Development Division
Community Services Department, 328-3608, kmullin@washoecounty.us

THROUGH: William H. Whitney, Division Director, Planning and Development
Community Services Department, 328-3617, bwhitney@washoecounty.us

SUBJECT: Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) – (1) To acknowledge receipt of the Planning Commission's report regarding the Board of County Commissioners' action January 26, 2016 to reverse the Planning Commission's action December 1, 2015 to deny MPA15-003 and RZA15-005; and (2) to take possible action to: (a) Adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential, Industrial and Commercial to Suburban Residential; and (b) Subject to final approval of the associated Master Plan amendment, to adopt an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone on the same parcel from a mix of Low Density Suburban, Open Space, Industrial and Neighborhood Commercial to Medium Density Suburban; and if approved (c) Authorize the Chair to sign the two resolutions to adopt the amendments to the Spanish Springs Master Plan Map, after a determination of conformance with the Truckee Meadows Regional Plan by the Truckee Meadows Regional Planning Commission, and to adopt amendments to the Spanish Springs Regulatory Zone Map.

The applicant is SP58, LLC and the property owner is Jacie, LLC. The subject parcel (APN: 534-571-01) is located on the north side of Calle de la Plata, approximately 650 feet east of its intersection with Pyramid Highway. It is within the Spanish Springs Area Plan and Spanish Springs Citizen Advisory Board boundaries and within Section 23, Township 21N, Range 20E, MDM. The Development Code articles applicable to this amendment are Article 820, *Amendment of Master Plan* and Article 821, *Amendment of Regulatory Zone*. (Commission District 4.)

SUMMARY

Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 for Blackstone Estates seek to (1) amend the Washoe County

AGENDA ITEM # _____

Master Plan, Spanish Springs Area Plan, to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential, Industrial and Commercial to Suburban Residential and (2) amend the regulatory zone on the same parcel from a mix of Low Density Suburban, Open Space, Industrial and Neighborhood Commercial to Medium Density Suburban.

The Planning Commission effectively denied the applications at their December 1, 2015 hearing. The denial was subsequently appealed by the applicant's representative to the Washoe County Board of Commissioners (Board) as Appeal Case Number AX15-005. On January 26, 2016, the Board approved the appeal and reversed the Planning Commission's denial, sending both cases back to the Planning Commission for a report as required by NRS and County Code. As directed, on March 1, 2016, the Planning Commission discussed the Board's actions and provided a report as outlined below. The Board now has the option to approve or deny the original request for MPA15-003 and RZA15-005.

Washoe County Strategic Objective supported by this item: Safe, secure and healthy communities.

PREVIOUS ACTION

March 1, 2016 Planning Commission (PC). The PC was asked to review and provide comments on the action the Board took at their January 26, 2016 meeting. Comments from Planning Commissioners indicated disagreement with the Board's action to reverse the PC's initial denial of the requests. A motion to "make a report to send back to the Board of County Commissioners disagreeing with their overturning of the Planning Commission's denial" was passed unanimously (7 Commissioners in favor, none absent).

The following options were provided to the PC for their consideration at their March 1 meeting:

1. Report back to the Board with a recommendation of approval for the Master Plan and/or Regulatory Zone amendment requests with applicable findings; or
2. Report back to the Board by collectively or individually commenting on the action taken and findings made by the Board of County Commissioners.

The following comments are from the draft minutes of the meeting and constitute the report from the Planning Commission:

> *Chair Barnes called for discussion on the motion and invited the Commissioners to provide their reasons for disagreeing with the County Commission.*
>
> *Commissioner Prough said that it does not conform to the Area Plan.*
>
> *Commissioner Horan said that it does not compare with the required finding number one, and the availability of facilities is also lacking in that regard.*
>
> *Commissioner Edwards feels that it does not conform to the Area Plan. He knows there is development on the way, but he feels that it is probably not the right time. He said that it does not conform to the Area Plan, and it would change the whole character of Spanish Springs.*
>
> *Chair Barnes feels that it does not conform to the Area Plan.*
>
> *Vice Chair Chvilicek feels that it is inconsistent with the Master Plan and does not conform to the Spanish Springs Area Plan.*

Commissioner Chesney agreed that it is inconsistent with the Master Plan and does not conform to the use.

Commissioner Daly concurred that it does not conform to the Master Plan, the Area Plan, and the vision and Character Statement.

Draft minutes of the Planning Commission's meeting are attached as Exhibit A.

January 26, 2016 Board of County Commissioners. After conducting a public hearing, taking public testimony and discussing the proposed Master Plan amendment and Regulatory Zone amendment applications, the Board approved Appeal Case Number AX15-005, voted unanimously to reverse the denial of the Planning Commission, remand MPA15-003 back to the Planning Commission for a report, and also remand back RZA15-005 with instructions.

December 1, 2015 Planning Commission. After conducting a public hearing, taking public testimony and discussing the proposed amendments, a motion was made and seconded to approve Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005. With a vote of 2 (in favor) to 5 (opposed), the motion failed to pass – effectively a denial. A subsequent motion was made and passed unanimously for the denial to be without prejudice.

October 14, 2015 Neighborhood Meeting. Both the Master Plan amendment and Regulatory Zone amendment requests were discussed at the neighborhood meeting. Sixteen residents were in attendance. The applicant's representative provided an overview of the proposed amendments and answered questions.

BACKGROUND

If the proposed amendments are adopted, the subject 58.49-acre parcel will have a regulatory zone of Medium Density Suburban, allowing for up to 175 dwelling units on the property.

As stated above, on January 26, 2016, the Board reversed the PC's denial of Master Plan Amendment Case No. MPA15-003 and Regulatory Zone Amendment Case No. RZA15-005 for Blackstone Estates. Pursuant to State Law and Washoe County Code Section 110.820.30(c)(3), the Board may not approve a Master Plan amendment request unless the PC has either recommended approval of the request or has provided a report back to the Board. That report is provided above in the summary of the Planning Commission's March 1, 2016 meeting.

The Board is now asked to consider the report and either approve or deny the original request for MPA15-003 and RZA15-005. Exhibit E contains the full record of the various staff reports that have been written to date for these requests, along with draft minutes of the hearings on those items, plus the original application materials.

FISCAL IMPACT

No fiscal impact.

RECOMMENDATION

It is recommended that the Board review the Planning Commission's report and determine whether or not the appropriate findings can be made to:

(1) Adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential, Industrial and Commercial to Suburban Residential; and

(2) Subject to final approval of the associated Master Plan amendment, adopt an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban, Open Space, Industrial and Neighborhood Commercial to Medium Density Suburban.

And if approved,

Authorize the Chair to sign the two resolutions to adopt the amendments to the Spanish Springs Master Plan Map after a determination of conformance with the Truckee Meadows Regional Plan by the Truckee Meadows Regional Planning Commission, and to adopt amendments to the Spanish Springs Regulatory Zone Map.

POSSIBLE MOTIONS

Should the Board decide to **approve** the amendment requests, a possible motion would be:

"Having made the appropriate findings as identified in Exhibit D, I move that the Board approve (1) an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one ± 58.49 acre parcel (APN: 534-571-01) from a mix of Suburban Residential, Industrial and Commercial to Suburban Residential; and (2) Subject to final approval of the associated Master Plan amendment, adopt an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban, Open Space, Industrial and Neighborhood Commercial to Medium Density Suburban on the same parcel.

"I further move to authorize the Chair to sign the two Resolutions to adopt the amendments to the Spanish Springs Master Plan Map after a determination of conformance with the Truckee Meadows Regional Plan by the Truckee Meadows Regional Planning Commission, and to adopt amendments to the Spanish Springs Regulatory Zone Map."

Should the Board decide to **deny** the amendment requests, a possible motion for each amendment request is presented below.

Master Plan Amendment

"I move to deny Master Plan Amendment Case Number MPA15-003 for Blackstone Estates, having been unable to make all of the necessary findings for approval outlined in Exhibit D. Specifically, the following findings cannot be made: *[identify specific findings]*."

Regulatory Zone Amendment

"I move to deny Regulatory Zone Amendment Case Number RZA15-005 for Blackstone Estates, having been unable to make all of the necessary findings for approval outlined in Exhibit D. Specifically, the following findings cannot be made: *[identify specific findings]*."

Attachments:

Exhibit A – Draft Minutes of March 1, 2016 Planning Commission meeting
Exhibit B – Master Plan Amendment Resolution
Exhibit C – Regulatory Zone Amendment Resolution
Exhibit D – Required Findings for Approval
Exhibit E – Planning Commission Staff Report from meeting of March 1, 2016

EXHIBIT A

WASHOE COUNTY PLANNING COMMISSION
MPA15-003 and RZA15-005
Transcript

Planning Commission Members
James Barnes, Chair
Sarah Chvilicek, Vice Chair
Larry Chesney
Thomas Daly
Roger Edwards
Philip Horan
Greg Prough
Carl R. Webb, Jr., AICP, Secretary

Tuesday, March 1, 2016
6:30 p.m.

Washoe County Commission Chambers
1001 East Ninth Street
Reno, NV

The Washoe County Planning Commission met in a scheduled session on Tuesday, March 1, 2016, in the Washoe County Commission Chambers, 1001 East Ninth Street, Reno, Nevada.

9. Public Hearings

B. Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) – Discussion and possible action to send a report to the Washoe County Board of Commissioners regarding the Board's potential decision to approve the following two amendment requests despite the Planning Commission's original denial:

(1) To adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR); and

(2) Subject to final approval of the associated Master Plan change, to recommend adoption of an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

- Applicant: SP58, LLC, 439 W. Plumb Lane, Reno, NV 89509
- Property Owner: Jacie, LLC c/o Douglass Properties, LLC
- Location: On the north side of Calle De La Plata, approximately 650 feet east of its intersection with Pyramid Highway.
- Parcel Size: ± 58.49 acres
- Assessor's Parcel Number: 534-571-01
- Previous Master Plan: Suburban Residential (SR), Industrial (I) and Commercial (C)
- Proposed Master Plan: Suburban Residential (SR)
- Existing Regulatory Zone: Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC)

- Proposed Regulatory Zone: Medium Density Suburban (MDS)
- Area Plan: Spanish Springs
- Citizen Advisory Board: Spanish Springs
- Development Code: Article 820, *Amendment of Master Plan*
  Article 821, *Amendment of Regulatory Zone*
- Commission District: 4 - Commissioner Hartung
- Section/Township/Range: Section 23, Township 21N, Range 20E, MDM, Washoe County, NV

Mr. Webb provided a description of the item.

Chair Barnes asked for ethics or ex parte disclosures. Commissioner Daly discussed the item with County Commissioner Hartung.

Chair Barnes opened the public hearing.

Kelly Mullin presented her staff report, dated February 16, 2016.

Commissioner Edwards asked if these presentations were warranted, because these were previous items returning to the Planning Commission. He believed the Commission was present to perform their part in the matter, rather than listening to presentations. He commented on the size of the packet for this item. Unless there was a change, Commissioner Edwards believed that the focus should be on the Planning Commission coming up with a response to the Board of County Commissioners' actions.

Mr. Webb explained that the purpose of the presentations was to provide the Planning Commission with a summary of the Board of County Commissioners' (Board) actions and their subsequent reversal of the Planning Commission's decision. The presentations for both will be a summary of that action. The thick packet was to make sure that the Planning Commissioners received a summary, the extract of the Board's minutes, and a complete background. This was to allow the Commissioners to provide comments, issues, concerns, and recommendations as a part of their report back to the Board. Ms. Mullin's purpose was to provide a summary and the two actions that the Planning Commission could take. The summary was also provided for members of the public.

Commissioner Prough disclosed that he had emailed Ms. Mullin to ask if there were any changes since the last time the Planning Commission heard the matter, and she confirmed no changes. Commissioner Prough asked if the Planning Commission was deciding whether or not the Board of County Commissioners' opinions on whether this item does meet the specifics to make this finding differs from what the Planning Commission saw. He asked if they were ruling on that at the meeting.

Ms. Mullin replied that the Planning Commission had the opportunity to provide individual comments in their report, specific to the action that the Board took, including the findings that the Board made at their January 26, 2016 meeting. This could be provided in individual or collective form. The report could be similar in format to the report they provided on the Sign Code.

Vice Chair Chvilicek addressed Ms. Mullin. She asked about the property location on the east side of Pyramid Highway. In the Area Plan, the Character Statement says, "the existing and desired land use pattern in Spanish Springs planning area is discussed in the following text: A distinct suburban core is and will continue to be concentrated along Pyramid Highway." Vice

Chair Chvilicek stated that they were in agreement there. "The suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwellings per acre. These suburban land uses are located predominantly, but not exclusively, on the west of Pyramid Highway. Outside the suburban core the transition to a more rural character occurs. This transition occurs more rapidly in the west as elevation increases and then to the north and east, the transition to rural stretches out into the valley, includes lower density." Vice Chair Chvilicek stated that the Character Statement says that lower density is on the east side of Pyramid Highway.

Ms. Mullin responded that this was discussed at the Planning Commission's hearing when they did hear this item. It was not specifically addressed by the Board in their review, or at least during discussion, was not mentioned in any detail. Commissioner Hartung did mention the Character Statement in passing. That is something that Vice Chair Chvilicek could speak to again in the individual comments or collective comments that are made from the Planning Commission to the Board.

Chair Barnes called for the applicant presentation.

Mike Railey with Rubicon Design Group spoke on behalf of Blackstone Development Group. He did not have a presentation or any new information to provide that was not presented at the Planning Commission's previous meeting.

Chair Barnes called for public comment.

Larry Thomas did not want to rehash infrastructure, schools, and everything that they do not have out there. He addressed the Character Statement. He said that when you go east on Calle De La Plata, there is a sign that says Spanish Springs Valley Ranches. If that is not a character statement, then he does not know what is. He appreciated Commissioner Prough's comment at the last meeting about property rights and another Commissioner who voted against it, but who also said that we have to expect development out there; a property owner has rights to develop. Mr. Thomas does understand, appreciate, and agree with that. He does not agree with someone who does not live out there buying a bunch of land and totally changing their lifestyle. He does not have a problem with someone who has property out there and wants to have a small business or split it into five-acre parcels or something like that. As far as character statements go, he believes this is way out of the park. He added that not that long ago, that part of Calle De La Plata was a private road. He said that he does not know how the county pulled it off, but they assessed all of the property owners $20,000 to pave the road. He wonders if this was a backdoor way to get control of Calle De La Plata so they could bring in this kind of development. He reiterated the character statement: it might not be your traditional description of ranches, but that is the sign. It is a development, and they are trying to put two developments within an existing development that states what it was originally for and why they all bought out there. He asked the Planning Commission to take that into account. This is not going up the highway in the character statement that the county is trying to explain to us. This is unique. The other side of the highway, as someone pointed out at the last meeting, they were not against development. They approved 400 houses, and he felt that was great. He agreed with that. He is a contractor and is all for development. But he believes this is changing the complete lifestyle, and it is just not right. He asked the Planning Commission to keep in mind that it was a private road, and there is a sign that says Spanish Springs Valley Ranches, not Blackstone or Sugarloaf or anything like that.

Chair Barnes invited the Commission to ask questions.

Vice Chair Chvilicek asked Ms. Mullin about the two options provided in the possible motion. The suggested motion does not include approval of the Master Plan and Regulatory Zone amendments; it is providing a report.

DDA Edwards said that the Planning Commission's report back could be a report that they are in approval with what the County Commission has indicated it wants to do.

Chair Barnes closed the public hearing and called for Commission discussion.

Commissioner Edwards said he did not feel any different than the last time he denied this. He understands that they have to look at development, and development is going to come to that area. His concern is with Master Plan Amendments and changes like these that do not address transitional-sized lots and so forth on the borders, because they cannot do that in this format. It is either accepting three per acre or turning it down.

Vice Chair Chvilicek acknowledged that a Master Plan Amendment and Regulatory Zone Amendment are the first steps in a long process. These are followed by the plans submitted for review and such. Through her definition and her understanding of the Spanish Springs Area Plan, her concerns continue to be that this project, as presented, is in conflict with the Spanish Springs Area Plan. In order to go along with the Board of County Commissioners' denial, her individual comment would be addressing the Spanish Springs Area Plan and the project not being in compliance with the Spanish Springs Area Plan. It is her understanding that the Area Plans have a lot more teeth than other planning documents. She asked if this was correct.

Mr. Webb replied that the Master Plan documents are the overriding document for development. Regulatory Zone Amendments and Development Code Amendments have to conform to the Master Plan. That is why "consistency with Master Plan" is a part of the findings.

Vice Chair Chvilicek asked if this was consistency with the Master Plan or with the Area Plan.

Mr. Webb explained that the Area Plan is a part of the Master Plan.

With no further discussion from the Commissioners, Chair Barnes called for a motion.

Commissioner Edwards made a motion to send a report back to the County Commission overturning their denial of the Planning Commission's action. He asked if that was correct.

DDA Edwards explained that the Planning Commission does not have the authority to overturn what the County Commission is doing. He said that they could report back, indicating the reasons why they disagree with an approval. The Planning Commission can state those reasons as one or individually after the motion is seconded.

Commissioner Edwards made a motion to make a report to send back to the Board of County Commissioners disagreeing with their overturning of the Planning Commission's denial. Commissioner Prough seconded the motion.

Chair Barnes called for discussion on the motion and invited the Commissioners to provide their reasons for disagreeing with the County Commission.

Commissioner Prough said that it does not conform to Area Plan.

Commissioner Horan said that it does not compare with the required finding number one, and the availability of facilities is also lacking in that regard.

Commissioner Edwards feels that it does not conform to the Area Plan. He knows there is development on the way, but he feels that it is probably not the right time. He said that it does not conform to the Area Plan, and it would change the whole character of Spanish Springs.

Chair Barnes feels that it does not conform to the Area Plan.

Vice Chair Chvilicek feels that it is inconsistent with the Master Plan and does not conform to the Spanish Springs Area Plan.

Commissioner Chesney agreed that it is inconsistent with the Master Plan and does not conform to the use.

Commissioner Daly concurred that it does not conform to the Master Plan, the Area Plan, and the vision and Character Statement.

Chair Barnes called for any additional discussion on the motion.

Commissioner Prough said that when the Planning Commission last reviewed this, the motion was without prejudice, allowing the developer to come back with one unit per acre, etc. He asked if this was the appropriate time to add with prejudice.

DDA Edwards said it would not be the right time. That would have been at the last meeting. This is now a report.

Commissioner Barnes called for a vote on the motion, which passed unanimously with a vote of 7 for, none against.

EXHIBIT B

WASHOE COUNTY COMMISSION

1001 E. 9th Street
P.O. Box 11130
Reno, Nevada 89520
(775) 328-2005

RESOLUTION
ADOPTING AN AMENDMENT TO THE WASHOE COUNTY MASTER PLAN, SPANISH SPRINGS MASTER PLAN MAP (MPA15-003)

WHEREAS, SP58, LLC and Jacie, LLC applied to the Washoe County Planning Commission to amend the master plan category on one parcel (APN: 534-571-01) from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR) in the Spanish Springs Area Plan;

WHEREAS, On December 1, 2015, the Washoe County Planning Commission denied Master Plan Amendment Case No. MPA15-003;

WHEREAS, The applicant appealed that denial to the Board of County Commissioners, and on January 26, 2016, the Board held a duly noticed public hearing, reversed the decision of the Planning Commission and sent the item back to them for a report;

WHEREAS, upon receiving the Planning Commission's report and holding a subsequent public hearing on April 12, 2016, this Board voted _____ to adopt the proposed amendment, having made the relevant findings for approval;

WHEREAS, Under NRS 278.0282, before this adoption can become effective, this Board must submit this proposed amendment to the Regional Planning Commission and receive a final determination that the proposed amendment conforms with the Truckee Meadows Regional Plan;

NOW THEREFORE BE IT RESOLVED,

That this Board of County Commissioners does hereby ADOPT the amendment to the Spanish Springs Master Plan Map (Case No. MPA15-003), as set forth in Exhibit B-1 attached hereto, to become effective if and when the County has received a final determination that the amendment conforms to the Truckee Meadows Regional Plan.

ADOPTED this 12th day of April 2016, to be effective only as stated above.

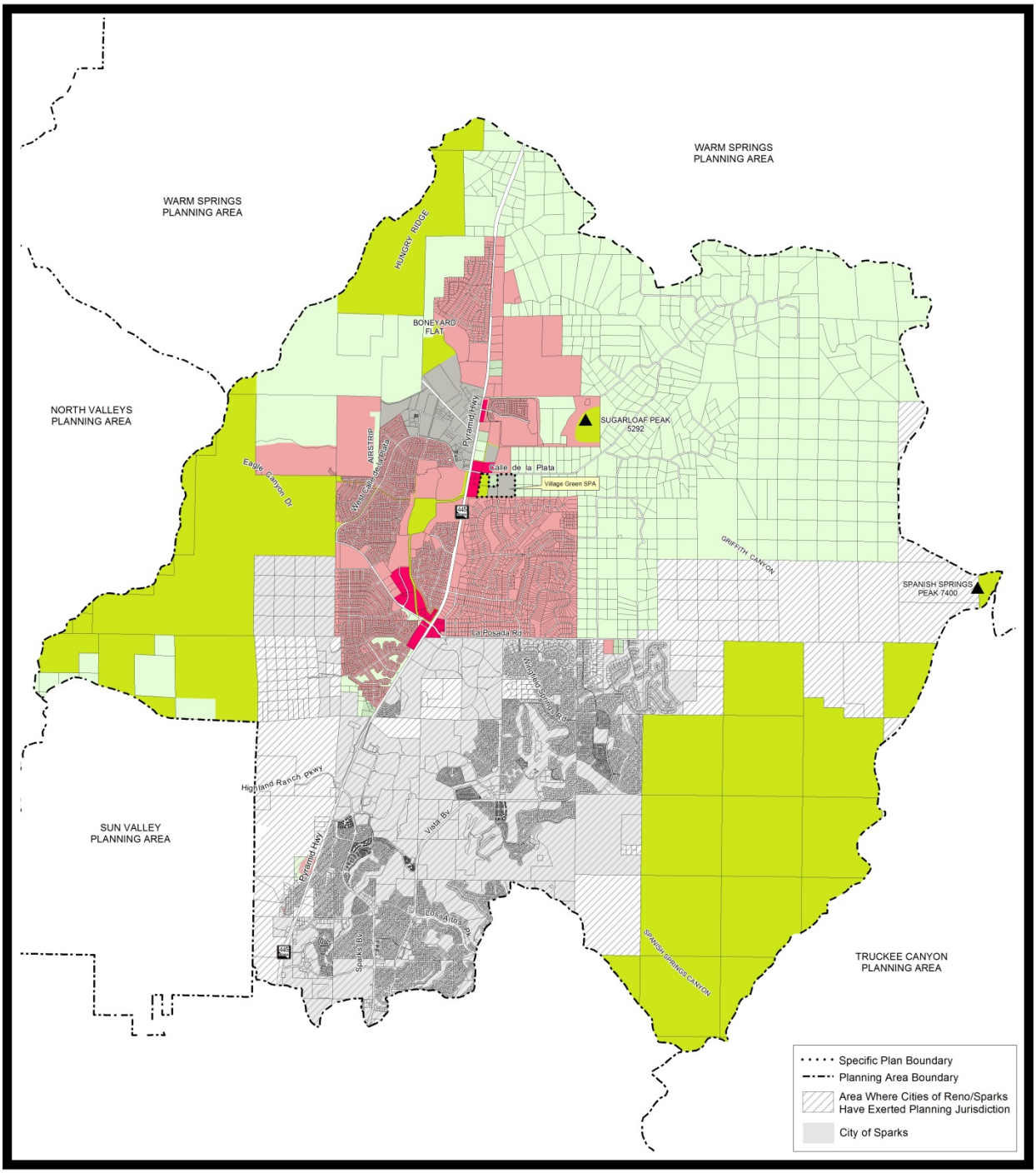
WASHOE COUNTY COMMISSION

_____
Chair

ATTEST:

_____
Nancy Parent, County Clerk

Exhibit B-1



SPANISH SPRINGS

MASTER PLAN MAP

- RURAL
- RURAL RESIDENTIAL
- SUBURBAN RESIDENTIAL
- URBAN RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- OPEN SPACE

SOURCE ; Planning and Development Division

PC Date: December 1, 2015
BCC Date:
RPC Conformance Date:
Resolution Adoption Date:

NOTE: THE SCALE AND CONFIGURATION OF ALL INFORMATION SHOWN HEREON ARE APPROXIMATE ONLY AND ARE NOT INTENDED AS A GUIDE FOR DESIGN OR SURVEY WORK. REPRODUCTION IS NOT PERMITTED WITHOUT PRIOR WRITTEN PERMISSION FROM THE WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT.

0 1,150 2,300 4,600 Feet

G:\arcdata\planareas\sspl\mapseries\MPA\15-004\ssMPA15-004.mxd

CERTIFICATION:
THIS DOCUMENT HAS BEEN REVIEWED AND APPROVED AS AN ACCURATE REPRESENTATION OF THE ADOPTED MASTER PLAN MAPS OF WASHOE COUNTY, NEVADA, BY THE WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT.

DATE_____ DIRECTOR_____

Community Services Department

WASHOE COUNTY NEVADA

Post Office Box 11130
Reno, Nevada 89520
(775) 328-3600

EXHIBIT C

WASHOE COUNTY COMMISSION

1001 E. 9th Street
P.O. Box 11130
Reno, Nevada 89520
(775) 328-2005

RESOLUTION
ADOPTING AN AMENDMENT TO THE SPANISH SPRINGS REGULATORY ZONE MAP (RZA15-005)

WHEREAS, SP58, LLC and Jacie, LLC applied to the Washoe County Planning Commission to amend the regulatory zone on one parcel (APN: 534-571-01) from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS) in the Spanish Springs Area Plan;

WHEREAS, On December 1, 2015, the Washoe County Planning Commission denied Regulatory Zone Amendment Case No. RZA15-005;

WHEREAS, The applicant appealed that denial to the Board of County Commissioners, and on January 26, 2016, the Board held a duly noticed public hearing, reversed the decision of the Planning Commission and sent the item back to them for a report;

WHEREAS, upon receiving the Planning Commission's report and holding a subsequent public hearing on April 12, 2016, this Board voted _____ to adopt the proposed amendment, having made the relevant findings for approval;

WHEREAS, This action will become effective after the adoption of Master Plan Amendment Case No. MPA15-003 by the Board of County Commissioners and a subsequent favorable conformance review with the Truckee Meadows Regional Plan;

NOW THEREFORE BE IT RESOLVED,

That this Board of County Commissioners does hereby ADOPT the amendment to the Spanish Springs Regulatory Zone Map (Case No. RZA15-005), as set forth in Exhibit C-1 attached hereto, to become effective if and when the County has received a final determination that Master Plan Amendment Case No. MPA15-003 conforms to the Truckee Meadows Regional Plan.

ADOPTED this 12th day of April 2016, to be effective only as stated above.

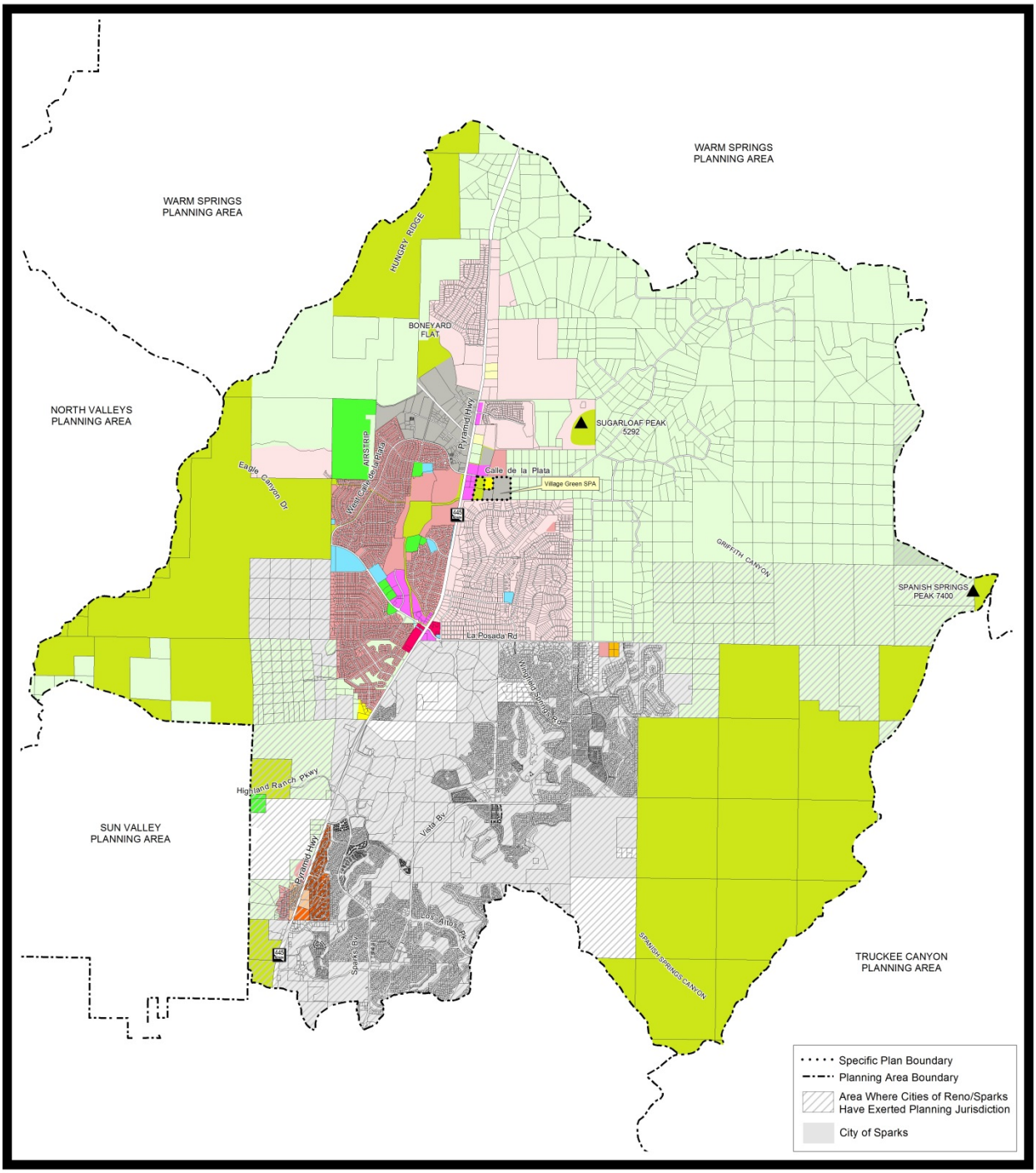
WASHOE COUNTY COMMISSION

_____
Chair

ATTEST:

_____
Nancy Parent, County Clerk

Exhibit C-1



SPANISH SPRINGS

REGULATORY ZONE MAP

- LOW DENSITY RURAL
- MEDIUM DENSITY RURAL
- HIGH DENSITY RURAL
- LOW DENSITY SUBURBAN
- LOW DENSITY SUBURBAN 2
- MEDIUM DENSITY SUBURBAN
- MEDIUM DENSITY SUBURBAN 4
- HIGH DENSITY SUBURBAN
- LOW DENSITY URBAN
- MEDIUM DENSITY URBAN
- HIGH DENSITY URBAN
- GENERAL COMMERCIAL
- NEIGHBORHOOD COMMERCIAL/ OFFICE
- TOURIST COMMERCIAL
- INDUSTRIAL
- PUBLIC AND SEMI-PUBLIC FACILITIES
- PARKS AND RECREATION
- OPEN SPACE
- GENERAL RURAL
- GENERAL RURAL AGRICULTURAL
- DRY LAKE/ WATER BODY

Source: Planning and Development Division

PC Date: December 1, 2015
BCC Date:

NOTE: THE SCALE AND CONFIGURATION OF ALL INFORMATION SHOWN HEREON ARE APPROXIMATE ONLY AND ARE NOT INTENDED AS A GUIDE FOR DESIGN OR SURVEY WORK. REPRODUCTION IS NOT PERMITTED WITHOUT PRIOR WRITTEN PERMISSION FROM THE WASHOE COUNTY PLANNING AND DEVELOPMENT DIVISION.

G:\arcdata\planning\arcmap\ssRegzone_final\ssRZA15-006.mxd

0 1,500 3,000 6,000 Feet

CERTIFICATION:
THIS DOCUMENT HAS BEEN REVIEWED AND APPROVED AS AN ACCURATE REPRESENTATION OF THE ADOPTED ZONING MAPS OF WASHOE COUNTY, NEVADA, BY THE WASHOE COUNTY PLANNING AND DEVELOPMENT DIVISION.

DATE_____ DIRECTOR_____

Community Services Department

WASHOE COUNTY NEVADA

Post Office Box 11130
Reno, Nevada 89520

(775) 328-3600

EXHIBIT D

Findings Required for Master Plan Amendment

Washoe County Development Code Section 110.820.15(d) Master Plan Amendment Findings

1. *Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.*
2. *Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.*
3. *Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.*

Spanish Springs Area Plan Findings - Policy SS.17.1 (a part of the Master Plan)

a. *The amendment will further implement and preserve the Vision and Character Statement.*
b. *The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.*
c. *The amendment will not conflict with the public's health, safety or welfare.*

Findings Required for Regulatory Zone Amendment

Washoe County Development Code Section 110.821.15(d) Regulatory Zone Amendment Findings

1. *Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.*
2. *Compatible Land Uses. The proposed amendment will not result in land uses which are incompatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.*
3. *Response to Change Conditions; more desirable use. The proposed amendment identifies and responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.*
4. *Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.*
5. *No Adverse Effects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.*
6. *Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the*

projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Spanish Springs Area Plan Findings - Policy SS.17.2 (a part of the Master Plan)

a. *A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.*

b. *A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.*

c. ***(NOT APPLICABLE)*** *For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.*

d. *For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.*

e. *If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.*

f. *If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.*

g. *Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.*

h. *If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.*

i. *Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.*

Planning Commission Staff Report

Meeting Date: March 1, 2016

Subject:	Report to Washoe County Board of Commissioners on Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005
Applicant:	SP58, LLC
Agenda Item Number:	**9B**
Summary:	Hearing, discussion and possible action to send a report to the Washoe County Board of Commissioners on their approval of an appeal of Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005
Recommendation:	**Send a report to the Washoe County Board of Commissioners**
Prepared by:	Kelly Mullin, Planner Washoe County Community Services Department Division of Planning and Development 775.328.3608 kmullin@washoecounty.us

Description

Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) – Discussion and possible action to send a report to the Washoe County Board of Commissioners regarding the Board's potential decision to approve the following two amendment requests despite the Planning Commission's original denial:

(1) To adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR); and

(2) Subject to final approval of the associated Master Plan change, to recommend adoption of an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

- Applicant: SP58, LLC, 439 W. Plumb Lane, Reno, NV 89509
- Property Owner: Jacie, LLC c/o Douglass Properties, LLC
- Location: On the north side of Calle De La Plata, approximately 650 feet east of its intersection with Pyramid Highway.

- Parcel Size: ± 58.49 acres
- Assessor's Parcel Number: 534-571-01
- Previous Master Plan: Suburban Residential (SR), Industrial (I) and Commercial (C)
- Proposed Master Plan: Suburban Residential (SR)
- Existing Regulatory Zone: Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC)
- Proposed Regulatory Zone: Medium Density Suburban (MDS)
- Area Plan: Spanish Springs
- Citizen Advisory Board: Spanish Springs
- Development Code: Article 820, *Amendment of Master Plan*
  Article 821, *Amendment of Regulatory Zone*
- Commission District: 4 - Commissioner Hartung
- Section/Township/Range: Section 23, Township 21N, Range 20E, MDM, Washoe County, NV

Staff Report Contents

Description 1
Summary 3
Background 3
Planning Commission Request for Action 4
Requirements for Planning Commission's Report 5
Review of Findings 5
Recommendation 8
Motion 8

Exhibit Contents

Draft Minutes from Board of County Commissioners Meeting on January 26, 2016 ..... Exhibit A
Board of County Commissioners Staff Report, Dated December 31, 2015 ..... Exhibit B

Summary

Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 for Blackstone Estates seek to amend the Washoe County Master Plan, Spanish Springs Area Plan, to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR) and (2) approve an amendment to the regulatory zone on the same parcel from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

The Planning Commission denied the applications at their December 1, 2015 hearing. The denial was subsequently appealed by the applicant's representative to the Washoe County Board of Commissioners (Board) as Appeal Case Number AX15-005. On January 26, 2016, the Board approved the appeal and reversed the Planning Commission's denial, sending both cases back to the Planning Commission for a report as required by NRS and County Code.

Background

January 26, 2016 – Board of County Commissioners

After conducting a public hearing, taking public testimony and discussing the proposed Master Plan Amendment and Regulatory Zone Amendment applications, the Board approved Appeal Case Number AX15-005, voted unanimously to reverse the denial of the Planning Commission, remand MPA15-003 back to the Planning Commission for a report and also remand back RZA15-005 with instructions.

Draft minutes of the Board's January 26, 2016, meeting are attached as Exhibit A. In addition, a video of the meeting can be viewed at http://bit.ly/23T9sGd. The hearing for this appeal (agenda item #17) begins at approximately 02:01:20 into the recording. (For reference, the hearing for the similar appeal to the east, for Sugarloaf Ranch Estates, was agenda item #16 and begins at 01:38:04.)

During discussion of both appeals for Blackstone Estates and Sugarloaf Ranch Estates, the Board noted they believed the Master Plan Amendment and Regulatory Zone Amendment requests on the subject parcel to be appropriate and had a different interpretation of the relevant findings for approval than the Planning Commission. Board members stressed the difference between Master Plan and Regulatory Zone amendments and tangible projects such as tentative maps, along with the timing for when infrastructure improvements must be in place. During their discussion, Board members stated that adequate infrastructure and public services are not required to be in place prior to a density increase being authorized in a Master Plan or Regulatory Zone amendment; rather, that adequate infrastructure needs to be in place or conditioned for at the time of development. The Board also discussed that the current mix of commercial and industrial zoning on the property has the potential to be more intense in terms of traffic and wastewater in comparison to the proposed Medium Density Suburban residential regulatory zoning.

December 1, 2015 – Planning Commission Action

After conducting a public hearing, taking public testimony and discussing the proposed Master Plan Amendment and Regulatory Zone Amendment, a motion was made and seconded to approve Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005. With a vote of 2 (in favor) to 5 (opposed), the motion failed to pass – effectively a denial. A subsequent motion was made and passed unanimously for the denial to be without prejudice. During discussion of the initial motion, Planning Commissioner Greg Prough indicated he could not make the required finding of fact related to health, safety and welfare. He also indicated concern that a transition zone (referenced in the Spanish Springs Area Plan Character Statement) may not be present if the proposals were approved. Commissioner Sarah Chvilicek also indicated she could not make the finding for Spanish Springs Area Plan Policy SS.17.1 regarding preserving and enhancing the Spanish Springs Vision and Character Statement.

October 14, 2015 – Neighborhood Meeting

Both the Master Plan Amendment and Regulatory Zone Amendment requests were discussed at the neighborhood meeting. Sixteen residents were in attendance. The applicant's representative provided an overview of the proposed amendments and answered questions. The following topics were discussed: traffic at the intersection of Pyramid Highway and Calle de la Plata; well impacts; proposed density vs. density of properties to the east; comparison to proposed amendments for the Sugarloaf Ranch project to the east; intent of the Area Plan's Character Statement, including the potential for lots smaller than 1-acre east of Pyramid Highway; and the desire of some residents to not be located near what they see as urban development.

Planning Commission Request for Action

The Planning Commission is requested to discuss and take action to send a report to the Board. The report to the Board is required for the Master Plan Amendment pursuant to Washoe County Code Section 110.820.35, as stated below:

> Section 110.820.35 Report by the Planning Commission. If a modification to a proposed Master Plan amendment is referred to the Commission for a report under NRS 278.220(4), the Commission is not required to hold a public hearing on the modification and shall submit a report within 90 days from the date of referral. Failure by the Commission to submit a report within 90 days shall be deemed as a recommendation of approval.

It is requested that the Planning Commission include within the required report its comments and discussion on the Regulatory Zone Amendment. The Planning Commission may choose one of the following options:

1. Report back to the Board with a recommendation of approval for the Master Plan and/or Regulatory Zone Amendment requests with applicable findings.

2. Report back to the Board by collectively or individually commenting on the action taken and findings made by the Board of County Commissioners.

Requirements of Planning Commission's Report

As noted in the previous section of this report, the applications have been referred back to the Planning Commission by the Board for a report on the action taken by the Board to reverse the decision of the Planning Commission.

There is no required format or contents for the report. The Planning Commission may choose to simply make observations, recommendations, and comments regarding the findings, and/or to give collective or individual comments about the proposed amendments. The report is tentatively scheduled to be considered by the Board on April 12, 2016, at which time the Board has the ability to take final action on both the Master Plan and Regulatory Zone Amendment applications. Any action taken on the Master Plan Amendment by the Board will not become effective until the amendments are reviewed by the Regional Planning Commission for conformance with the Truckee Meadows Regional Plan. Final action on the Regulatory Zone Amendment would be contingent upon final approval of the Master Plan Amendment after a conformance finding with the Regional Plan.

Review of Findings

Before adopting a Master Plan amendment, Washoe County Code (WCC) Section 110.820.15(d) requires that at least three of the required findings be made. Similarly, WCC Section 110.821.15(d) requires all relevant findings to be made to recommend approval of a Regulatory Zone amendment. Additionally, any amendment to the Spanish Springs Area Plan must make all three findings of policy SS.17.1 (a),(b) & (c) and all relevant findings of policy SS.17.2 (a thru i). The Board made all of the following required findings in the affirmative during their reversal of the Planning Commission's denial of MPA15-003 and RZA15-005 and approval of the appeal in AX15-005.

Required Findings for Master Plan Amendment

1. Consistency with Master Plan. The proposed amendments are in substantial compliance with the policies and action programs of the Master Plan.
2. Compatible Land Uses. The proposed amendments will provide for land uses which are compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Response to Change Conditions. The proposed amendments respond to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendments represent a more desirable utilization of land.
4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendments.

5. Desired Pattern of Growth. The proposed amendments will promote the desired pattern for the orderly physical growth of the County and guide the development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Required Findings for Regulatory Zone Amendment

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan and the Regulatory Zone Map.
2. Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Response to Change Conditions; more desirable use. The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.
4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed amendment.
5. No Adverse Effects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.
6. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Required Findings for Amendments to the Spanish Springs Area Plan

Goal Seventeen: Amendments to the Spanish Springs Area Plan will be for the purpose of further implementing the Vision and Character Statement, or to respond to new or changing circumstances. Amendments must conform to the Spanish Springs Vision and Character Statement. Amendments will be reviewed against a set of criteria and thresholds that are measures of the impact on, or progress toward, the Vision and Character Statement.

SS.17.1 In order for the Washoe County Planning Commission to recommend the approval of ANY amendment to the Spanish Springs Area Plan, the following findings must be made:

a. The amendment will further implement and preserve the Vision and Character Statement.

b. The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.

c. The amendment will not conflict with the public's health, safety or welfare

SS.17.2 In order for the Washoe County Planning Commission to recommend approval of any amendment involving a change of land use, the following findings must be made:

a. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

c. **(NOT APPLICABLE)** For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.56 percent of the suburban Character Management Area.

d. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.

e. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For Impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

g. Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.

h. If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operations of its permitted activities.

Recommendation

Staff recommends that the Planning Commission send a report to the Washoe County Board of Commissioners regarding Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005.

Motion

The following motion is provided for your consideration:

> "I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Planning Commission provide a report to the Washoe County Board of Commissioners regarding Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 containing the following: (*insert appropriate comments/information*)."

BOARD OF COUNTY COMMISSIONERS
WASHOE COUNTY, NEVADA

TUESDAY 10:00 A.M. JANUARY 26, 2016

PRESENT:

Kitty Jung, Chair
Bob Lucey, Vice Chair
Marsha Berkbigler, Commissioner
Vaughn Hartung, Commissioner
Jeanne Herman, Commissioner

Nancy Parent, County Clerk
John Slaughter, County Manager
Paul Lipparelli, Legal Counsel

Pending Board Approval

The Washoe County Board of Commissioners convened at 10:00 a.m. in regular session in the Commission Chambers of the Washoe County Administration Complex, 1001 East Ninth Street, Reno, Nevada. Following the Pledge of Allegiance to the flag of our Country, the Clerk called the roll and the Board conducted the following business:

16-0078 **AGENDA ITEM 3** Public Comment.

Ardena Perry expressed her concerns about County Code Chapter 55 Section 200 regarding the tethering of animals. She provided a brief history related to the Code. She indicated she did not believe tethering animals in front a business, regardless whether or not a person received the property owner's permission, was appropriate since it posed a danger to the animal and people passing by.

Tim Stoffel expressed his concerns about Agenda Items 13 and 15 associated with County Code Chapter 55. He questioned the vagueness of the definition of veterinary care and the commercial animal establishments permit language. He said there was a dark undertone to the regulations.

Bob Akerman came forward in memory of Michael Greene, former Sierra Fire Protection District Chief, who recently passed away. He spoke about Michael Greene's accomplishments. He recommended the Board recognize Chief Greene with a plaque at Fire Station 36.

Cathy Brandhorst spoke about matters of concern to herself.

Sam Dehne spoke about the negative effects that Storey County's inclusion into the Economic Development Authority of Western Nevada had on Washoe County.

Garth Elliott talked about making the County a gentler place to live. He said the County should watch the kinds of laws it enacted.

16-0079 **AGENDA ITEM 4** Announcements/Reports.

John Slaughter, County Manager, recommended the removal of Agenda Item 5D, a sub-grant for emergency food assistance, and Agenda Item 15, the second reading of amendments to Chapter 55.

Commissioner Herman stated she received complaints from residents, in the rural areas of District 5, about their garbage not being picked up by Waste Management. Since residents were not receiving the service they were paying for, she thought residents should receive a refund or a credit with regards to their billing. She suggested there needed to be changes made to the way complaints were received. She felt complaints needed to be made in writing so there would be a record. She mentioned the Lemmon Valley Flood and asked staff to research obtaining a grant to improve the ditches. She also mentioned possibly using her discretionary funds to help the Citizen Advisory Boards move forward.

Commissioner Hartung said he received emails with respect to single-stream recycling and hoped the County would have single-stream recycling in the near future.

Commissioner Berkbigler mentioned the Board previously requested a formal resolution for Michael Greene, former Sierra Fire Protection District Chief, which would be coming before the Board.

Commissioner Lucey commended the staff and the Board for their involvement in the strategic planning session. He mentioned there were significant gains and accomplishments. He stated he wanted to mimic some of the announcements from the session regarding positively branding the County, making sure every County citizen was aware of what the County did for them on a daily basis, and the continuation of helping citizens move forward. He noted County citizens had many concerns and he asked them to be patient. The County was working through every situation as fast as it could to try to find a resolution for its citizens. He said he attended the Library Board of Trustees meeting and spoke with the new Library Director, Jeff Scott. He stated Mr. Scott was a phenomenal addition to the County's team. He indicated libraries were cultural and community centers that were sometimes overlooked. The relevance and importance of the County's libraries were so much more than just books and librarians. He mentioned the libraries were underfunded and hoped Mr. Scott's leadership would improve the situation.

Chair Jung stated she met with a group which Scott Pearson, Reno Justice Court Chief Judge, had assembled that established a specialty court to address human trafficking and the exploitation of humans. She noted the County had a formal agreement with Awaken, a non-profit organization which helped women and children break away

Pending Board Approval

from the cycle of exploitation. She spoke about the shortage of doctors in the region and she suggested starting a dialog with Renown to discuss the issue. She mentioned she would be attending the Directions 2016 meeting at the Grand Sierra Resort to discuss economic development issues. She also mentioned there would be a District Board of Health meeting and a concurrent meeting with the City of Reno, the City of Sparks and the Washoe County School District. Lastly, she stated she would be sitting at the Reno is Artown table for the Go Red for Women luncheon, which was a fundraiser and an awareness event for women's heart health.

Commissioner Berkbigler said Go Red for Women was wonderful. She stated she was a member of the Go Red Team and she would also be at the event. She wished Chair Jung a happy birthday.

CONSENT ITEMS 5A THROUGH 5F2

16-0080 **5A** Approve roll change requests, pursuant to NRS 361.765 and/or NRS 361.768, for errors discovered for the 2012/2013, 2013/2014, 2014/2015 and 2015/2016 secured and unsecured tax rolls and authorize Chairman to execute the changes described in Exhibit A and direct the Washoe County Treasurer to correct the error(s). [cumulative amount of decrease $44,329.22]. Assessor. (Parcels are in various Commission Districts.)

16-0081 **5B** Acknowledge Receipt of the Interim Financial Report for Washoe County Governmental Funds for the six months Ended December 31, 2015 – Unaudited. Comptroller. (All Commission Districts.)

16-0082 **5C** Approve the updated Washoe County Grant Management Policy Manual 2016. Manager. (All Commission Districts.)

16-0083 **5E1** Approve an Easement Amendment (Truckee River Bicycle and Pedestrian Traffic Access Bridge) between Washoe County and the State of Nevada Division of State Lands, due to an increase in the annual fees associated with the Easement [$275 annually]. (All Commission Districts.)

16-0084 **5E2** Approve a Sanitary Sewer Infrastructure Dedication Agreement between Washoe County, St. James's Village, Inc. and World Properties, Inc., for the development, construction and subsequent dedication of Sanitary Sewer Infrastructure for the St. James's Village and Sierra Reflections residential developments located in the South Truckee Meadows. (Commission District 2.)

16-0085 **5E3** Approve a Communications Use Lease for Fox Mountain (NVN-004731) between the United States of America, acting through the Bureau of Land Management, Department of the Interior and Washoe County to replace an existing Right of Way Grant. (Commission District 5.)

Pending Board Approval

16-0086 **5F1** Approve receipt of a direct grant award [$127,470, no County match required] from the Bureau of Justice Assistance (BJA), State Criminal Alien Assistance Program (SCAAP), FY2015, Project number 2015-AP-BX-0775, to the Washoe County Sheriff's Office, Detention Bureau. Beginning date of the grant term is retroactive to October 1, 2015, with no end date. If approved, direct the Comptroller's Office to make the necessary budget amendments. (All Commission Districts.)

16-0087 **5F2** Approve the direct grant award from the U.S. Department of Justice, Bureau of Justice Assistance FFY 2015/2016, Project No. 2015-SJ-BX-0002 for [$113,472, 25% cash match required from County] to support the Anti-Wandering Initiative project for the retroactive grant period of 10/1/15 through 9/30/17 and award contract to Catholic Charities of Northern Nevada based on response to RFP #2958-16 and if approved, direct Comptroller's Office to make necessary budget amendments. (All Commission Districts.)

On the call for public comment, Cathy Brandhorst spoke about matters of concern to herself.

On motion by Commissioner Hartung, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Consent Agenda Items 5A through 5F2 be approved with the exception of Agenda Item 5D which was pulled. Any and all Resolutions or Interlocal Agreements pertinent to Consent Agenda Items 5A through 5F2 with the exception of Agenda Item 5D are attached hereto and made a part of the minutes thereof.

BLOCK VOTE – AGENDA ITEMS 8, 9, 10, 11 AND 12

16-0088 **AGENDA ITEM 8** Recommendation to acknowledge a grant award and a FY16 General Fund allocation of [$314,136], awarded to the Second Judicial District Court, to help support and increase the number of participants served through the expansion of the existing Mental Health Court, titled the Northern Nevada Regional Mental Health Court, creation of a new Medication Assisted Treatment Court, and expansion of the existing Adult Drug Court, effective November 1, 2015 – June 30, 2016, and direct the Comptroller's Office to make the necessary budget adjustments. District Court. (All Commission Districts.)

On motion by Commissioner Lucey, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Agenda Item 8 be acknowledged and directed.

16-0089 **AGENDA ITEM 9** Recommendation to approve a Grant Agreement between William N. Pennington Foundation and Washoe County for

Pending Board Approval

Bower's Mansion Pool construction and equipment improvements [$400,000 - no match required]; authorize the Community Services Department Director to sign the grant agreement, reports, and any subsequent documents related to the grant on behalf of the County; and direct the Comptroller's Office to make the appropriate budget adjustments. Community Services. (Commission District 2.)

On motion by Commissioner Lucey, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Agenda Item 9 be approved, authorized and directed.

16-0090 **AGENDA ITEM 10** Recommendation to approve the sole source purchase of absentee ballot central scanning hardware and software for the Registrar of Voters Office from Dominion Voting Systems; authorize the Purchasing and Contracts Manager to execute an agreement in the amount of [$224,523], which includes first year maintenance as well as extensive training; approve the inter-fund contingency transfer of [$224,523] from the general fund contingency account 189000-820000 to project (number to be determined) Voter's Absentee Ballot project in the Capital Improvement Fund; and direct the Comptroller's Office to make the appropriate adjustments. The total project implementation cost, year one of maintenance and necessary training is requested for the project and years two through four maintenance costs are to be included in the base budget of the Registrar of Voter's Office beginning fiscal year 2016/2017 and is approximately [$39,000] annually. Voters. (All Commission Districts.)

On the call for public comment, Cathy Brandhorst spoke about matters of concern to herself.

On motion by Commissioner Lucey, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Agenda Item 10 be approved, authorized and directed.

16-0091 **AGENDA ITEM 11** Recommendation to approve the settlement of the claims by John Kesner and Corrine Kesner against Washoe County et al, for a total sum of [$200,000] for all claims against all defendants, with funding from the Risk Management Fund. Comptroller. (All Commission Districts.)

On motion by Commissioner Lucey, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Agenda Item 11 be approved.

16-0092 **AGENDA ITEM 12** Recommendation to award Washoe County Bid No. 2943-16 for Ortho-Photography and 2-foot Contour Products on behalf of Washoe County and the Jointer Agencies (the Cities of Sparks and Reno,

Pending Board Approval

and Nevada Power Company) to the Geophex, Ltd., 605 Mercury St., Raleigh, NC 27603 in the amount of [$196,844.56.] Authorize the Purchasing and Contracts Administrator to purchase additional mapping products from the same vendor through December 31, 2016 provided there is no increase in the pricing structure. Technology Services. (All Commission Districts.)

On motion by Commissioner Lucey, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Agenda Item 12 be awarded and authorized.

16-0093 **AGENDA ITEM 6** Department Presentation – Community Services Department, highlighting services and operations.

Dave Solaro, Community Services Department (CSD) Director, conducted a PowerPoint presentation. He stated the general public knew the CSD by various other department names; such as, parks, roads, engineering, public works, building and safety, sewer, utilities, and planning and development. Internal staff knew the CSD as facilities, equipment services, and capital projects. He said the CSD was a group of multiple disciplines put together for the benefit of the tax payer, the rate payer, and the permit holders. He noted a total of 437,000 residents utilized the regional services the CSD supported, which included the jail, Animal Services, the Courts, dispatch, the senior centers and the libraries. The mission the CSD worked towards was to provide and sustain a safe, secure and healthy community. A video was played which captured the impacts of CSD's services throughout the County, including roads, parks and facilities. He reviewed a slide providing CSD facts which highlighted the number of employees, miles of roads, square feet of buildings, acreage of parks, number of permits, number of building inspections, and the general fund budget amount. He spoke about the CSD's staff and their experiences. He noted his staff was educated, knowledgeable and dedicated. He said the CSD did not always meet the expectations of all the residents, but it met the expectations of most of them. He noted with proper planning and budgeting, the CSD would meet the needs of the County citizens well into the future. Meeting the needs of the community would require investing in equipment, technology and staff. He said the CSD planned to meet the challenge. He thanked the employees of the CSD, the Manager's office and the Board. He noted the last slide of the presentation provided the CSD's contact information.

Commissioner Hartung said the County was more user friendly than it had ever been. He thought one of the best moves the Board made was to combine the various departments under the CSD. He stated the CSD was really proactive and the staff was amazing.

Commissioner Berkbigler thanked Mr. Solaro for all of the help he had been to her. She noted the CSD was doing a great job.

Pending Board Approval

Commissioner Lucey stated he could not thank Mr. Solaro enough. He noted the presentation Mr. Solaro gave at the District 2 Forum and to the Board showed how much Mr. Solaro oversaw. He commended Mr. Solaro and the CSD staff.

Chair Jung echoed the statements of the other Commissioners. She believed Mr. Solaro's background was impressive and she asked him to elaborate on his education and licensure.

Mr. Solaro stated he was a believer of bettering yourself through education. He remarked he was a licensed architect and registered engineer. He obtained his architecture degree from the University of Idaho and his engineering degree from the University of Nevada, Reno.

Chair Jung noted the video was great and she thanked Mr. Solaro.

There was no public comment or action taken on this item.

16-0094 **AGENDA ITEM 7** Recommendation to acknowledge staff update regarding dispatch consolidation conversations with the City of Reno and provide further direction to staff regarding option to pursue consolidation study. Manager. (All Commission Districts.)

Joey Orduna-Hastings, Assistant County Manager, stated she was present to provide an update on dispatch conversations with the City of Reno and the Sheriff's Office. Staff's recommendation was to pursue and commission a consulting agreement to review data, personnel issues, the governing structure and technology needs. She indicated as Dispatch moved toward consolidation, having a national expert would be beneficial. She noted Russell Pedersen, Sheriff's Department Chief Deputy, was present to answer questions.

Commissioner Hartung asked whether the County was bearing the entire cost of the estimated $50,000 to $80,000.

Ms. Orduna-Hastings stated the County would utilize funds from the Office of the County Manager's budget.

There was no public comment.

On motion by Commissioner Hartung, seconded by Commissioner Herman, which motion duly carried, it was ordered that Agenda Item 7 be acknowledged.

16-0095 **AGENDA ITEM 13** Introduction and first reading of an ordinance amending Washoe County Code Chapter 55 by repealing provisions concerning riding horses while intoxicated, abandoning injured animals, and giving away live animals as part of a promotion; by amending provisions related to keeping animals in sanitary conditions, animal waste

Pending Board Approval

disposal, cruelty to animals, animal fighting, pigeon shoots, endangering animals and restraining animals; and by repealing, adding and revising various definitions, and all other matters properly relating thereto; and, if supported, set the public hearing for second reading and possible adoption of the ordinance on February 9, 2016. Animal Services. (All Commission Districts.)

The Chair opened the public hearing by calling on anyone wishing to speak for or against adoption of said Ordinance.

Nancy Parent, County Clerk, read the title for Bill No. 1757.

On the call for public comment, Ardena Perry stated she would like to see clarification on the language "reasonable veterinary care". She said there was a lot of subjective language and it left a lot of wiggle room.

Cathy Brandhorst spoke about matters of concern to herself.

Commissioner Lucey stated there was no clarity in the language regarding the restraining of animals on public property. He said he would like to see clarification regarding tethering on public property.

Chair Jung asked Paul Lipparelli, Legal Counsel, whether Commissioner Lucey could introduce the Bill with the stipulation that the second reading would identify the changes.

Mr. Lipparelli said in these situations the question was always whether the changes or refinements would destroy the notice that was given. He stated a lot depended on how substantial the changes were. It was always safer to start over and make sure everyone had notice of what the provisions were. If that course was not chosen and the changes were made, the question would be whether the changes were substantial enough to warrant a first reading and an adoption.

Bobby Smith, Animal Services Manager, noted the Code indicated it was perfectly legal to tether a dog at horse parks and similar spaces. He said Animal Services could work with the District Attorney's office to add the exemption for parks.

In response to Chair Jung's question whether Mr. Smith's suggestion was satisfactory, Commissioner Lucey responded in the affirmative.

Commissioner Herman indicated she understood the concerns of the public regarding the word "reasonable". She expressed concerns over the verbiage "other birds" in the section dealing with animal fighting and pigeon shooting. She mentioned she raised birds for the purpose of training her bird dogs. She suggested clarifying the language to exempt birds that a person raised themselves.

Pending Board Approval

Mr. Smith noted the language Commissioner Herman referenced was original language. He stated the language was directed towards animal fighting where animals were pitted against each other; for example, cock fighting.

Commissioner Herman remarked her interpretation of the language was not the same. She noted the language was still unclear as people could interpret it differently.

Bill No. 1757 was introduced by Commissioner Lucey, and legal notice for final action of adoption was directed with a second reading to be held on February 9th.

16-0096 **AGENDA ITEM 14** Recommendation to approve the request to approve the relocation of a medical marijuana dispensary within unincorporated Washoe County pursuant to section 3 of Senate Bill Number 276 as signed into law on June 9, 2015. The request is from Tryke Companies Reno, LLC to approve the relocation of a medical marijuana dispensary within unincorporated Washoe County pursuant to section 3 of Senate Bill Number 276 as signed into law. The request is from Tryke Companies Reno, LLC to move a medical marijuana dispensary from the location issued as State of Nevada provisional medical marijuana certificate at 10 Stateline Road in Crystal Bay, Nevada to a new location at 5105 Sun Valley Boulevard in Sun Valley, Nevada. If approved, direct staff to notify the State of Nevada Division of Public and Behavioral Health in writing of the Board's approval of the relocation request. Manager. (Commission Districts 1 and 3).

Kevin Schiller, Assistant County Manager, stated the County lobbied for a bill to allow moving medical marijuana facilities beyond the five-mile requirement and this was the first facility brought forward pursuant to the changes. He said the process required a public hearing and a neighborhood meeting. The meeting, which consisted of a panel that included himself and representatives from Tryke Companies Reno, LLC, occurred at the Sun Valley Community Center. He mentioned 20 attendees signed in and proper notice was provided. He indicated residents' concerns primarily focused on security. Other concerns included traffic, proximity to schools, cultural issues, having a second dispensary in Sun Valley, and the public review process. He said the panel spent a lot of time presenting information specific to the rules and regulations regarding oversight of a medical marijuana dispensary. He noted historically in other jurisdictions when a medical marijuana dispensary was placed in neighborhoods, criminal activity decreased due to increased scrutiny around the facility. He mentioned Tryke Companies Reno, LLC was very invested in the Sun Valley community, and in their prior businesses, they had been very gracious in terms of contributing to the community. Tryke Companies Reno, LLC arranged a tour of their City of Sparks' facility for some of the Citizens Advisory Board (CAB) members which included Chair Jung. He said staff's recommendation was to approve the move as the proposed parcel was eligible. He added

Pending Board Approval

there were time frames tied to setting up the dispensaries, which was why staff tried to move through the process quickly.

On the call for public comment, Carol Burns objected to the approval of moving of the medical marijuana dispensary to Sun Valley. She stated according to the State there had been 2,235 medical marijuana permits issued and she found it difficult to believe that all those people were proximal to Sun Valley. She believed the intersection of the location was dangerous. She also believed the move appeared to be a vendetta against the Sun Valley community as she noted other issues that plagued Sun Valley; such as, the previous lack of a CAB, the fact that the Sun Valley community had to assume the financial responsibilities of their parks, and now a proposal for a second medical marijuana dispensary.

Cathy Brandhorst spoke about matters of concern to herself.

Garth Elliott said he did not have a medical marijuana card but he knew of several older people who had them. He said his wife had a medical marijuana card for her fibromyalgia. He noted the benefits of having two medical marijuana dispensaries in Sun Valley, which included having viable businesses in the area and the fact that having two facilities would force competition. He did not believe traffic would be a concern. He thought Sun Valley would benefit from the medical marijuana facilities. He thought marijuana was destructive to young people; however, it was good for seniors.

Chair Jung requested an email from Susan Severt be placed into the record. The email was placed on file with the Clerk.

Commissioner Herman indicated she attended the meeting in Sun Valley and one of the concerns residents had was that the two facilities might become recreational facilities. She said residents were told that would not happen so she hoped that was the case.

Chair Jung stated she was a supporter of medical marijuana. She spoke about the successes of medical marijuana. She thought the location of the medical marijuana dispensary in Sun Valley was great.

On motion by Chair Jung, seconded by Commissioner Berkbigler, which motion duly carried, it was ordered that Agenda Item 14 be approved and directed.

PUBLIC HEARINGS

16-0097 **AGENDA ITEM 15** Second reading and adoption of an ordinance amending Washoe County Code Chapter 55 by creating provisions regulating commercial animal establishments (through an animal welfare permit); by adding related definitions; and by making changes to the definition of "County" and all other matters properly relating thereto. (Bill No. 1756). Animal Services. (All Commission Districts.)

Pending Board Approval

John Slaughter stated the agenda item was recommended for removal.

The Chair opened the public hearing by calling on anyone wishing to speak for or against adoption of said Ordinance.

On the call for public comment, Lisa Jaramillo, Pet Play House Co-Owner, stated the definition of a commercial animal establishment in the ordinance lumped several industries under one umbrella. She felt there were two separate industries: the purchase and sale of animals, and the service industry. Dog day care was similar to child day care. The animals had an advocate or guardian, which distinguished it from the sale industry where the animals did not have representation until they were purchased or adopted. She did not believe parts of the proposed ordinance pertained to her type of business; for example, euthanasia and carcass removal. She hoped the Board could revise the language. She said she supported inspections of all facilities involving pets without prior warning.

Chair Jung suggested that Bobby Smith, Animal Services Manager, and Shyanne Schull, Animal Services Director, reach out to Ms. Jaramillo to clarify the language for her.

Chair Jung stated Agenda Item 15 was to be removed from the Agenda through her authority as Chair. She said Paul Lipparelli, Legal Counsel, believed the record would still be clean and in compliance with the open meeting law.

Mr. Lipparelli added while Chair Jung was probably not technically required to take public comment for an item that was removed from the agenda, in the interest of public participation, it was within the Chair's discretion to do so.

16-0098 **AGENDA ITEM 16** Hearing, discussion, and possible action on Appeal Case No. AX15-006 (Sugarloaf Ranch Estates), an appeal of the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-004 and Regulatory Zone Amendment Case Number RZA15-006, which (1) requested approval of an amendment to the Washoe County Master Plan, Spanish Springs Area Plan, to change the Master Plan Categories on one parcel of ± 39.84 acres from a mix of Industrial (I) Commercial (C) and Open Space (OS) to Suburban Residential (SR) and (2) requested approval of an amendment to the regulatory zones on the same parcel from a mix of Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS). The applicant and property owner is Sugarloaf Peak, LLC. The subject parcel (APN: 534-562-07) is located on the north side of Calle De La Plata, approximately 2/10 of a mile east of its intersection with Pyramid Highway within the Spanish Springs Area Plan and Spanish Springs Citizen Advisory Board boundaries, Section 23, Township 21N, Range 20E, MDM. The Development Code sections applicable to this

Pending Board Approval

amendment are Article 820, Amendment of Master Plan, and Article 821, Amendment of Regulatory Zones. The Board of County Commissioners may take action to: (1) Confirm the Planning Commission's denial of either or both cases; or (2) Reverse the Planning Commission's denial of both cases, remand the Master Plan Amendment back to the Planning Commission for a report and also send the Regulatory Zone Amendment back to the Planning Commission with instructions; or 3) Reverse the Planning Commission's denial of both cases, remand the Master Plan Amendment back to the Planning Commission for a report, approve the Regulatory Zone Amendment subject to ultimate approval of the associated Master Plan Amendment, and authorize the Chair to sign the attached resolution. Community Services. (Commission District 4.)

Roger Pelham, Planning and Development Division Senior Planner, conducted a PowerPoint presentation, which was placed on file with the Clerk, regarding a regulatory zone amendment and a master plan amendment to change the zoning of the specified property from commercial and industrial to residential. The slides included a map of the property, and the action taken by the Planning Commission which denied staff's recommendation for the approval of the zoning change. He said the Planning Commission felt the proposals did not create the transition and the feathering of densities that the character statement provided for. He noted in his initial evaluation, the area plan statement dealt with a broader level of review; whereas, the Planning Commission felt the statement dealt with individual parcels that were stacked up against each other. The character statement, as he understood it, was meant to indicate there would be a higher density in the suburban core, which was the suburban character management area, and then feathering out to the more rural densities on the outside.

Commissioner Hartung asked Mr. Pelham to articulate some of the issues the Planning Commission had with respect to traffic, upgrades to the intersection, and other likely improvements.

Mr. Pelham said the Planning Commission, from a physical infrastructure standpoint, felt that the potential for additional traffic could place burdens on the intersection of Pyramid Way and Calle de la Plata. He added they also felt improvements should be made to the area prior to the approval of the Master Plan and the Regulatory Zone Amendments. Additionally, the Planning Commission felt there could be additional burdens on the waste water system and perhaps on individual wells, based on additional pumping that might come out of the municipal wells. He noted the Truckee Meadows Water Authority and Community Sewer would service the area. He stated the capacity did exist to support the sewer system for the additional intensity that was requested by the Master Plan Amendment and zoning change. He indicated there was not a specific project at this time.

Commissioner Hartung spoke of his concern regarding the lack of a right-hand deceleration lane on the corner of Pyramid Way and Calle de la Plata. He asked

Pending Board Approval

whether the warrants had been met and if the developers would be able to improve the corner themselves prior to any projects.

Mr. Pelham said he did not believe it met the warrants but the recommendation for the deceleration lane was within the traffic report that was submitted. The warrants had not been met for the full signalized intersection.

Commissioner Hartung stated the Planning Commission wanted to see certain kinds of improvements prior to development; however, that was not the process. Development had to occur before improvements could be made to the intersection. He said it was important to understand the Board was not addressing a specific project. They would be approving a Master Plan Amendment and rezoning the property.

Commissioner Berkbigler questioned whether more traffic and waste water issues would occur if the property was utilized under its current commercial zoning.

Mr. Pelham replied yes. He noted there was commercial and industrial zoning in place, which provided for more intense uses in comparison to the suburban residential and the medium density suburban (MDS) zones.

Commissioner Berkbigler added she thought the Planning Commission was incorrect by denying the applicant's request.

On the call for public comment, Maria Voltl asked the Board to deny the rezoning of the property in question. She said her property was a 40 acre parcel nearby. She said she was the first to be vandalized by kids with nothing to do. She added she was 86 years old, and she moved there for peace and quiet. She concluded by stating if the amendments were approved, the Board would be driving her out of her home.

Dan Herman stated he was perplexed as to why the public hearing was not time specific. He expressed his concerns about the timing of the hearing and the lack of notice. He said a notice was not mailed out to the individual property owners. He spoke about his concerns regarding the lack of a transition area. He stated there needed to be a minimum of full one-third acre parcels, and a transition zone between the large acre parcels and the MDS areas.

In response to Commissioner Hartung's question as to how many notices were sent, Mr. Pelham replied a total of 52 notices were sent out.

Mr. Pelham confirmed Commissioner Hartung's statement regarding the process of the appeal. As stated by Commissioner Hartung, if the Board approved the appeal, it would go back to the Planning Commission, back again to the Board, on to the Regional Planning Commission, and then finally to the Regional Governing Board.

Pending Board Approval

Commissioner Hartung asked Sugarloaf Ranch Estates' representative whether it would be possible to feather the edges.

Garrett Gordon, Partner at Lewis Roca Rothgerber Christie, stated their engineer was working on a tentative map. He noted if the amendments were approved, it would allow for 119 single-family dwellings. He added the configuration, the roads, the feathering and additional items were being discussed and worked on. He stated they were doing everything they could to help feather and buffer surrounding property owners. He said the finalized map would be presented to the Board. He mentioned the Donovan Ranch Subdivision as an example of a property which was zoned for one unit per acre; however, it clustered three units per acre. He stated the rezoning request, from low to medium density, would make it more compatible under the County's Land Use and Transportation (LUT) policy. He noted the rezoning would bring the property into more of a transition zone.

Commissioner Hartung moved to reverse the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-004 and Regulatory Zone Amendment Case Number RZA15-006; to remand MPA15-004 back to the Planning Commission for a report; and to remand RZA15-006 back to the Planning Commission. This action is based on this Board's review of the written materials and oral testimony at the public hearing, and this Board's interpretation of the relevant finding. Commissioner Berkbigler seconded the motion which duly carried.

16-0099 **AGENDA ITEM 17** Hearing, discussion, and possible action on Appeal Case No. AX15-005 (Blackstone Estates), an appeal of the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005, which (1) requested approval of an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Categories on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR) and (2) requested approval of an amendment to the regulatory zones on the same parcel from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS). The applicant is SP58, LLC and the property owner is Jacie, LLC. The subject parcel (APN: 534-571-01) is located on the north side of Calle de la Plata, approximately 650 feet east of its intersection with Pyramid Highway. It is within the Spanish Springs Area Plan and Spanish Springs Citizen Advisory Board boundaries and within Section 23, Township 21N, Range 20E, MDM. The Development Code sections applicable to this amendment are Article 820, Amendment of Master Plan and Article 821, Amendment of Regulatory Zone. The Board of County Commissioners may take action to: (1) Confirm the Planning Commission's denial of either or both cases; or (2) Reverse the Planning Commission's denial of both cases, remand the Master Plan Amendment back to the Planning Commission for a report

Pending Board Approval

and also send the Regulatory Zone Amendment back to the Planning Commission with instructions; or (3) Reverse the Planning Commission's denial of both cases, remand the Master Plan Amendment back to the Planning Commission for a report, approve the Regulatory Zone Amendment subject to ultimate approval of the associated Master Plan Amendment, and authorize the Chair to sign the attached resolution. Community Services. (Commission District 4.)

Kelly Mullin, Planning and Development Division Planner, stated the hearing was an appeal for Blackstone Estates. The applicant appealed the Planning Commission's denial of the Master Plan Amendment MPA15-003 and the Regulatory Zone Amendment RZA15-005. She gave a PowerPoint presentation covering the Master Plan Amendment request; the changing of the zoning to medium density suburban (MDS); the summary of the request; the concerns brought up from the Planning Commission hearing, which included traffic issues, water and sewer services, and school capacity; the Planning Commission's action to deny, and the Board's options regarding the appeal.

In response to Commissioner Hartung's call for the applicant's, Blackstone Estates, representative to provide additional information, Mike Railey, Rubicon Design Group, stated the request was strictly a land use request. He displayed a map, which was placed on file with the Clerk, and he said the property was located within the suburban character management area identified in the Spanish Springs Area Plan. He noted the area plan specifically called for residential densities up to three units per acre. He mentioned Blackstone Estates was well within the parameters of the area plan with their request. He also mentioned a zoning change from the current industrial and commercial zoning would generate less traffic. He stated if the Board were to review the MDS designation and the surrounding designations, they would see they had the highest compatibility. He said not a single reviewing agency, which reviewed Blackstone Estates' application, had a recommendation for denial. He added the Planning Commission had concerns about water, which was part of the reason they said they could not make the findings; however, at the Planning Commission Meeting, a representative from the Truckee Meadows Water Authority anticipated no impacts to existing wells. He added Blackstone Estates was committed to and planned to deed restrict the front yards in the neighborhood to have xeriscaping, which would be installed by the developer. He also mentioned they had given written commitments to the surrounding neighbors to provide an open space buffer and to feather the densities.

Commissioner Hartung asked staff how the County would deal with the parks in the area.

Bill Whitney, Planning and Development Division Director, said the County would have to look at future growth and also look at the Park District Master Plan to see if it required updating. He stated he did not have an answer. He noted the Parks and Open Space staff felt there were an adequate number of parks in the larger vicinity of Spanish Springs.

Pending Board Approval

Commissioner Hartung discussed the possibility of converting detention and retention facilities into a dual-use facility where there could be a park that was allowed to flood. As the water drained out and with a little clean up, the land would become a park again.

Mr. Whitney indicated it was a possibility. He said there was a park in Sun Valley that was like that and it was very popular.

In response to Commissioner Hartung's mention of the timing of the improvements, Dwayne Smith, Engineering and Capital Projects Director, stated improvements were looked at and conditioned as part of the improvement process for the final map. He added any of the required upgrades would be constructed as an actual project if and when that came before them.

On the call for public comment, Dan Herman said his property was situated against the development. He noted he was in favor of the development and that the developer had worked with him as far as providing some buffering. He expressed his concern over the lack of noticing of the hearing. He said it was a bad time for a meeting as most people were at work. He mentioned the development on the Donovan property where land was given up for open space and the lots were a minimum of a full one-third acre. He hoped the standard would be maintained.

Commissioner Hartung moved to reverse the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005; to remand MPA15-003 back to the Planning Commission for a report; to approve RZA15-005, subject to final approval of the master plan request; and to authorize the Chair to sign the resolution attached as Exhibit E. This action is based on this Board's review of the written materials and oral testimony at the public hearing, and this Board's interpretation of the relevant findings. Commissioner Berkbigler seconded the motion

Mr. Whitney asked Commissioner Hartung to consider making the same motion as was made for Agenda Item 16, which were almost identical projects, to make the Planning Commission's job a little easier. He noted on Agenda Item 16, the motion sent back both the Master Plan Amendment and the Regulatory Zone Amendment back to the Planning Commission; whereas, on this agenda item, the motion was to send back the Master Plan Amendment but to approve the Regulatory Zone Amendment.

Paul Lipparelli, Legal Counsel, stated each agenda item had two parts, the Master Plan Amendment and the Regulatory Zone Amendment. He explained the differences in the motions and he noted Mr. Whitney pointed out the motions were inconsistent.

Commissioner Berkbigler stated she was withdrawing her seconding of the motion unless it was the exact same motion as made for Agenda Item 16.

Pending Board Approval

Commissioner Hartung moved to reverse the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005; to remand MPA15-003 back to the Planning Commission for a report; and to remand RZA15-005 back to the Planning Commission. This action is based on this Board's review of the written materials and oral testimony at the public hearing, and this Board's interpretation of the relevant finding. Commissioner Berkbigler seconded the motion which duly carried.

Mr. Lipparelli added the zone change could not be implemented until the Master Plan was approved by the Board and by the Regional Planning Commission. There was no real advantage or disadvantage to the applicant, the neighborhood or interested persons to try and send the zoning change forward without the Master Plan. He said by sending them both back, it gave the Planning Commission a fuller opportunity to review the Board's direction.

16-0100 **AGENDA ITEM 18** Possible Closed Session for the purpose of discussing labor negotiations with Washoe County, Truckee Meadows Fire Protection District and/or Sierra Fire Protection District per NRS 288.220.

There was no closed session.

16-0101 **AGENDA ITEM 19** Public Comment.

Daniel Gray expressed his concern about the non-existent shelter regulations and the overreaching by the County upon animal establishments. He said there were no regulations regarding the importation of animals from outside the State or the Country by shelters and rescue facilities. He stated the shelters and rescue facilities posed a safety hazard by importing animals into the County.

Ardena Perry spoke about her concerns regarding the tethering of dogs in a retail and gaming area.

16-0102 **AGENDA ITEM 20** Announcements/Reports.

Chair Jung asked staff to provide her with data regarding a concern with the possible danger posed at the intersection of 1st Avenue and Sun Valley Boulevard. She asked the County Manager to look into whether District 3 had a representative on the Planning Commission.

* * * * * * * * * *

Pending Board Approval

12:31 p.m. There being no further business to discuss, the meeting was adjourned without objection.

_____

KITTY K. JUNG, Chair
Washoe County Commission

ATTEST:

_____

NANCY PARENT, County Clerk and
Clerk of the Board of County Commissioners

Minutes Prepared by:
Michael Siva, Deputy County Clerk

Pending Board Approval

WASHOE COUNTY

"Dedicated To Excellence in Public Service"
www.washoecounty.us

CM/ACM _____
Finance _____
DA _____
Risk Mgt. N/A
Clerk _____
Comptroller _____

STAFF REPORT
BOARD MEETING DATE: January 26, 2016

DATE: December 31, 2015

TO: Board of County Commissioners

FROM: Kelly Mullin, Planner, Planning and Development Division
Community Services Department, 328.3608, kmullin@washoecounty.us

THROUGH: William H. Whitney, Division Director, Planning and Development
Community Services Department, 328-3617, bwhitney@washoecounty.us

SUBJECT: Hearing, discussion, and possible action on Appeal Case No. AX15-005 (Blackstone Estates), an appeal of the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005, which (1) requested approval of an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Categories on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR) and (2) requested approval of an amendment to the regulatory zones on the same parcel from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

The applicant is SP58, LLC and the property owner is Jacie, LLC. The subject parcel (APN: 534-571-01) is located on the north side of Calle de la Plata, approximately 650 feet east of its intersection with Pyramid Highway. It is within the Spanish Springs Area Plan and Spanish Springs Citizen Advisory Board boundaries and within Section 23, Township 21N, Range 20E, MDM. The Development Code sections applicable to this amendment are Article 820, *Amendment of Master Plan* and Article 821, *Amendment of Regulatory Zone*.

The Board of County Commissioners may take action to:
(1) Confirm the Planning Commission's denial of either or both cases; or
(2) Reverse the Planning Commission's denial of both cases, remand the Master Plan Amendment back to the Planning Commission for a report and also send the Regulatory Zone Amendment back to the Planning Commission with instructions; or
(3) Reverse the Planning Commission's denial of both cases, remand the Master Plan Amendment back to the Planning Commission for a report, approve the Regulatory Zone Amendment subject to ultimate approval of the associated Master Plan Amendment, and authorize the Chair to sign the attached resolution.

(Commission District 4.)

AGENDA ITEM # 17

SUMMARY

The Washoe County Board of Commissioners may choose to confirm or reverse the Planning Commission's denial of Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005, which requested approval of an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Categories on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR) and requested approval of an amendment to the regulatory zones on the same parcel from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

Washoe County Strategic Objective supported by this item: Safe, secure, and healthy communities.

PREVIOUS ACTION

December 1, 2015 Planning Commission. After conducting a public hearing, taking public testimony and discussing the proposed amendments, a motion was made by Commissioner Roger Edwards and seconded to approve Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005. With a vote of 2 (in favor) to 5 (opposed), the motion failed to pass – effectively a denial. A subsequent motion was made and passed unanimously for the denial to be without prejudice. During discussion of the initial motion, Planning Commissioner Greg Prough indicated he could not make the required finding of fact related to health, safety and welfare. He also indicated concern that a transition zone (referenced in the Spanish Springs Area Plan Character Statement) may not be present if the proposals were approved. Commissioner Sarah Chvilicek also indicated she could not make the finding for Spanish Springs Area Plan Policy SS.17.1 regarding preserving and enhancing the Spanish Springs Vision and Character Statement. (The Planning Commission Staff Report is included as Exhibit D with this report. Planning Commission Draft Minutes for the Dec. 1, 2015 meeting are included as Exhibit C.)

October 14, 2015 Neighborhood Meeting. Both the Master Plan Amendment (MPA) and Regulatory Zone Amendment (RZA) requests were discussed at the neighborhood meeting. Sixteen residents were in attendance. The applicant's representative provided an overview of the proposed amendments and answered questions. The following topics were discussed: traffic at the intersection of Pyramid Highway and Calle de la Plata; well impacts; proposed density vs. density of properties to the east; comparison to proposed amendments for the Sugarloaf Ranch project to the east; intent of the Area Plan's Character Statement, including the potential for lots smaller than 1-acre east of Pyramid Highway; and the desire of some residents to not be located near what they see as urban development.

BACKGROUND

The Planning Commission (PC) held a public hearing to consider the proposed Master Plan Amendment and Regulatory Zone Amendment Dec. 1, 2015. During the same meeting, the Planning Commission considered a similar proposal on the adjacent parcel to the east. Both proposals were recommended for approval by staff but ultimately

denied. The Planning Commission's discussion of the appropriateness of the proposals centered on potential impacts to the surrounding area and whether the proposals were consistent with the Master Plan.

The Planning Commission found that the proposals were not compliant with the Spanish Springs Area Plan, particularly the Character Statement, which reads in part:

> A distinct suburban core is, and will continue to be, concentrated along Pyramid Highway. This suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre. These suburban land uses are located predominately, but not exclusively, on the west side of Pyramid Highway. Outside the suburban core, a transition to a more rural character occurs. This transition occurs most rapidly in the west as elevation increases along the western slopes of the Spanish Springs Valley. To the north and east, the transition to rural stretches out into the valley and includes lower density, suburban residential opportunities (one- to five-acre parcels). The area outside the suburban core and transition area is predominately of a rural character with rural residential densities (five plus acre parcels) and agricultural land uses. Aggregate mining is a significant component of the local landscape and is found in both the suburban and rural areas. To the south is the heavily suburbanized northern portion of the City of Sparks.
>
> The suburban core, together with the transition zone, will be known as the Suburban Character Management Area (SCMA). This area will contain all commercial land use designations and residential densities greater than one unit per ten acres. The Suburban Character Management Area will be the designated growth area in the Spanish Springs Valley. *[highlight added]*

Planning Commissioners asked a number of questions of Planning & Development staff, Engineering and Capital Projects Division Director Dwayne Smith, and Truckee Meadows Water Authority representative John Enloe. Planning Commissioners noted concerns during the discussion that covered the following topics: potential traffic impacts; availability of water and sewer services; school capacity; rights of current residents who own livestock; fire service availability; and the Spanish Springs Area Plan's Character Statement. (Draft minutes of the meeting are included as Exhibit C with this report, with the discussion of these cases beginning on page 8 of the minutes.)

The appellant contends that the Planning Commission "failed to consider staff, TMWA and applicant testimony, along with technical reports in their analysis of the findings." (Appeal application is included as Exhibit A with this report.)

FISCAL IMPACT

None

RECOMMENDATION

It is recommended that the Board of County Commissioners review the record and take one of the following three actions:

1. Affirm the decision of the Planning Commission and deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005; or

2. Reverse the decision of the Planning Commission, remand MPA15-003 back to the Planning Commission for a report and remand RZA15-005 back to the Planning Commission with instructions; or
3. Reverse the decision of the Planning Commission, remand MPA15-003 back to the Planning Commission for a report, and approve RZA15-005, subject to final approval of the master plan request.

POSSIBLE MOTIONS

Should the Board of County Commissioners **agree** with the Planning Commission's action to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005, staff offers the following motion:

"Move to confirm the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005. This denial is based on this Board's review of the written materials and oral testimony at the public hearing, and this Board's interpretation of the findings made by the Planning Commission."

Should the Board of County Commissioners **disagree** with the Planning Commission's action to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005, staff offers the following two motion options:

"Move to reverse the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005; remand MPA15-003 back to the Planning Commission for a report; and remand RZA15-005 back to the Planning Commission with instructions to _____. This action is based on this Board's review of the written materials and oral testimony at the public hearing, and this Board's interpretation of the relevant findings.

OR

"Move to reverse the Planning Commission's decision to deny Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005; remand MPA15-003 back to the Planning Commission for a report; approve RZA15-005, subject to final approval of the master plan request; and authorize the Chair to sign the resolution attached as Exhibit E. This action is based on this Board's review of the written materials and oral testimony at the public hearing, and this Board's interpretation of the relevant findings.

Attachments:

A. Appeal Application, dated 12/4/15
B. Planning Commission Action Order, dated 12/3/15
C. Planning Commission Draft Minutes for 12/1/15 meeting
D. Planning Commission Staff Report and all original attachments, dated 11/5/15
E. Regulatory Zone Amendment Resolution

xc:

Applicant: SP58, LLC, Attn: Josh Myers, 439 W. Plumb Lane, Reno, NV 89509

Property Owner:	Jacie, LLC c/o Douglass Properties, LLC, Attn: Samuel Douglass, 3820 Lone Tree Lane, Reno, NV 89511
Consultant:	Rubicon Design Group, LLC, Attn: Mike Railey, 100 California Ave., Suite 202, Reno, NV 89509

AX15-005 - EXHIBIT A

Washoe County
Appeal of Decision Application

Appeal of Decision by (Check one)

☐ Board of Adjustment	☐ Hearing Examiner
☐ Design Review Committee	☐ Parcel Map Review Committee
☐ Director of Building & Safety (NRS 278.310)	☒ Planning Commission
☐ Director of Planning and Development	☐ Code Enforcement Officer

Appellant Information

Name: MIKE RAILEY	Phone: 775-425-4300
Address: RUBICON DESIGN GROUP, LLC 100 CALIFORNIA AVE. SUITE 202	Fax: Email: mraileyc rubicondesigngroup.com
City: RENO State: NV Zip: 89509	Cell: 775-250-3455
Original Application Number: MPA15-003 & RZA15-005	
Project Name: BLACKSTONE ESTATES	
Project Location: NORTHSIDE OF CALLE DE LA PLATA, EAST OF PYRAMID HIGHWAY IN SPANISH SPRINGS – APN # 534-571-01	
Date of decision for which appeal is being filed: DECEMBER 1, 2015	

State the specific action you are appealing:

THE DENIAL OF CASE #'S MPA15-003 AND RZA15-005 BY THE WASHOE COUNTY PLANNING COMMISSION.

State the reasons why the decision should or should not have been made:

THE COMMISSION FAILED TO CONSIDER STAFF, TMWA, AND APPLICANT TESTIMONY, ALONG WITH TECHNICAL REPORTS IN THEIR ANALYSIS OF THE FINDINGS.

For Staff Use Only

Appeal Number:	Date Stamp
Notes:	Staff:_____

Appellant Information (continued)	
Cite the specific outcome you are requesting under the appeal: WE ARE REQUESTING APPROVAL OF THE MASTER PLAN AMENDMENT AND REGULATORY ZONE AMENDMENT ASSOCIATED WITH BLACKSTONE ESTATES (CASE #'S MPA15-003 AND RZA15-005).	
State how you are an affected individual entitled to file this appeal: WE REPRESENT THE PROJECT APPLICANT AND FEEL THAT THE PLANNING COMMISSION FAILED TO CONSIDER EXPERT TESTIMONY WHEN CONSIDERING THE APPLICABLE FINDINGS.	
Did you speak at the public hearing when this item was considered?	☒ Yes ☐ No
Did you submit written comments prior to the action on the item being appealed?	☒ Yes ☐ No

For time limitations imposed for the various types of appeals, please refer to the Washoe County Development Code (WCC Chapter 110) and Nevada Revised Statutes Chapter 278 (NRS 278).

APPELLANT AFFIDAVIT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, MICHAEL RAILEY,
being duly sworn, depose and say that I am an appellant seeking the relief specified in this petition and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by staff of the Planning and Development.

Signed [signature]

Address 100 CALIFORNIA AVE. #202
RENO, NV 89509

Subscribed and sworn to before me this 4th day of December, 2015.

[signature]
Notary Public in and for said county and state

My commission expires: 5/4/17

(Notary stamp)

DEREK WILSON
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 09-9836-2 - Expires May 4, 2017

AX15-005 - EXHIBIT B

Planning Commission Action Order

Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005

Decision:	**Denied**
Decision Date:	December 1, 2015
Mailing/Filing Date:	December 3, 2015
Property Owner:	Jacie, LLC c/o Douglass Properties, LLC Attn: Samuel Douglass 3820 Lone Tree Lane Reno, NV 89511
Assigned Planner:	Kelly Mullin, Planner Washoe County Community Services Department Planning and Development Division Phone: 775.328.3608 E-Mail: kmullin@washoecounty.us

Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) – Hearing, discussion and possible action:

(1) To adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR); and

(2) Subject to final approval of the associated Master Plan change, to recommend adoption of an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

- Applicant: SP58, LLC, 439 W. Plumb Lane, Reno, NV 89509
- Property Owner: Jacie, LLC c/o Douglass Properties, LLC
- Location: On the north side of Calle De La Plata, approximately 650 feet east of its intersection with Pyramid Highway.
- Parcel Size: ± 58.49 acres
- Assessor's Parcel Number: 534-571-01
- Previous Master Plan: Suburban Residential (SR), Industrial (I) and Commercial (C)
- Proposed Master Plan: Suburban Residential (SR)
- Existing Regulatory Zone: Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC)
- Proposed Regulatory Zone: Medium Density Suburban (MDS)
- Area Plan: Spanish Springs
- Citizen Advisory Board: Spanish Springs

- Development Code: Article 820, *Amendment of Master Plan*
  Article 821, *Amendment of Regulatory Zone*
- Commission District: 4 - Commissioner Hartung
- Section/Township/Range: Section 23, Township 21N, Range 20E, MDM, Washoe County, NV

This serves as official notice that Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 were denied, and neither the master plan nor the regulatory zone has been amended by the Washoe County Planning Commission as requested. After giving reasoned consideration to the information in the staff report and testimony and evidence produced at the public hearing, the Planning Commission did not make the findings required for approval by the Spanish Springs Area Plan and Washoe County Code Sections 110.820.15(d) and 110.821.15(d).

Anyone wishing to appeal this decision to the Washoe County Board of County Commissioners may do so within 10 calendar days after the Mailing/Filing Date shown on this Action Order. To be informed of the appeal procedure, call the Planning staff at 775.328.6100. Appeals must be filed in accordance with Section 110.912.20 of the Washoe County Development Code.

Washoe County Community Services Department
Planning and Development Division

William Whitney

William H. Whitney
Acting Secretary to the Planning Commission

WW/KM/ks

xc:

Applicant: SP58, LLC, Attn: Josh Myers, 439 W. Plumb Lane, Reno, NV 89509

Consultant: Rubicon Design Group, LLC, Attn: Mike Railey, 100 California Avenue, Suite 202, Reno, NV 89509

Agencies: Nathan Edwards, Esq., District Attorney's Office (nedwards@da.washoecounty.us); Chair – Spanish Springs Citizens Advisory Board

AX15-005 - EXHIBIT C

WASHOE COUNTY PLANNING COMMISSION
Meeting Minutes

Planning Commission Members
James Barnes, Chair
Sarah Chvilicek, Vice Chair
Larry Chesney
Thomas Daly
Roger Edwards
Philip Horan
Greg Prough
Carl R. Webb, Jr., AICP, Secretary

Tuesday, December 1, 2015
6:30 p.m.

Washoe County Commission Chambers
1001 East Ninth Street
Reno, NV

The Washoe County Planning Commission met in a scheduled session on Tuesday, December 1, 2015, in the Washoe County Commission Chambers, 1001 East Ninth Street, Reno, Nevada.

1. *Determination of Quorum

Chair Barnes called the meeting to order at 6:30 p.m. The following Commissioners and staff were present:

Commissioners present: James Barnes, Chair
Sarah Chvilicek, Vice Chair
Larry Chesney
Thomas Daly
Roger Edwards
Philip Horan
Greg Prough

Staff present: William H. Whitney, Director, Planning and Development
Dwayne Smith, Director, Engineering and Capital Projects
Trevor Lloyd, Senior Planner, Planning and Development
Kelly Mullin, Planner, Planning and Development
Roger D. Pelham, MPA, Senior Planner, Planning and Development
Nathan Edwards, Deputy District Attorney, District Attorney's Office
Kathy Emerson, Recording Secretary, Planning and Development
Katy Stark, Office Support Specialist, Planning and Development

2. *Pledge of Allegiance
Commissioner Daly led the pledge to the flag.

3. *Ethics Law Announcement
Deputy District Attorney Edwards provided the ethics procedure for disclosures.

4. *Appeal Procedure
Director Whitney recited the appeal procedure for items heard before the Planning Commission.

5. *Public Comment
Chair Barnes opened the Public Comment period. There was no public comment.

6. Approval of Agenda
In accordance with the Open Meeting Law, Vice Chair Chvilicek moved to approve the agenda for the December 1, 2015 meeting as written. Commissioner Daly seconded the motion, which passed unanimously with a vote of seven for, none against.

7. Approval of November 3, 2015 Draft Minutes
Commissioner Prough moved to approve the minutes for the November 3, 2015, Planning Commission meeting as written. Commissioner Horan seconded the motion, which passed unanimously with a vote of seven for, none against.

8. Public Hearings

A. Master Plan Amendment Case No. MPA15-005 and Regulatory Zone Amendment Case No. RZA15-008 – Hearing, discussion, and possible action:

1) To adopt by resolution an amendment to change the Master Plan Category on four parcels of land totaling approximately 155 acres from a mix of Rural (R) (139.92 acres) and Suburban Residential (SR) (15.07 acres) to 69.60 acres of Rural (R), 59.20 acres of Rural Residential (RR) and 26.1 acres of Suburban Residential (SR); and
2) Subject to final approval of the associated Master Plan changes, to approve a resolution recommending an amendment to the Southwest Truckee Meadows Regulatory Zone Map to change the Regulatory Zone on four parcels of land totaling approximately 155 acres from a mix of General Rural (GR) (139.92 acres) and Low Density Suburban (LDS) (15.07 acres) to 69.60 acres of General Rural (GR), 59.20 acres of High Density Rural (HDR) and 26.1 acres of Low Density Suburban (LDS).

To reflect changes requested within this application and to maintain currency of general area plan data, administrative changes to the Southwest Truckee Meadows Area Plan are proposed. These administrative changes include a revised map series with updated parcel base and updated applicable text, and other matters properly relating thereto without prejudice to the final dispensation of the proposed amendments.

- Applicant/ Property Owners: The Ridges at Hunter Creek, LLC and Ridges Development Inc.
- Location: South of Woodchuck Circle and Hunters Peak Road and West of Hawken Drive
- Assessor's Parcel No's: 041-671-01, 041-650-02, 041-662-12 & 41-650-03
- Existing Master Plan Category: Rural (R) and Suburban Residential (SR)
- Proposed Master Plan: Rural (R), Suburban Residential (SR) and Rural Residential (RR)
- Existing Regulatory Zone: General Rural (GR) and Low Density Suburban (LDS)
- Proposed Regulatory Zone: General Rural (GR), Low Density Suburban (LDS) and High Density Rural (HDR)
- Area Plan: Southwest Truckee Meadows Area Plan
- Citizen Advisory Board: West Truckee Meadows
- TMSA: Inside the TMSA

- Development Code: Article 820, *Amendment of Master Plan*
  Article 821, *Amendment of Regulatory Zone*
- Commission District: 1 – Commissioner Berkbigler
- Section/Township/Range: Section 19 & 30, T19N, R19E, MDM, Washoe County, NV

Trevor Lloyd provided a brief description of the item.

Chair Barnes asked for ethics or ex parte disclosures. Commissioner Chesney disclosed that he was contacted by a representative of the developer by the phone; no discussion. Commissioner Daly was contacted by the developer, who gave him history on the project; Commissioner Daly had not yet seen the agenda or staff report at that time. Commissioner Edwards was contacted by a representative of the developer; he informed the representative that the representative should talk to Chair Barnes. Commissioner Prough was contacted and was asked if he had questions; Commissioner Prough said, "None." Commissioner Horan was contacted and was offered a tour of the property and answers to any questions; he declined both. Chair Barnes received a phone message on his answering machine, but he did not return the call or speak to anyone. Vice Chair Chvilicek received a voice mail, but she had no opportunity to return the call.

Chair Barnes opened the public hearing. Mr. Lloyd announced that Dwayne Smith from the Division of Engineering and Capital Projects and Chief Charles Moore from the Truckee Meadows Fire Protection District were in the audience. Mr. Lloyd reviewed his staff report.

Melissa Lindell, Wood Rodgers, Inc. provided an applicant presentation. A neighborhood meeting and CAB meeting were held, and the project was discussed with several neighbors. At the meetings they explained that the Master Plan Amendment and the zone change are the first steps in the process. There is currently no project. If approved, they will meet with the neighbors again to work on the details of a tentative map design and to listen to any concerns before bringing a request for a tentative map before the Planning Commission. There is some history to the project site. A portion of the property was included in a previously-approved tentative map, but it expired during the recession. Only part of the lots was developed. The developer put in roads, graded roads, put in all the storm drainage improvements, put in a big TMWA water tank, put in entrance gates, and arranged for emergency access, but homes were not constructed. The property sits behind the gate in an inactive, abandoned state. At this time, the current owner wants to reactivate and finish the project. Part of the original project included 91 acres of adjacent land, which was going to be part of a future phase. The current owner would like to include those acres, which makes this a 155-acre site. This is why they are requesting a higher density. The additional 91 acres would allow for potentially 32 more lots. There would be a total of 50 lots. This would amount to a density of 0.32 homes per acre, or essentially over 3.1 acres per house. Schools, utilities, and public services are all capable of handling 50 lots in the area. They are not yet positive if they will create all 50 lots. If the Master Plan Amendment and zone change are approved, then they will work on lot design and meet with the neighbors to address lot sizes, buffering, and any traffic impacts. Schools are under capacity in the area. Water rights are already arranged with the TMWA water tank.

Chair Barnes opened public comment.

David Cochran, Fire Chief with the City of Reno, brought a matter forward for the record on the project application. He discussed the implication of the proposed amendment on the automatic aid agreement for fire services. The automatic aid agreement dictates that the closest fire apparatus, whether from the Reno Fire Department or from Truckee Meadows Fire Protection

District, will respond to brush and structure fires in defined geographic areas. The project site is one of those defined areas. The automatic aid agreement has a series of maps as Attachment 1. This project area is clearly listed in the maps identified as Caughlin West and Caughlin East. The fire suppression services in this area will be provided first, though not solely, by the Reno Fire Department. This will place a burden on the Reno Fire Department, and that burden is borne by the City of Reno tax payers. Approval of this project and the proposed amendment is a change in the status quo that existed when the automatic aid agreement was adopted. The ability to provide for public safety should be a consideration in any application like this. In this case, part of that public safety service is being provided by the Reno Fire Department. Chief Cochran wanted to put this on the record so that it could be considered by the Planning Commission when reviewing this application and any future applications that have similar implications.

Chair Barnes invited Commission questions.

Vice Chair Chvilicek referred to a letter from NDOW and asked Mr. Lloyd how mitigation factors will be factored in for Mule Deer populations.

Mr. Lloyd replied that the question is difficult to answer at this time, because a project is not in front of them. He said it will be taken very seriously into consideration when there is a proposed tentative map. Conditions can be added that would address that need. He understands the concern, and it will be addressed in the future.

Commissioner Daly mentioned to Chief Cochran that Reno Station 7 would be closest to the community, but the station is closed. He asked who would be the closest City or County station.

Chief Cochran stated that the closest station to the eastern portion of the project would be Reno Station 5 off of Mayberry, and the closest station to the western portion of the project would be Reno Station 11 off of Mae Anne. This is reflected in the run cards, which is the dispatch protocol that dictates who responds.

Commissioner Prough asked Chief Cochran the estimated response time from the existing stations and asked if he could foresee a need to build a subsequent station closer to the area if the project is built.

Chief Cochran said they would not need to build an additional station, especially for a project of this size. The project as a whole, in and of itself, would not justify adding a fire station, but it would be an additional burden on the services that the Reno Fire Department already provides. He estimated response time at four and a half minutes or so from the closest station.

Vice Chair Chvilicek stated that she chaired the Blue Ribbon Commission for Washoe County on regionalization of fire services. With the auto aid agreement, the understanding was that the closest unit responds and that the citizens dictate that they want fire protection services, but this project is entirely within the Washoe County sphere, understanding that the closest units would respond. Right now, with a Master Plan Amendment and Regulatory Zone Amendment, there is no tentative map. She believes it is premature to be talking about fire services.

Chief Cochran thanked Vice Chair Chvilicek for her comment and said that he was simply stating this for the record. He said that we, as a City and as the Reno Fire Department, do not have an official position. He was not necessarily speaking for or against it. His council will take this up and when they have an official position, they will make their position known. He wanted the Planning Commission to hear from him before a project might come up.

Vice Chair Chvilicek said that she hopes the City of Reno and Truckee Meadows Chiefs are in conversation with one another prior to City Council involvement and Board of County Commissioner involvement.

Commissioner Daly spoke to Chief Moore regarding the fire code and the Wildland Urban Interface code obligations on the developer initially and on the HOA or individual homeowners subsequent to the developer leaving. He asked if there is a defensible space obligation at the perimeter of the community, particularly given the fire history in Caughlin Ranch.

Chief Moore said there is a defensible space required around the perimeter, which would be a maintenance issue for a future home owners' association, and there would be requirements for each individual lot for defensible space. He added that, with these lots, he believes it is likely that each home would be greater than 5,000 square feet. In this case, fire sprinkler and fire alarm requirements would kick in. So the incidence of a severe structure fire happening in one of these homes would be very unlikely.

Chair Barnes closed the public hearing and called for Commission discussion. There was no discussion. Chair Barnes called for a motion.

Commissioner Edwards, after giving reasoned consideration to the record in this case, including but not limited to the information contained in the staff report and the information presented during the hearing on these items, moved to approve Master Plan Amendment Case Number MPA15-005 and Regulatory Zone Amendment Case Number RZA15-008, based on all of the findings as outlined in the staff report. He further moved to certify the resolutions and the proposed Amendments in MPA15-005 and RZA15-008 as set forth in the staff report for submission to the Washoe County Board of Commissioners and authorized the chair to sign the resolutions on behalf of the Planning Commission.

Washoe County Development Code Section 110.820.15 (d) Master Plan Amendment Findings

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.
2. Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Response to Changed Conditions. The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.
4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the Proposed Master Plan designation.
5. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services; and,

Southwest Truckee Meadows – Findings

6. Policy SW.20.1 Findings

a. The amendment will further implement and preserve the Vision and Character Statement.

b. The amendment conforms to all applicable policies of the SWTM Area Plan and the Washoe County Master Plan, and the Regional Water Management Plan.

c. The amendment will not conflict with the public's health, safety or welfare.

7. Policy SW.20.3 Findings

a. The impacts of the amendment are within commonly accepted thresholds of sustainable resource management and the county's ability to manage the conservation of the area's character will not be compromised.

b. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resources plans for SWTM by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

c. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the Southwest Truckee Meadows planning area and the improvement likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

d. For amendments that propose new or intensified commercial land use, the scale of the intended use shall be shown to be community serving in nature. Casinos are not appropriate in the Southwest Truckee Meadows planning area.

e. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's applicable policy growth level for the SWTM Area Plan, as established under Goal One.

f. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Southwest Truckee Meadows planning area, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, the Washoe County Planning Commission, upon written request from the Regional Transportation Commission, may waive this finding.

g. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

h. Proposed amendments shall complement the long range plans of facilities providers for transportation, water resources, schools and parks as reflected in the policy growth level established in Policy 1.2.

i. If the proposed intensification results in existing public school facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. The Washoe County Planning Commission, upon request of the Washoe County Board of Trustees, may waive this finding.

j. Any existing development in the Southwest Truckee Meadows planning area, the South Valleys planning area, the Forest planning area, or the Southeast Truckee Meadows planning area which is subject to the conditions of a special use permit will not experience undue hardship in its ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

Washoe County Development Code Section 110.821.15 (d) Regulatory Zone Amendment Findings

1. Consistency with Master Plan The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan and Regulatory Zone Map.
2. Compatible Land Uses The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Response to Change Conditions The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.
4. Availability of Facilities There are, or are planned to be, adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.
5. Master Plan Policies and Action Programs The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.
6. Desired Pattern of Growth The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Commissioner Prough seconded the motion, which passed unanimously with a vote of seven for, none against.

B. Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) – Hearing, discussion and possible action:

1) To adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR); and
2) Subject to final approval of the associated Master Plan change, to recommend adoption of an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

• Applicant:	SP58, LLC, 439 W. Plumb Lane, Reno, NV 89509
• Property Owner:	Jacie, LLC c/o Douglass Properties, LLC
• Location:	On the north side of Calle De La Plata, approximately 650 feet east of its intersection with Pyramid Highway.
• Parcel Size:	± 58.49 acres
• Assessor's Parcel Number:	534-571-01
• Previous Master Plan:	Suburban Residential (SR), Industrial (I) and Commercial (C)
• Proposed Master Plan:	Suburban Residential (SR)
• Existing Regulatory Zone:	Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC)
• Proposed Regulatory Zone:	Medium Density Suburban (MDS)
• Area Plan:	Spanish Springs
• Citizen Advisory Board:	Spanish Springs
• Development Code:	Article 820, *Amendment of Master Plan* Article 821, *Amendment of Regulatory Zone*
• Commission District:	4 - Commissioner Hartung
• Section/Township/Range:	Section 23, Township 21N, Range 20E, MDM, Washoe County, NV

Director Whitney provided a brief description of the item, at the request of Chair Barnes.

Chair Barnes asked for ethics or ex parte disclosures. Commissioner Prough disclosed that he lives in the area. The project is on the side of which Commissioner Prough is a part, but this will not affect him one way or another.

DDA Edwards asked Commissioner Prough where his property is in relation to the application being considered.

Commissioner Prough answered that his property is approximately three miles from the location in the Spanish Springs Valley Ranches.

DDA Edwards stated that this is not a project specific application, but rather a Master Plan Amendment and Regulatory Zone Amendment case. He said that as a property owner, Commissioner Prough is qualified to give an opinion on the value of his property. He asked Commissioner Prough if he believed this would have any pecuniary effect on the value of his property.

Commissioner Prough answered, "No."

DDA Edwards confirmed that Commissioner Prough had already stated that this would not interfere with his independence of judgment.

Commissioner Prough affirmed DDA Edwards' statement.

Chair Barnes opened the public hearing. Kelly Mullin reviewed her staff report, dated November 5, 2015.

Mike Railey, with Rubicon Design Group, present on behalf of Blackstone Development, provided an applicant presentation. He explained that this is the first step in developing a tentative map for the project. There is currently no project that will be brought forward. They are pursuing three dwelling units per acre density on the site. He noted that this site is within the Suburban Character Management Area identified in the Area Plan. He said that this does not require any change to the Character Management Statement identified in the Area Plan. The existing zoning designations, Neighborhood Commercial and Industrial, have the lowest compatibility with the existing surrounding uses. What the applicant is proposing with MDS has either high compatibility or medium compatibility, so they believe they are improving the compatibility per the County's own standards. The northern half of the property is already Master Plan Suburban Residential; they'd like to extend this to the south. They had a neighborhood meeting, at which they received good input. A big concern at the meeting was the rural character of the area. Mr. Railey stated that this is a down zone in terms of land use intensification. MDS is a lower intensity designation than Industrial and Neighborhood Commercial. Some of the uses that could be allowed by Industrial would generate truck traffic, potentially noise, lighting, etc., adjacent to the rural area, which would not create a rural feel under the existing regulations. This is reflected in the traffic report based on build out of the existing zoning designations. It would be a 42% reduction in traffic compared to what could be built under the existing Commercial and Industrial designations. The next concern is the Calle De La Plata-Pyramid Highway intersection. With the forthcoming tentative map, they are agreeable to conditions to make improvements to that intersection. NDOT issued a memo saying that should the Planning Commission approve the project adjoining to theirs, the signal warrants would be met to potentially get the intersection signalized. Mr. Railey said they would be more than happy to participate in that during the tentative map process. In terms of water, they have gone through the TMWA discovery process. They are eligible for annexation into TMWA's service territory; they will dedicate water rights with their tentative map and be served by TMWA through TMWA's existing system. They will pay for all of the improvements and upgrades to connect to TMWA's system, same with sewer. This is the first step; very specific conditions can be placed on a tentative map. They have met with potentially the most impacted

resident of the development: Dan Herman, who lives to the west and whose property adjoins their property. They have agreed to some provisions in the forthcoming tentative map with Mr. Herman and have committed to those in writing. He believes that Mr. Herman is not opposed to the project.

Chair Barnes opened public comment.

DDA Edwards mentioned that the overhead timer was broken and stated that time was still being kept by the clerks. The time limits set in the agenda apply.

Larry Thomas, who lives on Calle De La Plata, expressed concern that the 750-foot radius for notification of the residents isn't adequate in an area with ten-acre parcels. He believes that residents farther east on Calle De La Plata should have been notified, because anyone who hits the stop sign on Pyramid highway will be impacted. He doesn't believe that the people present for the meeting were representative of everyone's opinion on the project. His second concern was the water and the impact on the current residents' wells. He stated that TMWA supplements their water rights in Spanish Springs with the Truckee River water rights, so he believes it could impact the residents' wells. He reiterated his concern with the traffic on Calle De La Plata. He believes it is not legitimate to approve this project and the neighboring project simply to trip the NDOT requirements for a traffic light to be installed. It is not only open space to the south of this project. Mr. Thomas is concerned about the quality of life, because they moved out there for a specific lifestyle without neighbors across the street. He is worried that new residents will complain about the animals and smells from the currently-existing property owners; he doesn't want to lose those things. He feels this should be discussed again with more extensive notification (beyond 750 feet) of surrounding property owners.

Merl K. Jessop II lives to the east of this project. He did not receive notification that the zoning was going to change to one-third acre lots. He moved from a one-third acre lot to get away from one-third acre lots and to live a more rural lifestyle. He believes it does not make sense to put one-third acre lots further north at Calle De La Plata when there is plenty of open land around the Desert Springs subdivision. Mr. Jessop asked Commissioner Prough if, as a homeowner, he was notified of this project. All summer Mr. Jessop has been worried about having enough water in his well to feed his animals, and he will be more concerned if the subdivision is approved on one-third acre lots. He feels they will be impacted if TMWA has to drill into their aquifer to get more water. He currently knows of one house without water. The traffic impact is a big consideration for Mr. Jessop. His daily commute is already lengthy, and he anticipates the traffic becoming worse for homeowners with a residential zoning. He believes that with Industrial/Commercial, traffic patterns would be the opposite. He moved to the area to have animals and doesn't believe animals can be owned on one-third acre lots.

Ann Sweder believes there are too many factors not in place to allow the zone change to medium density, three units per acre. In addition to the roads, traffic, fire, and police, Ms. Sweder believes the schools must be considered. Of the six elementary schools in the area, four are over capacity and two are close to capacity, even with additional portable buildings to expand the schools. Shaw Middle School has two portables and is at 98 percent capacity. With all of the current housing being built, Ms. Sweder stated that they'll soon be over capacity.

Spanish Springs High School has ten portables and is still over capacity by 104 percent. Ms. Sweder took these capacities from the Washoe County School website. She is concerned about busing students to schools that aren't at capacity, because looking at the whole area, there really aren't any. All the schools are at capacity or over. She feels that all these homes would push the schools way over, and she would like to know where the money is coming from to pay for additional schools. She stated that the School District does not have the money to make the repairs on the schools that we have. Ms. Sweder believes we should fix the problems in the area before we pile on more housing. She urged the Planning Commission not to approve the rezoning of the property.

Chair Barnes called for Commission questions.

Commissioner Edwards spoke to Ms. Mullin. He mentioned the danger of the Pyramid and Calle De La Plata intersection. He said that this is determined after the building occurs and after certain levels are reached. He believes we don't have the requirements in changing a master plan amendment and zone amendment when we know it is going to import a significant amount of traffic to an area that is already bad. The report indicates that the intersection is already at Level F. Commissioner Edwards acknowledged that they did not have a project plan in front of them to indicate actual densities, but said that 174 lots on 58 acres is right at the 0.33 before taking out roads, easements, setbacks, etc. He asked Ms. Mullin if, in the planning process, there is some way to adjust the final plan when it exists. He'd like to know, if the Planning Commission approves this with three per acre, if it will end up four per acre once they take out roads, curbs, and other items. He asked if there is a plan for this.

Ms. Mullin said that maximum density speaks to the maximum number of dwelling units that can be placed on a property. For Medium Density Suburban, the number is three dwelling units per acre. There are also minimum lot sizes in the regulatory and development standards. This is 12,000 square feet. There is generally a bit of a difference between the minimum lot size and the maximum number of dwellings that are allowed on a property. There's a little bit of give that might take into consideration roads and other things that might be included.

Commissioner Edwards asked if the final result might not be 174, because you need to make the minimum lot size.

Ms. Mullin said that the maximum number of homes on this property, if it was zoned Medium Density Suburban, would be 175. The minimum lot sizes are usually going to be a little bit smaller than three per acre. Ms. Mullin invited Roger Pelham, Senior Planner, to the front to share additional details.

Commissioner Edwards said they run into this all the time on these projects. He said it seems that when they come back to the Planning Commission as a final project, it's not at all what they thought they were going to approve. When Master Plan Amendments are made, it impacts the whole area. He said they're supposed to be the ones looking forward when making the Master Plan Amendments so that these things are considered. There are not many areas of the County in which we can expand, and Commissioner Edwards believes we need to expand. He intends to vote for these things, but wants to know if there is a process.

Mr. Pelham noted that he and Ms. Mullin worked on this project and the adjacent project in conjunction. He offered the question, "Do we have a way to look forward for how development is going to take place?" He answered, yes, in the Spanish Springs Area Plan, that development has been identified to be within the Suburban Character Management Area. This is within the Suburban Character Management Area. They're seeking Suburban Residential Master Plan and Medium Density Suburban zoning. To address the actual difference between development potential and lot size, three dwelling units per acre, a third of an acre, is about 14,000-and-change square feet. The minimum lot size is 12,000. That leaves you 2,000-and-change square feet per dwelling unit to account for all of the necessary infrastructure like roads, sidewalks, and the infrastructure that goes underneath.

Vice Chair Chvilicek asked Ms. Mullin about the supplemental reports, Exhibit M, Exhibit O, and Exhibit N. She is concerned about the Washoe County Community Services Engineering and Capital Projects letter, which reads: "On conclusion the CSD is currently preparing a facility plan for the Spanish Springs area. This document identifies the potential for significant offsite sewer improvements that the applicant would need to construct in order to obtain service from the Community Services Department." Vice Chair Chvilicek believes this is a red flag. She also highlighted the Washoe Storey Conservation District letter, Items 6, 7, and 8, with the report that the applicant did not provide significant information regarding water rights issues. These are big concerns for her with sewage and water.

Ms. Mullin addressed the Washoe Storey Conservation District memo. Regarding information on water rights, there is a memo that was received from the Truckee Meadows Water Authority. This memo from TMWA was provided after the initial application came in, so it is not necessarily something the Washoe Storey Conservation District would have seen. Exhibit O-1 is a memo from TMWA that discusses infrastructure requirements for water service. They discuss a little bit regarding water rights that would need to be dedicated to TMWA for future development. That is something that would come later. She referred this to Dwayne Smith for how the process works. John Enloe from TMWA was also present for questions.

Vice Chair Chvilicek asked to hear about Engineering and offsite sewage improvements and then water.

Dwayne Smith, Community Services Department Engineering and Capital Projects, stated the philosophy that new development pays for development. Any required offsite sewer improvements, be they improvements to existing infrastructure or new infrastructure, would be on the developer, ultimately when the project is developed. It would be on the developer to pay and construct, provide easements, etc., and offer those for dedication to Washoe County for the operation and maintenance.

Vice Chair Chvilicek quoted Mr. Simpson's letter regarding the potential for significant offsite sewer improvements. She said the other factor is that sewer improvements need to go to a plant. Plants, if not now, then are soon to reach capacity. She asked how that is going to be addressed. There are this Master Plan Amendment and this Regulatory Zone Amendment, but

this project and the next are side by side, so we need to think about them in a larger perspective in terms of impact to sewage, water, traffic, and all those factors.

Mr. Smith spoke to the infrastructure necessity. As part of Washoe County's preparedness for new development, facility planning has been initiated in all sewer service areas, including Spanish Springs. Through facility planning work which is currently underway, the need for some enlarged pipes has been identified on the west side of Calle De La Plata. Those improvements are taken into consideration any time they look at new developments, including this development, the neighboring development, and other developments in the area. That part of the process is already underway, and it is the responsibility of us to make sure we're planning appropriately and increasing and constructing those facilities as necessary. The costs will be borne by the new development. Mr. Smith said that Vice Chair Chvilicek's second issue was more of a regional question regarding overall sewer capacity. At this time, there are no limitations associated with adding this development into the overall mix of available capacity. The Spanish Springs area is serviced by unincorporated Washoe County, but all of the municipal sewer flows are conveyed through Washoe County interceptors and the City of Sparks interceptors, which are then conveyed to the TMWA facility. That facility is jointly owned by the City of Reno and the City of Sparks and operated by the City of Sparks. Our capacity within that facility and within the interceptors is identified under a 2005 agreement between Washoe County and the City of Sparks. There is a maximum limitation of ERU connections under that agreement; currently less than half of those have been utilized. We still have significant numbers remaining, and this project, as well as the next project, will fall within that. We don't have any current limitations anticipated through that.

Commissioner Prough addressed Ms. Mullin. He said that traffic, water, schools, and fire came to his mind while reviewing the packet. Assuming that the zoning change is made and the developer wants to build three units per acre and increase the homes in the area, Commissioner Prough asked if the existing fire station by the Save Mart would be able to handle the increased capacity. He asked if more engines, a ladder truck, and/or a bigger station would be needed and who would pay for it.

Ms. Mullin referenced a memo from Truckee Meadows Fire Protection District which was included as Exhibit J. They did not specifically mention any negative impacts to that fire station. If a development proposal was to come through in the future, then Truckee Meadows Fire would again have the opportunity to provide comments and voice any concerns. Ms. Mullin mentioned two letters from the Fire Marshall in Exhibit J regarding this project with comments that would be related to future development.

Commissioner Prough stated that they only address the general regulations for clearance around the properties, the HOA, etc. He is more concerned about the number of units and the demands this would put on the one engine that is currently located there. He asked Ms. Mullin to get back to the Planning Commission with this information.

Ms. Mullin thanked Commissioner Prough for the opportunity. She did not currently have an answer, but could research and get back to them.

Commissioner Prough addressed water. He lives on the other side and has a private well. There are some wells that have gone dry in the area. He was not notified, but it was not required to be notified that far out. He asked if there is any scenario in which the private water table will be molested and cause a reduction in the potential of private water in this change. He asked if there is any scenario where they could drill wells into the private area and sap off the aquifer.

Ms. Mullin referred Commissioner Prough's question to the Truckee Meadows Water Authority expert, John Enloe.

John Enloe said that water rights issues had come up. He said that there are Truckee River water rights available to allow this development and other developments to proceed. TMWA has a bank of water rights, approximately 7,000 acre feet of water held by TMWA that is available for new development. That is roughly enough water for seven years of development throughout the entire region. Two significant events have occurred recently which have greatly improved this region's water supply. One is the merger of the Washoe County water utilities into TMWA. The second is the implementation of the Truckee River Operating Agreement. The merger with Washoe County has allowed TMWA to operate the system much more efficiently. For example, today, almost all of the wells in the system are off, where those areas can be reached with Truckee River water. So they are able to reduce our reliance on the pumping of ground water wells. Only when surface water is not available, wells are pumped in the summer to help meet peak demands. This is referred to as conjunctive use operation. This type of operation reduces the pumping of ground water wells. Water level rises have been seen, particularly on the western side of the valley in Spanish Springs with the ground water tables. With the merger and the conjunctive use operation, the pumping on the wells will be reduced. They are actually actively recharging many of the wells in Spanish Springs. The recharge starts tomorrow for this year and will go all winter long, probably until about April or so. They are doing everything they can to bolster the ground water table in those areas. They cannot guarantee that domestic well owners in certain locations won't have problems. There are many domestic well owners located up on the fringe of the valley; TMWA's wells are nowhere near those domestic wells. They are located in fractured ground water aquifers, and they may have a problem, not necessarily associated with TMWA's pumping, probably more associated with the ongoing drought. Mr. Enloe said that he is a domestic well owner himself and understands the issues. The second thing is the implementation of TROA, the Truckee River Operating Agreement. It has been a negotiated, ongoing process in this community for over twenty years. As of December 1, 2015, they are actively storing water in upstream reservoirs, which they've never been able to do before. The operation of the river has changed. It's a huge benefit for this community, and it will greatly improve TMWA's ability to provide a drought supply to the community.

Commissioner Prough restated his original question to Mr. Enloe. He asked about any potential scenario on the east side of Pyramid, at Calle De La Plata, with this many units going in, that could cause additional drawing of the water from that aquifer that would affect the community there?

Mr. Enloe replied not from what they are doing to provide water service to that area.

Commissioner Prough asked Ms. Mullin a question regarding one of the comments from the community that was at the Spanish Springs Citizen Advisory Board. The comment was from Mr. Herman. Per Mr. Herman, the Spanish Springs Area Plan calls for a transition zone that is not being applied to these residential upzoning requests, and the Spanish Springs Area Plan Character Statement, paragraphs two and three, address this issue. Commissioner Prough asked Ms. Mullin to explain the transition zone and whether or not it was applied.

Ms. Mullin explained that the Character Statement does include a number of descriptives as far as the current state of the Suburban Character Management Area. In speaking with Director Whitney, the Planning and Development Director, and with Planner Eric Young, who helped put together the update to the Spanish Springs Area Plan, they indicated that many of the descriptions were meant to be descriptive, not necessarily requirements for future development.

Director Whitney requested that the Character Statement be displayed on the overhead.

Commissioner Prough referred to a portion of the Character Statement: "Outside the suburban core, a transition to a more rural character occurs." He asked if the portion stating "to the...east, the transition to rural stretches out into the valley and includes lower density" is being fulfilled because one parcel is currently zoned that way. Does that mean they are all encompassed that way?

Director Whitney said the general take on the text, which can be interpreted differently, is that the suburban core is along the Pyramid Highway. The Character Statement says that the transition to more rural character occurs on the east side, and it does. This is a change in density. It's going to be much denser on the east side close to Pyramid Highway. Director Whitney looked at the Character Statement very closely from many angles, and he did not feel that the Character Statement needed to be amended. He feels it is flexible enough and allows enough flexibility that this MPA could go forward without the need to amend the Character Statement. He affirmed that you could look at and interpret the Character Statement in different ways.

Commissioner Prough asked if the rights of the existing homeowners will suffer if the smells from their parcels, where animals can be kept, cross over into the new area under discussion and complaints are filed. He asked if there are any protections for the public or if they get cited to get rid of the smells.

Ms. Mullin responded that the rights of the existing homeowners in terms of keeping animals on their property shouldn't be affected by or change as a result of a project such as this or a change in zoning at this location. There are requirements regarding the number of animals that can be kept on a property. The Health District and Animal Services both have regulations regarding the keeping of those animals; that wouldn't change for a project like this. It is possible that more complaints might come in, but the regulations and requirements would not be effected.

Commissioner Prough is concerned about the possibility of a large number of new neighbors complaining about smells from one person's property. What are that person's rights? If that person is complying with all of the code, will he be held responsible for eliminating the smell?

Ms. Mullin answered that if he is in compliance with Washoe County regulations, then he is in compliance and would not be cited.

Vice Chair Chvilicek returned to the Washoe County Storey Conservation District letter, dated September 29, 2015, for clarification. She was referred to the Truckee Meadows Water Authority letter, dated May 7, 2015. She wanted to clarify her understanding that the Conservation District might not have had access to the TMWA letter. She asked what process is put into place when concerns are put into the report. How are they addressed, and how does follow up occur? She is still concerned about water rights.

Ms. Mullin discussed the difference in the dates. The memo from Truckee Meadows Water Authority very likely was created on the date stated by Vice Chair Chvilicek, but was not received by Ms. Mullin until later. A request was submitted to the applicant for additional information. The applicant has already submitted a subsequent application related to this project, which is on hold right now, but did have information on water from TMWA. So that was included as an exhibit with this staff report, because it is pertinent information. It wasn't necessarily with the original packet that went to the different agencies for review, but it was included with this packet because of its relevance.

Commissioner Prough asked Ms. Mullin about Exhibit G, Points 5 and 6, on the Department of Transportation letter. The letter states that SR 445, Pyramid Highway, has a posted speed of 55 miles per hour through the project limits. A deceleration/right turn lane will be required from northbound SR 445 to eastbound Calle De La Plata. Left turn/deceleration lanes will be required on southbound SR 445 to eastbound Calle De La Plata. Commissioner Prough asked whether he was correct that approval of this change, without looking at the other project, that these are requirements that have been put in place.

Ms. Mullin explained that the comments received from Nevada Department of Transportation, as well as from a number of the other reviewing agencies, are requirements that would be placed potentially on future development on the property. If a tentative map was submitted, then requirements such as that might be placed at time of development. When it comes to Master Plan Amendments or Regulatory Zone Amendments, they are either approved or denied. There is not an opportunity to condition those.

Chair Barnes closed the public hearing and called for any discussion from the Commission.

Commissioner Chesney mentioned that every time they address development in this area, three things are brought up repeatedly – traffic, water, and sewer. He's not sure what can be done about the traffic, because RTC has no plans until 2025 or 2035. He believes this needs to be addressed now. The water and sewer is on the developer, but the traffic is a public safety issue. For the record, Commissioner Chesney said that on whatever level, it needs to be dealt with starting now, because that kind of timeframe is not acceptable.

Commissioner Horan mentioned the other consideration they always hear is schools, which is never answered. He works in some of these schools and doesn't know of any elementary school without trailers.

Commissioner Prough said that he cannot get behind this as it stands now. The discussion is three units per acre. The schools will be overtaxed. He does not believe it is in the best interest of the community. He believes that keeping LDS, with one unit per acre, would allow development and would allow us to avoid heavily taxing the area with the current resources. The traffic, which is always an unknown, concerns him with three units per acre.

Commissioner Edwards stated that he is in favor of development in Spanish Springs. He would also prefer to see LDS. He can vote for the project, because the Planning Commission is not voting on a project; they are voting on a Master Plan Amendment and a zoning amendment. When the project comes before them, they can take another look at it. Of course, it will come before them with 174 units. He's concerned about the impact on the neighborhood. There has been an ongoing discussion about having Industrial and Commercial there to bring traffic back to the neighborhood, not out from neighborhood. He believes they need the development, but wonders why it must be more and more homes. He stated that they just approved 475 more homes on the other side of the road less than a year ago.

Commissioner Prough clarified that he is not against development either, but he believes it needs to be intelligent development. He's all for the development of homes in the area, but he believes that one per acre is more applicable.

Vice Chair Chvilicek referred to the Spanish Springs Area Plan. She shared points in the introduction: respect the rural heritage of the area by encouraging a rustic appearance and preserving scenic quality, respect private property rights, provide a range of low density housing opportunities, provide open space and recreational opportunities, provide local service and employment opportunities, and ensure that growth is kept in balance with resources and infrastructure. She believes it's very important for the Commission to keep this in mind, with the last point being the most pertinent.

Chair Barnes called for motions and findings of fact.

Vice Chair Chvilicek clarified that they had a Master Plan Amendment and a Regulatory Zone Amendment before them. The Commission has been very vocal about the concerns, particularly for Pyramid Highway and Spanish Springs. Road condition is already at F, which can't get worse. Vice Chair Chvilicek believes that the Planning Commission, to do their due diligence, has a responsibility to look at the bigger picture when they see these projects, even though they have the MPA and RZA in front of them. They need to take the concerns of community members into consideration. She said that the reluctance to put forth a motion on the MPA and the RZA speaks volumes.

Commissioner Edwards asked DDA Edwards about the process for making an amendment to a proposal in front of the Planning Commission. He asked if they need to first make a motion and then amend that motion, or if they can make a motion with an amendment before.

DDA Edwards asked Commissioner Edwards if he was pondering doing a motion with a reduced density potential.

Commissioner Edwards answered DDA Edwards' question in the affirmative.

DDA Edwards explained that the agenda drives what the Planning Commission could take action on that night. He heard discussion about LDS instead of MDS. The agenda is for the Master Plan Amendment and the associated zoning change that would increase it to three per acre. The Planning Commission was not agendized to take action on a one per acre change in zoning that night. This does not mean that it couldn't be brought back down the road at another meeting.

Commissioner Edwards asked about the process that night. He wanted to know if they should make a motion on the item before them, and if it were denied by vote, then it would simply be denied and would have to come back.

DDA Edwards said this was correct. He said that if it were denied, then an additional question would be whether it was denied with or without prejudice. With prejudice means a one-year wait on coming back. Without prejudice means there is not a one-year wait to bring it back before the Planning Commission.

Commissioner Edwards asked when this would occur, specifically if it would occur when there was a denial vote.

DDA Edwards answered DDA Edwards' question in the affirmative.

Commissioner Edwards, after giving reasoned consideration to the record in this case, including but not limited to the information contained in the staff report and the information presented during the hearing on these items, moved to approve Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005, based on all of the findings as outlined in the staff report. He further moved to certify the resolutions and the proposed Amendments in MPA15-003 and RZA15-005 as set forth in the staff report for submission to the Washoe County Board of Commissioners and authorized the chair to sign the resolutions on behalf of the Planning Commission.

Washoe County Development Code Section 110.820.15(d) Master Plan Amendment Findings

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.
2. Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Spanish Springs Area Plan Findings - Policy SS.17.1 (a part of the Master Plan)

a. The amendment will further implement and preserve the Vision and Character Statement.

b. The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.

c. The amendment will not conflict with the public's health, safety or welfare.

Washoe County Development Code Section 110.821.15(d) Regulatory Zone Amendment Findings

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.
2. Compatible Land Uses. The proposed amendment will not result in land uses which are incompatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Response to Change Conditions; more desirable use. The proposed amendment identifies and responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.
4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.
5. No Adverse Effects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.
6. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Spanish Springs Area Plan Findings - Policy SS.17.2 (a part of the Master Plan)

a. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

c. **(NOT APPLICABLE)** For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.

d. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.

e. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

g. Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.

h. If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

Commissioner Chesney seconded the motion.

Chair Barnes called for discussion.

Commissioner Prough disagreed with the finding that the amendment will not conflict with the public's health, safety or welfare. He believes that it will conflict with all of those and cannot be passed. He also isn't certain about the transition zone. He urged a no vote.

Vice Chair Chvilicek feels that the amendment will not further implement and preserve the Vision and Character Statement of the Area Plan. She addressed Director Whitney with her other question regarding how the Planning Commission can compartmentalize this when they're just looking at an MPA and an RZA, knowing there is a much bigger picture.

Director Whitney told the Planning Commission to look at and weigh all of the information that was presented to them and to make the decision, if appropriate, to change the Master Plan and the zoning. He said that it's impossible to really compartmentalize. They must focus that they are changing the color on the Master Plan and the color on the zoning map; that is what their vote is about. But at the same time, the staff report provides much information about the particulars that go along with it, and he can't tell them to ignore the information. The information is provided so that the Planning Commission can make the best call and the best judgment.

Chair Barnes called for a vote on the motion. The motion was denied with a vote of two for (Commissioners Edwards and Horan), five against (Chair Barnes, Vice Chair Chvilicek, and Commissioners Chesney, Prough, and Daly).

DDA Edwards stated that pursuant to their rules, having failed to receive the required number of votes for passage, there is an opportunity for a second motion to determine whether it is denied with or without prejudice. Without prejudice frees them to come back without the time constraints. With prejudice means they would have to wait until the time period is over.

Commissioner Prough made a motion to allow them to come back without prejudice. Commissioner Daly seconded the motion, which passed unanimously with a vote of seven for, none against.

Director Whitney initiated discussion on whether a separate vote was needed for the RZA. He explained that a zone amendment cannot be passed without first passing the Master Plan Amendment. He wanted to confer with counsel regarding the appropriate procedure.

DDA Edwards asked for clarification regarding whether or not Commissioner Edwards' motion included both the MPA and the RZA.

The Planning Commission confirmed that Commissioner Edwards' motion did include both the MPA and the RZA, so no further action was needed.

C. Master Plan Amendment Case Number MPA15-004 and Regulatory Zone Amendment Case Number RZA15-006 (Sugarloaf Ranch Estates) – Hearing, discussion and possible action:

1) **To adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan** to change the Master Plan Category on one parcel of ± 39.84 acres from a mix of Industrial (I) Commercial (C) and Open Space (OS) to Suburban Residential (SR). and

2) Subject to final approval of the associated Master Plan change, to recommend adoption of an amendment to the regulatory zone on one parcel of ±39.84 acres from a mix of Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

- Applicant: Lewis Roca Rothgerber, LLP, 50 West Liberty Street, Suite 410, Reno, NV 89501
- Property Owner: Sugarloaf Peak, LLC, 2777 Northtowne Lane, Reno, NV 89512
- Location: On the north side of Calle De La Plata, approximately 2/10 of a mile east of its intersection with Pyramid Highway.
- Parcel Size: ± 39.84 acres
- Assessor's Parcel No: 534-562-07
- Existing Master Plan: Industrial (I), Commercial (C) and Open Space (OS)
- Proposed Master Plan: Suburban Residential (SR)
- Existing Regulatory Zone: Open Space (OS), Industrial (I) and Neighborhood Commercial (NC)
- Proposed Regulatory Zone: Medium Density Suburban (MDS)
- Area Plan: Spanish Springs
- Citizen Advisory Board: Spanish Springs
- Development Code: Article 820, *Amendment of Master Plan* Article 821, *Amendment of Regulatory Zone*
- Commission District: 4 - Commissioner Hartung
- Section/Township/Range: Section 23, Township 21N, Range 20E, MDM, Washoe County, NV

Director Whitney identified the general nature of the proceeding. He stated that the property is adjacent to the property with which they just dealt.

Chair Barnes called for ethics or ex-parte communications from the Commissioners. Commissioner Prough disclosed the same information as the previous item.

DDA Edwards guided Commissioner Prough through several questions. Commissioner Prough affirmed that he owns property approximately three miles from the area of the application, he has a well on that property, and as a property owner, he does not believe that approval or denial of this item will have a pecuniary effect on the value of that property. Commissioner Prough also affirmed that it would not materially affect the independence of his judgment one way or another in considering this item.

Vice Chair Chvilicek disclosed that she attended Spanish Springs Citizen Advisory Board when this was heard by the CAB.

Commissioner Edwards asked if a subject like this or like the last one comes up and there is no vote and no motion, what happens?

DDA Edwards explained that in the Planning Commission rules, Rule 17 of Rules, Policies, and Procedures, when a motion is made, if a motion to approve an adjudicative matter does not

receive the required number of votes, it is deemed denied. If there is no second or no action taken, then there are no votes required to approve an item, and it would be deemed denied. At that point, the Planning Commission would have a separate motion, to determine whether it is with or without prejudice.

Commissioner Edwards asked what would happen if no motion at all was made on an item.

DDA Edwards said that the item, in his view, would be deemed denied.

Chair Barnes opened the public hearing.

Roger Pelham reviewed his staff report, dated November 5, 2015.

Garrett Gordon, from the law firm of Lewis Roca Rothgerber, LLP, provided the applicant presentation. He mentioned that many of the questions on the previous agenda item are applicable to this agenda item. He endorses every answer that was given to this body. He reminded everyone present of the legal standard for approving the applications. The question he broached was, "Has there been substantial evidence presented on the record to make the findings?" When he was before this body asking for 360 units on this property, he was told that they have educated, trained, professional planning staff drafting staff reports. When the staff was recommending denial of 360 units, part of this body's motion was because staff is recommending denial. They expressed the need to rely upon the staff. He believes that the staff report submitted for this item was very important, because it made a very good record of all of the concerns by the CAB and all of the concerns from this body in the prior history. He believes the document provides substantial evidence that all of the findings can be made. He stated that on the last go around, they were told that their experts were biased. The traffic engineer, here, is referring to 43 percent fewer trips. They had other experts paid for by the applicant. What they did this time was take a different approach. TMWA came and answered every question the Planning Commission asked about water, and specifically, would there be an impact? The answer was no. The Planning Commission asked about sewer, and their own staff, a professional engineer, said there was not a problem; capacity is available. This is substantial evidence. Mr. Gordon stated that nothing in the record this night has shown that there will not be sewer capacity, and there will not be traffic issues or water issues. When Mr. Gordon's client was proposing 360 units, the room was full of 50, 60, 70 people. Many of them said that if you don't change the Character Statement, if you live within the plan, we won't come out, we won't oppose it. He said that now they are not asking to change the Character Statement. MDS is currently allowed, and they are asking for MDS. He stated that they have experts in the field who have answered all of the Planning Commission's questions. He said that out of all of the reviewing agencies in the staff report, which was 20 or 30 agencies, including fire and schools, not one of them recommended denial or said that it should be less dense. Out of every piece of evidence in the staff report and every witness heard that night, nothing said that the health, safety, or welfare would be impacted whatsoever. He asked for the Planning Commission's support. He said that they have worked on this for years and are now asking for what is allowed in the plan.

Chair Barnes opened public comment.

Larry Thomas believes that all answers were not rectified by the professionals. He stated that health and welfare is common sense. We know that's a death trap waiting to happen, and health and welfare would be directly impacted. He said that 42 percent fewer trips if it was an industrial project – two wrongs don't make a right. This being less than another wrong doesn't make it right. He said that we know from past projects everywhere that property rights don't mean anything when there are enough complaints. They can be in compliance with every County regulation, but if enough people complain, then he believes they will lose. They wouldn't want to have to fight every complaint. Infrastructure should be put in before this is approved.

Merl K. Jessop II stated that Mr. Gordon did a good job of representing his client, but he doesn't think that Mr. Gordon lives in the area or will be impacted by the amount of traffic generated by this number of homes. This project is further to the east, and he wonders how much more time will be taken before we keep going further east, eliminating the 40-acre parcels. He's worried about homeowners who already have 10-acre and 40-acre parcels giving up due to complaints from homeowners about animal smells. He's concerned about this going three more miles up the road where he lives. This project should be denied just like the last project on the wisdom of the Commission. He agrees that the County has good staff and that the County believes in positive growth within the community. He doesn't believe that positive growth will happen with this project. It should happen closer to the city limits where infrastructures are already in place. He asked the County Commissioners to deny this request.

Ann Sweder is opposed to this property being medium density with three units per acre. Adding more homes would mean over 300 homes between the two properties. The schools cannot handle it; they are at capacity and over capacity. Only two elementary schools are close to capacity. The other four are over capacity. The high school is over capacity by 700 students. Adding another 300 homes would push this way over. She believes we need to fix the problems before adding more weight to what we already have, which is broken. She urged the Planning Commission not to rezone the property.

Ralph H. C. Theiss said that the 750-feet notification, even if it was in the Reno Gazette, covers only one to two properties at the most in this area. He believes that something should be done about the notification laws in the outer areas. Water is still a problem, because TMWA would still pull from their area wells, because they need to supply their immediate facilities. There are still no guarantees that all of these infrastructure needs will be met, regardless of the planning. Five years ago, Gordon and Jim Haas met with Mr. Theiss' family several times, and they came to an agreement after a couple of months that 120 houses on that 40 acre, give or take a couple, was fine. Then he came back with the industrial change and the Master Plan change. Now it's going back to the 120 houses again. In the past five and a half years, with this going back and forth, other developers have stepped in. Another guy is looking at 175 houses. Mr. Theiss didn't realize this five years ago when he met with Gordon and his boss and said, okay, we'll go for your 120 houses. That philosophy of his has changed, because now we have one guy going for it and the next guy going for it. He believes it needs to be stopped. 360 apartments went away a few months ago, and he's glad that's gone. He said the infrastructure out there can't handle any more homes than are already there. He didn't move there to have

125 or 175 houses next door; currently his son is the only dividing line between the developments and his property. He asked the Planning Commission to turn this down.

Cindy Thomas said she opposes this. She just moved into the neighborhood in March. They had to wait for their property to become Residential, because her property and several others were once Residential and were then made into Industrial. She is surrounded by Industrial. They're trying to do this across the street from her, to the north. Both properties are directly across from her 10-acre parcel. She opposes it, because in their information, they stated that there was only going to be one entrance for each development. She believes this is a problem, because there is only one way in and one way out. Fire, congestion at the front of Calle De La Plata, and her ability to get out will be problems. She thinks the low density is a better idea; it would still add 90 homes. But the system needs to be updated before bringing in any of these houses. She said it's behind the times. There is an F rating for the highway, and there aren't lights. She believes it will cause more problems. She hopes that more people up the road on Calle De La Plata are notified. Her community mailbox was knocked over, so no one has been able to get their mail for almost four weeks. She thinks that more people would be present if they had been able to get their mail and had been notified.

Maria Volte lives right next to this property. Three miles up the mountain, she is affected by the water. She is also worried about her safety. With so many homes being built, she wonders who will protect her. She asked the Planning Commission not to approve the project. She is eighty-six years old, and she is afraid of almost 200 houses next door.

Dan Herman said that he has been very vocal for the last 15 years. He helped write the Area Plan. The Area Plan clearly states that the suburban core together with a transition zone will be known as the Suburban Character Management Area. Where is the transition zone? Mr. Herman said it's not there. The Donovan Ranch actually had a transition zone of one-acre parcels, where they butt up to the other large-acreage parcels. They did a transition zone even though there are one-third acre parcels there. They also did 360 dwelling units on 360 acres. They donated open space for Sugarloaf Peak. The houses there are all on a minimum of one-third acre. Mr. Herman said there need to be transition zones for all property owners. The developer before with Blackstone heard Mr. Herman's concerns and gave him a transition zone, which is why he didn't speak on that project. That should be required for everyone. There is a big problem with the water rights. There's probably water out there. The problem is the summertime, four months of the year, in the high-use area where half the water is provided by the Truckee River and the other half of the ground water is pumped. He doesn't know if this will affect the private wells. In the CAB meeting, Mr. Gordon said they were not going to pump any ground water; he said it would all be Truckee River water. Mr. Herman said this is not true: ask TMWA. The number of residents who get noticed on this is ridiculous, especially the people who live up the hill on large-acre parcels on wells. They didn't know about this. He applauded the Commissioners for their comments on the last project and believes they're all applicable to this project, as well. He would like to see the lots stay at a full acre if this area is developed, as was anticipated in the Area Plan. He said that you can find this in the Area Plan, but the developers are using a clause that says "predominately" to go to three units per acre on the east side. It was designed to have the east side of the property remain in the rural type of property.

Chair Barnes asked for Commission questions.

Vice Chair Chvilicek addressed Mr. Pelham about the Spanish Springs Area Plan. This subject property is adjacent to the other subject property, but also to ten-acre parcels and such. As it speaks in the Area Plan of transition zone or feathering, how would that be addressed? This project is abutting larger lots.

Mr. Pelham's evaluation is that when you look at the plan in its entirety and you look at the density and the resultant probability of lot sizes of around a third of an acre and smaller, going from that third acre zoning near Pyramid Highway to the 10-acre parcels and then feathering out into the 40-acre parcels. He believes the transition is, on a plan-wide basis, being implemented.

Vice Chair Chvilicek acknowledged that a Master Plan Amendment and a Regulatory Zone Amendment are before them this evening. If this project were to move forward, or when it moves forward, she'd like the applicant to take into consideration those featherings. She has been involved with other projects where the developer and the affected property owners met and came up with a plan that was palatable to everyone. People came with an open mind, and it was extremely helpful and empowering to the community to not oppose growth, but to request a reasoned approach.

Mr. Pelham agreed that is an ideal situation. He emphasized her comment about when a project comes forward. He said they were a little bit hamstrung, because they were not currently talking about parcels on a piece of land. They were talking about the color, the allowable density. He agreed that there is absolutely a time when it is 100 percent appropriate, and that is primarily at the tentative map phase.

Vice Chair Chvilicek said that even though they are looking at a Regulatory Zone Amendment and a Master Plan Amendment, through both the staff report and the collaboration with the developer, they also see what the planned development is, even without a tentative map. The Planning Commission is given dwelling units and all of that information. It becomes extremely convoluted and very complicated to be able to come to those reasoned decisions when you see the future.

Mr. Pelham agreed with Vice Chair Chvilicek. He said that if these were simple things, then they would not be in front of the Commission. He said it is the Planning Commission's collective wisdom that is applied to make these decisions. They have the task to project forward this evening and see what is a likely outcome, what is a beneficial outcome, and then use their best reasoned consideration to make your decisions.

Vice Chair Chvilicek complimented Mr. Gordon and his client for listening to what happened prior and making an attempt to come forward with the more reasoned proposal.

Mr. Gordon appreciated Vice Chair Chvilicek's comments. He said that much hard work, time and effort has gone into this. He added that when this property was rezoned from General Rural to Industrial Commercial, they sat down with the families and put together an agreement dealing with the transition issues. They agreed on a berm, agreed to put up trees, agreed on

number of trees, and limited their height to preserve their view shed of the mountains. It was a package deal for Industrial Commercial. They were dealing with a specific plan at the time, so they had the ability to make some commitments. He said it was not applicable that night, but if the Commission approved the application, he gave his word on behalf of the developer that they would again sit down with these families and try to come up with some transition elements when they came before the Commission with a tentative map. They have been dealing with Commercial Industrial, parking, and industrial lighting. With Residential, there are probably different ways to transition for them to help mitigate their concerns.

Commissioner Prough addressed Mr. Gordon and Mr. Pelham. He acknowledged that they cannot condition things, but he feels as though they're saying that this needs to be passed in order to see what's in it. Commissioner Prough is uncomfortable with that approach. He said that when they voted down the other one, it still did not meet health and safety issues, even though Mr. Gordon said that with all of the reports, no one was against it. Commissioner Prough said that in the reports, the Commissioners were allowed reasoning. The Washoe Schools didn't say not to do it, but they did say that they were at capacity or over. The expectation is that this would make them all over capacity. Commissioner Prough was offended at Mr. Gordon's remarks and felt that he was implying that the Commissioners were stupid. Commissioner Prough said that he was using his reasoning with what he was given in the reports, and even though the agencies did not go against the project in the reports, he doesn't see merits in this structure.

Mr. Gordon said that he appreciates Commissioner Prough's passion about this, as Commissioner Prough and his neighbors live out there. Mr. Gordon said that this is the process. You approve a Master Plan and a zone change. They get up to three units per acre. That doesn't mean they will come in with three; it is likely, but roads and other considerations will be included. Maybe they come with two and a half, maybe one, but those considerations are at tentative map. Commissioner Prough would have, in his wisdom, the ability to deny a tentative map based on the actual number of homes, the actual transition/buffering, the actual access issues, the actual traffic impacts of how much RTC fees they need to pay or not pay. He wishes that he had a better answer of what the plan is, but tonight it's just changing the colors on a map, and they'll have to come back with what the plan will actually be.

DDA Edwards said that he believed there had been a blending of some terminology about the idea of transition area versus what might be considered buffering, which would come along at a project specific level. For example, if this were approved, then the Planning Commission would have the opportunity, as the condition of a tentative map, to require buffering around the edges of the property. That is somewhat different, though there may be some overlap, from the idea of the transition area. The suburban core and the transition area are not the same. The transition area is the area outside the suburban core. This is out of the Character Statement in the Spanish Springs Area Plan. The suburban core is the area concentrated along the Pyramid Highway. The transition area is the area outside the suburban core. If you decide that this is the suburban core, then the transition area is a separate area from what we're talking about tonight. Even if you decide that this is suburban core and it is not transition area, that doesn't mean that if and when a project came along, you wouldn't be able to include conditions like buffering. DDA Edwards wanted to make this clear as the Planning Commission moved forward

to make a motion. He believes it is an important distinction. Suburban core is not a blend with the transition area; there is suburban core and then transition area. He believes it is a fair question whether this fits exactly within suburban core or not. The standard in the Character Statement is "concentrated along Pyramid Highway". If the Planning Commission considers this concentrated along Pyramid Highway and suburban core, then they are not talking about transition area.

Chair Barnes closed the public hearing and called for discussion among the Commissioners.

Commissioner Chesney stated that the developers and owners of the property have the right to develop this property one way or another. He told the neighbors that, as much as they protest the development for one reason or another, sooner or later it will be developed. He brought up the choke point of the traffic situation. He believes Mr. Gordon made it clear that they have some grip on the water and the sewer. They can see by all of the studies that the schools are overloaded; he doesn't know if this is temporary or not, because people eventually graduate. These properties are going to be developed. He wanted the developers to know that he is not antidevelopment in the area. He believes there are some issues beyond the developers' control because of the immensity of the issues. These issues need to be mitigated to keep the public safe out there. He lives in Palomino Valley and drives in there every day, and Calle De La Plata intersection is a crapshoot every day, and someone is going to be killed there soon. The intersection is a big deal to him, and he approaches it very carefully.

Vice Chair Chvilicek spoke to Mr. Pelham, Director Whitney, or DDA Edwards. In terms of the Area Plan, as noted with the suburban core being Pyramid Highway, what defines the boundaries of that core for this project? This project is significantly removed from Pyramid Highway and moves east.

Director Whitney answered that there are not boundaries drawn on the map in the Area Plan to define the suburban core. It is described, and that is where you get differences of opinion. He looked at the Character Statement every way he could, analyzed it, and felt there was significant flexibility so that these increased densities still met the intent of the Character Statement. Colors on the map show different zoning. Boundaries on maps show the Truckee Meadows service area where growth is supposed to be concentrated per the Regional Plan, but there is not a boundary to answer what Vice Chair Chvilicek is asking.

Vice Chair Chvilicek said it is distinct that suburban core is and will continue to be concentrated along Pyramid Highway. That's interpretive, but for her, along Pyramid Highway means directly along Pyramid Highway, not however many acres away from Pyramid Highway.

DDA Edwards told Vice Chair Chvilicek that he believed she was engaging in reasoned analysis. There is fluidity built into the way that this would be applied. As he understands, Eric Young was one of the chief writers of this plan. That is the idea of a Master Plan – to allow some level of fluidity, rather than a rigid straightjacket. He believes that her interpretation and analysis is appropriate, as long as it is based on facts and information in the record. If they decide suburban core, then it's not part of the transition area. He believes that Vice Chair Chvilicek is engaging in the right form of analysis to determine if it is or is not.

Commissioner Edwards has been to this property many times. It is a great piece of property, and it is too bad that it doesn't sit farther to the east. It is clearly in the area that Commissioner Edwards would determine as transition area. If a developer wanted to go to a one acre, Low Density Suburban, or something like that, then he would not have any problem supporting it. He doesn't believe that the density in the project is correct for the neighborhood. He supposes that it does come down to health and safety with the traffic and whatnot. He is satisfied with the water. He understands about the wells going dry, but they're talking about importing water to this area. If they import water, then you will get recharged. They did in Golden Valley. He can't support it by opening the door to three parcels per acre.

Commissioner Horan believes that one thing with which boards struggle is pressure on infrastructure across the board in all areas – schools, police, fire, roads. Too many times, this Commission and others are faced with, "Well, the schools say they will bus them." That is not an answer. We need to do a better job with our infrastructure. We cannot continue kicking the can down the road on the infrastructure. That is Commissioner Horan's problem with this.

Commissioner Prough apologized to Mr. Gordon for losing his temper. He told the developer that he is not against development. He is against the rezoning that would put three units on one acre. He would support one unit on an acre. He believes that would be more appropriate to the area.

Chair Barnes called for motions and findings of fact.

Commissioner Prough asked DDA Edwards if it is possible to reword this motion in the negative.

DDA Edwards said that would be appropriate if a few things were tweaked.

Commissioner Prough, after giving reasoned consideration to the record in this case, including but not limited to the information contained in the staff report and the information presented during the hearing on these items, moved to deny Master Plan Amendment Case Number MPA15-004 and Regulatory Zone Amendment Case Number RZA15-006, based on all of the findings as outlined in the staff report. He further moved to deny the resolutions and the proposed Amendments in MPA15-004 and RZA15-006 as set forth in the staff report for submission to the Washoe County Board of Commissioners and authorized the chair to sign the denial on behalf of the Planning Commission.

Commissioner Prough believes that the following findings are not met:

Washoe County Development Code Section 110.820.15(d) Master Plan Amendment Findings

3. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Spanish Springs Area Plan Findings - Policy SS.17.1 (a part of the Master Plan)

a. The amendment will further implement and preserve the Vision and Character Statement.

c. The amendment will not conflict with the public's health, safety or welfare.

Washoe County Development Code Section 110.821.15(d) Regulatory Zone Amendment Findings

4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.

5. No Adverse Effects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.

6. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

DDA Edwards asked Commissioner Prough if the motion for denial was without prejudice or with.

Commissioner Prough stated that the motion was without prejudice.

Commissioner Chesney seconded the motion.

Chair Barnes called for any discussion.

Vice Chair Chvilicek referenced the Spanish Springs Area Plan and concurred with Commissioner Edwards that this is in a transition zone. As plans are developed this needs to be addressed. She submitted to the developer that through her earlier reference to collaboration, consensus, and meeting with property owners, transition can be included that as this property abuts larger properties, that maybe zoning can be one dwelling unit per acre and then intensified within up to the three units per acre as you go into a project. Having been a property owner who was part of that kind of collaboration, they came up with something agreeable. She also supports that this plan does not preserve the vision and Character Statement of the Spanish Springs Area Plan.

Chair Barnes called for a vote on the motion for denial without prejudice, which passed unanimously, with a vote of seven for, none against.

9. Chair and Commission Items

***A.** Future agenda items

Commissioner Edwards asked if the Golden Valley Pit Special Use Permit could be put on the next month's agenda. Director Whitney said that a Planning staff member and two Engineers are going on an inspection of the pit on Wednesday, December 2, 2015. They agreed that the item will be on the February 2016 agenda.

Commissioner Prough asked if the sign ordinance would be coming back before the Planning Commission. Director Whitney answered that staff is working on how to best change the ordinance to follow the recommendations of the Board of County Commissioners. The Planning Commission should see it within the next few months.

Commissioner Horan asked if staff can do "more than the bare minimum" on notifications of cases to surrounding properties, at least on controversial issues. Director Whitney said the Division may need to re-look at notification in the larger lot rural areas.

***B.** Requests for information from staff

Vice Chair Chvilicek said it would be helpful if all of the plans they receive have directional arrows (north arrows). Director Whitney said some of the plans come from the applicants and that staff will do their best to add directional arrows.

Commissioner Horan said that Director Whitney's staff did a very good job in their presentation of the material.

Vice Chair Chvilicek mentioned to staff that the process is very difficult for the Commissioners when they have to look at the big picture.

Director Whitney commended the Commissioners on their public service during this difficult process.

10. Director's and Legal Counsel's Items

***A.** Report on previous Planning Commission items

Director Whitney let the Commission know that there is an application coming into the City of Reno to amend the Reno/Stead Corridor Joint Plan, which is in the North Valleys. The application is called Sky Vista, and it is a Master Plan Amendment to that Corridor Joint Plan. There will be a joint meeting of the Planning Commissions from the City of Reno and Washoe County, followed by a joint meeting of the Reno City Council and the Board of County Commissioners. Mr. Whitney will email the Planning Commissioners with a couple of possible dates in February for the joint meeting.

***B.** Legal information and updates

None

11. *General Public Comment

Chair Barnes opened general public comment.

Dan Herman thanked the Planning Commission and said, "You guys got it right tonight."

12. Adjournment

With no further business scheduled before the Planning Commission, the meeting adjourned at 9:28 p.m.

Respectfully submitted,

Kathy Emerson, Recording Secretary

Approved by Commission in session on November 3, 2015.

Carl R. Webb, Jr., AICP
Secretary to the Planning Commission

Planning Commission Staff Report

Meeting Date: December 1, 2015

Subject:	Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005
Applicant:	SP58, LLC
Agenda Item Number:	**8B**
Summary:	(1) To amend the Master Plan Category on one ±58.49 acre parcel from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR); and (2) To amend the regulatory zone on the same ±58.49 acre parcel from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).
Recommendation:	**Adopt recommended amendment and authorize Chair to sign both attached resolutions**
Prepared by:	Kelly Mullin, Planner Washoe County Community Services Department Division of Planning and Development
Phone:	775.328.3608
E-Mail:	kmullin@washoecounty.us

Description

Master Plan Amendment Case Number MPA15-003 and Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) – Hearing, discussion and possible action:

(1) To adopt an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Category on one parcel of ± 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR); and

(2) Subject to final approval of the associated Master Plan change, to recommend adoption of an amendment to the Spanish Springs Regulatory Zone Map, changing the Regulatory Zone from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS).

- Applicant: SP58, LLC, 439 W. Plumb Lane, Reno, NV 89509
- Property Owner: Jacie, LLC c/o Douglass Properties, LLC

- Location: On the north side of Calle De La Plata, approximately 650 feet east of its intersection with Pyramid Highway.
- Parcel Size: ± 58.49 acres
- Assessor's Parcel Number: 534-571-01
- Previous Master Plan: Suburban Residential (SR), Industrial (I) and Commercial (C)
- Proposed Master Plan: Suburban Residential (SR)
- Existing Regulatory Zone: Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC)
- Proposed Regulatory Zone: Medium Density Suburban (MDS)
- Area Plan: Spanish Springs
- Citizen Advisory Board: Spanish Springs
- Development Code: Article 820, *Amendment of Master Plan*
  Article 821, *Amendment of Regulatory Zone*
- Commission District: 4 - Commissioner Hartung
- Section/Township/Range: Section 23, Township 21N, Range 20E, MDM, Washoe County, NV

Staff Report Contents

Explanation and Processing of a Master Plan Amendment 4
Explanation and Processing of a Regulatory Zone Amendment 5
Vicinity Map 7
Existing and Proposed Master Plan Categories Map 8
Existing and Proposed Regulatory Zones Map 9
Proposed Spanish Springs Master Plan Map 10
Proposed Spanish Springs Regulatory Zone Map 11
Analysis 12
Background and Current Conditions 12
Compatibility 12
Change of Conditions 14
Desired Pattern of Growth 14
Services and Facilities 15
Consistency with Washoe County Master Plan 16
Development Suitability within the Spanish Springs Area Plan 20
Neighborhood Meeting 21
Public Comment 21
Public Hearing Notice 22
Agency Comments 22
Staff Comments on Required Findings for Master Plan Amendment 24
Staff Comments on Required Findings for Regulatory Zone Amendment 26
Recommendation 30
Possible Motion for Master Plan Amendment 31
Possible Motion for Regulatory Zone Amendment 32
Appeal Process 34

Exhibits Contents

Master Plan Amendment Resolution ..... Exhibit A
Regulatory Zone Amendment Resolution ..... Exhibit B
Noticing Map ..... Exhibit C
Neighborhood Meeting Memo ..... Exhibit D

Citizen Advisory Board and Public Comment Correspondence ..... Exhibit E

Agency Comments

Nevada Division of Water Resources ..... Exhibit F

Nevada Department of Transportation ..... Exhibit G

Regional Transportation Commission ..... Exhibit H

Washoe County School District ..... Exhibit I

Truckee Meadows Fire Protection District ..... Exhibit J

Washoe County Parks and Open Space ..... Exhibit K

Washoe County Health District – Emergency Medical Services ..... Exhibit L

Washoe County Utility Services ..... Exhibit M

Washoe-Storey Conservation District ..... Exhibit N

Project Application ..... Exhibit O

Water Facility Requirements ..... Exhibit O-1

Geotechnical and Drainage Reports ..... Exhibit O-2

Feasibility Study Update ..... Exhibit P

Explanation and Processing of a Master Plan Amendment

The purpose of a Master Plan Amendment application is to provide a method of review for requests to amend the Master Plan.

The Master Plan guides growth and development in the unincorporated areas of Washoe County, and consists of three volumes. By establishing goals and implementing those goals through policies and action programs, the Master Plan addresses issues and concerns both countywide and within each community. Master Plan amendments ensure that the Master Plan remains timely, dynamic, and responsive to community values. The Washoe County Master Plan can be accessed on the Washoe County website at www.washoecounty.us/comdev - select Master Plan & Maps - or it may be obtained at the front desk of the Washoe County Planning and Development Division.

Volume One of the Master Plan outlines six countywide priorities through the year 2025. These priorities are known as Elements and each is summarized below. The Land Use and Transportation Element, in particular, plays a vital role in the analysis of a Master Plan Amendment.

- Population Element. Projections of population, housing characteristics, trends in employment, and income and land use information for the County.

- Conservation Element. Information, policies and action programs, and maps necessary for protection and utilization of cultural and scenic, land, water, air and other resources.
- Land Use and Transportation Element. Information, policies and action programs, and maps defining the County's vision for development and related transportation facilities needed for the forecasted growth, and protection and utilization of resources.
- Public Services and Facilities Element. Information, policies and action programs, and maps for provision of necessary services and facilities (i.e. water, sewer, general government and public safety facilities, libraries, parks, etc.) to serve the land use and transportation system envisioned by the County.
- Housing Element. Information, policies and action programs, and maps necessary to provide guidance to the County in addressing present and future housing needs.
- Open Space and Natural Resource Management Plan Element. Information, policies and action programs, and maps providing the necessary framework for the management of natural resources and open spaces.

Volume Two of the Master Plan consists of 13 Area Plans, which provide detailed policies and action programs for local communities in unincorporated Washoe County relating to conservation, land use and transportation, public services and facilities information, and maps.

Volume Three of the Master Plan houses Specific Plans, Joint Plans and Community Plans that have been adopted by the Washoe County Board of County Commissioners. These plans provide specific guiding principles for various districts throughout unincorporated Washoe County.

Requests to amend the Master Plan may affect text and/or maps within one of the six Elements, one of the 13 Area Plans, or one of the Specific Plans, Joint Plans or Community Plans. Master Plan Amendments require a change to the Master Plan and are processed in accordance with Washoe County Chapter 110 (Development Code), Article 820, Amendment of Master Plan.

When adopting a Master Plan amendment, the Planning Commission must make at least three of the five required findings as set forth in Washoe County Code (WCC) Section 110.820.15(d). If a military installation is required to be noticed, then an additional finding of fact pursuant to WCC Section 110.820.15(d)(6) is required. If there are findings relating to Master Plan amendments contained in the Area Plan in which the subject property is located, then the Planning Commission must also make all of those findings. Adoption of the Master Plan amendment requires a 2/3 vote of the Planning Commission's membership.

Explanation and Processing of a Regulatory Zone Amendment

The following explains a Regulatory Zone Amendment, including its purpose and the review and evaluation process involved for an application with such a request. The analysis of the subject proposal can be found beginning on page 12 of this report.

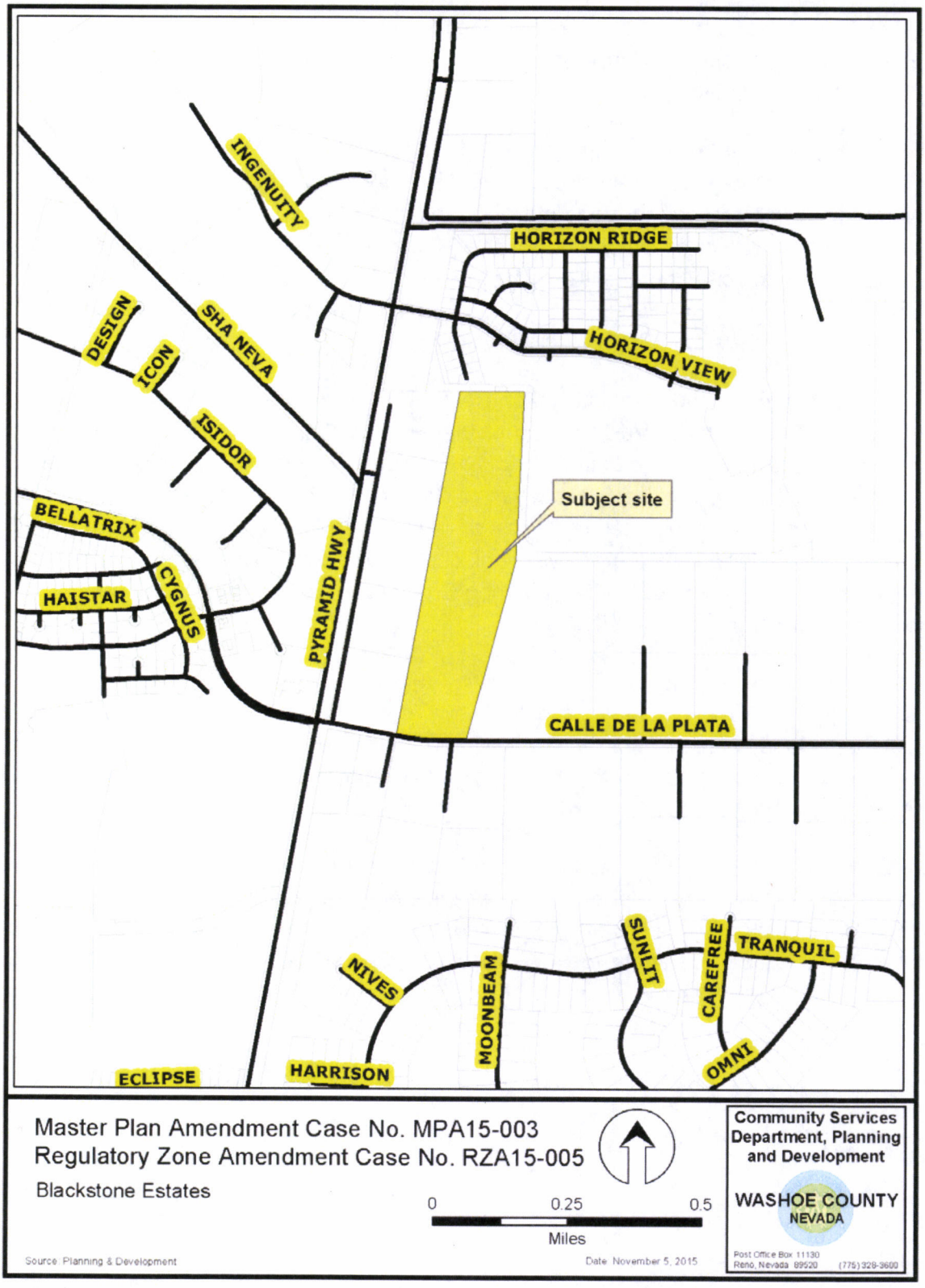
The purpose of a Regulatory Zone Amendment (RZA) is to provide a method for amending the Regulatory Zone Maps of Washoe County. The Regulatory Zone Maps depict the Regulatory Zones (i.e. zoning) adopted for each property within the unincorporated area of Washoe County. The Regulatory Zones establish the uses and development standards applied to each property.

Regulatory zones are designed to implement and be consistent with the Master Plan by ensuring that the stability and character of the community will be preserved for those who live and work in the unincorporated areas of the County. A regulatory zone cannot be changed if it conflicts with the objectives or policies of the Master Plan, including area plans that further define policies for specific communities. The Master Plan is the blueprint for development within the unincorporated County. Pursuant to NRS 278, any action of the County relating to zoning must conform to the Washoe County Master Plan.

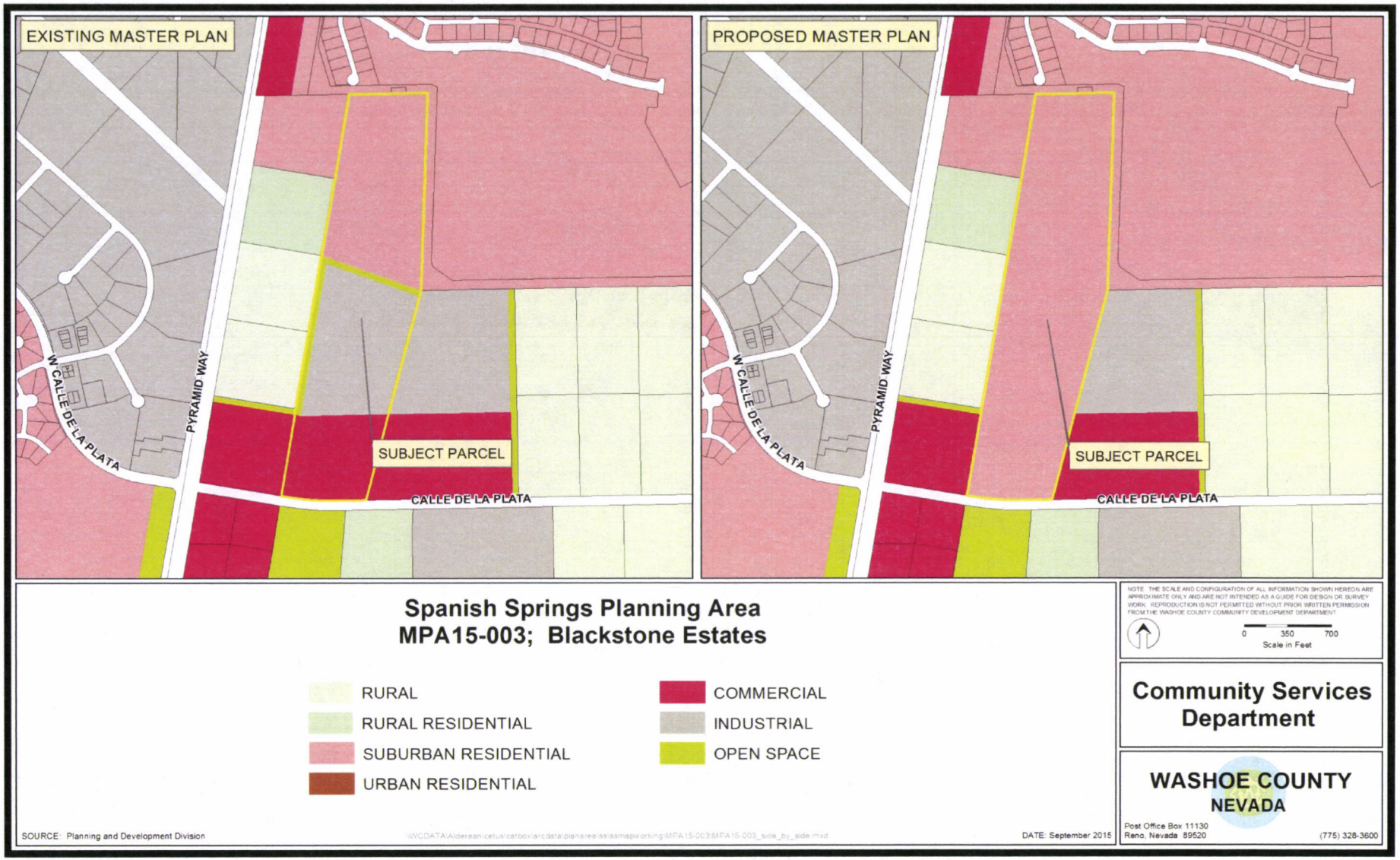
Evaluation of the proposed Regulatory Zone Amendment involves review for compliance with countywide policies found in Volume One of the Washoe County Master Plan and applicable area plan policies found in Volume Two of the Washoe County Master Plan. If the subject parcel(s) is within a Specific Plan, Joint Plan or Community Plan found in Volume Three of the Master Plan, then supplemental review shall be required to ensure compliance with the applicable plan. Additionally, the analysis includes review of the proposed amendment against the findings found in Article 821 of the Washoe County Development Code and any findings as set forth in the appropriate Area Plan.

Requests to change a regulatory zone affecting a parcel of land or a portion of a parcel are processed under Article 821, Amendment of Regulatory Zone, of the Washoe County Development Code. Rezoning or reclassification of a lot or parcel from one Regulatory Zone to another requires action by both the Planning Commission and the Board of County Commissioners.

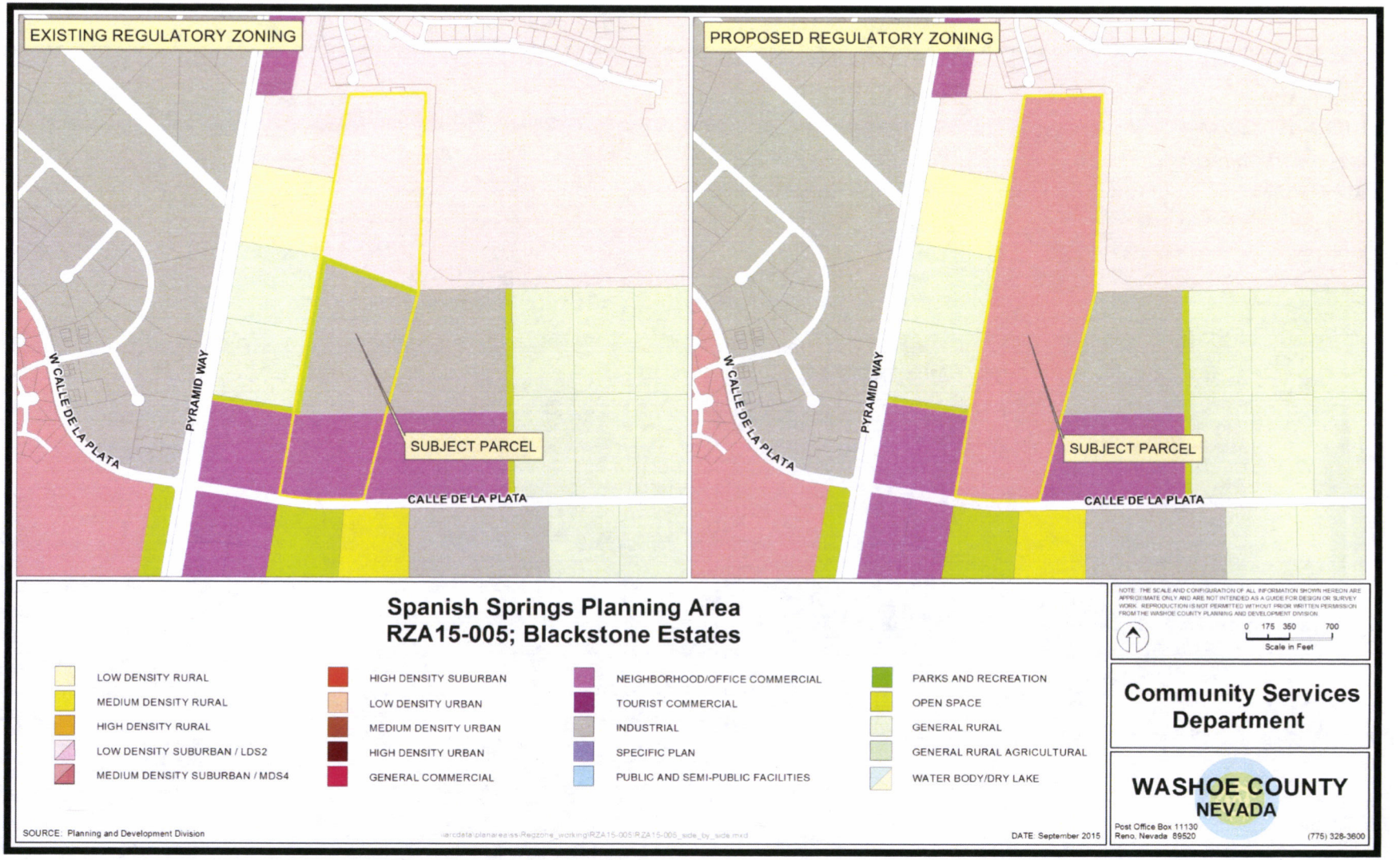
The Planning Commission may recommend adoption of a Regulatory Zone Amendment to the Board of County Commissioners, or it may deny it. Upon an affirmative recommendation by the Planning Commission, the Board of County Commissioners is required to hold a public hearing which must be noticed pursuant to Section 110.821.20 of the Washoe County Development Code. Final action is taken by the Board of County Commissioners who may adopt, adopt with modifications, or deny the proposed amendment.



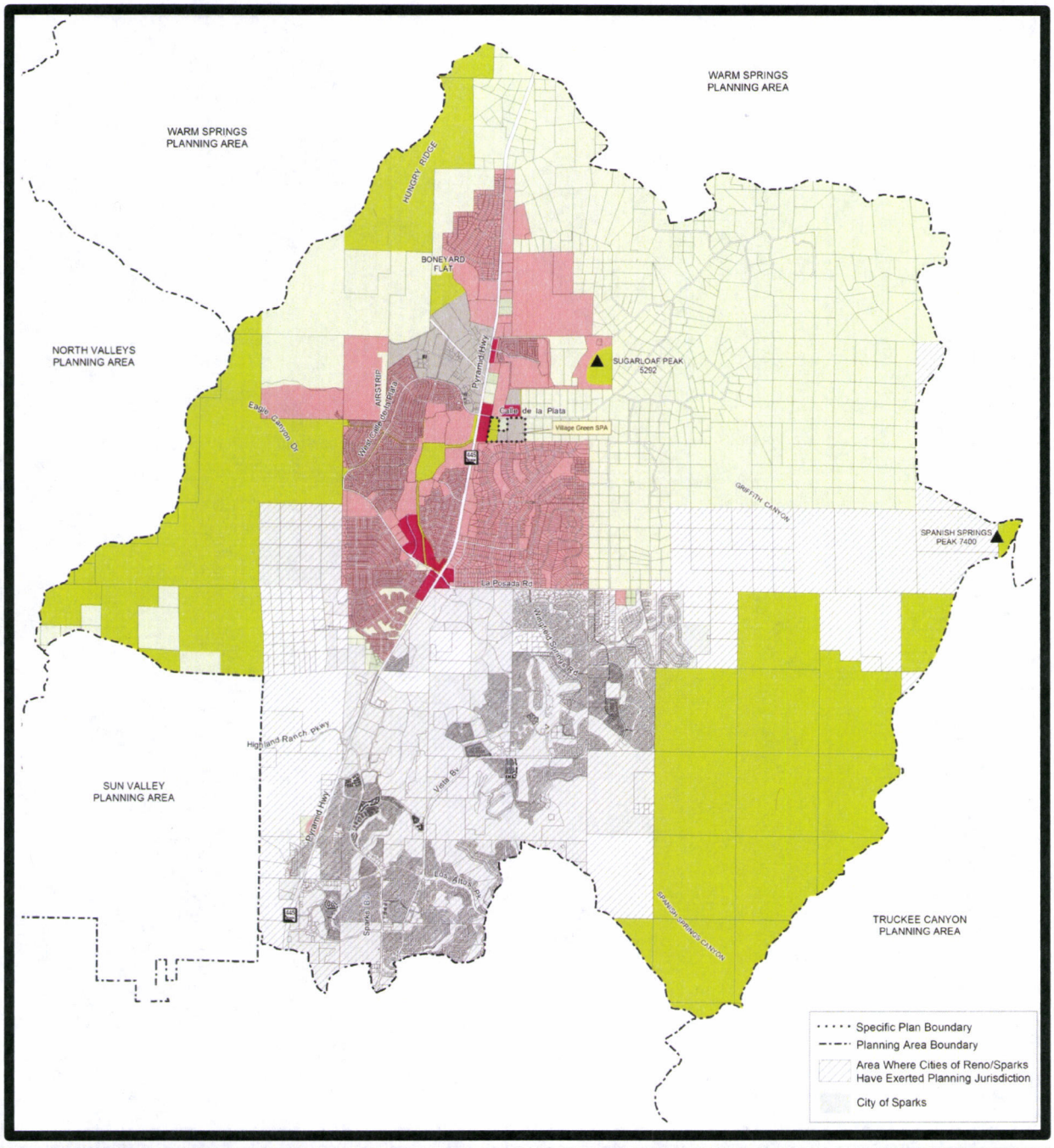
Vicinity Map



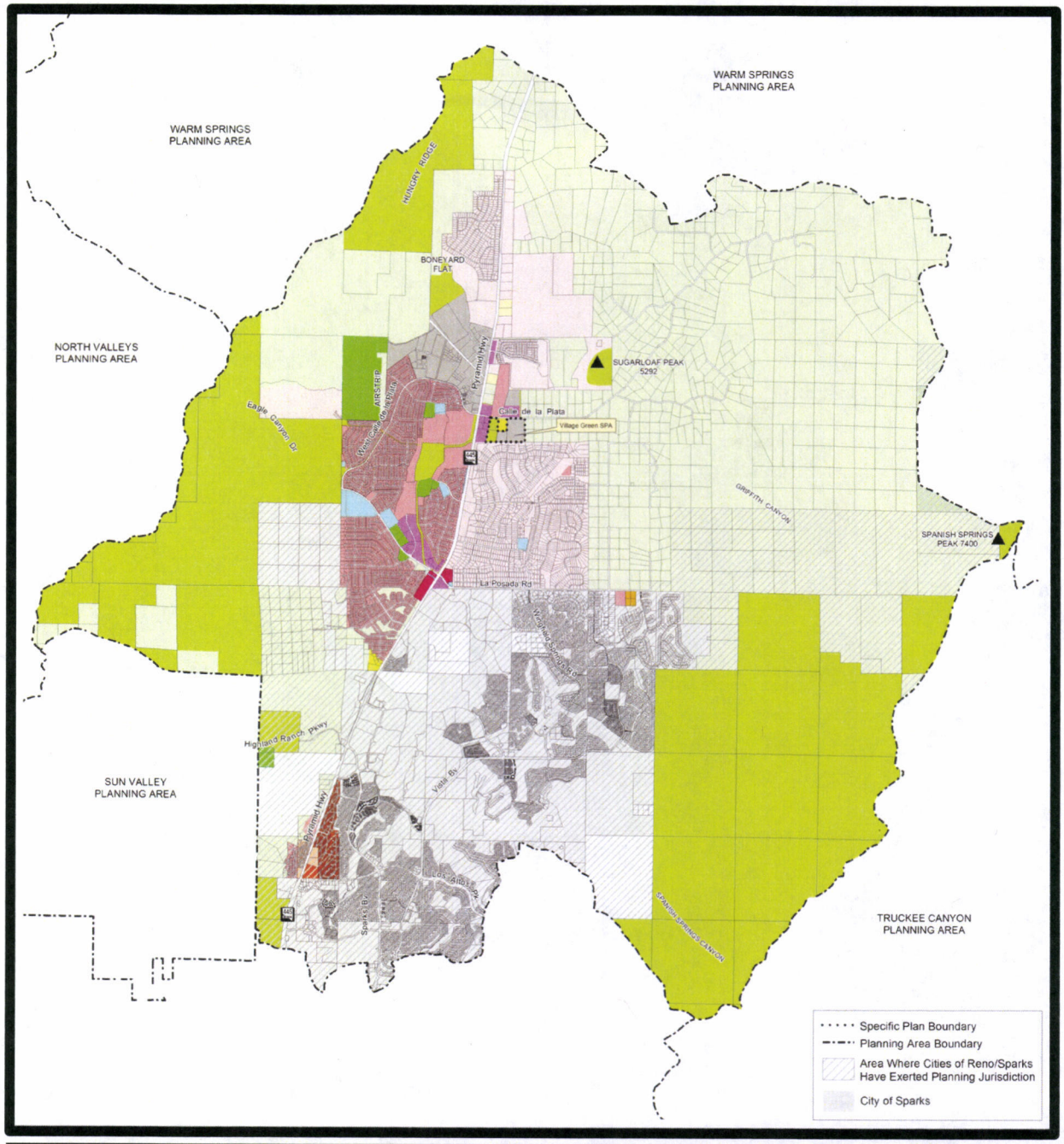
Existing and Proposed Master Plan Categories

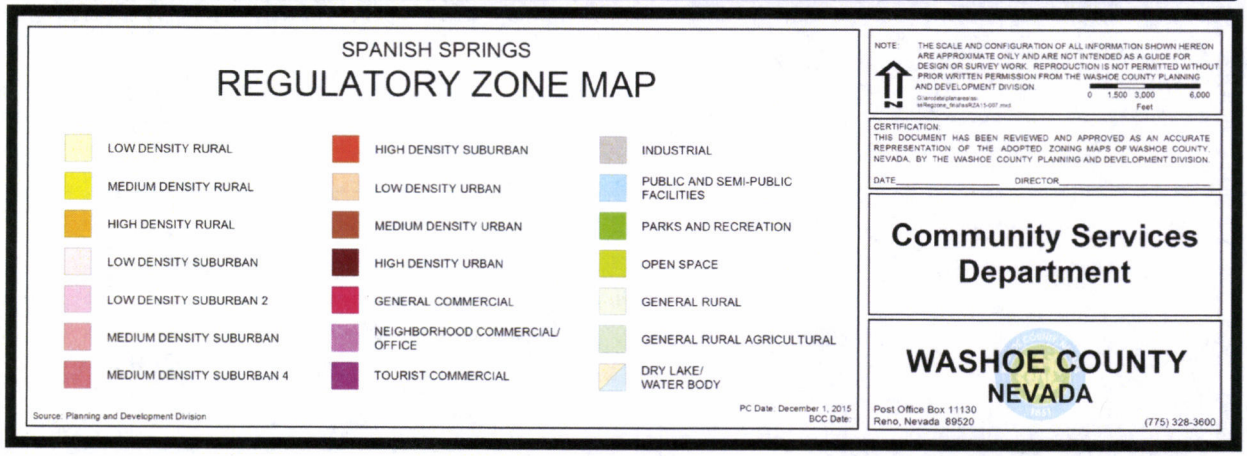


Existing and Proposed Regulatory Zones



Proposed Spanish Springs Master Plan Map





Proposed Spanish Springs Regulatory Zone Map

ANALYSIS

Background and Current Conditions

The subject property is ± 58.49-acres and is located within the Spanish Springs Area Plan and Spanish Springs Suburban Character Management Area. This request seeks to amend the subject property's Master Plan category from a mix of Suburban Residential, Industrial and Commercial to Suburban Residential. The request also seeks to change the property's regulatory zone from a mix of Low Density Suburban (LDS), Industrial (I), Neighborhood Commercial (NC) and Open Space (OS) to Medium Density Suburban (MDS). Approval of both requests would allow for residential development of up to three dwelling units per acre on a ± 58.49-acre parcel, for a potential total of up to 175 dwelling units.

In comparison, the current zoning mix on the property includes ±24.9 acres of Low Density Suburban, which potentially allows for up to 25 homes on the property. The property also currently contains ±19.5-acres Industrial, ±11.7-acres Neighborhood Commercial and ±2.4-acres Open Space zoning.

Compatibility

The neighborhood has a wide variety of regulatory zones nearby, including Industrial, Neighborhood Commercial, Medium Density Suburban, Low Density Suburban, Medium Density Rural, Low Density Rural, General Rural and Open Space all located within 1,000 feet of the subject parcel.

The subject parcel is currently undeveloped. Residential development is currently occurring to the north and northeast of the subject parcel in the Donovan Ranch Subdivision. As a common open space subdivision, lots in that development have been reduced in size and clustered. Donovan Ranch lot sizes are generally in the vicinity of one-third acre, which is comparable to Medium Density Suburban lot sizes.

Standard setbacks for the Medium Density Suburban (MDS) regulatory zone are 20 feet to the front and rear of the property, and 8 feet on the sides. In comparison, the Donovan Ranch subdivision to the north has setbacks that are similar to the MDS regulatory zone: 20 feet for the front and rear, with a choice of either 8-foot side setbacks, or 5-foot and 11-foot side setbacks.

As visible in the following aerial photograph, two of the parcels to the west of the subject property contain single-family residences, while two other parcels to the west are undeveloped. To the south is Calle de la Plata, a 2-lane arterial roadway. To the north and northeast is the Donovan Ranch subdivision, which is currently under construction. To the southeast is an undeveloped property for which an application to change the master plan category and regulatory zoning on that parcel has also been received by Washoe County. That request is similar to this one in that it also seeks to change the property's master plan category to Suburban Residential and the regulatory zoning to Medium Density Suburban. For the purposes of evaluation of compatibility with the surrounding area, staff has assumed that no changes to that parcel have yet taken place, although it should be noted that changes may occur.

There is an area of land located between the subject parcel's western property line and Pyramid Highway. This area contains five parcels with regulatory zoning that includes Low Density Suburban, Low Density Rural, General Rural, Open Space and Neighborhood Commercial.

In determining compatibility with surrounding land uses, staff reviewed the Land Use Compatibility Matrix with the proposed Regulatory Zone. The compatibility matrix is found in the Land Use and Transportation Element in Volume One of the Washoe County Master Plan. The compatibility between the proposed and existing adjacent regulatory zones is captured in the table below.

Compatibility Rating of Proposed Regulatory Zone with

Existing Regulatory Zones on Adjacent Parcels

Proposed Regulatory Zone	Existing Adjacent Regulatory Zone	Compatibility Rating
Medium Density Suburban (MDS)	Low Density Suburban (LDS) (located to the north, northwest and northeast)	High
	Open Space (OS) (located to the west)	High
	Low Density Rural (LDR) (1 parcel to the west)	Medium
	General Rural (GR) (2 parcels to the west)	Medium
	Neighborhood Commercial (NC) (located to the southwest and southeast)	Low
	Industrial (I) (located to the southeast on the parcel with a similar master plan/zoning amendment request)	Low

High Compatibility: Little or no screening or buffering necessary.
Medium Compatibility: Some screening and buffering necessary.
Low Compatibility: Significant screening and buffering necessary.

Change of Conditions

Adjacent to the northern end of the property is the Donovan Ranch Subdivision. Although that property is zoned Low Density Suburban (1 dwelling unit/acre), it is being developed as a common open space subdivision with most lots approximately 1/3-acre in size – comparable to what is generally found in Medium Density Suburban regulatory zones.

In addition, with the local economy improving, the demand for single-family dwellings in our region has been increasing. It is anticipated that growth will occur in areas like the Spanish

Springs Suburban Character Management Area, which is the designated growth area for the Spanish Springs Valley.

Desired Pattern of Growth

This property is situated just off of Pyramid Highway and within the Spanish Springs Suburban Character Management Area (SCMA), which is the designated growth area for the Spanish Springs Valley. The Spanish Springs Area Plan states that "a distinct suburban core is, and will continue to be, concentrated along Pyramid Highway," with that suburban core including "a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre."

Services and Facilities

Water and Sewer: The subject parcel is located within the Truckee Meadows Service Area (TMSA). The Truckee Meadows Water Authority is designated as the potable water service provider for the subject parcel, but it would require annexation to TMWA's water service territory prior to service. Community sewer service would be provided by Washoe County Community Services Department. Sanitary sewer service within the unincorporated Washoe County areas of Spanish Springs is provided by Washoe County. Under a 2005 agreement with the City of Sparks, conveyance and ultimately treatment of waste water is performed at the Truckee Meadows Water Reclamation Facility (TMWRF). At present, approximately 42% total available allocation of sewer connections have been utilized, so there currently is adequate sewer capacity available for the maximum allowed density on the property if the request is approved.

A number of goals and policies within the Spanish Springs Area Plan govern water supply (SS.12.1 and SS.12.2), water service (SS.15.1, SS.15.2 and SS.15.3), and wastewater (SS.16.1). Compliance with these policies will be required at the time a specific development proposal is brought forward, if approval for these amendment requests is granted.

Community Services: Truckee Meadows Fire Protection District has a station near La Posada and Pyramid Highway. Northern Nevada Medical Center in Sparks and Renown Urgent Care on Los Altos Parkway are the nearest health care facilities.

The subject parcel is currently zoned for Alyce Taylor Elementary, Shaw Middle, and Spanish Springs High schools. The Washoe County School District (WCSD) has indicated that Alyce Taylor Elementary is currently at 95% capacity, Shaw Middle is at 94% capacity, and Spanish Springs High is at 107% capacity. The School District has stated that future residential development in the area may require some students to be assigned to the nearest WCSD school with available capacity.

Nearby public parks include Sky Ranch, Gator Swamp and Eagle Canyon. The Spanish Springs Public Library is on Pyramid Highway.

Traffic: The submitted traffic impact study analyzed the impact of the project on the intersection of Pyramid Highway at Calle de la Plata, and stated that this intersection currently operates at a Level of Service (LOS) F during morning and afternoon peak hours, but overall operates at LOS

A. The study indicates that "the number of trips generated by the proposed residential use is a decrease from the number of trips proposed with the current mixed use zoning." The study further states that the proposed residential zoning would generate up to 42% fewer trips than what might be generated by the existing mixed use zoning.

Both the Nevada Department of Transportation (NDOT) and the Regional Transportation Commission (RTC) have reviewed the request. RTC indicated that the potential increase in density posed by the Blackstone Estates project may not warrant a traffic signal at that intersection on its own. However, both NDOT and RTC indicated that the proposed project, when reviewed in conjunction with the separate Sugarloaf Ranch Estates proposal to the east, may warrant the installation of a traffic signal at Pyramid Highway and Calle de la Plata. In either case, both NDOT and RTC indicated that street improvements on Calle de la Plata would likely be required with future residential development on the subject property.

As reflected in the traffic impact study, the applicant states that the proposed Medium Density Suburban residential regulatory zone will result in fewer traffic trips than what is estimated for the current zoning mix of Industrial, Neighborhood Commercial and Low Density Suburban. The Traffic Impact Study is attached with the project application (Exhibit O).

Washoe County Traffic Engineer, Clara Lawson, has reviewed both of the adjacent requests and provided the following:

> *Both the Blackstone Estates and Sugarloaf Ranch have access to Pyramid Highway through Calle de la Plata. Traffic analysis for both projects report that the intersection operates at a Level of Service of F. This level of service is based primarily on the delay of the side street, Calle De La Plata to make a left or through traffic movement. Prior to approval of a subdivision a traffic analysis will be required which will include the above intersection with and without the project, plus the 10 year forecast with and without the project. When additional analysis is brought in the timing a traffic signal can better be estimated. NDOT approval will also be required prior to the installation of a traffic signal. NDOT typically requires traffic signal warrants to be met prior to installation and not in anticipation of future growth.*
>
> *A Regional Road Impact Fee, RRIF, is required for all new development in the area. The Capital Improvement Plan, CIP, upon which the RRIF is based, needs to be updated at least every three years. The North Service area CIP has budgeted for 5 intersections at a cost of $1,000,000 each. The locations of these will be determined by the greatest need in the area.*

Consistency with Washoe County Master Plan

Master Plan Amendments and Regulatory Zone Amendments are to be reviewed for consistency with applicable policies and action plans of the Washoe County Master Plan. The following Master Plan policies and programs are applicable to the proposed amendment requests.

LAND USE AND TRANSPORATION ELEMENT – Volume One of the Washoe County Master Plan

Goal Three: **The majority of growth and development occurs in existing or planned communities, utilizing smart growth practices.**

Policy LUT.3.1 Require timely, orderly, and fiscally responsible growth that is directed to existing suburban character management areas (SCMAs) within the Area Plans as well as to growth areas delineated within the Truckee Meadows Service Area (TMSA).

Policy LUT.3.2 In order to provide a sufficient supply of developable land to meet the needs of the population, Area Plans shall establish growth policies that provide for a sufficient supply of developable land throughout the planning horizon of the next 20 years, with considerations to phase future growth and development based on the carrying capacity of the infrastructure and environment.

Policy LUT.3.3 Single family detached residential development shall be limited to a maximum of five (5) dwelling units per acre.

Policy LUT.3.5 Area Plans shall identify adequate land, in locations that support the regional form and pattern, for the residential, commercial, civic and industrial development needs for the next 20 years, taking into account land use potential within the cities and existing unincorporated centers, existing vacant lots, and resource and infrastructure constraints.

Staff Comment (Policies LUT.3.1; LUT.3.2, LUT.3.3 and LUT.3.5): The subject property is located within the Spanish Springs SCMA and within the Truckee Meadows Service Area which has available infrastructure and access. The proposed density of 3 dwelling units per acre is within policy levels. The majority of the property is considered unconstrained and suitable for development.

POPULATION ELEMENT – Volume One of the Washoe County Master Plan

Goal Three: **Plan for a balanced development pattern that includes employment and housing opportunities, public services and open spaces.**

Goal Four: **Coordinate population growth with the availability of water, sanitary sewer, streets and highways, and other public facilities and services.**

Goal Five: **Development occurs where infrastructure is available.**

Staff Comment (Goals Three, Four and Five): The proposed amendments will allow for increased residential opportunities with nearby employment opportunities in the Spanish Springs planning area. Public services, facilities, and infrastructure are available. TMWA is the water purveyor and Washoe County is the sanitary sewer service provider for the subject area. Washoe

County Engineering has indicated that there is currently adequate sewer capacity available for the maximum allowed density on the property if the request is approved. Primary streets and highways used to access the subject site will be Pyramid Highway and Calle de la Plata. At the time of development, the appropriate water rights would need to be dedicated and road impact fees and sewer connection fees paid. Depending on the type of development proposed, street improvements may also be required.

Spanish Springs Area Plan

Master Plan Amendments and Regulatory Zone Amendments are required to be reviewed for compliance with applicable goals and policies of the Spanish Springs Area Plan, which is a part of the Washoe County Master Plan. The following goals and policies of the Spanish Springs Area Plan are applicable to the proposed amendment requests.

Vision and Character Management

Land Use

Goal One: **The pattern of land use designations in the Spanish Springs Area Plan will implement and preserve the community character described in the Character Statement.**

Policy SS.1.2 The Policy Growth Level for the Spanish Springs Suburban Character Management Area is 1,500 new residential units of land use capacity. Land use intensifications will not add more than 1,500 new units of Land Use Capacity through 2025. The Washoe County Department of Community Development will be responsible for tracking increasing land use potential to ensure this growth level is not exceeded.

Staff Comment: The proposed master plan and regulatory zone amendment requests would increase the potential maximum residential density on the property from approximately 25 dwelling units to 175 dwelling units – a maximum net increase of approximately 150 dwelling units. If this request were approved, there would still be over 1,100 residential units of capacity remaining from the 1,500 residential unit growth cap in Spanish Springs. There are three amendments to the Spanish Springs Area Plan being considered at the present. If all are decided in such a manner as to maximize density there would be 1086 dwelling units of density remaining under the policy growth cap.

Policy SS.1.3 The following Regulatory Zones are permitted within the Spanish Springs Suburban Character Management Area:

a. High Density Rural (HDR – One unit per 2.5 acres).

b. Low Density Suburban (LDS – One unit per acre).

c. Medium Density Suburban (MDS – Three units per acre).

d. High Density Suburban (HDS limited to the areas designated HDS prior to August 17, 2004)

e. Neighborhood Commercial/Office (NC).

f. General Commercial (GC) – GC limited to the areas designated GC prior to August 17, 2004.

g. Industrial (I).

h. Public/Semi-Public Facilities (PSP).

i. Parks and Recreation (PR).

j. General Rural (GR).

k. Open Space (OS).

Staff Comment: The requested regulatory zone of Medium Density Suburban complies with this policy.

Policy SS.1.6 Staff will review any proposed Master Plan Amendment against the findings identified in the Plan Maintenance section of this plan and make a recommendation to the Planning Commission. At a minimum, the Planning Commission must make each of these findings in order to recommend approval of the amendment to the Board of County Commissioners.

Staff Comment: The findings required in the Plan Maintenance section can be met and are listed and discussed later in this report under "Staff Comments on Required Findings for Master Plan Amendment."

Transportation

Goal Three: **The regional and local transportation system in the Spanish Springs planning area will be a safe, efficient, multi-modal system providing significant connections to the greater region, and access to commercial services, public lands and employment opportunities in the community. The system will contribute to the preservation and implementation of the community character as described in the Spanish Springs Vision and Character Statement.**

Policy SS.3.1 Washoe County's policy level of service (LOS) for local transportation facilities in the Spanish Springs planning area is LOS "C."

Policy SS.3.3 Washoe County will strongly advocate the prioritization of improvements to Pyramid Highway and qualified regional roads and arterials within the boundaries of this area plan in the Regional Transportation Improvement Program in order to achieve and maintain established levels of service.

Staff Comment: Overall potential traffic impacts are anticipated to be lower with a Medium Density Suburban residential zoning in comparison to the current zoning mix that contains Neighborhood Commercial, Industrial and Low Density Suburban. A detailed traffic impact analysis is included with the attached application. The Regional Transportation Commission and Nevada Department of Transportation are anticipated to provide conditions of approval requiring road improvements to mitigate potential traffic impacts posed by a specific development proposal.

Plan Maintenance

Goal Seventeen: Amendments to the Spanish Springs Area Plan will be for the purpose of further implementing the Vision and Character Statement, or to respond to new or changing circumstances. Amendments must conform to the Spanish Springs Vision and Character Statement. Amendments will be reviewed against a set of criteria and thresholds that are measures of the impact on, or progress toward, the Vision and Character Statement.

Staff Comment: The Spanish Springs Area Plan's Vision and Character Statement defines the suburban core as being concentrated along Pyramid Highway and including a broad mix of non-residential uses, plus residential densities of up to three dwelling units per acre. The suburban core is part of the Suburban Character Management Area (SCMA), which is the designated growth area in the Spanish Springs planning area.

Comments on the individual policies found within Goal Seventeen are included later in this report under "Staff Comments on Required Findings for Master Plan Amendment" and "Staff Comments on Required Findings for Regulatory Zone Amendment."

Development Suitability within the Spanish Springs Area Plan

The Spanish Springs Development Suitability Map, which is part of the Spanish Springs Area Plan, identifies the southern third of the subject parcel as being located within a 1% FEMA Flood Hazard area. However, Washoe County Engineering staff have indicated that FEMA flood zone maps have been updated to account for flood control developments such as the North Spanish Springs detention facility and associated appurtenances (such as the sedimentation basin and drainage channel south of the property).

Only a small portion of the southeast corner of the parcel is now designated as being in a FEMA flood zone AO. The Development Suitability Map identifies the remainder of the property as being "unconstrained."

Neighborhood Meeting

In accordance with the provisions of NRS 278.210.2, the applicant is required to conduct a neighborhood meeting prior to a Master Plan Amendment being scheduled before the Planning Commission. The proposed Master Plan Amendment and related Regulatory Zone Amendment were discussed at a neighborhood meeting organized by the applicant.

NRS 278.210 requires the neighborhood meeting be noticed to a minimum of 30 separate property owners within a 750 foot radius nearest the area to which the proposed amendment pertains. The applicant mailed out 40 neighborhood meeting notices to property owners of 55 parcels within 750 feet of the subject parcel. The meeting was held at the Spanish Springs Library on Wednesday, October 14, 2015 at 6 p.m. and was noticed in accordance with NRS 278.210, Article 820 (Master Plan Amendments) and Article 821 (Amendment of Regulatory Zone) of the Washoe County Development Code, which require notice be mailed 10 days prior to the neighborhood meeting. 16 residents were in attendance, plus Washoe County staff and the applicant's representative.

At the Neighborhood Meeting, the applicant made a brief presentation outlining the requested amendments. The applicant states that the following topics were brought up by the residents in attendance: traffic at the intersection of Pyramid Highway and Calle de la Plata; well impacts; proposed density vs. density of properties to the east; comparison to the proposed amendments for the Sugarloaf Ranch project to the east; intent of Area Plan; desire of some residents to not be located near what they see as urban development. Exhibit D contains the memorandum summarizing the meeting.

Public Comment

- Dawn Costa-Guyon, Chair of the Spanish Springs Citizen Advisory Board, submitted written comments to Washoe County staff (Exhibit E). Ms. Costa-Guyon commented on: the proposed increase in density; potential traffic flow issues entering/exiting from the property; water & sewer availability; and the desire for larger lots in that area. Ms. Costa-Guyon indicated she was not in favor of the project.
- Kenneth Theiss, Vice-Chair of the Spanish Springs Citizen Advisory Board, provided combined written comments for both this project (Blackstone Estates) and the separate project to the east (Sugarloaf Ranch Estates). Comments are attached under Exhibit E. Mr. Theiss made the following recommendations: require a traffic light to be installed on Calle de la Plata; create a 50-foot-wide easement or trail-like buffer between the subject parcel and the properties to the west; ensure infrastructure needs can be met.
- Carl Savely, Spanish Springs resident, commented on the project via email (Exhibit E). Mr. Savely stated a desire for lots smaller than 10 acres to not be approved in the area.
- Dan Herman, Spanish Springs resident, commented on the project via email (Exhibit E). Mr. Herman stated three main concerns regarding the project: (1) The desire for a "transition zone" between the project site and adjacent properties; (2) The placement of Medium Density Suburban regulatory zone east of Pyramid Highway; (3) The source of water to serve the subject property.

Public Hearing Notice

Notice for Master Plan Amendments has been provided in accordance with the provisions of Nevada Revised Statutes 278.210, as amended; and Notice for Regulatory Zone amendments has been provided in accordance with the provisions of Nevada Revised Statutes 278.260, as amended. The time and place of the public hearing must be provided in at least one publication or a newspaper of general circulation in the city or county, at least 10 days before the day of the public hearing. NRS requires a minimum of 30 separate property owners be noticed within a 750 foot radius of the subject parcel to which the proposed amendment pertains.

Per Washoe County Code Sections 110.820.20(b) and 110.821.20, owners of all real property to be noticed are owners identified on the latest County Assessor's ownership maps and records. Such notice is complied with when notice is sent to the last known addresses of such real property owners as identified in the latest County Assessor's records. Any person who attends the public hearing is considered to be legally noticed unless those persons can provide evidence that they were not notified according to the provisions of Articles 820 Master Plan Amendments and 821 Amendment of Regulatory Zone.

40 property owners of 55 parcels within 750 feet of the subject parcel were noticed of the proposed Master Plan Amendment and Regulatory Zone Amendment by U.S. Mail not less than 10 days before the scheduled Planning Commission meeting of December 1, 2015. See Exhibit C for a copy of the noticing map. A legal ad was also scheduled to be published in the Reno Gazette-Journal November 20, 2015 edition.

Agency Comments

The proposed amendment was submitted to the following agencies for review and comment.

- Washoe County Community Services Department
  - Engineering and Capital Projects (including Roads, Sewer and Traffic)
  - Parks and Open Space
  - Planning and Development
  - Utilities
- Washoe County Health District
  - Air Quality
  - Emergency Medical Services
  - Environmental Health Services
  - Vector-Borne Diseases
- Truckee Meadows Fire Protection District
- Washoe County Sheriff's Office
- Washoe County School District
- Regional Transportation Commission
- State of Nevada
  - Division of Environmental Protection
  - Division of Forestry – Endangered Species

  - Division of State Parks
  - Department of Transportation
  - Division of Water Resources
  - Department of Wildlife
- City of Sparks – Community Services Department
- Truckee Meadows Regional Planning
- Washoe-Storey Conservation District
- Truckee Meadows Water Authority
- NV Energy

Comments were received from:

- Nevada Division of Water Resources commented that the subject property is located within the Truckee Meadows Water Authority service area and no active water rights are currently associated with the parcel. Comments were also provided regarding future development proposals of the property. **(Exhibit F)**

  Contact: Steve Shell, 775.684.2836, sshell@water.nv.gov

- Nevada Department of Transportation offered comments on coordination and upgrades that may be required for future development proposals affecting Pyramid Highway and Calle de la Plata Drive. **(Exhibit G)**

  Contact: Anita Lyday, 775.834.8320, alyday@dot.state.nv.us

- Regional Transportation Commission (RTC) offered technical comments related to Pyramid Highway and Calle de la Plata Drive capacity, access standards, and future anticipated upgrades. RTC also commented on the applicant-provided traffic impact study and its conclusions. **(Exhibit H)**

  Contact: Debra Goodwin, 775.335.1918, dgoodwin@rtcwashoe.com

- Washoe County School District offered comments on current and future capacity at three schools for which the subject parcel is zoned. Comments were included on requirements that may be placed on future development proposals. **(Exhibit I)**

  Contact: Mike Boster, 775.789.3810, mboster@washoeschools.net

- Truckee Meadows Fire Protection District offered a number of fire safety conditions that would be applied to future development proposals. **(Exhibit J)**

  Contact: Amy Ray, 775.326.6005, aray@tmfpd.us

- Washoe County Parks and Open Space provided comments related to pedestrian and equestrian access points within the subject parcel. Suggested conditions for future development proposals were also included. **(Exhibit K)**

  Contact: Dennis Troy, 775.328.2059, dtroy@washoecounty.us

- Washoe County Health District – Emergency Medical Services commented that minimal impacts regarding EMS responses are anticipated and no impacts concerning access to health care facilities are expected. **(Exhibit L)**

  Contact: Christina Conti, 775.328.6042, cconti@washoecounty.us

- Washoe County Utility Services commented that a sewer line is within 100' of the subject property and that a facility plan is currently being prepared for the Spanish Springs Area, which will identify improvements the applicant would need to construct in order to obtain service. **(Exhibit M)**

  Contact: Timothy Simspon, 775.954.4648, tsimpson@washoecounty.us

- Washoe-Storey Conservation District offered comments on drainage, flooding and water rights that would be addressed during future development proposals. **(Exhibit N)**

  Contact: Kevin J. Roukey, 775.425.1209, kevinjr_51@att.net

- The Washoe County Engineering and Capital Projects Division indicated they reviewed the proposal and have no comments.

Staff Comments on Required Findings for Master Plan Amendment

For a Master Plan Amendment to be adopted, Washoe County Code Section 110.820.15(d) requires the Planning Commission make all required findings contained in the area plan governing the property subject of the Master Plan amendment. The Commission must also make at least three of the following five findings of fact. No military installations were required to be noticed as a result of this application; therefore the finding related to a military installation is not required.

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.

   Staff Comment: There are no policies or action programs of the Spanish Springs Area Plan that prohibit approval of the proposed change in Master Plan Category.

2. Compatible Land Uses. The proposed amendment will not result in land uses which are incompatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.

   Staff Comment: The proposed amendment will provide for land uses compatible with the existing adjacent land uses, particularly to the north, northeast and west.

3. Response to Change Conditions. The proposed amendment identifies and responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.

   Staff Comment: This proposal supports growth within the TMSA and the Spanish Springs Suburban Character Management Area, the planned growth area for the

Spanish Springs Valley. Development to the north and northeast of the property has also resulted in subdivision lots close to 1/3-acre in size, which is comparable to the proposed Medium Density Suburban regulatory zone that is also part of the proposed Suburban Residential master plan category.

4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.

   Staff Comment: TMWA and Washoe County are the service providers for community water and sewer in this area. As detailed in Exhibit O-1, TMWA has identified facility improvement options to serve the subject parcel. Washoe County Engineering has indicated that there is currently adequate sewer capacity available for the maximum allowed density on the property if the request is approved. Truckee Meadows Fire Protection District is the fire protection service provider. Appropriate transportation improvements would need to be implemented by the applicant at the time of future development if it was approved.

5. Desired Pattern of Growth. The proposed amendment promotes the desired pattern for the orderly physical growth of the County and guides the development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

   Staff Comment: The proposed amendment will further implement the desired pattern of growth, particularly as stated in the Spanish Springs Area Plan Character Statement which reads in part, "A distinct suburban core is, and will continue to be, concentrated along Pyramid Highway. This suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre."

Spanish Springs Area Plan Findings

Policy SS.17.1 In order for the Washoe County Planning Commission to recommend the approval of ANY amendment to the Spanish Springs Area Plan the following findings must be made:

a. The amendment will further implement and preserve the Vision and Character Statement.

   Staff Comment: The Character Statement includes, "A distinct suburban core is, and will continue to be, concentrated along Pyramid Highway. This suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre. These suburban land uses are located predominately, but not exclusively, on the west side of Pyramid Highway. Outside the suburban core, a transition to a more rural character occurs. This transition occurs most rapidly in the west as elevation increases along the western slopes of the Spanish Springs Valley. To the north and east, the transition to rural stretches out into the valley and includes lower density, suburban residential opportunities (one- to five-acre parcels)."

If the amendment requests are approved, the subject property will be the first property zoned Medium Density Suburban (MDS) on the east side of Pyramid Highway in the Suburban Character Management Area. However, MDS to the east of Pyramid Highway in this location still meets the intent of the Character Statement. As it states above, the suburban core includes residential densities of up to three dwelling units per acre, but is not exclusively on the west side of the highway. The Donovan Ranch subdivision to the north of the subject property (and east of Pyramid Highway) contains parcel sizes similar to a Medium Density Suburban regulatory zone. Regarding the Character Statement's description of a transition from suburban to rural on the east side of the highway as including one-to-five-acre parcels – this is meant to be a description of what were current conditions at the time the statement was written. It is not intended to be a prohibition of Medium Density Suburban to the east of the highway. As such, Washoe County's Director of Planning and Development has indicated that an amendment to the Character Statement is not required in order to either process or approve requests for Medium Density Suburban east of Pyramid Highway.

b. The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.

Staff Comment: Policy SS1.2 allows intensification of zoning to allow 1,500 new dwelling units in the Suburban Character Management Area (SCMA). The proposed change does not have the potential to exceed that limit. Policy SS1.3 allows the Medium Density Suburban regulatory zone in the SCMA. The Suburban Residential Master Plan Category requested by the applicant is consistent with that potential density, as is the requested Regulatory Zone.

c. The amendment will not conflict with the public's health, safety or welfare.

Staff Comment: Eventual development of the subject site will comply with all applicable safety and health regulations.

Staff Comments on Required Findings for Regulatory Zone Amendment

Section 110.821.15(d) of Article 821, *Amendment of Regulatory Zone*, within the Washoe County Development Code, requires that all of the following findings be made to the satisfaction of the Washoe County Planning Commission before recommending adoption to the Board of County Commissioners. No military installations were required to be noticed as a result of this application; therefore the finding related to a military installation is not required. Staff has completed an analysis of the Regulatory Zone Amendment application and has determined that the proposal is in compliance with the required findings as follows.

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan and the Regulatory Zone Map.

Staff Comment: The proposed amendment does not conflict with the policies and action programs of the Master Plan as detailed in this staff report.

2. Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.

   Staff Comment: The proposed amendments will further implement and preserve the Spanish Springs Area Plan Vision and Character Statement, which promotes an area of mixed land uses (zoning) and a range of employment opportunities. The proposed amendments conform to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan as provided earlier in this report. The proposed amendments will not result in a conflict with the public's health, safety or welfare.

3. Response to Change Conditions; more desirable use. The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.

   Staff Comment: This proposal supports growth within the TMSA and the Spanish Springs Suburban Character Management Area, the planned growth area for the Spanish Springs Valley. Development to the north and northeast of the property has also resulted in subdivision lots close to 1/3-acre in size, which is comparable to Medium Density Suburban regulatory zones.

4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed amendment.

   Staff Comment: TMWA and Washoe County are the service providers for community water and sewer in this area. As detailed in Exhibit O-1, TMWA has identified facility improvement options to serve the subject parcel. Washoe County Engineering has indicated that there is currently adequate sewer capacity available for the maximum allowed density on the property if the request is approved. Truckee Meadows Fire Protection District is the fire protection service provider. Appropriate transportation improvements would need to be implemented by the applicant at the time of future development proposals if they are approved.

5. No Adverse Effects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.

   Staff Comment: The proposed amendment does not conflict with the policies and action programs of the Master Plan as detailed in this staff report.

6. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

   Staff Comment: The proposed amendment will further implement the desired pattern of growth, particularly as stated in the Spanish Springs Area Plan Character Statement which reads in part, "A distinct suburban core is, and will continue to be, concentrated along Pyramid Highway. This suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre." The current request is to establish additional suburban zoning within the identified suburban core.

Staff Comment on Spanish Springs Area Plan Findings

Policy SS.17.2 In order for the Washoe County Planning Commission to recommend approval of any amendment involving a change of land use, the following findings must be made:

a. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

   Staff Comment: The applicant has provided information from the Truckee Meadows Water Authority regarding necessary water facility improvements. These are attached as Exhibit O-1.Geotechnical and hydrology reports related to drainage and storm water have been included as Exhibit O-2. In addition, Washoe County Engineering has indicated that adequate sewer capacity will be available for the maximum allowed density on the property if the request is approved.

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

   Staff Comment: A traffic analysis is provided with the application and includes the conclusion that the intersection of Pyramid Highway and Calle de la Plata currently operates at a level of service (LOS) F. The traffic report indicates that the current proposal is anticipated to generate 42% fewer vehicle trips than what would be expected if the area were built out according to its current Commercial, Industrial and Low Density Suburban regulatory zoning.

c. For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.

Staff Comment: The current proposal is not for a commercial or industrial land use intensification and therefore this policy is not applicable.

d. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.

Staff Comment: The proposed regulatory zone will not exceed Washoe County's policy growth level for Spanish Springs. Were the project to be approved, over 1,100 residential units would still be available within the 1,500-unit policy growth cap.

e. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

Staff Comment: A traffic analysis is provided with the application and includes the conclusion that the intersection of Pyramid Highway and Calle de la Plata currently operates at a level of service (LOS) F. The traffic report indicates that the current proposal is anticipated to generate 42% fewer vehicle trips than what would be expected if the area were built out according to its current Commercial, Industrial and Low Density Suburban regulatory zoning. The traffic report states that improvements proposed within the Regional Transportation Plan would improve the level of service at this intersection; however, the Regional Transportation Commission (RTC) has clarified that such improvements are not projected until after 2035. The Nevada Department of Transportation and Regional Transportation Commission have identified that improvements to that intersection will likely be required as a condition of future development proposals to the subject property.

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

Staff Comment: According to the traffic study submitted by the applicant, the current proposal is anticipated to generate fewer vehicle trips than would be expected if the area were built out according to its current Commercial, Industrial and Low Density

Suburban regulatory zoning. The Nevada Department of Transportation and Regional Transportation Commission have identified that improvements to that intersection will likely be required with future development proposals to the subject property.

g. Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.

Staff Comment: The proposed changes are within the policy growth level established by Policy SS.1.2.

h. If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.

Staff Comment: The Washoe County School District (WCSD) has indicated that if future residential development on the property were to result in student capacity being exceeded at zoned schools, then some students may be assigned to the nearest WCSD school with available capacity.

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

Staff Comment: No special use permits are anticipated to be impacted by the proposed change in land use.

Recommendation

Based upon the information presented in the staff report, it is recommended that the required findings can be made, the proposed Master Plan Amendment be adopted and the proposed Regulatory Zone Amendment be recommended for adoption to the Board of County Commissioners. Staff recommends that the Planning Commission:

(1) Adopt an amendment to the Spanish Springs Master Plan Map, changing the Master Plan Category from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR) on the subject ±58.49 acre parcel (APN: 534-571-01). Possible action to approve a resolution adopting an amendment to the Spanish Springs Master Plan Map; and

(2) Subject to final approval of the associated master plan amendment, recommend adoption of an amendment to the Spanish Springs Regulatory Zone Map, changing the

regulatory zone from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS) on the subject parcel (APN: 534-571-01). Approve a resolution adopting an amendment to the Spanish Springs Regulatory Zone Map; and

(3) If the resolution adopting the Master Plan amendments and the resolution recommending adoption of the Regulatory Zone Amendment are approved, direct staff to forward these amendments to the Board of County Commissioners. These approvals include administrative changes with a revised map series including an updated parcel base and updated applicable text.

(4) Authorize the Chair to sign Resolutions Number 15-24 and 15-25 on behalf of the Planning Commission.

Possible Motion for Master Plan Amendment

I move that after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Planning Commission adopt Master Plan Amendment Case Number MPA15-003 having made the following three findings in accordance with Washoe County Code Section 110.820.15(d) and the findings required by Spanish Springs Area Plan Policy SS.17.1. I further move to certify the resolution and the proposed Master Plan Amendment in MPA15-003 as set forth in this staff report for submission to the Washoe County Board of County Commissioners and authorize the chair to sign the resolution on behalf of the Planning Commission.

Washoe County Development Code Section 110.820.15(d) Master Plan Amendment Findings

1. *Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.*
2. *Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.*
3. *Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.*

Spanish Springs Area Plan Findings - Policy SS.17.1 (a part of the Master Plan)

a. *The amendment will further implement and preserve the Vision and Character Statement.*
b. *The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.*
c. *The amendment will not conflict with the public's health, safety or welfare.*

Possible Motion for Regulatory Zone Amendment

I move that after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Planning Commission adopt the Regulatory Zone Amendment Case Number RZA15-005 having made all of the following findings in accordance with Washoe County Development Code Section 110.821.15(d) and the findings required by Spanish Springs Area Plan Policy SS.17.2. I further move to certify the resolution and the proposed Regulatory Zone Amendment in RZA15-005 as set forth in this staff report for submission to the Washoe County Board of County Commissioners and authorize the chair to sign the resolution on behalf of the Planning Commission

Washoe County Development Code Section 110.821.15(d) Regulatory Zone Amendment Findings

1. *Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.*
2. *Compatible Land Uses. The proposed amendment will not result in land uses which are incompatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.*
3. *Response to Change Conditions; more desirable use. The proposed amendment identifies and responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.*
4. *Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.*
5. *No Adverse Effects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.*
6. *Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.*

Spanish Springs Area Plan Findings - Policy SS.17.2 (a part of the Master Plan)

a. *A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.*

b. *A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.*

c. ***(NOT APPLICABLE)*** *For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.*

d. *For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.*

e. *If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.*

f. *If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.*

g. *Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.*

h. *If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.*

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

Appeal Process

Planning Commission action will be effective 10 calendar days after the written decision is signed by and filed with the Secretary to the Planning Commission and mailed to the original applicant, unless the action is appealed to the Washoe County Board of Commissioners, in which case the outcome of the appeal shall be determined by the Washoe County Board of Commissioners. Any appeal must be filed in writing with the Planning and Development Division within 10 calendar days after the written decision is signed and filed with the Secretary to the Planning Commission and mailed to the original applicant.

xc: Applicant: SP58, LLC, Attn: Josh Myers, 439 W. Plumb Lane, Reno, NV 89509

Property Owner: Jacie, LLC c/o Douglass Properties, LLC, Attn: Samuel Douglass, 3820 Lone Tree Lane, Reno, NV 89511

Consultant: Rubicon Design Group, LLC, Attn: Mike Railey, 100 California Ave., Suite 202, Reno, NV 89509

EXHIBIT A

RESOLUTION OF THE WASHOE COUNTY PLANNING COMMISSION

ADOPTING AN AMENDMENT TO THE WASHOE COUNTY MASTER PLAN, SPANISH SPRINGS MASTER PLAN MAP (MPA15-003), AND RECOMMENDING ITS ADOPTION TO THE BOARD OF COUNTY COMMISSIONERS

Resolution Number 15-24

WHEREAS, Master Plan Amendment Case Number MPA15-003 came before the Washoe County Planning Commission for a duly noticed public hearing on December 1, 2015;

WHEREAS, the Washoe County Planning Commission heard public comment and input from both staff and applicant representatives regarding the proposed master plan amendment;

WHEREAS, the Washoe County Planning Commission has given reasoned consideration to the information it has received regarding the proposed master plan amendment;

WHEREAS, the Washoe County Planning Commission has made the findings necessary to support adoption of this proposed master plan amendment as set forth in NRS chapter 278, Washoe County Development Code Article 820, and the Spanish Springs Area Plan;

NOW, THEREFORE, BE IT RESOLVED pursuant to NRS 278.210(3) that (1) the Washoe County Planning Commission does hereby adopt the proposed master plan amendment in Master Plan Amendment Case Number MPA15-003, comprised of the maps, descriptive matter and other matter intended to constitute the amendment as submitted at public hearing noted above; and (2) to the extent allowed by law, this approval is subject to the conditions adopted by the Planning Commission at the public hearing noted above.

ADOPTED on December 1, 2015

WASHOE COUNTY PLANNING COMMISSION

_____

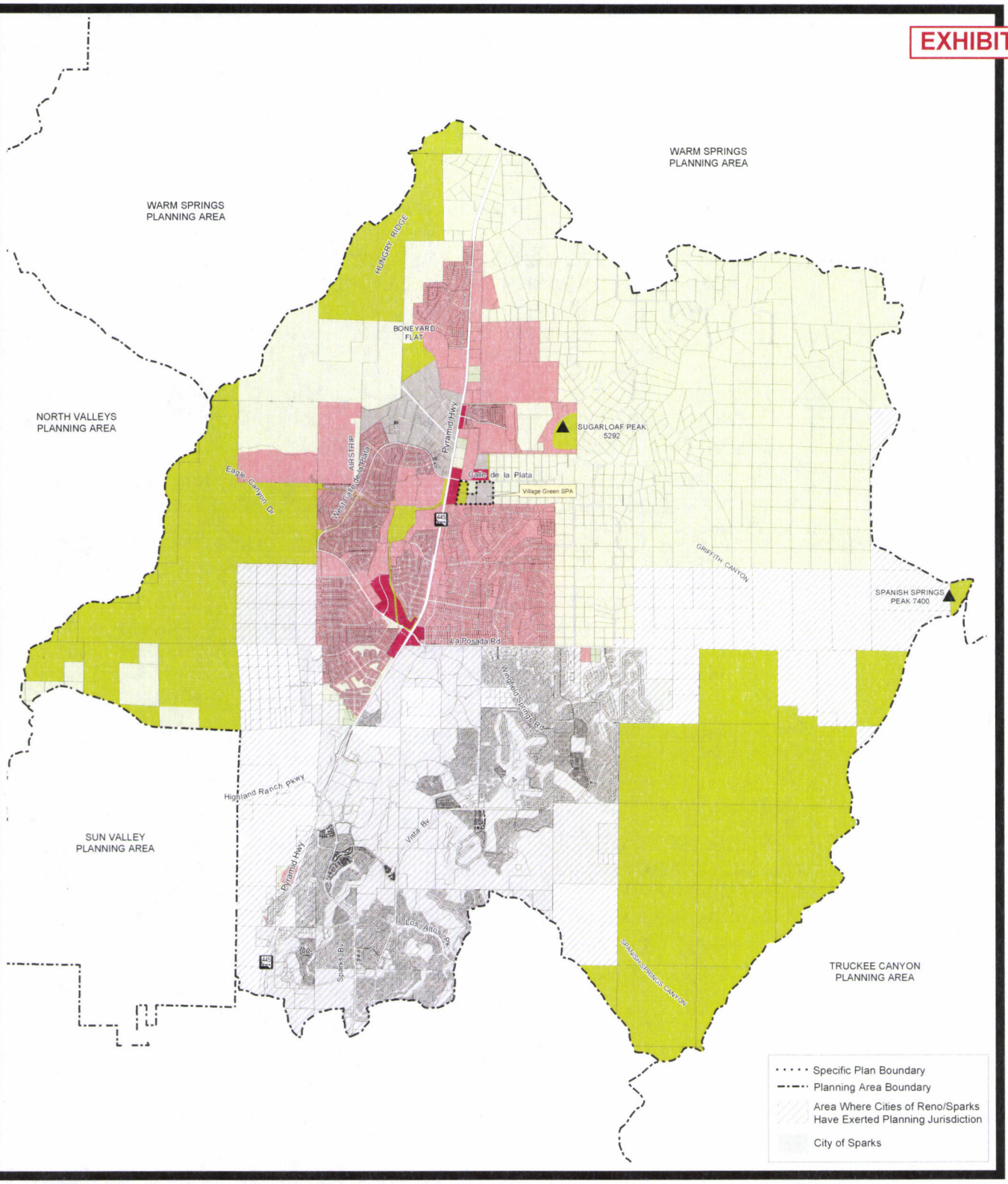
James Barnes, Planning Commission Chairman

I hereby attest the Chairman's signature and certify pursuant to NRS 278.210(6) that the proposed master plan document and maps have been reviewed and approved by the Planning Commission as an accurate representation of the approved amendment to the Washoe County master plan.

_____

Carl R. Webb, Jr., AICP, Secretary to the Planning Commission

EXHIBIT A-1



SPANISH SPRINGS

MASTER PLAN MAP

- RURAL
- RURAL RESIDENTIAL
- SUBURBAN RESIDENTIAL
- URBAN RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- OPEN SPACE

SOURCE : Planning and Development Division

PC Date: December 1, 2015
BCC Date:
RPC Conformance Date:
Resolution Adoption Date:

NOTE: THE SCALE AND CONFIGURATION OF ALL INFORMATION SHOWN HEREON ARE APPROXIMATE ONLY AND ARE NOT INTENDED AS A GUIDE FOR DESIGN OR SURVEY WORK. REPRODUCTION IS NOT PERMITTED WITHOUT PRIOR WRITTEN PERMISSION FROM THE WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT.

G:\arcdata\planareas\sswmapseries\MPA15-006\sMPA15-006.mxd

0 1,150 2,300 4,600 Feet

CERTIFICATION:
THIS DOCUMENT HAS BEEN REVIEWED AND APPROVED AS AN ACCURATE REPRESENTATION OF THE ADOPTED MASTER PLAN MAPS OF WASHOE COUNTY, NEVADA, BY THE WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT.

DATE _____ DIRECTOR _____

Community Services Department

WASHOE COUNTY
NEVADA

Post Office Box 11130
Reno, Nevada 89520
(775) 328-3600

EXHIBIT B

RESOLUTION OF THE WASHOE COUNTY PLANNING COMMISSION

ADOPTING ADOPTION OF REGULATORY ZONE AMENDMENT CASE NUMBER RZA15-005 AND THE AMENDED SPANISH SPRINGS REGULATORY ZONE MAP

Resolution Number 15-25

WHEREAS, Regulatory Zone Amendment Case Number RZA15-005 (Blackstone Estates) came before the Washoe County Planning Commission for a duly noticed public hearing on December 1, 2015;

WHEREAS, the Washoe County Planning Commission heard input from both staff and the public regarding the proposed Regulatory Zone Amendment;

WHEREAS, the Washoe County Planning Commission has given reasoned consideration to the information it has received regarding the proposed Regulatory Zone Amendment;

WHEREAS, the proposed Regulatory Zone Amendment shall be adopted pending adoption of proposed Master Plan Amendment Case Number MPA15-003 by the Washoe County Board of Commissioners and a positive finding of conformance with the Truckee Meadows Regional Plan; and

WHEREAS, the Washoe County Planning Commission has made the findings necessary to support adoption of this proposed Regulatory Zone Amendment as set forth in Washoe County Development Code Article 821 and the Spanish Springs Area Plan;

NOW, THEREFORE, BE IT RESOLVED that the Washoe County Planning Commission does hereby recommend adoption of Regulatory Zone Amendment Case Number RZA15-005 and the amended Spanish Springs Regulatory Zone Map as included as Exhibit B-1 to this Resolution to the Washoe County Board of Commissioners.

ADOPTED on December 1, 2015

WASHOE COUNTY PLANNING COMMISSION

_____

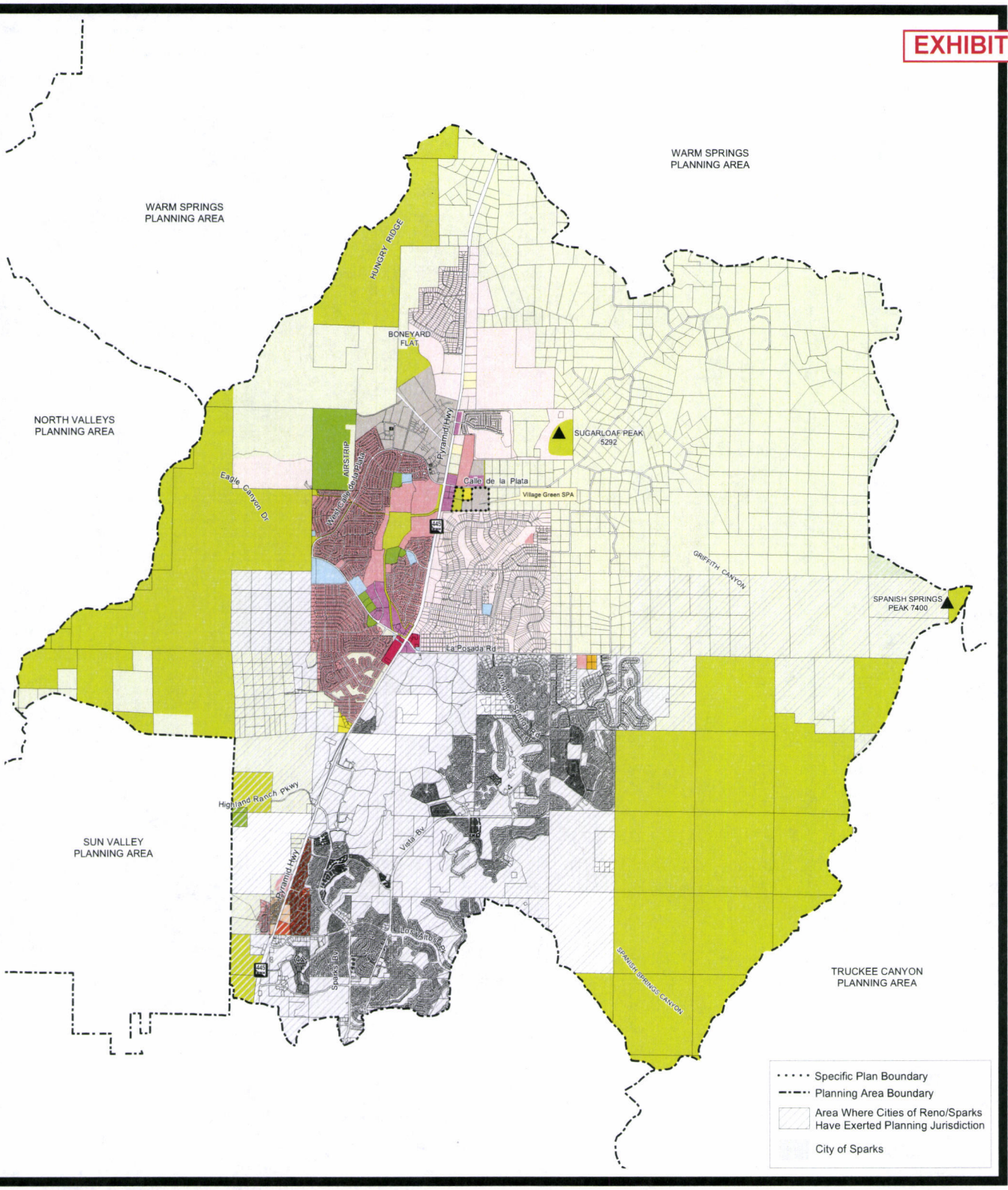
James Barnes, Planning Commission Chairman

ATTEST:

_____

Carl R. Webb, Jr., AICP, Secretary to the Planning Commission

EXHIBIT B-1



SPANISH SPRINGS

REGULATORY ZONE MAP

- LOW DENSITY RURAL
- MEDIUM DENSITY RURAL
- HIGH DENSITY RURAL
- LOW DENSITY SUBURBAN
- LOW DENSITY SUBURBAN 2
- MEDIUM DENSITY SUBURBAN
- MEDIUM DENSITY SUBURBAN 4
- HIGH DENSITY SUBURBAN
- LOW DENSITY URBAN
- MEDIUM DENSITY URBAN
- HIGH DENSITY URBAN
- GENERAL COMMERCIAL
- NEIGHBORHOOD COMMERCIAL/ OFFICE
- TOURIST COMMERCIAL
- INDUSTRIAL
- PUBLIC AND SEMI-PUBLIC FACILITIES
- PARKS AND RECREATION
- OPEN SPACE
- GENERAL RURAL
- GENERAL RURAL AGRICULTURAL
- DRY LAKE/ WATER BODY

Source: Planning and Development Division

PC Date: December 1, 2015
BCC Date:

NOTE: THE SCALE AND CONFIGURATION OF ALL INFORMATION SHOWN HEREON ARE APPROXIMATE ONLY AND ARE NOT INTENDED AS A GUIDE FOR DESIGN OR SURVEY WORK. REPRODUCTION IS NOT PERMITTED WITHOUT PRIOR WRITTEN PERMISSION FROM THE WASHOE COUNTY PLANNING AND DEVELOPMENT DIVISION.

C:\arcdata\planareas\srsn\Regzone_finalFiles\RZA15-007.mxd

0 1,500 3,000 6,000
Feet

CERTIFICATION:
THIS DOCUMENT HAS BEEN REVIEWED AND APPROVED AS AN ACCURATE REPRESENTATION OF THE ADOPTED ZONING MAPS OF WASHOE COUNTY, NEVADA, BY THE WASHOE COUNTY PLANNING AND DEVELOPMENT DIVISION.

DATE_____ DIRECTOR_____

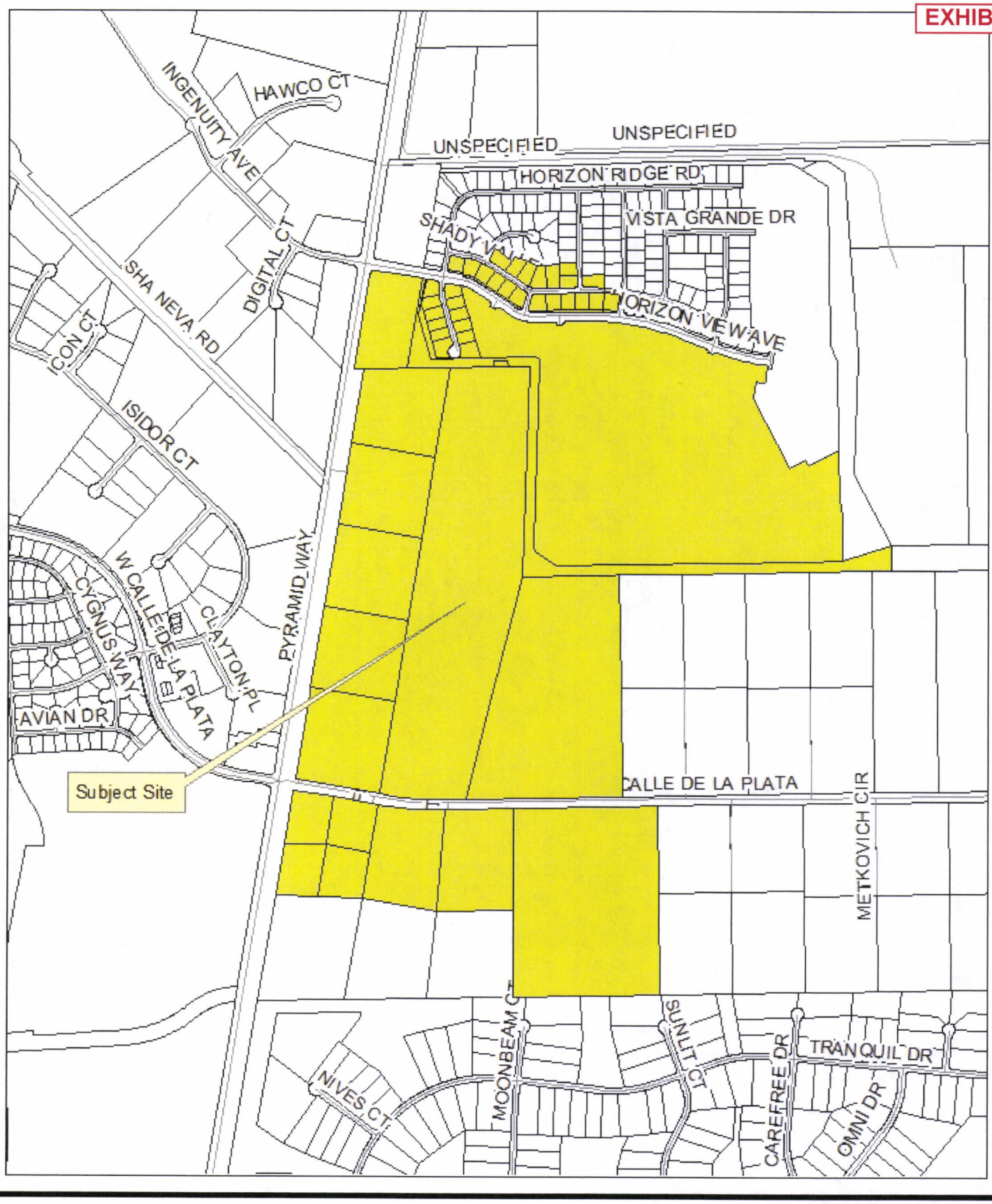
Community Services Department

WASHOE COUNTY
NEVADA

Post Office Box 11130
Reno, Nevada 89520

(775) 328-3600

EXHIBIT C



Mailing Map

MPA15-003 & RZA15-005 Sugarloaf Estates

55 parcels selected at 750 feet

0 500 1,000 2,000

Feet

Source: Planning and Development Division

Date: 9/16/2015

Community Services Department

WASHOE COUNTY NEVADA

Post Office Box 11130
Reno, Nevada 89520 (775) 328-3600

EXHIBIT D

RUBICON DESIGN GROUP

Memo

To: Kelly Mullin

From: Mike Railey

cc: Blackstone Estates Job File

Date: October 19, 2015

Re: Blackstone Estates Neighborhood Meeting

The purpose of this memo is to summarize the neighborhood meeting held to discuss the proposed Master Plan Amendment for Blackstone Estates. In accordance with NRS and Washoe County requirements, a neighborhood meeting was held on October 14, 2015 at 6:00 pm at the Washoe County Library (Spanish Springs branch). All property owners within 750 feet of the Blackstone Estates boundary were noticed of this meeting. Notices were sent via US Mail on October 1, 2015.

The meeting was attended by 16 people (not including Washoe County or Rubicon staff). Key issues discussed are listed below:

- Traffic impacts on the existing area and the need for signalization of the Calle de la Plata/Pyramid Highway intersection.
- Impacts on existing wells in the area.
- The project should be reviewed in context with the adjoining proposed project (Sugarloaf Ranch Estates) in order to analyze the cumulative impacts.
- Concern was stated that density was too high given larger parcels to the east.
- It was stated that the intent of the Area Plan was to have larger parcels east of Pyramid Highway.
- It was stated that residents chose to live on the east side of the valley to "get away from urban development."

Each of these comments was addressed, including a summary of the projected traffic impacts and proposed improvements, discussion of the Area Plan Suburban Character Management Area and policies, and the process for the forthcoming Tentative Map. All attendees were given the date of the upcoming Planning Commission hearing (December 1, 2015) and were asked to leave their names and email addresses on a sign-in sheet. A representative from Rubicon Design Group provided contact information and encouraged attendees to contact him with additional questions or concerns and stated that any emails received would be copied to Kelly Mullin at Washoe County for inclusion in her staff report.

EXHIBIT E

Washoe County Citizen Advisory Boards
CAB Member Worksheet

WASHOE COUNTY
NEVADA

Citizen Advisory Board: Spanish Springs

Meeting Date (if applicable): 10-14-15

Topic or Project Name (include Case No. if applicable): Blackstone Estates Neighborhood meeting.

Please check the appropriate box:

My comments ☐ **were** (or) ☒ **were not discussed during the meeting.**

Identified issues and concerns:

- A Master Plan should be presented to CAB for Spanish Springs
- Change from building what would currently be 20 houses to a 160 houses is a large increase in number houses built.
- The entrance/exit route to the development is off a narrow two lane road & closely located to the intersection of Pyramid Hwy which could likely create traffic flow problems. i.e. those entering development have to stop and wait traffic from Calle going west, this would likely backup onto Pyramid Hwy.

Suggested alternatives and/or recommendations:

No change to master Plan for this project at this time. Not good fit for community.

Community concerns: Traffic flow for corner Calle & Pyramid Hwy
- Restricted: i.e water, sewer limits for basin meeting max.
- Residents/neighbors bought on that side for bigger lots.

Name Dawn Costa-Guyon **Date:** 10-19-15
(Please Print)

Signature: Dawn Costa-Guyon

This worksheet may be used as a tool to help you take notes during the public testimony and discussion on this topic/project. Your comments during the meeting will become part of the public record through the minutes and the CAB action memorandum. Your comments, and comments from other CAB members, will and shall not collectively constitute a position of the CAB as a whole.

If you would like this worksheet forwarded to your Commissioner, please include his/her name.

Commissioner's Name: Vaughn Hartung.

Use additional pages, if necessary.

Please mail, fax or email completed worksheets to:

Washoe County Manager's Office
Attention: CAB Program
Post Office Box 11130, Reno, NV 89520-0027
Fax: 775.328.2037;
Email: cab@washoecounty.us
cc: kmullin@washoecounty.us

Washoe County Citizen Advisory Boards
CAB Member Worksheet

WASHOE COUNTY
NEVADA

Citizen Advisory Board: Spanish Springs

Meeting Date (if applicable): N/A

Topic or Project Name (include Case No. if applicable): MPA 15-003 / RZA 15-005 / MPA 15-004 / RZA 15-006

Please check the appropriate box:

My comments ☐ were (or) ☐ were not discussed during the meeting.

Identified issues and concerns:

Traffic at Calle De La Plata intersection and this be addressed and a light installed prior to any ground being broke.

Also maintain 50ft easement between Parcell 534-562-07 and Parcells 534-562-05 and [redacted] 534-562-06 with Buffer of some kind. as well as All parcels west of 534-571-01

These need to be mid to high end houses being in a Rural Setting.

Suggested alternatives and/or recommendations:

Buffers up agaist adjoinus properties should NOT be roads with traffic on them but Rather walking [redacted] Paths or Bike Cycle Trails with bushes and Trees..

Great Consideration needs to be addressed to our infrastructure with being able to support. close to 300 homes with these two parcels in regaurds to schools, fire, Police, sewer and water.

Name Kenneth Theis (Please Print) **Date:** 9-28-15

Signature:

This worksheet may be used as a tool to help you take notes during the public testimony and discussion on this topic/project. Your comments during the meeting will become part of the public record through the minutes and the CAB action memorandum. Your comments, and comments from other CAB members, will and shall not collectively constitute a position of the CAB as a whole.

If you would like this worksheet forwarded to your Commissioner, please include his/her name.

Commissioner's Name: Vaughn Hartung.

Use additional pages, if necessary.

Please mail, fax or email completed worksheets to:

Washoe County Manager's Office
Attention: CAB Program Coordinator
Post Office Box 11130, Reno, NV 89520-0027
Fax: 775.328.2491
Email: atavener@washoecounty.us

From: Jill Savely
To: Mullin, Kelly
Subject: Sugerloaf Estates
Date: Thursday, October 08, 2015 4:47:07 PM

Kelly,

Please do not compound previous errors by increasing residential density on lands North of Calle de La Plata and East of Pyramid Highway. This area was intended for large residential rural lots the smallest of which are 10 acres. In case no one has noticed there is significant demand for these type of parcels. No residential lots should be approved in this area that are less than 10 acres in size because they are completely inconsistent with existing residences.

Carl Savely
305 Alamosa Dr
89441

From: dog
To: Pelham, Roger; Mullin, Kelly
Cc: karma777@sbcglobal.net
Subject: Re: CITIZEN INPUT //corrected version
Date: Thursday, November 05, 2015 12:39:53 PM

Corrected version, please use this version. Thanks Dan
On Nov 5, 2015, at 12:25 PM, dog <karma777@sbcglobal.net> wrote:

> Nov. 5, 2015
>
>
> Please include my written inputs for both projects, 350 &370 Calla de la Plata. My inputs are the same for both applications as they are essentially asking for the same Residential up Zoning.
>
> Ref: Spanish Springs Area Plan.
>
>
> 1. The SS area plan clearly calls for a "Transition Zone" that is not being applied to these residential up zoning requests. The SS area plans Character Statement paragraphs 2&3 address this issue. "The Suburban core, together with the transition zone, will be known as the Suburban Character Management Area (SCMA)". I see no Transition Zone mitigation in the applications. The SS Area Plan Character Statement clearly states "This area will contain all commercial land use designations and residential densities greater than one unit per ten acres". There are numerous large lot (10acres) parcels adjacent to to these requested up zoning applications with no Transition Zones. I own a 10 acre parcel that is zoned GR, 1du per parcel. I feel it is unfair to the existing property owners to zone MDS 3du per acre next to existing parcels that are zoned 1du per ten acres. Again there are no Transition Zones. The Transition Zones are a part of and are included in the SS SMCA.
>
> Recommendation: Apply a Transition Zone of LDS 1du per acre adjacent to all existing developed property. This will provide a buffer that is more acceptable.
>
> 2. LDS (1du per acre) versus requested MDS (3du per acre) up zoning on the East side of Pyramid Highway. When the SS area plan was drafted the intent was to keep the land in the SS SCMA on the East side of Pyramid Highway zoned to a maximum density of LDS (1 du per acre). I was directly involved as a citizen in its drafting along with County Staff and the SS CAB.
>
> Paragraph 2 of the Character Statement states: "This suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre." It further states: "These suburban land uses are located predominately, but not exclusively, on the West side of Pyramid Highway."
>
> Currently there are no MDS (3du per acre) zoned property on the East side of Pyramid Highway. I am concerned that if we let these developers increase their properties zoning to MDS it will open up any other developer on the East side of Pyramid Highway to use the MDS zoning. This will set a bad precedent.
>
> Recommendation: Keep LDS (1du per acre) the maximum zoning density on the East side of Pyramid Highway as anticipated in the SS Character Statement.
>
>
> Please deny the requested up zoning request of MDS (3du per acre) and limit the applications to LDS (1du per acre). Also require the developments to comply with the Transition Zones addressed in the SS Area Plan Character Statement.
>
>
> 3. Water. Both developers said that their water rights are Truckee Meadow water rights. The developers both said that they will not be using groundwater. This is technically correct but not true. I requested from County staff

to have TMWA attend our 4 Nov 2015 CAB to brief the citizens on the SS area water system. They could not attend. I know that there are 3-4 commercial wells that supplement water use during high peak times. The citizens that are on wells are concerned about the water table level with significantly higher density. Seems that no one wants to be straight up about our valley's water. The developers do not know how it works, nor county staff.

> Recommendation: Have TMWA available for the Planning Commission to brief the board if questions arise!

> Respectfully Submitted,

> Dan Herman
> Campo Rico Ln

EXHIBIT F

Mullin, Kelly

Subject: RE: September Agency Review Memo II - Washoe County Planning & Development

From: Steve Shell [mailto:sshell@water.nv.gov]
Sent: Tuesday, September 22, 2015 1:30 PM
To: Stark, Katherine
Subject: RE: September Agency Review Memo II - Washoe County Planning & Development

Good Afternoon, Katy,

There are no active water rights appurtenant to the described lands in this proposed project. Any water used on the described lands should be provided by an established utility or under permit issued by the State Engineer's Office. All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes (NRS), and not otherwise. Any water or monitor wells, or boreholes that may be located on either acquired or transferred lands are the ultimate responsibility of the owner of the property at the time of the transfer and must be plugged and abandoned as required in Chapter 534 of the Nevada Administrative Code. If artesian water is encountered in any well or borehole it shall be controlled as required in NRS § 534.060(3).

The described lands lie within the Truckee Meadows Water Authority Service Area and also within Hydrographic Basin 85, Spanish Springs Valley. No agreement to serve has been filed with the Division of Water Resources.

Steve Shell
Water Resources Specialist II
Division of Water Resources
775-684-2836

From: Stark, Katherine [mailto:KRStark@washoecounty.us]
Sent: Tuesday, September 22, 2015 12:16 PM
To: Steve Shell
Cc: Stark, Katherine; Emerson, Kathy
Subject: September Agency Review Memo II - Washoe County Planning & Development

Good morning, Steve,

Please find the attached Agency Review Memo with the cases received this month by CSD, Planning and Development.

You've been asked to review the below-listed application as indicated; the item description and the link to the application are provided in the memo.

Item 1

Thank you!

Katy Stark
Office Support Specialist
Washoe County Community Services Department
(775) 328-3618 (office)
KRStark@washoecounty.us
1001 E. Ninth St., Bldg. A, Reno, NV 89512

EXHIBIT G

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

District II
310 Galletti Way
Sparks, Nevada 89431
(775) 834-8300 FAX (775) 834-8390

BRIAN SANDOVAL, *Governor*

RUDY MALFABON, P.E., *Director*

September 25, 2015

Washoe County Community Service Department
Planning and Development Division
P.O. Box 11130
Reno, NV 89520-0027

MPA15-003
MPA15-004
Sugarloaf Estates

Attention: Ms. Kelly Mullin, Planner

Dear Ms. Mullin:

I have reviewed the master plan amendment to the Washoe County. I have the following comments:

1. Prior to any grading adjacent to the Nevada Department of Transportation right-of-way, a Drainage Report, including a grading plan, and a Drainage Form must be submitted to the Permit office. A Drainage Information Form is attached. Please contact the Permit Office at (775) 834-8330 for more information.
2. The Nevada Department of Transportation will require an occupancy permit for any work performed within the State's right-of-way. Please contact the Permit Office at (775) 834-8330 for more information regarding the occupancy permit.
3. Developer is encouraged to coordinate traffic study review and seek NDOT traffic study approval early in the development planning process. It is likely the volumes created with these projects will warrant the installation of the traffic signal or alternative traffic mitigation at the intersection of SR 445 and Calle de la Platta.
4. It appears the proposed development could have significant impact to SR 445 (Pyramid Hwy). NDOT currently does not have plans to upgrade this roadway. NDOT suggest considering any potential impact to the roadway and any required mitigation. Any required mitigation will require a permanent encroachment permit and appropriate coordination with NDOT District II staff, NDOT Headquarters Traffic staff, and NDOT Headquarters Design staff.
5. SR 445 (Pyramid Hwy) has a posted speed of 55 mph through the project limits. A deceleration/right turn lane will be required from northbound SR 445 to eastbound Calle de la Platta.
6. Left turn/deceleration lanes will be required on southbound SR 445 to eastbound Calle de la Platta.

7. The state defers to municipal government for land use development decisions. Public involvement for Development related improvements within the NDOT right-of-way should be considered during the municipal land use development public involvement process. Significant public improvements within the NDOT right-of-way developed after the municipal land use development public involvement process may require additional public involvement. It is the responsibility of the permit applicant to perform such additional public involvement. We would encourage such public involvement to be part of a municipal land use development process.

Thank you for the opportunity to review this development proposal. The Department reserves the right to incorporate further changes and/or comments as the design review advances. I look forward to working with you and your team, and completing a successful project. Please feel free to me at (775)834-8320, if you have any further questions or comments.

Sincerely,

Anita Lyday, PE, PTOE
Urban Traffic Engineer

cc: File

EXHIBIT H

REGIONAL TRANSPORTATION COMMISSION
Metropolitan Planning • Public Transportation & Operations • Engineering & Construction
Metropolitan Planning Organization of Washoe County, Nevada

October 6, 2015

FR: Chrono/PL 183-15

Ms. Kelly Mullin, Planner
Community Services Department
Washoe County
P.O. Box 11130
Reno, NV 89520

RE: MPA15-003/RZA15-005 (Sugarloaf Estates)

Dear Kelly,

The applicant is requesting a master plan amendment and a regulatory zone amendment on approximately 58.49 acres located on the north side of Calle de la Plata Drive east of Pyramid Highway.

The Regional Transportation Plan (RTP) identifies Pyramid Highway from Queen Way to Calle de Plata Drive as an arterial with high access control (HAC). Calle de la Plata Drive, east of Pyramid Highway is not designated as a regional road. To maintain arterial capacity, the following RTP access management standards should be met.

Access Management Standards-Arterials[1] and Collectors

Access Management Class	Posted Speeds	Signals Per Mile and Spacing[2]	Median Type	Left From Major Street? (Spacing from signal)	Left From Minor Street or Driveway?	Right Decel Lanes at Driveways?	Driveway Spacing[3]
High Access Control	45-55 mph	2 or less Minimum spacing 2350 feet	Raised w/channelized turn pockets	Yes 750 ft. minimum	Only at signalized locations	Yes[4]	250 ft./500 ft.

1 On-street parking shall not be allowed on any new arterials. Elimination of existing on-street parking shall be considered a priority for major and minor arterials operating at or below the policy level of service.
2 Minimum signal spacing is for planning purposes only; additional analysis must be made of proposed new signals in the context of planned signalized intersections, and other relevant factors impacting corridor level of service.
3 Minimum spacing from signalized intersections/spacing other driveways.
4 If there are more than 30 inbound, right-turn movements during the peak-hour.

The policy Level of Service (LOS) standard for Pyramid Highway is E. New intersections or changes to existing intersections shall be designed to provide a level of service consistent with maintaining the policy level of service of the intersecting corridor. This project should be required to meet all the conditions necessary to complete road improvements to maintain policy LOS standards.

The 2035 RTP identifies the section of Pyramid Highway from Sparks Boulevard to Calle de la Plata Drive as a future 6-lane freeway as part of the Pyramid Highway/Sun Valley/US 395 Connector. Design and right of way are anticipated in the 2023-2035 timeframe with the construction after 2035. The Federal Highway Administration, in cooperation with the Nevada Department of Transportation (NDOT) and the RTC, has issued a draft Environmental Impact Statement for the proposed US 395/Pyramid

RTC Board: Neoma Jardon (Chair) · Ron Smith (Vice Chair) · Bob Lucey · Paul McKenzie · Vaughn Hartung
PO Box 30002, Reno, NV 89520 · 1105 Terminal Way, Reno, NV 89502 · 775-348-0400 · rtcwashoe.com

Connection. For more information, please see the website at PyramidUS395Connection.com. For further information on the US 395 Connector, please contact Doug Maloy at 335-1865.

The Traffic Impact Study (TIS) prepared by Star Consulting dated September 15, 2015 was submitted with the application. The study identified one primary entrance to serve the project on Calle de la Plata Drive with a secondary emergency access further east on Calle de la Plata Drive via a cross-access agreement. While direct access to Pyramid Highway was not included in the analysis, the report identified access to Pyramid is currently under discussion with the adjacent land owners.

A review of the Traffic Impact Study (TIS) found the following:

1. The TIS used counts from August 2008 to analyze existing conditions. Given the changes that have taken place in this corridor, as well as the region as a whole, more recent traffic counts should be used to represent "existing" conditions.
2. The TIS estimated 35% of exiting project traffic will turn right, northbound on Pyramid Highway. Given the absence of traffic generators or attractors north of Calle de la Plata Drive, the percentage appears high. We recommend using a distribution of 5%-10% which is closer to existing trip distribution.
3. The TIS used daily traffic volumes to evaluate signal warrants, however the Manual on Uniform Traffic Control Devices (MUTCD) signal warrants are defined in terms of hourly volumes. Typical hourly percentages should be applied to the daily volume for a better analysis. Hourly volumes at 4 p.m. and at 4 a.m. are not simply 1/24 of the daily volume.
4. When evaluating traffic volumes for traffic signal warrants, it is accepted practice to discount right turn traffic from the total minor-street approach volume. Right turn traffic can generally proceed with minimal delay without a traffic signal. Subtracting right-turn volumes reduces the minor-street approach below the threshold needed for the signal warrant.
5. The conclusions presented in the TIS recommended:
    a. The proposed regional roadway improvements identified in the RTP would accommodate regional growth including a traffic signal at Calle de la Plata Drive. *However, it should be noted that per the RTP physical improvements to Pyramid Highway are not projected until after 2035.*
    b. Traffic signal warrants are not met with the existing or existing plus project traffic volumes. *Additional new development currently under review in the vicinity of Calle de la Plata may increase traffic volumes related to the MUTCD Four-hour Vehicular Volumes Warrant. Additional analysis should be provided to determine if warrants are met, in addition to the evaluation of alternative intersection designs.*
    c. Installation of a (westbound) left turn pocket on Calle de la Plata Drive. *Any improvements proposed at the Pyramid Highway/Calle de la Plata intersection should consider alternative intersection designs, intersection ahead warning signs/detection, enhanced intersection lighting, etc.*

The land use data in the RTC's travel demand model does not include any residential growth. If this project is approved, we will adjust our travel demand model increasing the land use growth in the TAZ.

Thank you for the opportunity to comment on this project. If you have any questions, please feel free to contact me at 335-1918.

Sincerely,

Debra Goodwin
Planning Administrator

DG/jm

Copies: Bill Whitney, Washoe County Community Services Department
Marchon Miller, Regional Transportation Commission
Tina Wu, Regional Transportation Commission
David Jickling, Regional Transportation Commission
Julie Masterpool, Regional Transportation Commission
Doug Maloy, Regional Transportation Commission
Janelle Thomas, Nevada Department of Transportation District II
Jeremy Smith, Truckee Meadows Regional Planning Agency

641 Sugarloaf Estates

Washoe County School District
425 East Ninth Street * P.O. Box 30425 * Reno, NV 89520-3425
Phone (775) 348-0200 * (775) 348-0304 * www.washoeschools.net

Board of Trustees: John Mayer, President * Angela Taylor, Vice President * Barbara McLaury, Clerk * Veronica Frenkel * Howard Rosenberg * Lisa Ruggerio * Nick Smith * Traci Davis, Interim Superintendent

EXHIBIT I

05 October 2015

Kelly Mullin, Planner
Washoe County Community Services Dept.
1001 E. 9th Street
Reno NV 89512

RE: MPA 15-003 and RZA 15-005 (Sugarloaf Estates)

Dear Ms Mullin,

The Washoe County School District estimates that the proposed zone change on the 58.49-acre subject property will result in the possibility for 175 new single-family units, which will have some impact on WCSD facilities. This project is currently zoned for the following schools:

Alyce Taylor Elementary – 252 Egyptian Drive, Sparks NV 89431
Opened in 1990

- **Capacity = 643**
- **2014-2015 Enrollment* = 614 (95% of capacity)**
- **Portable units onsite = 2** (4 total classrooms) – Provides temporary space for up to 100 students. However, portables do not provide additional lunchroom, computer lab or playground space and are intended to be temporary measures to be used prior to new school construction. WCSD does not currently have a sufficient funding source for new school construction.
- **Estimated project impact = 48** new ES students (175 single-family units x 0.277 students per unit = **48**) – Project will increase enrollment at Taylor to **103%** of capacity.
- **Special Programs** - Taylor has 1 classroom dedicated to special education programs, which reduces the capacity of the school.
- **Overcrowding Strategy** - On September 22, 2015, the WCSD Board of Trustees set 120% of capacity as the conversion threshold for elementary schools to be converted to a multi-track year-round calendar, which increases effective capacity of the school by approximately 25%. This policy will go into effect as of the 2017-2018 school year. Taylor is currently at 95% of base capacity for the 2014-2015 school year. 2015-2016 Count Day enrollment numbers may be higher.

Shaw Middle – 600 Eagle Canyon Drive, Sparks NV 89436 – Opened in 2004

- **Capacity = 1072**
- **2014-2015 Enrollment* = 1008 (94% of capacity)**
- **Portable units onsite = 2** (4 total classrooms) – Provides temporary space for up to 100 students. However, portables do not provide additional lunchroom, computer lab or playground/field space and are intended to be temporary measures to be used prior to new school construction. WCSD does not currently have a sufficient funding source for new school construction.
- **Estimated project impact = 11** new MS students (175 single-family units x 0.064 students per unit = **11**) – Project will increase enrollment at Shaw to **95%** of capacity.
- **Special Programs** - Shaw has 3 classrooms dedicated to special education programs, which reduces the capacity of certain classrooms within the school.
- **Overcrowding Strategy** – The Shaw property may be able to accommodate additional portable classroom units if necessary. The caveat regarding the two existing portable classrooms applies to any additional units.

Spanish Springs High – 1065 Eagle Canyon Drive, Sparks NV 89436 – Opened in 2001

- **Capacity = 2160**
- **2014-2015 Enrollment* = 2315 (107% of capacity)**
- **Portable units onsite = 5** (10 total classrooms) – Provides temporary space for up to 250 students. However, portables do not provide additional lunchroom, computer lab, parking or sports field space and are intended to be temporary measures to be used prior to new school construction. WCSD does not currently have a sufficient funding source for new school construction.
- **Estimated project impact = 24** new HS students (175 single-family units x 0.136 students per unit = **24**) – Project will increase enrollment at Spanish Springs to **108%** of capacity.
- **Special Programs** – Spanish Springs has 4 classrooms dedicated to special education programs, which reduces the capacity of certain classrooms within the school.
- **Overcrowding Strategy** – Topography and parking constraints may not provide enough space for additional portable classroom units on the Spanish Springs High School property.

***Official 2015-2016 enrollment numbers are not available as of the date of this review but are anticipated to be higher at many schools. The District has recently introduced the Data Gallery that provides details of WCSD buildings including capacity, overcrowding, repair needs, upcoming projects, and more. The Data Gallery can be found at: http://datagallery.washoeschools.net/**

Recommended WCSD Condition for MPA 15-003 and RZA 15-005 (Sugarloaf Estates):
A disclosure shall be made by the developer to each homebuyer on their closing documents that K-12 students in this subdivision may be assigned to the nearest WCSD school(s) with available capacity in the event that the zoned schools cannot accommodate additional students.

Thank you for the opportunity to comment.

Mike Boster
School Planner
14101 Old Virginia Road
Reno NV USA 89521
Washoe County School District Capital Projects
775.789.3810
mboster@washoeschools.net

EXHIBIT J

Amy Ray
Fire Marshal

Tim Leighton
Division Chief

Charles A. Moore
Fire Chief

October 7, 2015

Washoe County Community Services Department
1001 East Ninth Street
Reno, NV 89512

Re: Master Plan Amendment Case No. MPA 15-003 (Sugarloaf Estates)

The Truckee Meadows Fire Protection District (TMFPD) will approve the above MPA with the following conditions:

- Any developments on the property shall meet the requirements of WCC 60.
- Plans shall be submitted for review and approval to TMFPD.
- A Vegetation Management Plan is required for the project in accordance with the requirements of the *International Wildland Urban Interface Code, 2012 Ed.* shall be submitted for approval by TMFPD.
- HOA and CC& R requirements and conditions shall be submitted for review, comment and approval by TMFPD prior to recording, adoption and use.
- Minimum cul-de-sac radius shall be 45 feet for fire department use.
- Rolled curbing is required on roundabouts for fire department use.
- Emergency/secondary emergency access shall be provided for the project, not contingent on future adjacent project development, but at time of the submission of the subdivision map. This easement shall be maintained by the subdivision and shall meet the requirements for access in accordance with WC Code 60.
- Open spaces and drainages shall be maintained in accordance with WC Code 60 and conditions placed in the HOA and CC&R documents ensuring vegetation management and maintenance.

Please contact me with any questions at (775) 326-6005.

Thank you,

Amy Ray
Fire Marshal

Amy Ray
Fire Marshal

TRUCKEE MEADOWS FIRE PROTECTION DISTRICT
WASHOE COUNTY, NV

Tim Leighton
Division Chief

Charles A. Moore
Fire Chief

October 7, 2015

Washoe County Community Services Department
1001 East Ninth Street
Reno, NV 89512

Re: Master Plan Amendment Case No. RZA 15-005 (Sugarloaf Estates)

The Truckee Meadows Fire Protection District (TMFPD) will approve the above MPA with the following conditions:

- Any developments on the property shall meet the requirements of WCC 60.
- Plans shall be submitted for review and approval to TMFPD.
- A Vegetation Management Plan is required for the project in accordance with the requirements of the *International Wildland Urban Interface Code, 2012 Ed.* shall be submitted for approval by TMFPD.
- HOA and CC& R requirements and conditions shall be submitted for review, comment and approval by TMFPD prior to recording, adoption and use.
- Minimum cul-de-sac radius shall be 45 feet for fire department use.
- Rolled curbing is required on roundabouts for fire department use.
- Emergency/secondary emergency access shall be provided for the project, not contingent on future adjacent project development, but at time of the submission of the subdivision map. This easement shall be maintained by the subdivision and shall meet the requirements for access in accordance with WC Code 60.
- Open spaces and drainages shall be maintained in accordance with WC Code 60 and conditions placed in the HOA and CC&R documents ensuring vegetation management and maintenance.

Please contact me with any questions at (775) 326-6005.

Thank you,

Amy Ray
Fire Marshal

MPA15-003 & RZA15-005
EXHIBIT J

EXHIBIT K

WASHOE COUNTY
DEPARTMENT OF REGIONAL PARKS AND OPEN SPACE

MEMORANDUM

DEPARTMENT OF REGIONAL PARKS AND OPEN SPACE

PLANNING DIVISION

TO: **Kelly Mullin, Planner**

FROM: **Dennis Troy, Park Planner**

DATE: **October 21, 2015**

SUBJECT: **Sugarloaf Estates (MPA15-003 and RZA15-005)**

Master Plan Amendment Case No. MPA15-003 and Regulatory Zone Amendment Case No. RZA15-005
The proposed development lies within Park District 2C and is adjacent to public open space and trails owned and managed by Washoe County, commonly known as Sugarloaf Peak (see map Exhibit A).

The application does not identify pedestrian/equestrian connection points within the development to an existing public access corridor known as the Sugarloaf Peak and Trail system. This is a heavily used natural surface equestrian trail corridor that currently exists along the northern and north-eastern portion of the property. This trail corridor is identified in the Park District 2C Master Plan and the Spanish Springs Area Plan and should be incorporated in a future trails plan as part of the development. (Master Plan excerpts Exhibits B)

Due to the abundant parks and recreation services available in the vicinity for future Sugarloaf Estates residents, there is no need for additional neighborhood parks to be considered as part of the development.

In accordance with NRS 278.4983, Sugarloaf Estates may generate up to $175,000 (maximum of $1,000 per proposed dwelling unit) in Residential Construction Tax (RCT) for Park District 2C. This RCT will be utilized in compliance with NRS at park facilities in the vicinity of the project area.

FUTURE Recommended Conditions of Approval (at the time of design and construction)

1. A trails plan shall be prepared as part of the project. Trail plan shall include:

    a. TRAIL EASEMENTS: Three 20'-30' non-motorized (equestrian and pedestrian) public access trail easements shall be provided as part of the project. Easements may be relocatable to ensure compatibility within the development. Trails should provide connection points at the following locations 1) Northwestern portion of the development; 2) East-Northeast of the northernmost proposed round-about and; 3) A

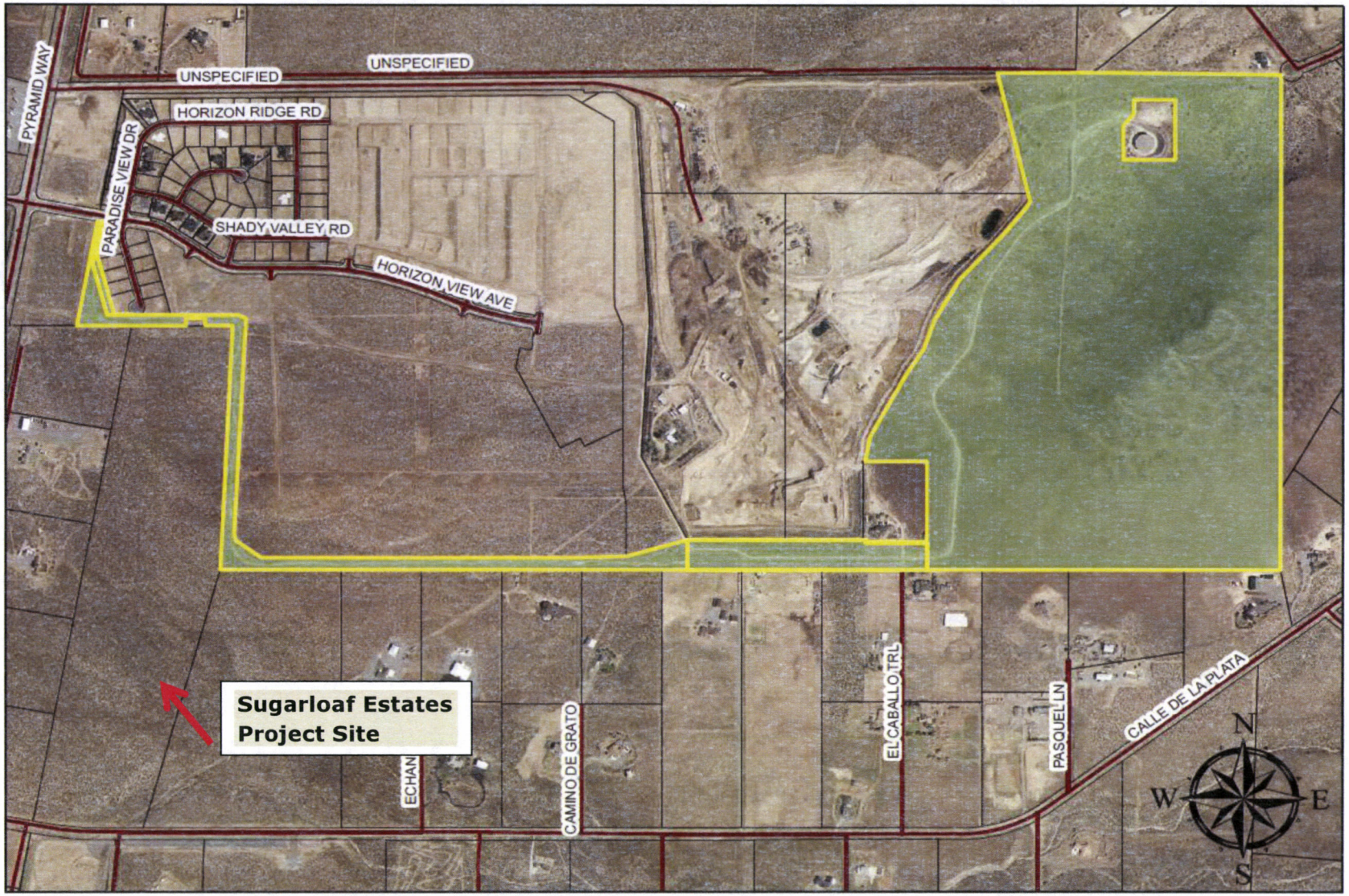
1001 E. 9th Street Reno, NV 89520 775.328.2059 dtroy@washoecounty.us

north-south connector providing access from Calle de la Plata to the Sugarloaf Peak & Trail in a location acceptable to the developer and Washoe County.

b. The applicant shall construct trails within easement corridors described in item a. above to Washoe County Green Book Standards.

c. Trails shall be constructed and maintained in accordance with Washoe County "Green Book" standards. Designated trails shall be maintained and perpetually funded by the homeowners or maintenance association as designated by the applicant. The maintenance and funding of the trail corridor and related improvements shall be addressed in the CC&Rs to the satisfaction of the Washoe County District Attorney. Trail corridor maintenance shall, as a minimum address the following:

-Debris and litter removal
-Weed abatement
-Drainage and watershed management
-Erosion Control
-Amenity maintenance and replacement (signage, dog waste disposal stations, benches etc.)



WASHOE COUNTY'S SUGARLOAF PEAK & TRAIL
EXHIBIT A

MPA15-003 & RZA15-005
EXHIBIT K

The Spanish Springs Citizen Advisory Board (CAB) and the Spanish Springs Park District 2C Working Group **priority goals** within the Park District are:

- **Ensure safe pedestrian routes of travel to parks, schools, and key recreation areas**
- **Preserve environmentally sensitive areas, wildlife habitat and migration corridors, natural, cultural, and historic resources**
- **Provide public access to open space and unique natural features of interest**
- **Provide a wide variety of recreation opportunities and community events**

These goals helped establish the project lists in section 3.2.C.3 to guide future planning and fundraising efforts within the Spanish Springs community.

Project priorities include:

- **Sugarloaf Peak Acquisition and Trail Access (Donovan Ranch & Harris Ranch)**
- **Pyramid Lake Highway Pedestrian Path (Eagle Canyon to Lazy 5 Parkway)**
- **Regional Aquatics Study**
- **Eagle Canyon Park and Lazy 5 Regional Park Master Plan Development**
- **Acquisition And Development Of New Park Land For Multi-Use Sports Activities**
- **Funding for Environmental Assessment and Lease of BLM Property**

While safety is a priority of the Spanish Springs CAB and its constituents, it is also an important consideration in park design. Additional activity and vandalism have increased public awareness of safety in our public spaces. Designers are now faced with the difficult task of creating interesting park spaces while eliminating potential hiding places for criminal activity. Future park planning should be consistent with the guidelines established through the National Recreation and Park Association with consideration for Crime Prevention Through Environmental Design. This will not only decrease water use and maintenance costs, but will provide for open areas that will positively affect the ecosystem and maintain view sheds for rangers and law enforcement, helping them to reduce incidents of vandalism.

EXHIBIT L

WASHOE COUNTY
HEALTH DISTRICT
ENHANCING QUALITY OF LIFE

October 1, 2015

Katy Stark
Washoe County Community Services Department
1001 E. Ninth Street, Bldg. A
Reno, NV 89512

Dear Ms. Stark:

I received your email dated September 22, 2015, requesting a review of the Agency Review Memo regarding the construction of the Sugarloaf Estates (Item 1).

Based on the submitted documentation, specifically the traffic impact section, it is anticipated that there will be minimal impacts concerning EMS responses to this new development. However, it is not anticipated that there will be impacts concerning access to healthcare services and facilities with the proposed 3 dwelling units per acre, or approximately 175 units. Should you need a complete Environmental Impact Assessment, please contact the Washoe County Health District's Division of Environment Health Services at (775) 328-2434.

Advanced Life Support (ALS) fire services are provided by Truckee Meadows Fire Protection District and ALS ambulance services are provided by REMSA through a Franchise agreement with the Washoe County Health District. For the proposed location of the Sugarloaf Estates, REMSA's Franchise response requirement for life-threating calls is 20 minutes and 59 seconds for 90 percent of calls.

There is one hospital within proximity to the proposed site of the Sugarloaf Estates should residents require such services. The Northern Nevada Medical Center is approximately 10.7 miles away from the proposed residential site. There are also several other acute care hospitals and healthcare resources available in Washoe County.

I recommend that the estate numbers be clearly marked on the curb and residences/common areas so the residents can be quickly located by public safety agencies. Additionally, please ensure that all dwellings will meet ADA requirements, as appropriate.

Please feel free to contact me if you have any questions.

Sincerely,

Christina Conti
EMS Program Manager
cconti@washoecounty.us
(775) 326-6042

EXHIBIT M

Washoe County
COMMUNITY SERVICES DEPARTMENT
Engineering and Capital Projects

November 3, 2015

To: Kelly Mullin, Planner, Community Services Department

From: Timothy Simpson, P.E., Environmental Engineer II

Subject: Master Plan Amendment MPA15-003
Regulatory Zone Amendment RZA15-005
Sugarloaf Estates

The Community Services Department (CSD) has reviewed the subject application and has the following comments:

The applicant is requesting to amend a portion of the master plan designations from a special planning area of Suburban Residential (SR), Industrial (I), and Commercial (C) to Rural Residential (SR) on +/- 58.49 acres within the Spanish Springs Plan being a part of the Washoe County Master Plan. The subject property is within the unincorporated portion of the Washoe County Truckee Meadows Services Area (TMSA).

SEWAGE COLLECTION CONSIDERATIONS

The closest available sewer main is located approximately 100' from the north property line of parcel APN 534-571-01. There is also a sewer main approximately 1700' from the south property line west of parcel APN 534-571-01.

The applicant's Engineer shall provide a sewer report to the DWR to ensure the proposed density increase by the land use change does not adversely affect any sewer infrastructure.

CONCLUSION

The CSD is current preparing a facility plan for the Spanish Springs Area. This document identities the potential for significant off-site sewer improvements that the Applicant will need to construct in order to obtain service from the Community Services Department.

EXHIBIT N

Washoe-Storey Conservation District

Natural Resource Conservation Service
1365 Corporate Blvd.
Reno, NV 89502

Tel: (775) 857-8500 ext. 131
Fax: (775) 857-8525

Board of Supervisors:

Bret Tyler
Chairman

James Shaffer
Secretary
County Appointee

Kevin Roukey
Director

Tory Friedmen
Supervisor

Spencer Scott
Supervisor

James Muntin
Supervisor

OPEN
City Appointee

Roger Pelham, MPA, Senior Planner
Kelly Mullin, Planner
Washoe County Community Services Department
Planning and Development Division
1001 E. Ninth St., Bldg. A
Reno, NV 89512

September 29, 2015

Subject: August Agency Review – Case Nos. – MPA15-003 (Sugarloaf Estates); RZA15-005 (Sugarloaf Estates); MPA15-004 (Sugarloaf Ranch Estates); RZA15-006 (Sugarloaf Ranch Estates)

Roger,

Thank you for providing us the August Agency Review and the opportunity to review and provide comments. We have reviewed the subject proposed projects as requested and we have the following comments:

Master Plan Amendment Case Number MPA15-003 (Sugarloaf Estates)
The proposed project is to approve an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Designation on one parcel of +/- 58.49 acres from a mix of Suburban Residential (SR), Industrial (I) and Commercial (C) to Suburban Residential (SR). The proposed project is located on the north side of Calle De La Plata, approximately 0.2 miles east of its intersection with Pyramid Highway. We have the following comments and recommendations on this proposed project:

1. The applicant states on page 14, paragraph 5 under the heading of Future Development states…" As a common open space development, covenants, conditions, and restrictions (CC&R's) will be recorded and a homeowners association (HOA) will be created to maintain common areas and open space. With the subsequent tentative map application, specific details will be provided in regards to landscaping, fencing, etc. The project will provide constancy with the theming and development standards included in the Spanish Springs Area Plan. Furthermore, by clustering units, conservation of natural resources, especially water, will be achieved. It is envisioned that significant attention will be given to xeriscaping and drought tolerant plantings within common areas. In terms of the central park, details as to whether this will be dedicated to Washoe County or maintained by the HOA will be determined as part of the tentative map review process." We recommend that the maintenance of common areas should specifically include drainage channels and any flood detention basins that may be constructed in the development area. We also recommend that the developer be required to coordinate with the Washoe/Storey Conservation District to select an appropriate seed mix and other plantings to be used in the development site.
2. LUT.9.1 discussed on page 39 in items a. V and VI state…" Provide financial assurances for any proposed improvements within the open space and Provide mechanisms to assure perpetual maintenance of the open space"… We recommend that the County require inclusion of maintenance of all drainage channels and flood control detention basins in the financial assurances and perpetual maintenance.
3. **Planning and Development Master Plan Amendment, Application Master Plan Amendment Supplemental Information** – In response to Item 5, the applicant states…"The site is undeveloped and contains flat terrain with slopes of less than 2%. The property includes sagebrush, rabbit brush and native grasses. There are no

waterbodies, geologic hazards, cultural resources or historical resources known on the property. Refer to the attached report for a detailed site analysis and photos of the existing condition"... After an on-site inspection it was observed that there are several ephemeral washes on site, with one, Griffith Canyon, that passes through the property and bisects it. We recommend the County require a complete set of plans illustrating the on-site drainage plan that will handle a 100-year storm event.

4. Item 6a – Is the property located within the 100-year flood plain? – The applicant checked no. Our review of the County Assessors FEMA flood plain maps indicates that the lower third of the property is within the 100-year flood plain. We recommend the County require the applicant revise their application and include design information on how they intend to handle on-site drainage for this event. During this past year this area experienced several flooding events. We recommend that the County require the applicant to construct appropriate sized trapezoidal channels on the property to channelize the potential flood flows so that they confluence with the existing appurtenances of the existing North Spanish Springs Detention Facility.
5. Item 6d – Does the property contain geologic hazards such as active faults; hillside or mountainous areas; is subject to avalanches, landslides, or flashfloods; is near a stream or riparian area such as the Truckee River, and/or an area of ground water recharge? The applicant checked no. This area is subject to flash flooding. Just this past year the area experienced flash floods that closed the road. Also there is an ephemeral stream that bisects the property. This area is within HUC 16050102, Truckee - California, Nevada Basin. We recommend the County require the applicant to provide plans that address how they plan to control flash flooding and the potential for a 100-year flood event.
6. Item 9 – Water Rights Issues – The applicant has not provided any information with regards to water rights issues. We are concerned that the County would approve a Master Plan amendment without this information. We recommend that the County require the applicant revise their application and provide the required information concerning waters rights.
7. **Regulatory Zone Amendment Supplemental Information** – Item 5 – Does the property contain development constraints such as flood plains or flood ways, wetlands, slopes or hillside in excess of 15%, geologic hazards such as active faults, significant hydrologic resources or major drainages or prime farmland? The applicant checked no. The lower third of the property is within the 100-year floodplain and contains ephemeral channels that are subject to flash flooding. As previously stated, we recommend the County require the applicant to provide plans that address how they plan to control flash flooding and the potential for a 100-year flood event.
8. Item 7 - Water Rights Issues – The applicant has not provided any information with regards to water rights issues. We are concerned that the County would approve a Master Plan amendment without this information. We recommend that the County require the applicant revise their application and provide the required information concerning waters rights.

Regulatory Zone Amendment Case Number RZA15-005 (Sugarloaf Estates)
The proposed project is to approve an amendment to the regulatory zone on one parcel on one parcel of +/- 58.49 acres from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I), and Neighborhood Commercial (NC) to Medium Density Suburban (MDS). The proposed project is located on the north side of Calle De La Plata, approximately 0.2 miles east of its intersection with Pyramid Highway. We have the following comments and recommendations on this proposed project:

All of our comments regarding the Master Plan Amendment Case Number MPA15-003 apply to this action as well.

Master Plan Amendment Case Number MPA15-004 (Sugarloaf Ranch Estates)
The proposed project is to approve an amendment to the Washoe County Master Plan, Spanish Springs Area Plan to change the Master Plan Designation on one parcel of +/- 39.84 acres from a mix of Industrial (I) and Commercial (C) and Open Space (OS) to Suburban Residential (SR). The proposed project is located on the north side of Calle De La Plata, approximately 0.2 miles east of its intersection with Pyramid Highway. We have the following comments and recommendations on this proposed project:

All of our comments regarding the Master Plan Amendment Case Number MPA15-003 apply to this action as well, with the exception that the applicant acknowledged that the property is within the 100-year flood plain and in this case the applicant did provide water rights information.

Regulatory Zone Amendment Case Number RZA15-006 (Sugarloaf Ranch Estates)
The proposed project is to approve an amendment to the regulatory zone on one parcel on one parcel of +/- 39.84 acres from a mix of Open Space (OS), Industrial (I), and Neighborhood Commercial (NC) to Medium Density Suburban (MDS). The proposed project is located on the north side of Calle De La Plata, approximately 0.2 miles east of its intersection with Pyramid Highway. We have the following comments and recommendations on this proposed project:
All of our comments regarding the Master Plan Amendment Case Number MPA15-003 apply to this action as well, with the exception that the applicant acknowledged that the property is within the 100-year flood plain and in this case the applicant did provide water rights information.

If these Master Plan Amendments and Regulatory Zone Amendments are approved and the projects move forward to tentative map we would appreciate to continue being included on the agency review list.

These are our comments and recommendations for the subject projects. We appreciate the opportunity to provide comments and recommendations on projects that may have impacts on our natural resources. Should you have any further questions please contact Kevin J. Roukey by phone at 775-232-1571 or email kevinjr_51@att.net.

Sincerely,

Kevin J. Roukey, District Coordinator
Washoe/Storey Conservation District

EXHIBIT O

SUGARLOAF ESTATES

MASTER PLAN AMENDMENT AND REGULATORY ZONE AMENDMENT APPLICATIONS

Photo Credit: SummitPost.org

Prepared by:

RUBICON DESIGN GROUP

SEPTEMBER 15, 2015

Job # 237-01

SUGARLOAF ESTATES

MASTER PLAN AMENDMENT AND REGULATORY ZONE AMENEMENT APPLICATION

Prepared for:

SP58, LLC

439 W. Plumb Lane

Reno, Nevada 89509

Prepared by:

Rubicon Design Group, LLC

100 California Avenue, Suite 202

Reno, Nevada 89509

(775) 425-4800

September 15, 2015

MPA15-003 & RZA15-005
EXHIBIT O

Table of Contents

Introduction 1
Project Location 1
Existing Conditions 2
Project Concept 7
Request Summary 5
    Master Plan Amendment 5
    Regulatory Zone Amendment 10
Future Development 14
Potential Impacts 16
    Traffic 16
    Schools 16
    Public Facilities/Infrastructure 18
    Site Suitability 18
    Public Services 18
Planning Policy Analysis 19
    Spanish Springs Area Plan 19
    Washoe County Master Plan 29
    Truckee Meadows Regional Plan 37
Request Findings 39
    Master Plan Amendment 39
    Regulatory Zone Amendment 41

List of Figures:

Figure 1 – Vicinity Map 1
Figure 2 – Existing Conditions 2
Figure 3 – Existing Conditions 3
Figure 4 – Suburban Character Management Area 4
Figure 5 – Washoe County Land Use Compatibility Matrix 6
Figure 6 – Existing Master Plan Designations 8
Figure 7 – Proposed Master Plan Designations 9

List of Figures (continued):

Figure 8 – Existing/Proposed Zoning 11
Figure 9 – Development Suitability Map 13
Figure 10 – Sugarloaf Estates Conceptual Plan 15

Appendices:

Washoe County Development Application
Owner Affidavits
Master Plan Amendment Application
Regulatory Zone Amendment Application
Property Tax Verification
Traffic Impact Study
Feasibility Geotechnical Study
Preliminary Title Report (Original Only)

Map Pocket:

Sugarloaf Estates Conceptual Plan

Introduction

This application includes the following requests:

- A **Master Plan Amendment** to re-designate 58.49± acres of property from a mix of Suburban Residential, Industrial, and Commercial to Suburban Residential.

- A **Regulatory Zone Amendment** to rezone 58.49± acres from a mix of Neighborhood Commercial, Industrial, and Low Density Suburban to Medium Density Suburban.

Project Location

The Sugarloaf Estates site (APN 534-571-01) consists of 58.49± acres and is located in northern Spanish Springs. Specifically, the property is located on the north side of Calle de la Plata, east of Pyramid Highway. Figure 1 (below) depicts the project location.

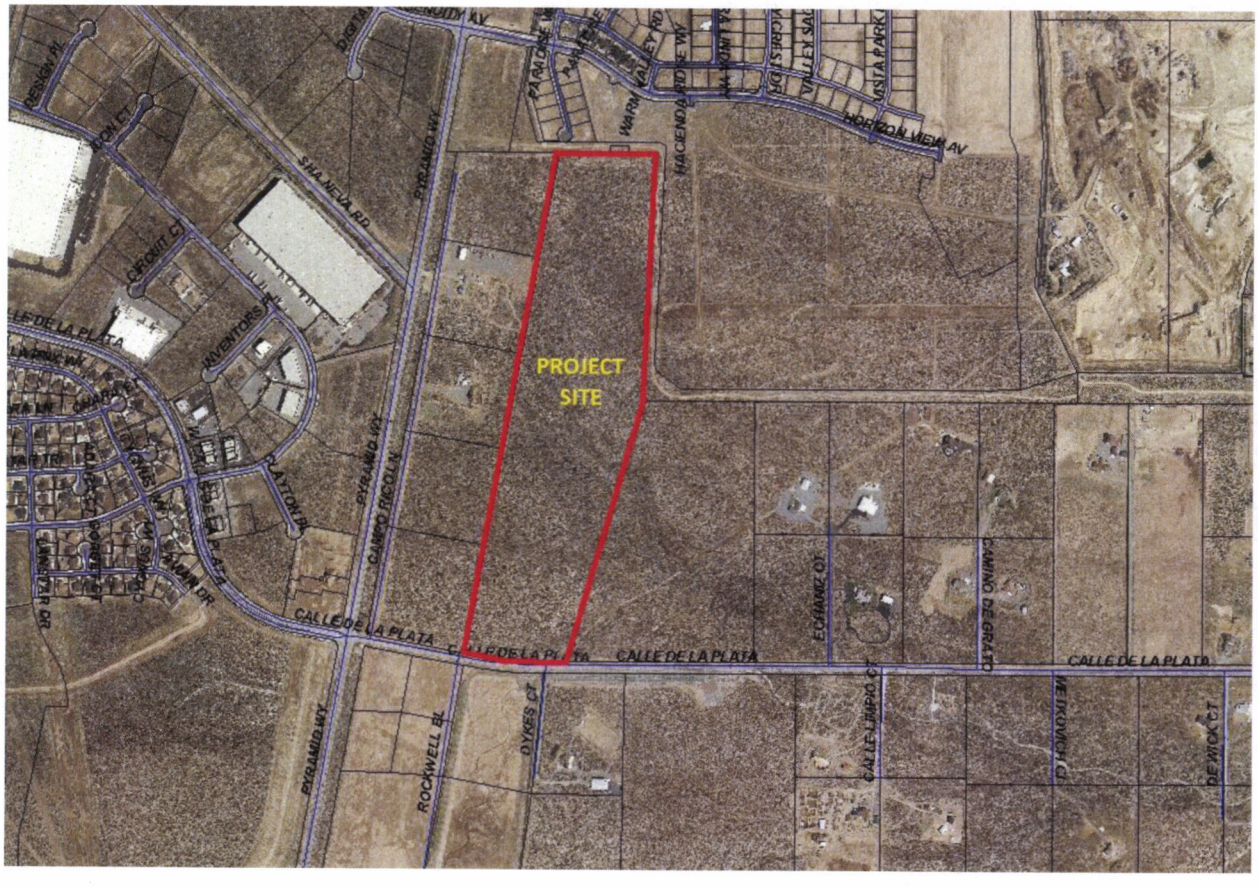
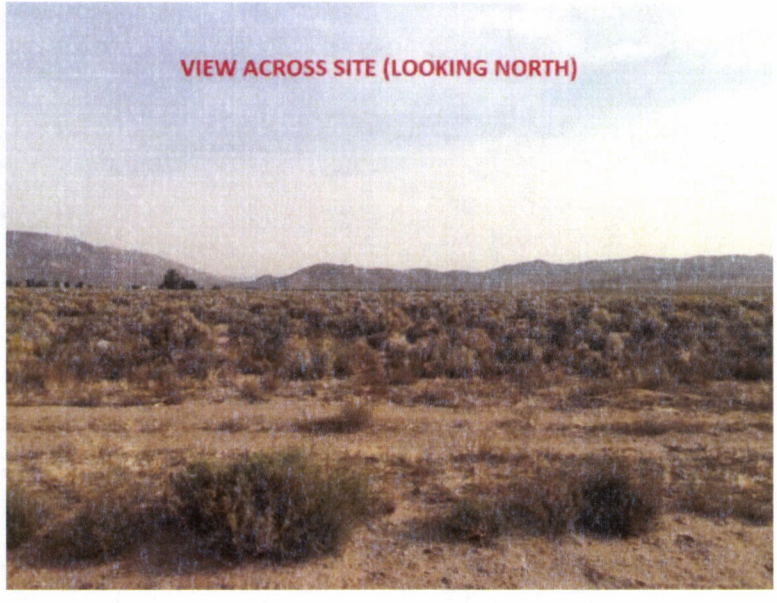


Figure 1 – Vicinity Map

Existing Conditions

Currently, the project site is vacant. Surrounding land use includes vacant land and single family residential uses to the west, the "Shadow Mountain" subdivision to the north, vacant land to the east, and a regional storm water detention facility and single family to the south.

The Sugarloaf Estates property contains generally flat terrain and is accessed from Calle de la Plata on the south side. Figures 2 (below) and 3 (following page) depict the existing onsite conditions.



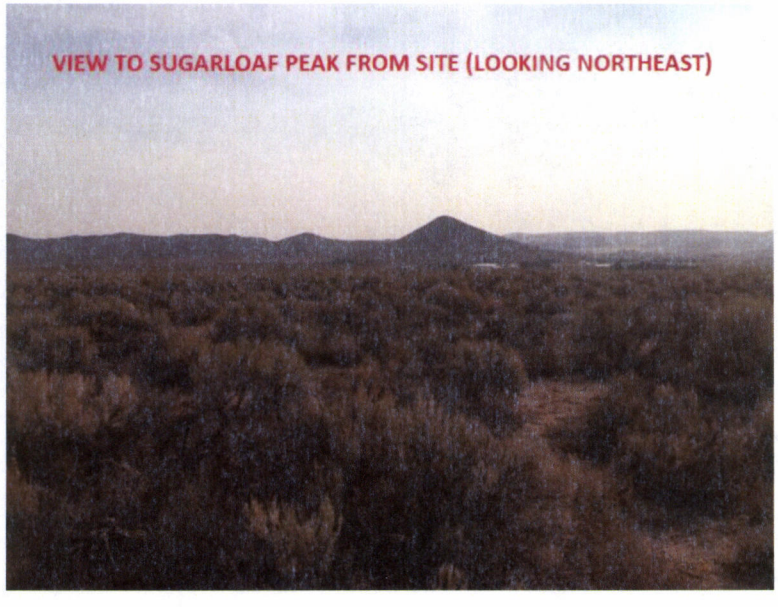
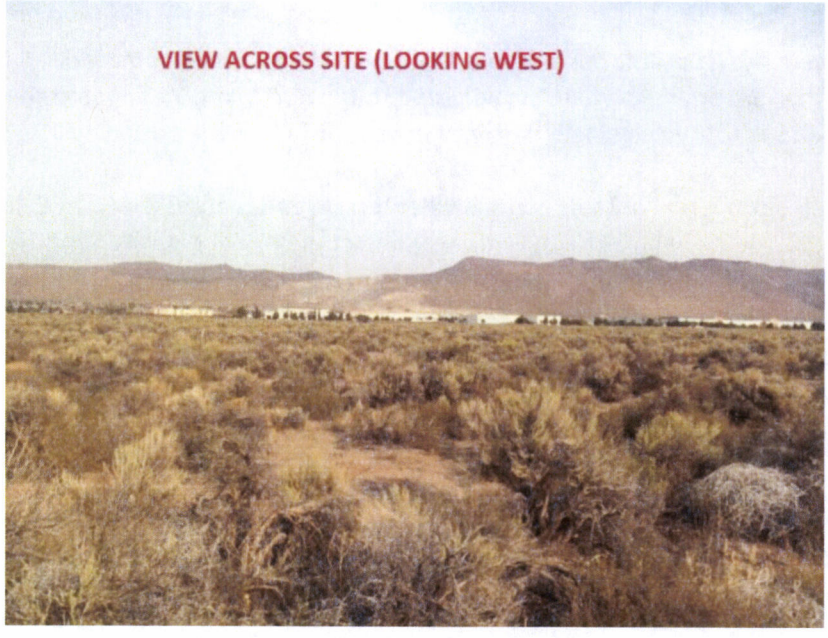


Figure 2 – Existing Conditions



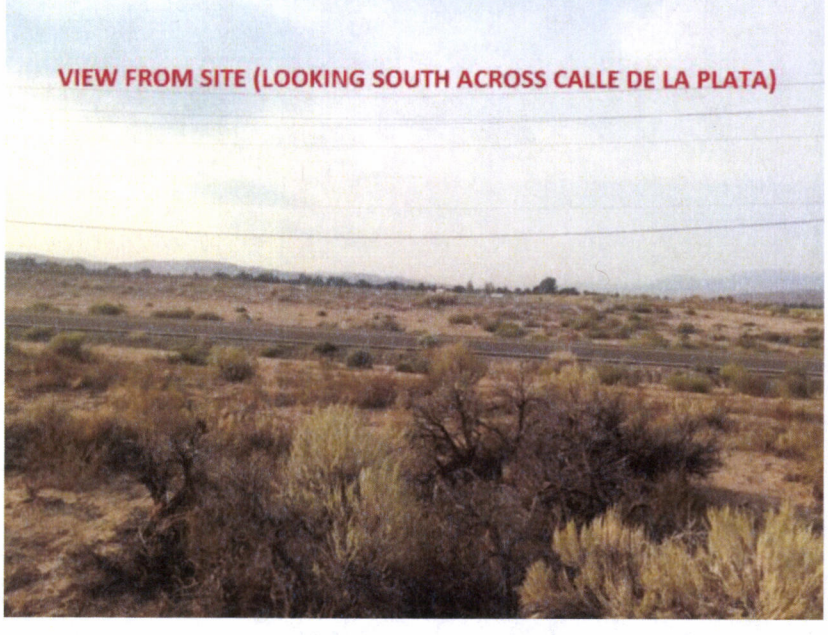
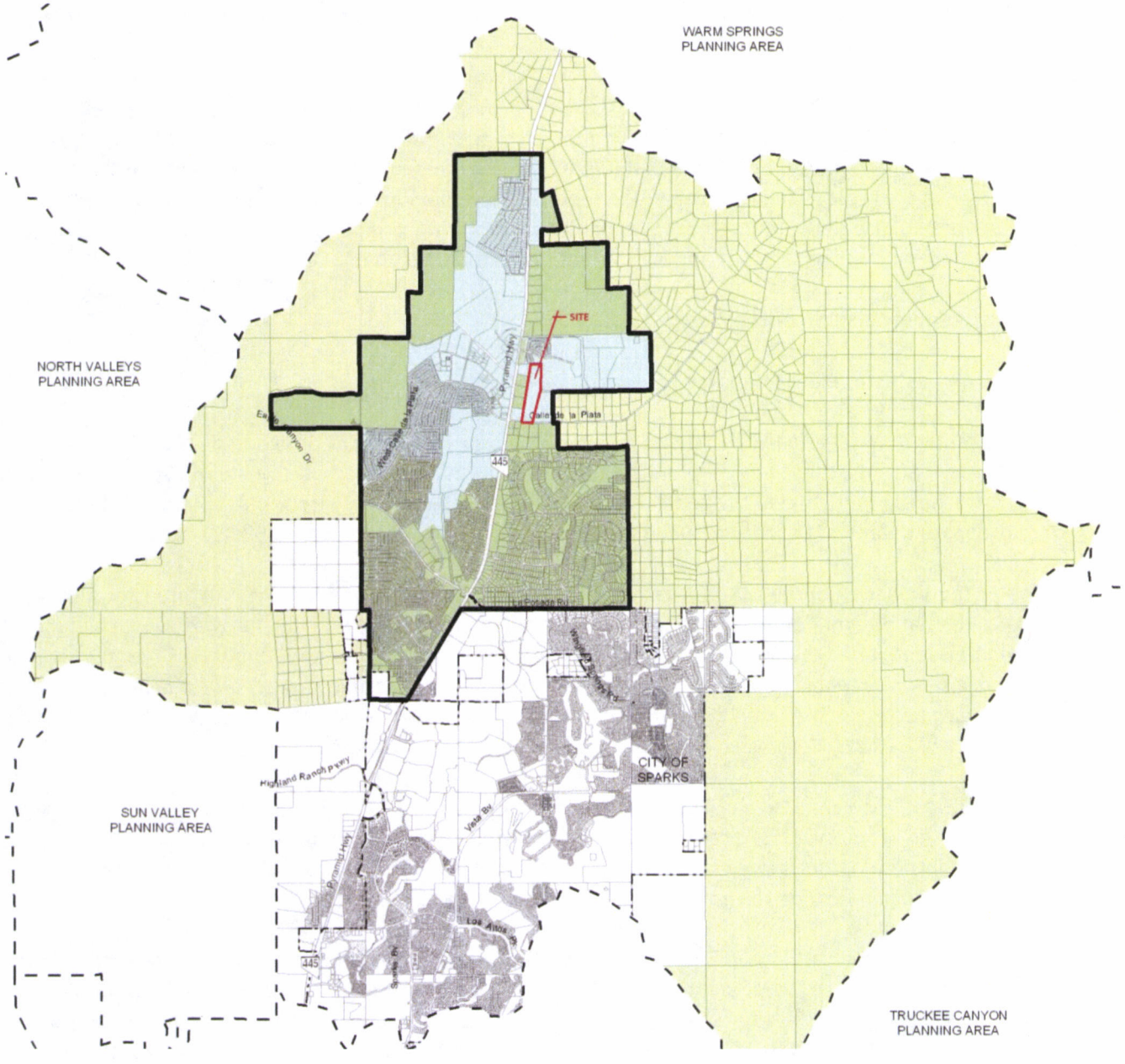


Figure 3 – Existing Conditions

Sugarloaf Estates is located within the Spanish Springs Area Plan and is identified within the Suburban Character Management Area as defined in the Spanish Springs Character Management Plan. The Spanish Springs Area Plan states that the Suburban Character Management Area (SCMA) *"will be the designated growth area in the Spanish Springs Valley."* Figure 4 (below) depicts the project site in context with the SCMA.



NOTE: SCMA boundary is outlined in bold.

Figure 4 – Suburban Character Management Area

Request Summary

This application includes two land use requests in order to establish Medium Density Suburban (MDS) zoning at the project site. The first is a Master Plan Amendment (MPA) from the current mix of Suburban Residential, Industrial, and Commercial to entirely Suburban Residential. The second request is a Regulatory Zone Amendment (RZA) from the current mix of Neighborhood Commercial, Industrial, and Low Density Suburban to MDS.

It is the intent of the project applicant to establish the necessary Master Plan and zoning designations to position the site for development of a common open space subdivision (described in subsequent sections of this report). It is important to note that this application is essentially the first step in establishing the proper zoning at the project site. It is planned to submit a tentative subdivision map (with common open space) in October 2015 with the intent that the tentative map "follow" the Master Plan Amendment and Regulatory Zone Amendment in terms of application/entitlement processing.

Each request is summarized below:

- **Master Plan Amendment**

Currently, the Sugarloaf Estates site includes a mixed Master Plan designation consisting of Suburban Residential, Industrial, and Commercial. These categories are split across the site with Suburban Residential to the north, Industrial in the central section of the site, and Commercial on the south. This application proposes to amend the Master Plan to Suburban Residential for the entire 58.49± acre site.

Per the Washoe County Master Plan Land Use and Transportation Element, the intent of the Suburban Residential designation is *"to provide for a predominantly residential lifestyle with supporting mixed-use nonresidential and residential uses, including commercial, public and semi-public facilities; parks and open space. A further goal of this group is to protect the stability of existing unincorporated neighborhoods and to encourage compatible smart growth development, while allowing diversity in lifestyle that is manifested in a variety of lot sizes, density, levels of mixed-use and land use patterns."*

In contrast, the Land Use and Transportation Element states that the intent of the Industrial Master Plan category is *"to provide for activities such as manufacturing, warehousing, mining and construction. The industrial designation is intended to create an environment in which industrial operations may be conducted with minimal impact on the natural environment and surrounding land uses."*

Like the Industrial designation, the Commercial designation fails to meet all of the locational criteria and would likely result in "strip" commercial which is "highly discouraged" in the Master Plan. Additionally, the Master Plan criteria calls for shared access between commercial uses, as does the Industrial. Given this criteria and the limited frontage along Calle de la Plata, a shared access between commercial and industrial uses would likely result with a single access to Calle de la Plata. This would result in a potentially hazardous situation for both automobiles and pedestrians and is inappropriate given the residential character of the area.

The Suburban Residential designation and its associated intent is highly logical for the Sugarloaf Estates site and surrounding area. However, the Industrial designation is out of place and has the potential to accommodate uses that could result in negative impacts to surrounding properties and single family residences. In fact, the Industrial designation is one of the most intense designations in terms of land use permitted in Washoe County. The County's own land use compatibility matrix identifies that the Industrial designation has a "low compatibility" with the designations that currently surround the site. The land use matrix also indicates that Neighborhood Commercial (NC) has a low compatibility with the MDS designation which is being sought under the RZA request included with this application. This is illustrated in Figure 5 (below) which is taken directly from the Washoe County Master Plan and clearly shows that Industrial and Commercial land uses have a "Low Compatibility" with all single family land uses such as those that surround Sugarloaf Estates.

	LDR	MDR	HDR	LDS/ LDS 2	MDS/ MDS 4	HDS	LDU	MDU	HDU	PR	PSP	GC	NC	TC	I	GR/ GRR	OS
LDR	H	H	M	M	M	L	L	L	H	M	L	L	L	L	H	H	
MDR	H	H	M	M	M	L	L	H	M	L	L	L	L	M	H		
HDR	H	H	M	M	M	L	H	M	L	L	L	L	M	H			
LDS/ LDS 2	H	H	M	M	M	H	M	L	L	L	L	M	H				
MDS/ MDS 4	H	H	M	M	H	M	L	L	L	L	M	H					
HDS	H	H	M	H	M	L	M	M	L	M	H						
LDU	H	H	H	H	M	M	L	L	M	H							
MDU	H	H	H	M	M	L	M	L	H								
HDU	H	H	M	M	M	M	L	H									
PR	H	H	H	H	M	H	H										
PSP	H	H	H	H	M	H											
GC	H	H	M	L	H												
NC	H	M	L	H													
TC	M	L	H														
I	L	M															
GR/ GRR	H																
OS	H																

H - High Compatibility: Little or no screening or buffering necessary

M - Medium Compatibility: Some screening and buffering necessary

L - Low Compatibility: Significant screening and buffering necessary

Regulatory Zones

Residential	Non-Residential
LDR - Low Density Rural	PR - Parks and Recreation
MDR - Medium Density Rural	PSP - Public and Semi-Public Facilities
HDR - High Density Rural	GC - General Commercial
LDS/LDS 2 - Low Density Suburban	NC - Neighborhood Commercial/Office
MDS/MDS 4 - Medium Density Suburban	TC - Tourist Commercial
HDS - High Density Suburban	I - Industrial
LDU - Low Density Urban	GR - General Rural
MDU - Medium Density Urban	GRR - General Rural Residential
HDU - High Density Urban	OS - Open Space

Note: Plans for the amount of screening and buffering shall be made to the satisfaction of Washoe County Department of Community Development staff before completion of project review.

Source: Washoe County Department of Community Development

Figure 5 – Washoe County Land Use Compatibility Matrix

As noted previously, and described in the following section of this report, a zone change to Medium Density Suburban (MDS) is also included with this request. As the table included in Figure 5 illustrates, the MDS zoning provides for "High Compatibility" with all surrounding residential designations.

By redesignating the entire site as Suburban Residential (SR), a high land use compatibility with surrounding properties will be achieved. Additionally, the SR designation is a logical extension of existing SR land use to the north and east of the project site.

The Washoe County Master Plan establishes guidelines to gauge whether a land use is appropriate for any given parcel. In the case of Sugarloaf Estates, the site meets or exceeds all criteria outlined for the SR designation on pages 48 and 49 of the Land Use and Transportation Element. This includes:

A. **Housing** – Sugarloaf Estates is planned for single family development at approximately 3 units per acre (additional details included in subsequent sections of this report). This is in direct compliance with the Master Plan standard for SR which states that *"detached and attached homes are the predominant housing type."*

B. **Conservation** – The Master Plan calls for the preservation of natural terrain and scenic qualities. As stated previously, the Sugarloaf Estates property is flat and will not result in grading of steep slopes or any type of development that results in visual scarring, etc. Additionally, by incorporating a common open space development plan (future application), open space is preserved that will include recreational opportunities and connections to the regional trail network.

C. **Land Use and Transportation** – The Land Use and Transportation Element lists Medium Density Suburban (MDS) as an allowable zoning designation within the SR category. This application also includes a Regulatory Zone Amendment to rezone the site from a mix of NC, Industrial and LDS to MDS, consistent with the Washoe County Master Plan criteria.

D. **Public Services and Facilities** – Sugarloaf Estates meets or exceeds the standards for fire, EMS, and police response times, will be developed with municipal water and sewer, and far exceeds the distances from public schools outlined in the Master Plan.

In comparison, the Sugarloaf Estates site does not meet the criteria for the industrial and commercial designations outlined in the Land Use and Transportation Element, including standards related to access, traffic management, and public transit.

Figure 6 (following page) depicts the existing Master Plan designations for the Sugarloaf Estates site, while Figure 7 (page 9) depicts the proposed land use changes.

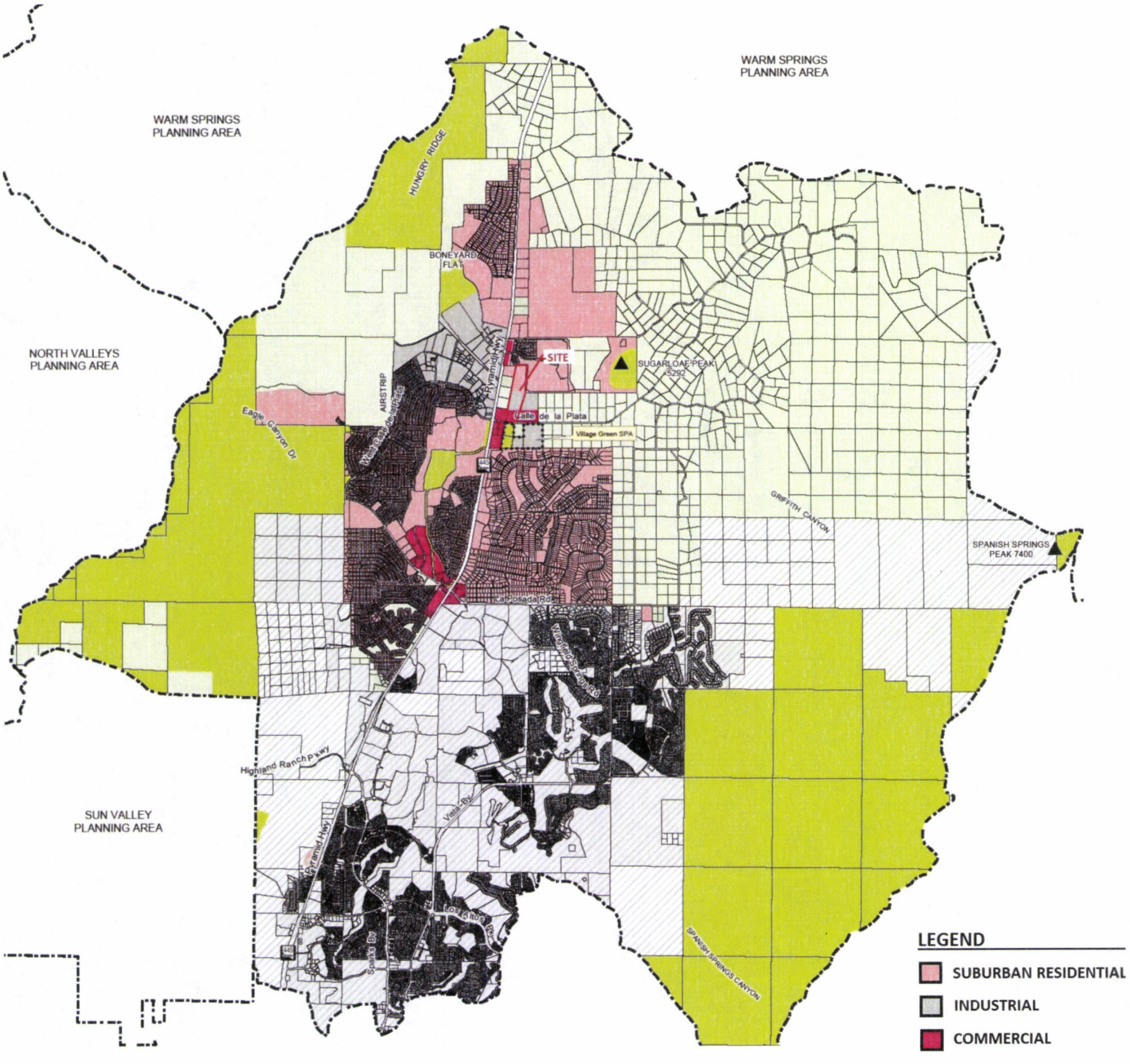


Figure 6 – Existing Master Plan Designations

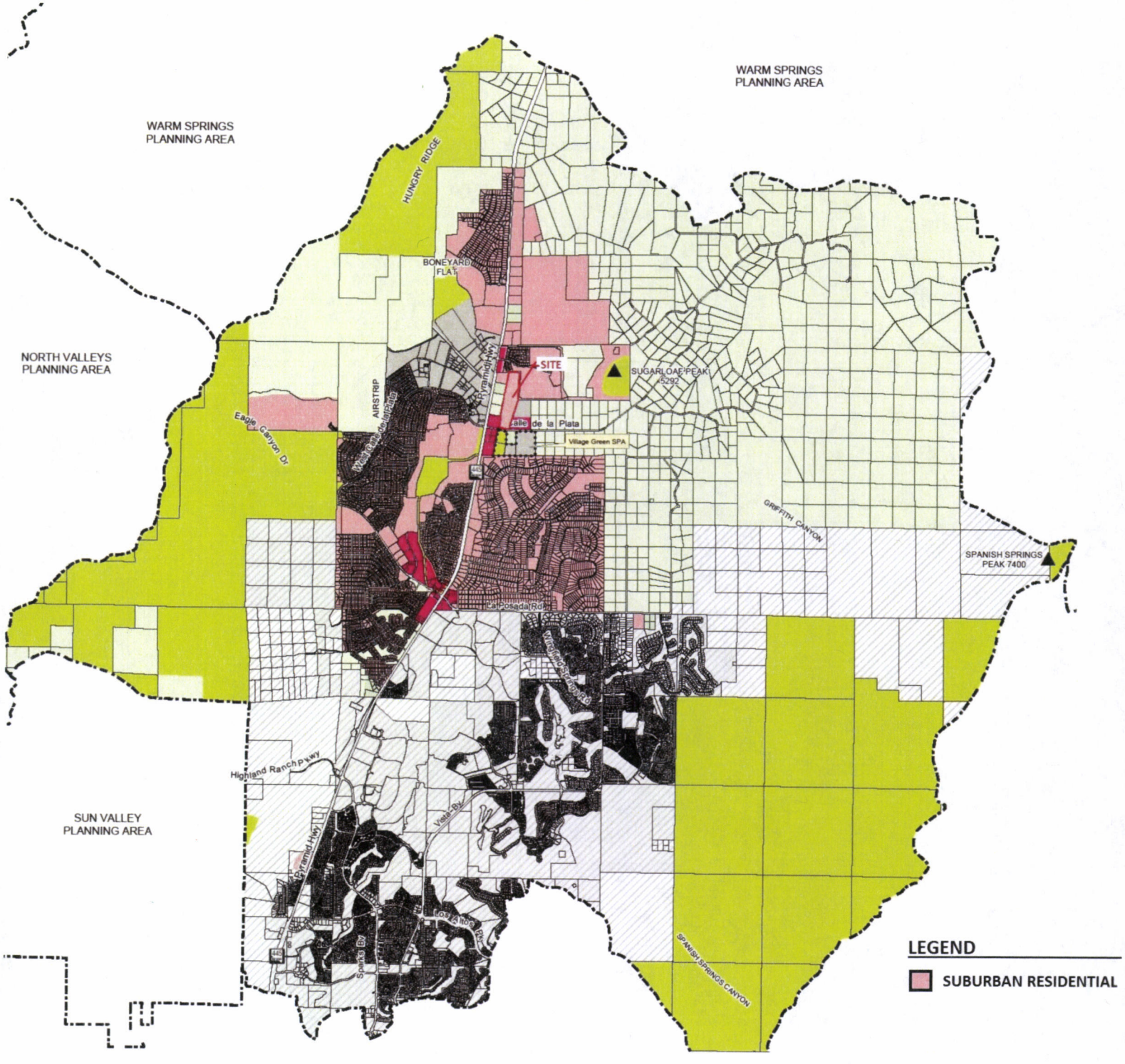


Figure 7 – Proposed Master Plan Designations

There are a variety of considerations when evaluating the requested Master Plan Amendment. As previously indicated, the criteria included within the Washoe County Master Plan for the placement of the Commercial and Industrial designations are not fully met under current conditions. Additionally, it is very important to consider the impacts that could result from the current Industrial and Commercial land uses. Locating an "island of industrial use" at the Sugarloaf Estates site does not represent comprehensive planning. Instead, it has the potential to develop highly intense operations that would not be compatible with adjoining single family uses in terms of intensity, noise, allowable building heights, traffic, etc. Similarly, commercial use at the project site is awkward at best and would include significantly higher trip generation along Calle de la Plata, including turning movements in and out of the site. Commercial use would be better suited along an arterial roadway or at the corner of Pyramid Highway and Calle de la Plata where it would have significantly higher exposure, etc.

The Planning Policy Analysis section of this report provides further analysis of applicable Washoe County Master Plan Goals and Policies and demonstrates how the proposed amendment serves to implement them along with goals and policies of the Spanish Springs Area Plan and Truckee Meadows Regional Plan.

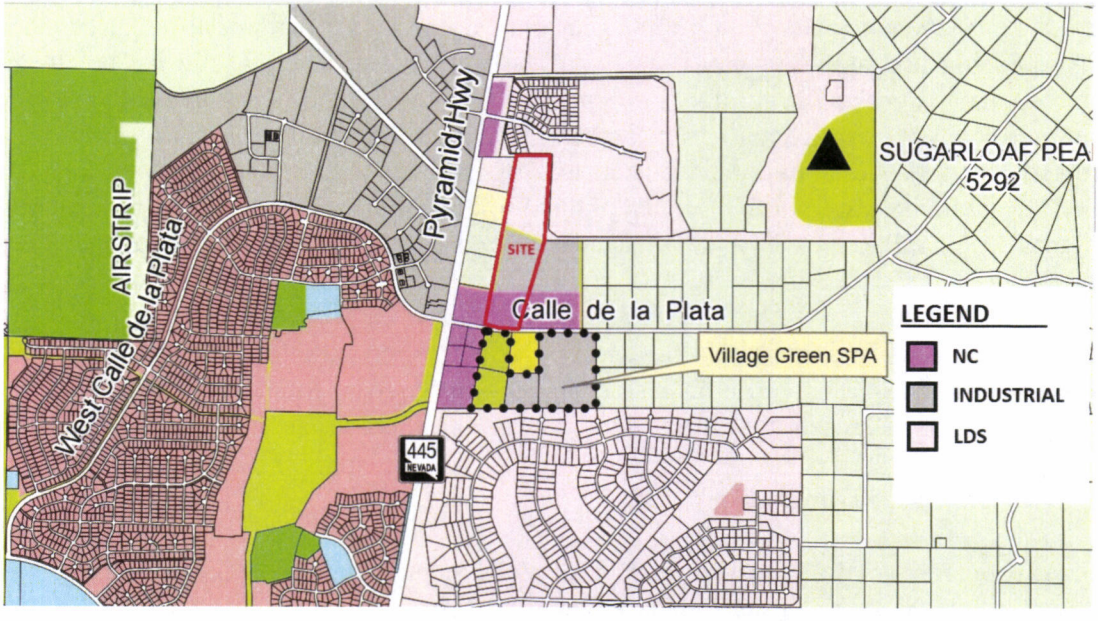
- **Regulatory Zone Amendment**

The second component of this request is a Regulatory Zone Amendment (RZA). Currently, the project site is zoned with a mix of Low Density Suburban (LDS), Industrial, and Neighborhood Commercial (NC) designations. Consistent with the requested SR Master Plan designation, it is requested that the zoning for the site be amended to Medium Density Suburban. The MDS designation will allow for single family residential development at a maximum density of 3 units per acre.

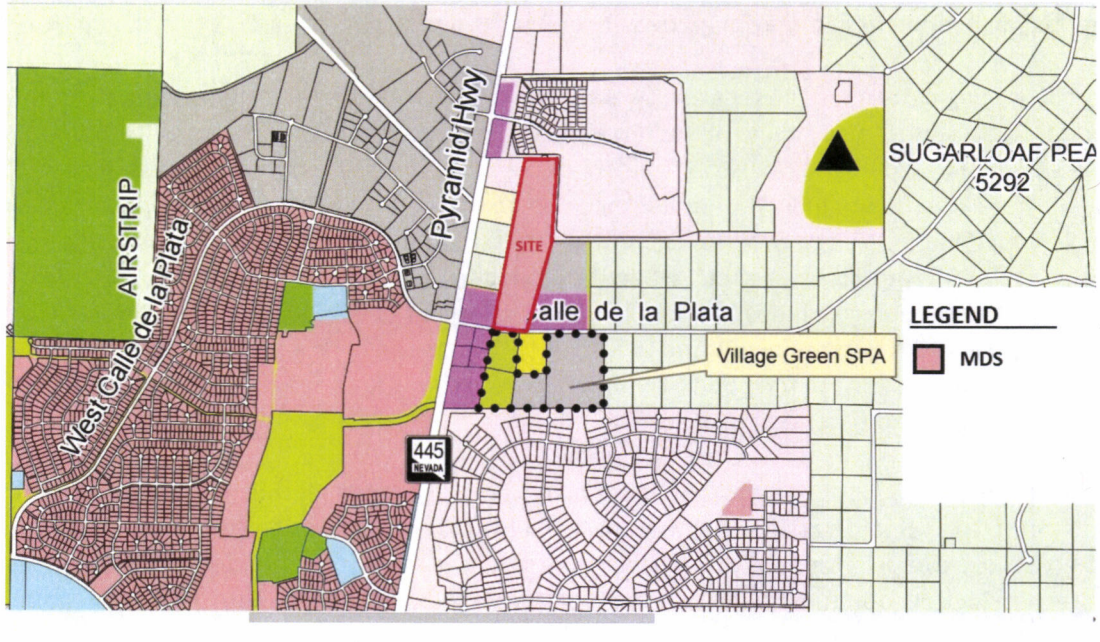
Generally, zoning patterns in the area are diverse and include a wide range of densities and intensities. The Sugarloaf Estates site is an example of this diversity with its inclusion of 3 separate designations ranging from one acre residential zoning to industrial; one, if not the most, intense zoning designations permitted in the County. There are areas of industrial zoning included on the south side of Calle de la Plata. However, these are included within the Village Green Specific Plan. Thus, those industrial uses include specific regulations in terms of use, buffering, screening, etc. while the "straight" industrial zoning at the project site does not. Other surrounding zoning includes NC, non-conforming General Rural (GR), Low Density Rural (LDR), and LDS to the west, LDS to the north, and LDS and Industrial to the east. In addition to the Industrial uses within the Village Green Specific Plan to the south, there is a large area of Open Space (OS) which is reflective of the flood control basin and detention facilities.

This eclectic mix of zoning to the west could be construed as "spot zoning" but is likely reflective of property owners wishing to remain classified at lower intensities for tax purposes when the last Area Plan update was completed. However, from a purely land use perspective, the current designations for the Sugarloaf Estates site are not logical, nor functional in a regional context. The elimination of the NC and Industrial designations are more in line with the residential character of the area. Also, there is additional NC zoning concentrated around the Pyramid Highway/Calle de la Plata intersection. This results in a "glut" of commercial uses in the area. As noted previously, extending commercial as far east as the Sugarloaf Estates site is not logical.

Figure 8 (below) depicts the existing and proposed zoning for the Sugarloaf Estates site.



EXISTING ZONING



PROPOSED ZONING

Figure 8 – Existing/Proposed Zoning

The parcel to the east currently includes NC and Industrial zoning as well. However, based on conversations with the property owner's representatives, there is intent to redesignate the property to MDS as well. As such, the redesignation of both Sugarloaf Estates and the adjoining parcel to the east would create a "block" of uniform zoning and eliminate the spot zoning conditions that occur now.

The Calle de la Plata/Pyramid Highway intersection has been a longtime concern of residents in regards to safety. The current NC and Industrial designations certainly have the potential to increase traffic on Calle de la Plata above and beyond what would result with the proposed MDS zoning, especially in terms of truck traffic and peak hour trips.

The proposed MDS zoning is consistent with the proposed SR Master Plan designation and will provide for single family use that is complementary to adjoining residential development to the north and is much more compatible with existing development to the west. Establishment of MDS densities at the site can serve to diversify the housing options within Spanish Springs while still retaining the overall community character and feel of the area.

The proposed MDS zoning also serves to implement goals and policies of the Truckee Meadows Regional Plan which encourages a variety of densities and housing types. The proposed 3 dwelling units per acre maximum density is well within the parameters permitted within the Regional Plan for unincorporated Washoe County and is compatible with the Suburban Character Management Plan included within the Spanish Springs Area Plan.

It is important to note that the Washoe County Master Plan designates the project site as an area "most suitable for development." As such, intensification of zoning is appropriate and will provide for more fiscally responsible development in terms of maximizing infrastructure utilization, etc. Figure 9 (following page) depicts the Development Suitability Map taken from the Spanish Springs Area Plan. It is noteworthy that the small portion of land shown to be affected by flooding is no longer applicable with the construction of regional flood facilities to the south

This report later contains a section entitled "Planning Policy Analysis", and provides a thorough review and analysis of the Washoe County Master Plan and Spanish Springs Area Plan. In that section, specific items are noted that support the requested change in zoning. These include policies and goals ranging from community character to infrastructure and development regulations.

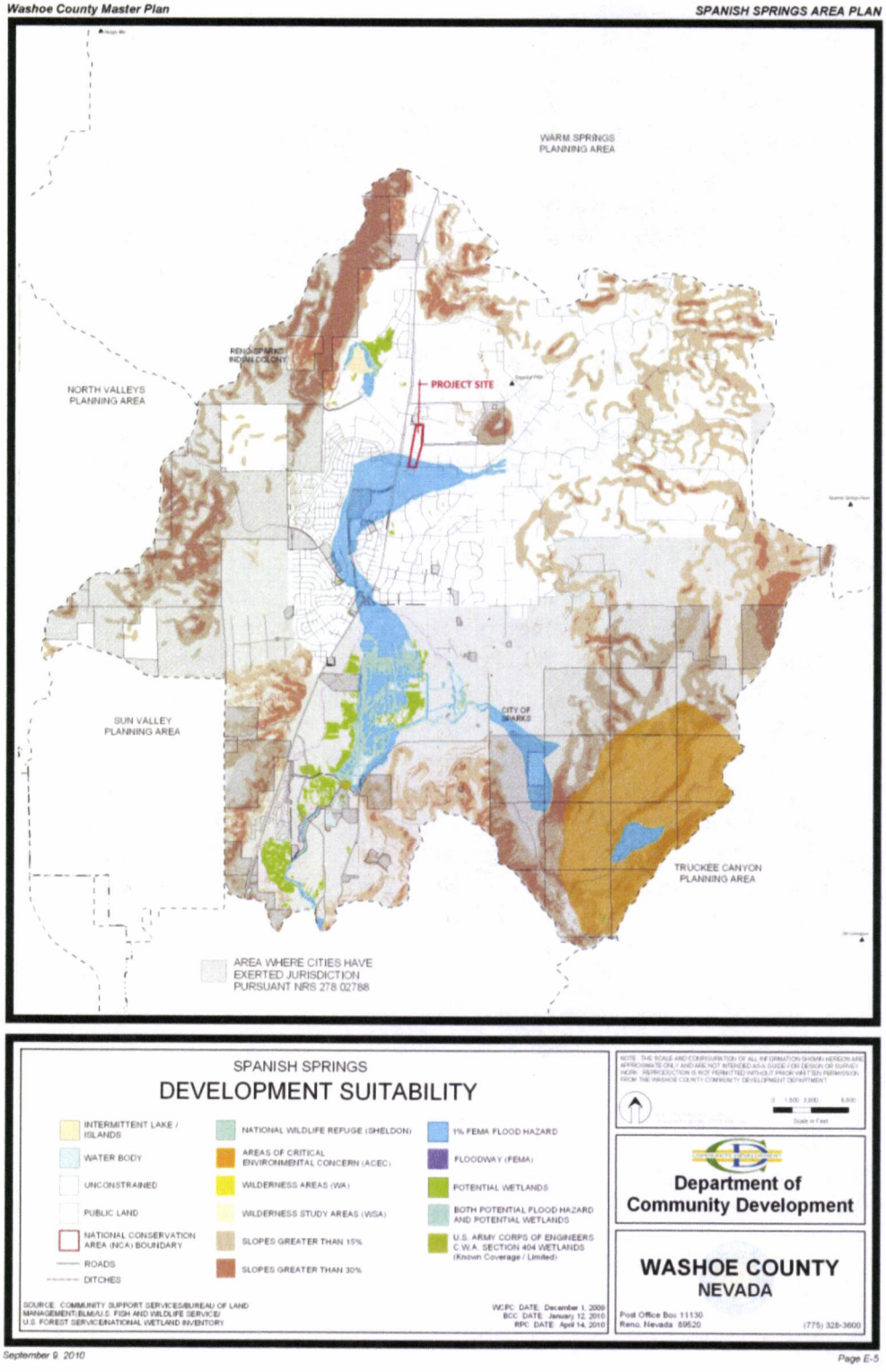


Figure 9 – Development Suitability Map

Future Development

As noted previously, it is intended to follow this MPA/RZA request with a tentative subdivision map request, to be submitted in October 2015. It is recognized that a future development plan cannot be considered with the MPA and RZA as these requests must stand on their own merits and are not capable of being conditioned. However, in this case, there is a clear intent and project envisioned for the site. Therefore, preliminary details are presented to demonstrate how the requested land use and zoning designations will be implemented, further demonstrating compatibility with the surrounding area.

The plan developed for Sugarloaf Estates includes a common open space approach. Based on the proposed density of 3 dwelling units per acre allowed under the MDS zoning, 175 lots are planned for Sugarloaf Estates. Lots will be clustered in order to provide meaningful open space and regional trail connections. This includes a 6 and ¾ acre± central community park as well as a trail connection along the eastern boundary of the project, connecting the site with the regional trail that connects to Sugarloaf Peak.

In general, larger lots are located along the western perimeter to provide compatibility with existing homes to the west. Additionally, open space areas are strategically located on the western portion of the project to buffer existing homes from any potential impacts.

Access to and from the project will be via a primary connection with Calle de la Plata. Additionally, a roadway will be extended east into the neighboring project providing a secondary full access to Sugarloaf Estates. An emergency access easement to Calle de la Plata could be provided at the southwest corner of the project (if needed). This will ensure that proper emergency/secondary access is provided regardless of timing of the adjacent project.

As a common open space development, covenants, conditions, and restrictions (CC&R's) will be recorded and a homeowners association (HOA) will be created to maintain common areas and open space. With the subsequent tentative map application, specific details will be provided in regards to landscaping, fencing, etc. The project will provide constancy with the theming and development standards included in the Spanish Springs Area Plan. Furthermore, by clustering units, conservation of natural resources, especially water, will be achieved. It is envisioned that significant attention will be given to xeriscaping and drought tolerant plantings within common areas. In terms of the central park, details as to whether this will be dedicated to Washoe County or maintained by the HOA will be determined as part of the tentative map review process.

A comprehensive traffic impact analysis will also be included with the tentative map. It is recognized that the Pyramid Highway/Calle de la Plata intersection is a long-standing concern with area residents in terms of safety and operations. NDOT and Washoe County will review the traffic impacts of this project and the adjoining proposed project(s) to determine what improvements can and will occur. The project applicant is committed to working with NDOT and adjoining property owners/developers to investigate potential improvements to the intersection. The traffic impact analysis completed for the project is included as an attachment to this report.

Figure 10 (below) depicts the conceptual site plan developed for Sugarloaf Estates. This plan is preliminary and subject to change as engineering plans are completed, although significant changes are not anticipated. A final layout along with comprehensive engineering and landscape plans will be submitted to Washoe County in October 2015 as part of a tentative subdivision map (with common open space) request.

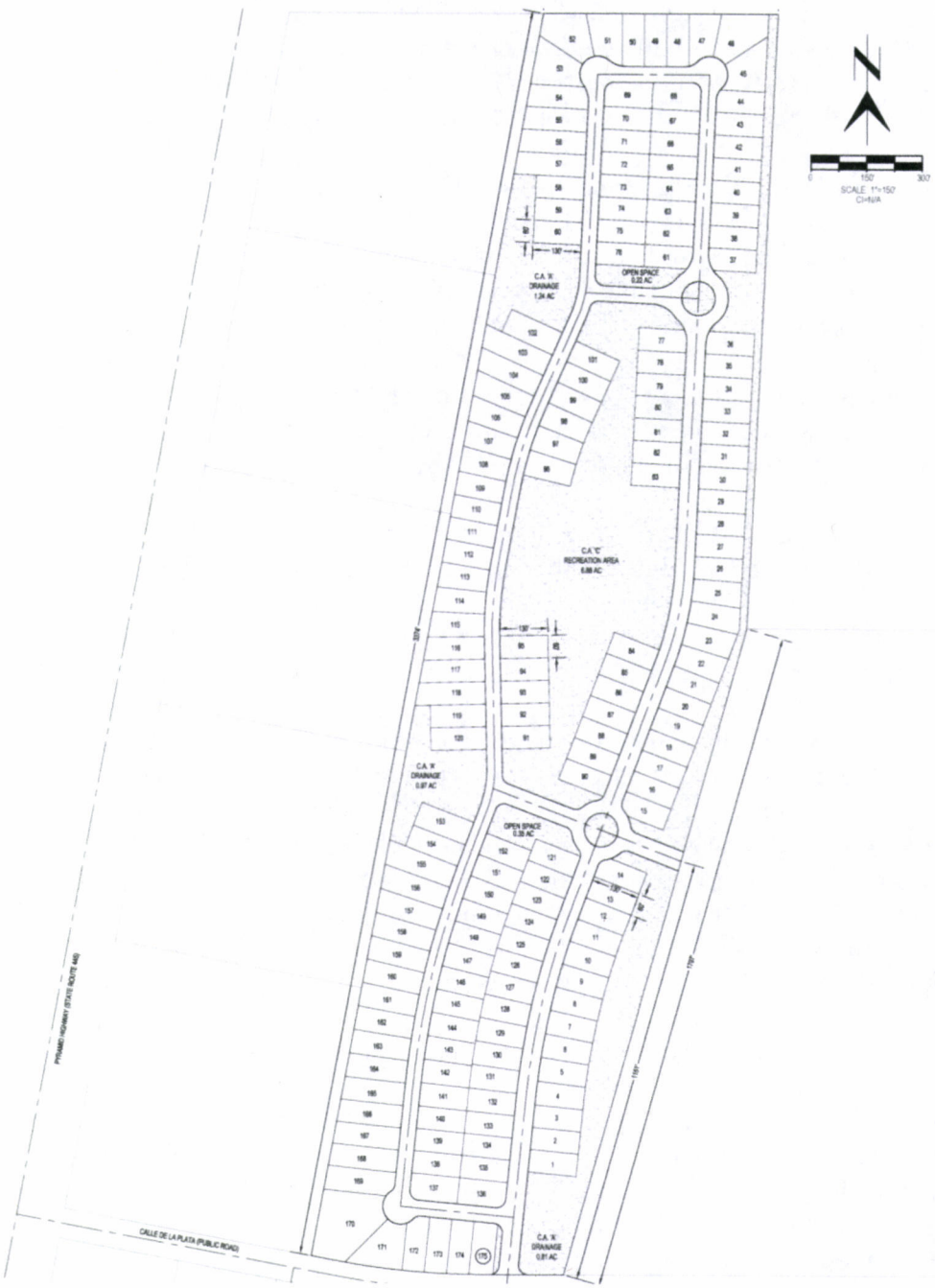


Figure 10 – Sugarloaf Estates Conceptual Plan

Potential Impacts

It is very important to note that the MPA and RZA requests included with this application do not grant an entitlement to construct a new subdivision at the site. Rather, this is simply the first step in establishing the appropriate underlying land use designations for a future project. Therefore, a tentative subdivision map must be filed and approved in order to implement the Sugarloaf Estates plan. This tentative map application (to be filed in October 2015), will provide highly specific project details, impact analysis, infrastructure review, hydrology reports, etc. and is subject to review and approval through a publicly noticed hearing process.

This section aims to provide a cursory impact analysis based on the conceptual plan developed for the project, as presented in Figure 10.

- **Traffic**

Traffic is a measurable impact that will result no matter what is developed at the site. As part of this application and consistent with the Plan Maintenance section of the Spanish Springs Area Plan, a comprehensive traffic impact study, prepared by Star Consulting, is attached within the appendices of this report.

As noted in the attached traffic report, the intersection of Calle de la Plata and Pyramid Highway was highly analyzed. Currently, the intersection operates at level of service (LOS) F which does not meet service criteria established within the Area Plan or by the Regional Transportation Commission (RTC). However, with planned regional improvements, including the widening of Pyramid Highway from two to four lanes up to Calle de la Plata, LOS for the intersection rises to C, even with added traffic from Sugarloaf Estates.

With approval of Sugarloaf Estates, it is conceivable that roadway improvements listed on the RTP will be accelerated, especially considering that regional projects are re-evaluated and prioritized every 2 years. As part of the forthcoming tentative map review process, Star Consulting will be meeting with NDOT and representatives of the adjoining project to the east to suggest planned intersection improvements at Calle de la Plata and Pyramid Highway. The traffic analysis also suggests the construction of a dedicated left turn lane at the intersection for southbound traffic.

Overall, Sugarloaf Estates is anticipated to generate 131 am peak hour trips, 177 pm peak hour trips, and 1,675 average daily trips. It is important to note that the number of trips generated by the proposed residential use is a decrease from the number of trips that would likely occur under the current zoning (by as much as 58%). The traffic analysis concludes that the proposed development will have no measurable impact on the LOS of the adjacent roadway segments or intersections, when regional improvements are completed and that the adjacent roadways are currently operating under capacity.

Sugarloaf Estates can help spearhead long anticipated improvements, including improvements at Calle de la Plata/Pyramid Highway that have been a desire of the community for over a decade. Additionally, the project developer will be required to make a significant contribution in terms of traffic impact fees paid to RTC with final map approval.

Additional details are and analysis are attached in the full traffic impact study. Also, more in-depth traffic discussion will be relevant with the forthcoming tentative map (October 2015).

- **Schools**

As part of this MPA/RZA process, the Washoe County School District was consulted as to the current capacities of schools that serve the project area. It was determined that the project site is zoned for the following schools:

- Spanish Springs Elementary School
- Yvonne Shaw Middle School
- Spanish Springs High School

Mike Boster, Washoe County School District Planner, provided the School District's accepted student generation formulas along with the 2014/2015 enrollments and capacities for each school (2015/2016 enrollments have not been finalized as of the filing date of this application). Mr. Boster also indicated that capacities can be misleading based on special programs that may be occurring within the school facility. For example, elementary schools often have special education classes, gifted and talented programs, autism specialty programs, etc. which are capped by law on maximum classroom size. This can therefore skew actual capacity levels. Regardless, Mr. Boster concurred that the School District could provide refined enrollment and capacity numbers as part of this and a future public review process.

Once again, for the sake of this analysis, a density yield of 175 units was assumed. The following table summarizes potential school impacts.

School	Current Enrollment[1]	Capacity[1]	Generation Rate[1]	Number of New Students
Spanish Springs ES	**713 students**	**772 students**	**0.277/unit**	**49 students**
Shaw MS	**1,008 students**	**1,072 students**	**0.064/unit**	**11 students**
Spanish Springs HS	**2,315 students**	**2,160 students**	**0.136/unit**	**24 students**

1 – provided by the Washoe County School District.

It is important to note that this analysis does not consider the potential for children to attend charter schools, private institutions, or home schooling and is therefore a worst-case scenario in terms of student generation projections.

- **Public Facilities/Infrastructure**

The project site is located in an area of existing infrastructure. All municipal services (i.e. water, sewer, storm drain, etc.) are either in place or can easily be extended (at the developer's expense) to serve Sugarloaf Estates. Consistent with the policies of the Spanish Springs Area Plan and requirements of the Washoe County Development Code, all new lots within Sugarloaf Estates will be served by municipal water and sewer. In fact, these policies (detailed later in this report) further support the MDS zoning/density requested as it is not feasible to supply large lot residential units with these municipal services. Thus, if the property were to develop with lower density, individual well and septic systems would likely occur as they do in the immediate area. This is viewed as highly undesirable by Washoe County. Power, natural gas, cable television, and high speed internet service all exist at or adjacent to the project site.

Another noteworthy point is that the proposed clustering of units (through a common open space subdivision) will result in resource conservation, reduction in water use, etc. All of the applicable infrastructure will be analyzed and compliance will be demonstrated with the forthcoming tentative map request. For the purpose of the land use requests included with this application, the property meets or exceeds all criteria for the designations being requested.

- **Site Suitability**

As noted previously in this report, the site is well suited for the type of density potential associated with the requested designations. This is based on the fact that the site is flat and the availability of existing site services and infrastructure. In fact, the requested MDS zoning represents a down zoning in terms of intensity from which is permitted under the existing designation. Furthermore, the site is not encumbered by geologic, cultural, historical, or flood concerns that would preclude development. For reference, a feasibility geotechnical investigation is included in the appendices of this report.

- **Public Services**

The property is within an acceptable response time of the Truckee Meadows Fire Protection District station located on La Posada Drive to the south. Also, the Washoe County Sherriff's Office has existing patrols within the project area.

Planning Policy Analysis

The proposed requests must be reviewed for consistency with the goals and policies of the Washoe County Master Plan, Sun Valley Area Plan, and Truckee Meadows Regional Plan. Each of these planning documents is addressed below:

- **Spanish Springs Area Plan**

The Spanish Springs Area Plan is an element of the Washoe County Master Plan that establishes the overall theme and vision that the community has in terms of how they wish to see Spanish Springs develop over the next 20 years. Last updated in 2010, there has been very little change within the plan area in the last 5 years. However, as the region's economy continues to recover, there is now opportunity to implement change within the plan area, consistent with the goals and policies of the Area Plan.

The Introduction section of the Area Plan states that the *"Spanish Springs community will maintain and apply objective standards and criteria that serve to manage growth and development in Spanish Springs in a manner that:*

- *Respects the rural heritage of the area by encouraging a rustic appearance and preserving scenic quality;*
- *Respects private property rights;*
- *Provides open space and recreational opportunities;*
- *Provides local services and employment opportunities;*
- *Ensures that growth is kept in balance with resources and infrastructure.*

This amendment request is entirely consistent with this intent of the Area Plan. The current Master Plan and zoning designations are in direct conflict with the first bullet point noted above. Industrial and commercial designations, located well east of Pyramid Highway will certainly not contribute to the rustic appearance and scenic character of the area. In contrast, Sugarloaf Estates will provide residential uses that will complement existing development patterns in the area as well as provide significant open space and linkages to regional trails. This is consistent with the first and third bullet point outlined in the Introduction of the Area Plan.

In terms of resources and infrastructure, amending the land use categories to residential is in actuality a down-zone in terms of intensity and will serve to better manage available resources and infrastructure The residential use proposed is far less intense than what could be developed under the existing zoning and will better complement the area as a whole.

The Vision of the Spanish Springs Area Plan is to *"manage growth in Spanish Springs, focusing on a rustic appearance in keeping with the rural character of the area, while respecting private property rights."* It can be logically argues that the current industrial and commercial designations conflict with the "rustic appearance" of the area, especially on the east side of Pyramid Highway. The residential use and density proposed, along with the planned open space, park, and trail facilities, are far more in line with the Area Plan vision.

The Area Plan also establishes an overall Character Statement. The first paragraph of the Character Statement states that *"over the next 20 years, the community will provide a range of employment opportunities and a more limited, but still mixed, range of residential opportunities. Over this period, the distribution of land uses and the provision of public facilities and infrastructure will preserve and facilitate a community character that merges Spanish Springs' scenic, low-density, rural and western heritage with suburban residential, employment, and commercial opportunities."* The Character Statement recognizes that a transition to more suburban densities will occur within Spanish Springs. The 3 du/ac density proposed with Sugarloaf Estates is complementary to suburban lot sizes to the north and matches that proposed to the east. There has been significant change in the area over the past 20 years and this application is reflective of proper planning and density given available infrastructure and developing land use patterns. The current commercial and industrial designations are simply not logical and out of place.

As noted previously and depicted in Figure 4, the project site is located within the Suburban Character Management Area defined in the Area Plan. This "suburban core" as discussed in the Character Statement includes *"residential densities of up to three dwelling units per acre."* The Character Statement goes on to state that *"suburban land uses are located predominantly, **but not exclusively**, on the west side of Pyramid Highway."* As part of this discussion, the Character Statement discusses transitions between the suburban core and more rural areas. The SR Master Plan designation and MDS zoning are consistent with the 3 du/ac suburban character identified in the plan and most definitely provide for a better transition to more rural areas to the east than the current industrial and commercial designations.

It is noteworthy that by Washoe County's own definition of "suburban," density is up to 7 units per acre (reflected in High Density Suburban zoning). The 3 du/ac density proposed with Sugarloaf Estates is less than half of this. Furthermore, Washoe County staff has agreed that the proposed density meets the suburban definition and character identified in the Area Plan and has determined that an amendment to the Character Statement is not needed as part of this Master Plan Amendment request.

Another noteworthy excerpt from the Character Statement is that *"the Suburban Character Management Area will be the designated growth area in the Spanish Springs Valley."* Given the fact that the Sugarloaf Estates site is flat, easily developed, and in an area where infrastructure exists or can easily be extended, not to mention located central to the Suburban Character Management Area, this request serves to implement the character and vision expressed in the Area Plan. The Character Statement goes on to note that *"an integrated trail system that provides access to regional and local open space"* is a community desire along with a *"desire for resource conservation in the community."* The plan for Sugarloaf Estates is directly compatible with this and provides trail linkages and open space connections to the regional network. Also, the clustering of units promotes resource conservation and greatly reduces water usage, etc. than if developed with larger lots.

The Area Plan also contains goals and policies that are applicable to this particular MPA and RZA requests. These policies are listed below and are addressed in **bold face** type. It is important to note that many of the policies are not applicable at this time but will be addressed with the forthcoming tentative map (i.e. policies related to grading, utilities, etc.).

Goal One: *The pattern of land use designations in the Spanish Springs Area Plan will implement and preserve the community character described in the Character Statement.*

As described in the previous section, Sugarloaf Estates conforms to the Character Statement in terms of location within the Suburban Character Management Area, allowable suburban densities, preservation of open space, trail connections, and resource conservation.

SS1.2 *The Policy Growth Level for the Spanish Springs Suburban Character Management Area is 1,500 new residential units of land use capacity. Land use intensifications will not add more than 1,500 new units of Land Use Capacity through 2025. The Washoe County Department of Community Development will be responsible for tracking increasing land use potential to ensure this growth level is not exceeded.*

Sugarloaf Estates, at build out, represents 175 new residential units. Land use intensifications since the Plan adoption in 2010 have been limited based on economic conditions. Therefore, there is well over 1,000 residential units of capacity remaining of which 175 is only a small portion. The recent economic growth in the region has created a new demand for housing. It is clearly envisioned in the Spanish Springs Area Plan that new residential growth was anticipated in the area. Sugarloaf Estates is consistent with this anticipated growth as well as the Vision and Character Statement included in the Area Plan and is much better suited to meet community needs than the existing industrial and commercial designations.

SS.1.3 *The following Regulatory Zones are permitted within the Spanish Springs Suburban Character Management Area:*

c. Medium Density Suburban (MDS – Three units per acre).

Note: Additional zoning categories listed in policy SS.1.3 are omitted as they are irrelevant to this request.

The requested SR Master Plan designation and MDS zoning are in direct compliance with this policy.

SS.1.6 *Staff will review any proposed Master Plan Amendment against the findings identified in the Plan Maintenance section of this plan and make a recommendation to the Planning Commission. As a minimum, the Planning Commission must make each of these findings in order to recommend approval of the amendment to the Board of County Commissioners.*

The findings included under the Plan Maintenance section are addressed later in this report. Sugarloaf Estates is consistent with all of the findings.

SS.3.1 Washoe County's policy level of service (LOS) for local transportation facilities in the Spanish Springs planning area is LOS "C."

A detailed traffic impact analysis is included in the attached appendices. The report concludes that with planned improvements, all adjoining roadways/intersections will operate at appropriate levels of service. It is also important to note that overall traffic impacts are reduced with MDS zoning, as compared to the existing LDS/Industrial/NC mix.

SS.3.3 Washoe County will strongly advocate the prioritization of improvements to Pyramid Highway and qualified regional roads and arterials within the boundaries of this area plan in the Regional Transportation Improvement Program in order to achieve and maintain established levels of service.

Sugarloaf Estates can serve to expedite improvements to the Calle de la Plata/Pyramid Highway intersection, including widening of Pyramid Highway, lane improvements to Calle de la Plata and upgrades to the Calle de la Plata/Pyramid Highway intersection. These have been long standing community concerns that Sugarloaf Estates can help to solve and fund.

SS.3.5 Washoe County will be an advocate for restricted access to Pyramid Highway pursuant to the provisions of the Pyramid Highway Corridor Management Plan.

Consistent with this policy, no direct access to Pyramid Highway is proposed with Sugarloaf Estates. Instead, the project (and the adjoining development proposed) can serve to address long standing concerns with the Calle de la Plata/Pyramid Highway intersection to the benefit of the community as a whole.

Goal Four: Maintain open vistas of the surrounding ridges and more distant mountain ranges, and minimize the visual impact of hillside development.

The Sugarloaf Estates site is ideal for development at the densities permitted under MDS. The property is flat and development will have zero impact to hillsides, sensitive areas, etc. and will not obstruct views to Sugarloaf Peak or other surrounding ranges.

Goal Five: The built environment will implement and preserve the community character as described in the Spanish Springs Vision and Character Statement.

The project can serve to implement the Character Statement by providing a more appropriate transition between suburban uses and rural areas further east. The current industrial and neighborhood commercial designations are contradictory to the Vision and Character statement and have potential to generate much greater impacts upon the surrounding area.

Goal Six: *Public and private development will respect the value of cultural and historic resources in the community.*

There are no believed or known cultural or historical resources located on the Sugarloaf Estates site, ensuring consistency with this goal.

Goal Seven: *The Spanish Springs planning area will contain an extensive system of parks and trails that provides the community and region with a broad range of recreational opportunities; provides connections between major developments, recreational facilities, the Regional Trail System, public lands and schools; and contributes to the preservation and implementation of the community character.*

As depicted in Figure 10, Sugarloaf Estates will be developed in a clustered fashion that will provide for public trail connections from the site to the regional network. Additionally, land will be preserved and possibly dedicated (to be determined by Washoe County) for a public park central to the Sugarloaf Estates project.

SS.7.2 *New trails will be designed to accommodate equestrian, pedestrian and off-road bicycle traffic, unless technical or severe economic hardships warrant consideration of a more limited use.*

All of the trails within Sugarloaf Estates will be public and will support the users listed within this policy. Additional details and specifications will be included with the forthcoming tentative map request.

SS.7.4 *As new residential and commercial properties develop in the Spanish Springs Valley, the Washoe County Department of Parks and Recreation will review development proposals for potential trail connections.*

The project applicant will work directly with the parks department to determine final design of trails and parks facilities along with determining connection points to the regional network, etc.

SS.7.6 *Access to existing trails will be protected and improved wherever possible. During the process of development review, the Washoe County Departments of Community Development and Parks and Recreation will request dedication of property and/or easements when appropriate trail alignments have been identified that link significant nodes with the Spanish Springs planning area or connect existing trails.*

Sugarloaf Estates will be in direct voluntary compliance with this policy and fully recognizes the importance of trail connectivity within the community.

SS.7.7 Development proposals and population trends will be evaluated on their impact to an established community standard of seven acres of community park per 1,000 residents. When warranted, the Washoe County Department of Parks and Recreation will request the dedication of an appropriate amount of community park acreage as property develops within the planning area.

There are currently no neighborhood parks on the east side of Pyramid Highway, north of Calle de la Plata. Sugarloaf Estates plans to provide a neighborhood park within the project that will not only serve project residents, but those in the immediate area as well. This will provide significant public benefit and potentially provide significant savings to Washoe County.

Goal Nine: The built environment will minimize the destructive potential of any identified geological hazard.

As detailed in the attached feasibility geotechnical investigation (included in appendices), there are no geological conditions that would preclude development of the site.

SS.12.1 Residential and commercial development must utilize one or a combination of the following reliable water resources that are replenished in quantities to meet the needs of the area without reliance upon groundwater mining or recharge from agricultural uses:

- *a. Decreed Truckee River water rights or other approved imported surface water rights when used with an appropriate drought yield discount as determined by the water purveyor and approved by the State Engineer.*
- *b. Imported groundwater from a source that is replenished in sufficient quantity to meet the demands placed upon a source without groundwater mining.*
- *c. Certificated groundwater rights or permitted quasi-municipal groundwater rights (that existed as of May 22, 1990) matched by imported, decreed surface water from a source such as the Truckee River.*
  - *i. For residential developments, the quantity of imported water or decreed surface water shall be equal to 50 percent of the groundwater demand.*
  - *ii. For developments other than residential (commercial, industrial, recreational, etc.), the quantity of the matching imported or decreed surface water rights shall be equal to 100 percent of the calculated demand.*
  - *iii. The Truckee River surface water dedicated must be capable of diversion to the Orr Ditch.*

It is premature to evaluate specific water rights at this time, but the forthcoming tentative map (planned for submittal in October 2015) will provide specifics on water demands and service.

SS.12.5 New residential subdivisions (e.g. tentative parcel map, tentative subdivision map) utilizing Medium Density Suburban land use densities (MDS: 1 du/ac to max. 3 du/1 ac) or greater densities approved after January 1, 1996 shall be required to use an imported water source, except subdivisions approved on land designated Medium Density Suburban prior to October 1, 1995.

Sugarloaf Estates will comply with the requirements of this policy. Further details will be provided with the forthcoming tentative map and are not directly relevant to the requests included with this application.

SS.12.7 The creation of parcels and lots in the Spanish Springs planning area shall require the dedication of water rights to Washoe County in quantities that are consistent with the water use standards set by the State Engineer and/or Washoe County.

Sugarloaf Estates will comply with the requirements of this policy. Further details will be provided with the forthcoming tentative map and are not directly relevant to the requests included with this application.

Goal Fifteen: Water resources will be provided to residential and non-residential uses in a manner that implements and preserves the community character as described in the Spanish Springs Vision and Character Statement.

As previously detailed, the project is indirect compliance with the Vision and Character Statement included in the Area Plan. This will include the manner in which water service is provided to the site and will be detailed with the forthcoming tentative map request.

SS.15.1 Whenever applicable, all development within the Spanish Springs Suburban Character Management Area will connect to a community water service.

Sugarloaf Estates will be served by a community water system. Individual wells are not being proposed.

Goal Sixteen: Wastewater treatment and disposal will be provided to residential and nonresidential uses in a manner that implements and preserves the community character as described in the Spanish Springs Vision and Character Statement.

Sugarloaf Estates will be served by sanitary sewer and not septic systems, serving to implement not only this goal, but numerous policies as well. It is also important to note that in order to make community water and sewer service available on a large scale (as encouraged in the Area Plan), additional density is needed in order to make it financially viable. Thus, services within the project could benefit adjoining parcels through the ability to hook up with municipal services that would not otherwise be available.

SS.16.1 Whenever applicable, all development within the Spanish Springs Suburban Character Management Area will connect to a community sewer service.

Sugarloaf Estates will connect with a community sewer system, consistent with this policy and a suburban development form.

Goal Seventeen: Amendments to the Spanish Springs Area Plan will be for the purpose of further implementing the Vision and Character Statement, or to respond to new or changing circumstances. Amendments must conform to the Spanish Springs Vision and Character Statement. Amendments will be reviewed against a set of criteria and thresholds that are measures of the impact on, or progress toward, the Vision and Character Statement.

As detailed throughout this report, Sugarloaf Estates is consistent with, and in many instances, serves to implement the Vision and Character Statement of the Spanish Springs Area Plan. The project site is identified within the Suburban Character Management Area which clearly allows for the density being proposed. Also, consistent with goals and policies of the Plan, the requested SR and MDS designations better serve to protect the character of the area and will have far less impact as compared to the existing designations for the site.

SS.17.1 In order for the Washoe County Planning Commission to recommend the approval of ANY amendment to the Spanish Springs Area Plan, the following findings must be made:

a. The amendment will further implement and preserve the Vision and Character Statement.

The project first directly within the framework of the goals and policies of the Area Plan and serves to implement the Vision of the Plan and preserve the character of the area, far more than what could occur at the site today under the existing designations. The project can serve to fulfill long term community needs such as a neighborhood park, trail connectivity, and roadway/intersection improvements and the designations being proposed are much more logical given the site location and character of surrounding properties.

b. The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.

This report contains detailed policy analysis from the Area Plan and Master Plan, demonstrating compliance.

c. The amendment will not conflict with the public's health, safety or welfare.

The project will promote the community's health, safety, and welfare by providing for more appropriate land use and improvements that will benefit the entire community, as detailed herein.

SS.17.2 In order for the Washoe County Planning Commission to recommend approval of any amendment involving a change of land use, the following findings must be made:

a. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

Sugarloaf Estates does not represent an intensification to the area. In fact, it will result in development far less intense than what is permitted under the current designations. As such, Washoe County has already determined the site to be appropriate for development based on these current designations and the fact that the site is included within the boundaries of the Suburban Character Management Area. A forthcoming tentative map request will provide highly detailed specifics. Granting of this Master Plan Amendment and zone change does not grant an underlying entitlement to develop (that must come in the form of a tentative map approval).

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

As noted previously, a highly detailed traffic impact analysis is included in the attached appendices and identifies no significant impacts occurring from the development of Sugarloaf Estates.

c. For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.

Not applicable.

d. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.

With only 175 units, Sugarloaf does not increase units above the 1,500 cap established in policy SS.1.2, as previously addressed.

e. *If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.*

The attached traffic impact analysis identifies the need for improvements triggered by development of the project along with the applicable mechanisms for completing them. These can then be conditioned with the forthcoming tentative map.

f. *If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.*

The attached traffic impact analysis provides specific details that speak directly to this finding.

g. *Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.*

As detailed previously in this section under policy SS.1.2, Sugarloaf Estates provides for consistency with all applicable requirements and polices.

h. *If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.*

The Washoe County School District has provided enrollment numbers and student projections which are included in a previous section of this report. School District staff has indicated that they will provide specific comments and conditions (if applicable) at the tentative map stage of the project.

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

Not applicable.

- **Washoe County Master Plan**

The Washoe County Master Plan contains numerous goals and policies that support the requested Master Plan and Regulatory Zone Amendments included with this application. These policies are listed and addressed below:

Conservation Element:

C.2.1 The Washoe County Department of Community Development shall maintain maps depicting valuable scenic areas, including but not limited to, prominent ridgelines, playas, and other unique scenic features. These maps shall be used to determine, in part, the land use and public services and facilities appropriate for each planning area. These maps, which may be specific to and contained within each Area Plan, shall also be used during development review to identify areas where scenic resource assessment and possible mitigation measures may be required.

The project site does not contain any significant natural features or resources and is identified in the Spanish Springs Area plan as an area "most suited for development."

C.2.3 Each development proposal shall be evaluated with the intent to preserve visually prominent ridges and escarpments. Evaluation shall address mitigation of the affects on visual appearance, scarring of hillsides, and the impact of increasing access in roadless areas.

The Sugarloaf Estates site is ideal in that development will not result in the grading of hillsides, visual scarring or grading of roadways through undeveloped parcels.

Goal Three: Regulate or mitigate development to protect environmentally sensitive and/or critical land, water and wildlife resources that present development hazards or serve highly valuable ecological functions.

Once again, development of the Sugarloaf Estates site will not result in any threat to protected resources, cultural sites, sensitive lands, etc. The project site is flat and well suited for development.

C.3.1 *The Washoe County Department of Community Development shall adequately consult with other agencies while maintaining Development Suitability maps that depict valuable and/or critical land, water and wildlife resources or features which shall include, but not be limited to, the following:*

a. *Geothermal and mining areas.*

b. *Landslide, avalanche and rockfall areas.*

c. *Active and potentially active faults, and areas of potential ground shaking.*

d. *Slopes greater than 15 percent.*

e. *Sensitive soils.*

f. *Key wildlife habitats and migration routes.*

g. *Wild fire hazard areas (as specified by the respective fire agency).*

h. *One hundred year flood plains.*

i. *Perennial and intermittent streams, and wetlands.*

This map series shall be used to determine the land use and public services and facilities appropriate for each planning area. These maps shall also be used during development review to identify areas where more detailed land and water resource information is needed. Where the information indicates a need, measures to protect these resources shall be required. The maps depicting development constraint areas and areas of biodiversity should be used as a reference tool only in reviewing development applications.

As indicated in the Spanish Springs Area Plan, the project site is identified as an area "most suitable for development." Additionally, minimal flooding concerns were alleviated with the construction of the regional detention facility located on the south side of Calle de la Plata. The appendices of this report also include a preliminary geotechnical investigation which identifies no significant issues.

Goal Ten: Incorporate technical information on geologic hazards into the land use planning and development processes.

A preliminary geotechnical investigation has been completed and included with this report to demonstrate that there are no identified constraints that would preclude development of the property.

C.16.1 Through the adoption of the Open Space and Natural Resource Management Plan and implementation of the policies contained in the Land Use and Transportation Element, Washoe County will promote and facilitate recreational use of green space by pedestrians and bicyclists, and provide access to public facilities, recreation, public transportation and open space.

The planned trails, trail connections, open space, and park proposed within Sugarloaf Estates will serve to implement this policy.

Housing Element:

Policy 1.5: Encourage development at higher densities where appropriate.

As explained throughout this document, the MDS zoning and associated 3 du/ac density is highly appropriate given the site characteristics, location, and the policies contained in the Area Plan. The MDS use will serve to better transition between more intense uses planned along Pyramid Highway and residential areas to the east and is much more suited to the site than industrial or commercial use types.

Program 1.5: The County will utilize its higher density zoning designations to allow for the most efficient use of land that has infrastructure in place or where the installation of infrastructure is planned. The County will consider installing minimum density requirements in mixed-use and/or high density areas.

Land Use and Transportation Element:

Goal One: Influence future development to abide by sustainable growth practices.

Clustering of lots, such as that proposed with Sugarloaf Estates, will reduce overall resource impacts, reduce water consumption, and serve to implement this goal.

LUT.1.1: Washoe County should define smaller areas where more intense suburban developments permitted (parallel with the Area Plan Suburban Character Management Area, or SCMA), and larger areas outside the suburban areas where development is strictly limited to retain the existing rural character (parallel with the Area Plan Rural Character Management Area, or RCMA).

The project site lies within the identified Suburban Character Management Area of the Spanish Springs Area Plan which allows for densities up to 3 units per acre, as proposed.

LUT.2.1: Allow flexibility in development proposals to vary lot sizes, cluster dwelling units, and use innovative approaches to site planning providing that the resulting design is compatible with adjacent development and consistent with the purposes and intent of the policies of the Area Plan. Development applications shall be evaluated with the intent to satisfy the minimum following criteria:

a. *Directs development away from hazardous and sensitive lands.*

b. *Preserves areas of scenic and historic value.*

c. *Provides access to public land.*

d. *Retains agricultural uses, fire and windbreaks, wildlife habitat, wetlands, streams, springs and other natural resources. An adequate amount of prime resources must be retained in order to sustain a functioning ecosystem.*

e. *Accommodates the extension and connection of trail systems and other active and passive recreational uses.*

f. *Furthers the purposes and intent of the respective Area Plan.*

g. *Prevents soil erosion.*

h. *Encourages a minimum distance from residential dwellings to active recreation in parks.*

Although more specific details will be provided in the forthcoming tentative map application, Sugarloaf Estates will implement this policy through a common open space design concept that provides for open space, recreational opportunities, trails, trail connection, and overall consistency with the Vision and Character of the Spanish Springs Area Plan.

Goal Three: The majority of growth and development occurs in existing or planned communities, utilizing smart growth practices.

Increasing residential densities and clustering units, as proposed with Sugarloaf Estates, is an accepted and well known smart growth practice.

LUT.3.1: Require timely, orderly, and fiscally responsible growth that is directed to existing suburban character management areas (SCMAs) within the Area Plans as well as to growth areas delineated within the Truckee Meadows Service Area (TMSA).

The project site is located within an identified Suburban Character Management Area as well as within the TMSA.

LUT.3.2: In order to provide a sufficient supply of developable land to meet the needs of the population, Area Plans shall establish growth policies that provide for a sufficient supply of developable land throughout the planning horizon of the next 20 years, with considerations to phase future growth and development based on the carrying capacity of the infrastructure and environment.

As discussed previously, the 175 units proposed with Sugarloaf Estates fits well within the growth policies established in the Spanish Springs Area Plan.

LUT.3.3: Single family detached residential development shall be limited to a maximum of five (5) dwelling units per acre.

At a proposed density of 3 du/ac, the project is in direct compliance with this policy.

LUT.3.5 Area Plans shall identify adequate land, in locations that support the regional form and pattern, for the residential, commercial, civic and industrial development needs for the next 20 years, taking into account land use potential within the cities and existing unincorporated centers, existing vacant lots, and resource and infrastructure constraints.

The site is identified as "most suitable" for development within the Spanish Springs Area Plan and is one of the few remaining larger (in excess of 40 acres) undeveloped parcels in the Suburban Character Management Area. As such, it is well suited to meet the future housing needs of Spanish Springs and the region.

LUT.4.1 Maintain a balanced distribution of land use patterns to:

a. Provide opportunities for a variety of land uses, facilities and services that serve present and future population;
b. Promote integrated communities with opportunities for employment, housing, schools, park civic facilities, and services essential to the daily life of the residents; and
c. Allow housing opportunities or a broad socio-economic population.

The proposed residential use is much more logical from a land use perspective than the existing commercial and industrial designations. It provides for a much more appropriate transition to residential areas to the east and will still locate residential uses within walking distance of planned commercial services located at Pyramid Highway and Calle de la Plata.

LUT.4.3 Encourage suburban development to provide a mix of residential densities and housing types in close proximity to retail/commercial.

Even though commercial use is being replaced with residential, there is a significant amount of planned commercial use within walking distance of the site. In fact, there is such an abundance of commercial use that amending the Sugarloaf Estates site from commercial to residential is highly logical.

LUT.4.4 Encourage new suburban developments to provide interconnected street networks (Photo 6) to improve fluidity between different land uses and encourage walking and cycling as viable and safe modes of transportation.

As depicted in Figure 10, the preliminary plan for Sugarloaf Estates calls for a connection into the proposed project to the east, establishing connectivity and secondary project access.

LUT.5.2 Proposed development plans shall be required to provide the minimum service standards as described in the Land Use and Transportation Plan.

As detailed previously under the Area Plan analysis, the project meets or exceeds all of the applicable standards.

LUT.5.3 New development shall not reduce the quality of service for existing residents and businesses nor reduce the ability of public agencies to provide quality service.

The site is located in an area of existing services and patrols and can easily be absorbed into the existing service framework. Any upgrades or improvements can be conditioned with the tentative map at the expense of the project developer.

LUT.6.1 Acknowledge the importance of Washoe County (including the incorporated cities of Reno and Sparks) in the continuing development of Northern Nevada's regional economic base.

a. Strengthen and support the identity of the region by encouraging land uses that both contribute to the character of the community and enable the area to sustain a viable economic base. Encourage land uses that preserve a quality of life and define a sense of place within the region

Sugarloaf Estates is consistent with the Vision of the Spanish Springs Area Plan and will promote a high quality of life through careful planning that will allow residents easy access to open space, trails, and recreational opportunities.

LUT.9.1 Create, maintain, and connect usable open space for aesthetic, recreational purposes and natural resource protection.

a. Development assurances shall provide that the open space will be used as intended and will be adequately maintained. The following measures shall be used as applicable:

i. Designate open space areas to a classification consistent with the intended use.

ii. Record Conditions, Covenants and Restrictions (with the County as an interested party) or other contractual agreement with specification of the intended use and prohibition of future sale of the property without consent of the County.

iii. Specify use of the property (e.g. common area) on recorded maps.

iv. Dedicate easements (with the County as an interested party) that specify the intended use.

v. Provide financial assurances for any proposed improvements within the open space.

vi. Provide mechanisms to assure perpetual maintenance of the open space.

vii. When a density bonus or density transfer is proposed, the parcel that is proposed to be use-restricted should be included as part of the tentative map.

Sugarloaf Estates will dedicate new public trails that serve not only the project, but provide connections to the regional trail network. This will benefit the entire community and help perpetuate the regional trail system in Spanish Springs.

LUT.9.5 Require the connection of open space; trail access and bikeway systems with regard to a multitude of different trail uses.

As noted above, new trails within Sugarloaf Estates will provide for connectivity with and continuance of the regional trail network within the community.

Goal Ten: The public has access to open space resources.

All open space areas, trails, and park facilities within Sugarloaf Estates will be dedicated to Washoe County or maintained for public use.

LUT.10.6 Promote an interconnected open space system that accommodates and provides efficient access to all reasonable trail uses.

Once again, the project will provide logical and thoughtful connections to the regional trail system throughout the planned community.

Goal Twelve: Washoe County should implement policy to acquire and preserve open space.

The project will preserve a significant amount of open space which will ensure proper land use relationships with adjoining properties as well as provide community recreational opportunities and amenities.

LUT.12.2 In reviewing development or other land use applications, the County shall consider open space values and other characteristics, which contribute to the open and rural character or unincorporated Washoe County.

The planned open space will serve to implement the Vision and Community Character sections of the Spanish Springs Area Plan. These components can be further conditioned with the forthcoming tentative map.

Goal Fourteen: Washoe County will, to the extent possible, create a cohesive interconnected trail network.

This project can serve to fill in a key gap in the regional trail network by providing a connection from the trail to the north to County facilities on the south side of Calle de la Plata. Such a connection across private land does not currently exist, eliminating the need for the County to acquire land or negotiate easements.

LUT.14.3 The County shall acquire trail right-of-way through purchase, lease, donation or dedication from any public or private entity. When appropriate and beneficial, existing roads and rights-of-way will be used.

With the proposed trail improvements, the project developer will directly implement this policy.

LUT.14.4 Trails shall be interconnected and provide for pedestrian, equestrian, bicycle, and motorized uses, where each use is warranted. Incompatible uses shall be appropriately separated.

Consistent with the policies of the Area Plan, the trails will accommodate pedestrians, off-road cyclists, and equestrian users. Further details and specifications will be provided with the forthcoming tentative map.

LUT.17.2 Suburban neighborhoods should be created with a discernible center. This is often a square, green space, or memorable center. A transit station can be located at this center.

As depicted in Figure 10, Sugarloaf Estates will implement this policy with the development of a large central open space/park area.

LUT.21.1 The design of new public facilities shall create a sense of community and connectivity among those who live, work and recreate within the community.

a. *Neighborhoods should be planned to provide emphasis on land uses such as parks, schools and other civic uses that are centralized and act as a community center and promote community interaction.*

b. *Where needed, expand existing public facility links such as trails, paths, open space, and streets to create connectivity between communities.*

c. *Enhance the long-term attractiveness and economic viability through architectural and other man-made features.*

d. *Encourage developers to use varying design strategies to begin to establish a sense of community.*

As explained throughout this report, Sugarloaf Estates will provide trails, open space, and recreational amenities that implement not only this policy but numerous policies from the Area Plan, along with the community vision.

LUT.25.1 Ensure that development proposals are in conformance with appropriate Master Plan policies and the relevant Area Plan policies.

The Planning Policy Analysis included in this report clearly demonstrates the project's conformance.

Population Element:

Goal Three: Plan for a balanced development pattern that includes employment and housing opportunities, public services and open spaces.

Establishment of suburban residential at the site is logical from a land use perspective as it provides for appropriate transitions to adjoining properties, offers recreational opportunities and amenities to residents, and is within a short distance of employment centers and planned commercial uses.

- **Truckee Meadows Regional Plan**

Master Plan Amendment applications in Washoe County are required to complete a review by the Truckee Meadows Regional Planning Agency. This project advances many of the goals and policies of the *2012 Truckee Meadows Regional Plan*. In general, this application seeks to provide suburban residential development within an area already included within the Truckee Meadows Service Area (TMSA) boundary. Densities of up to 5 units per acre are allowed in unincorporated areas within the TMSA per the Regional Plan. Sugarloaf Estates fits well within these parameters.

More specifically, the project conforms to the goals and policies of the *Regional Plan*, as outlined below.

GOAL 1.1 *Between 2007 and 2030, at least 99% of the region's population growth and 99% of the region's jobs growth will be located in the Truckee Meadows Service Areas (TMSA).*

The project site is within the existing TMSA and serves to better respect natural resources and provide more efficient use of infrastructure as encouraged within the Regional Plan, Washoe County Master Plan, and Spanish Springs Area Plan.

Policy 1.1.3 *or Reno, Sparks, and Washoe County the Regional Plan defines Truckee Meadows Service Areas (TMSA) and Future Service Areas (FSA) that avoid environmental degradation, optimize infrastructure, and maintain a compact form while providing for a variety of living and working situations.*

Sugarloaf Estates is well suited for development and will not result in environmental degradation. Smaller lots and clustering ensures better optimization of infrastructure and less impact on resources, especially water.

Policy 1.1.8 *The Regional Plan defines the Development Constraints Area (DCA) as an overlay upon the Truckee Meadows Service Areas and the Rural Development Area (see Map 3). The Development Constraints Area consists of playas, jurisdictional water/wetland in accordance with Section 404 of the Clean Water Act, designated FEMA floodway areas within the floodplain Zone AE floodways, significant water bodies, natural slopes over 30%, publicly-owned open space, and properties that are deed restricted to prevent development.*

The site is not located within a Development Constraints Area.

GOAL 1.3 *Unincorporated Washoe County within the TMSA will support Module #1 by providing a development pattern that includes a range of residential densities appropriate to the location and typified by medium density, and shall include appropriate neighborhood or local serving retail uses, and employment opportunities designed to reduce trips, enhance housing affordability and promote jobs-housing balance.*

The medium density proposed with the project directly complies with this policy. Furthermore, its close proximity to existing employment centers within Spanish Springs and planned commercial uses make it even more complementary to this policy.

Policy 3.5.1 *To be in conformance with the Regional Plan, the master plans, facilities plans, and other similar plans of local governments and affected entities must ensure that necessary public facilities and services to support new development are or will be available and adequate, based on adopted levels of services (LOS) at the time the impacts of new development occur.*

Infrastructure is already in place around the site and can be easily extended to serve Sugarloaf Estates. Therefore, the concurrency requirements are met. A traffic analysis is included and provides mitigation measures that will be implemented to ensure LOS standards are met.

Request Findings

The Washoe County Development Code establishes legal findings that must be made by the Planning Commission and Board of County Commissioners in order to approve Master Plan Amendment and Regulatory Zone Amendment requests. These findings are listed below and are addressed in **bold face** type.

- **Master Plan Amendment**

When adopting an amendment, the Commission shall make all required findings contained in the area plan for the planning area in which the property that is the subject of the Master Plan amendment is located and, at a minimum, make at least three of the following findings of fact unless a military installation is required to be noticed, then in addition to the above, a finding of fact pursuant to subsection (6) shall also be made:

(1) Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.

The requested Suburban Residential designation will allow for the establishment of Medium Density Suburban (MDS) zoning. The MDS zoning is consistent with the site's location within the Suburban Character Management Area and is consistent with the goals, policies, vision, and character statement of the Spanish Springs Area Plan, as detailed previously within this report.

(2) Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.

The requested amendment represents a decrease in intensification over what currently exists. This will provide for a much more appropriate transition between land uses and is far better suited for the property given surrounding land use patterns. Commercial and industrial uses would be inappropriate for the site and have the potential to create significant negative impacts within the area in terms of traffic, noise, buffering, etc.

(3) Response to Change Conditions. The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.

The current designations could be considered "spot" zoning which is highly discouraged in modern planning practice. The proposed SR and MDS designations are much more logical, provide for proper land use transitions, and are consistent with the goals, policies, vision, and character statement of the Spanish Springs Area Plan. Additionally, the project can serve to meet the increased demand for housing within the region sparked by a large influx of new economic growth that has occurred, and continues to occur, within Washoe County and the surrounding region.

(4) Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed Master Plan designation.

As detailed throughout this report all facilities, services, and infrastructure needed to serve the site are existing or can be easily extended to serve Sugarloaf Estates. The project meets the requirements of the Area Plan in terms of services and infrastructure and will serve to better optimize facilities over larger lot alternatives.

(5) Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

The site is identified within the Spanish Springs Area Plan as "most suitable for development" and within the Suburban Character Management Area. Therefore, it has already been determined that development of this property represents orderly growth and is located within an area where new growth has long been anticipated.

(6) Effect on a Military Installation. The proposed amendment will not affect the location, purpose and mission of the military installation.

Not applicable.

- **Regulatory Zone Amendment**

(1) Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.

As detailed in the Planning Policy Analysis section of this report the request RZA serves to implement numerous goals and policies of the Washoe County Master Plan and the Spanish Springs Area Plan.

(2) Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.

This request does not grant the absolute right to develop the parcel. Instead, it establishes the land use framework that will allow for future consideration of a common open space tentative map. At that time, project specific impacts can be evaluated during a public review process and appropriate conditions can be added or changes made. From a pure land use perspective, suburban use at 3 du/ac is appropriate with the surrounding residential uses and is far more compatible than the existing industrial and commercial designations. This is further reinforced through the County's own land use compatibility matrix.

(3) Response to Change Conditions.; more desirable use. The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.

There is currently an over abundance of industrial and commercial use along Calle de la Plata. The proposed MDS zoning is more complementary to surrounding development patterns and will serve to reduce project impacts when compared with what could be developed under the existing zoning. The property is well suited for development given its physical characteristics and location.

(4) Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed amendment.

As noted under the Master Plan Amendment findings, all facilities, services, and infrastructure needed to serve the site are existing or can be easily extended to serve Sugarloaf Estates. The project meets the requirements of the Area Plan in terms of services and infrastructure and will serve to better optimize facilities over larger lot alternatives.

(5) No Adverse Affects. The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.

As detailed in the Planning Policy Analysis section of this report, the project actually serves to implement goals and policies of the Master Plan and Area Plan. In fact, it is almost certain that additional goals and policies will be implemented with future development of a common open space subdivision at the site.

(6) Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

The subject site is identified as most suitable for development within the Area Plan and can serve to better meet the housing needs of the community. No environmental or other conditions exist that would preclude development of the property at the densities permitted within the MDS zone. The project can better maximize infrastructure usage providing for smart growth from both a planning and fiscal perspective.

(7) Effect on a Military Installation When a Military Installation is Required to be Noticed. The proposed amendment will not affect the location, purpose and mission of the military installation.

Not applicable.

APPENDICES

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Development staff at 775.328.3600.

Project Information	**Staff Assigned Case No.:** _____
Project Name: Sugarloaf Estates	
Project Description:	A Master Plan Amendment to redisignate 58.49 acres from a mix of Suburban Residential, Industrial, and Commercial to Suburban Residential and a Regulatory Zone Amendment to rezone the same property from a mix of LDS, I, and NC to MDS.
Project Address: 350 Calle de la Plata, Spanish Springs, 89441	
Project Area (acres or square feet): 58.49+/- acres	
Project Location (with point of reference to major cross streets **AND** area locator): The site is located on the north side of Calle de la Plata, east of its intersection with Pyramid Highway (State Route 445).	

Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No(s):	Parcel Acreage:
534-571-01	58.49 acres		

Section(s)/Township/Range: Section 23, T21, R20

Indicate any previous Washoe County approvals associated with this application:
Case No.(s).

Applicant Information (attach additional sheets if necessary)

Property Owner:		**Professional Consultant:**	
Name: Jacie, LLC - c/o Douglass Properties, LLC		Name: Rubicon Design Group, LLC	
Address: 3820 Lone Tree Ln.		Address: 100 California Ave., Suite 202	
Reno, NV	Zip: 89511	Reno, NV	Zip: 89509
Phone: 775-884-1896	Fax: 884-4896	Phone: 775-425-4800	Fax:
Email: samuel@jucommercial.com		Email: mrailey@rubicondesigngroup.com	
Cell: 775-443-7576	Other:	Cell: 775-250-3455	Other:
Contact Person: Samuel Douglass		Contact Person: Mike Railey	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name: SP58, LLC		Name:	
Address: 439 W. Plumb Ln.		Address:	
Reno, NV	Zip: 89509		Zip:
Phone: 775-352-4200	Fax:	Phone:	Fax:
Email: jgm@blackstonedevelopmentgroup.com		Email:	
Cell: 520-400-4845	Other:	Cell:	Other:
Contact Person: Josh Myers		Contact Person:	

For Office Use Only

Date Received:	Initial:	Planning Area:
County Commission District:		Master Plan Designation(s):
CAB(s):		Regulatory Zoning(s):

Property Owner Affidavit

Applicant Name: SP68, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, William V. Nardiello
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 534-571-01

Printed Name William V. Nardiello

Signed William V. Nardiello

Address 4619 Byron Circle

Irving, TX 75038

Subscribed and sworn to before me this 28 day of July, 2015

Sheryl Pickle
Notary Public in and for said county and state

My commission expires: 10/10/16

(Notary Stamp)

NOTARY PUBLIC STATE OF TEXAS
Sheryl Pickle
My Commission Expires
10/10/2016

*Owner refers to the following: (Please mark appropriate box.)

- ☒ Owner
- ☐ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

Property Owner Affidavit

Applicant Name: SP58, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, Patrick Douglass (Douglass Properties LLC),
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 534-571-01

Printed Name Patrick Douglass

Signed

Address 3820 Lone Tree Lane

Reno, NV 89511

Subscribed and sworn to before me this 5th day of August, 2015.

(Notary Stamp)

Notary Public in and for said county and state

My commission expires: November 25, 2017

KAREN E. ALLEN
Notary Public, State of Nevada
Appointment No. 02-72949-5
My Appt. Expires Nov 25, 2017

*Owner refers to the following: (Please mark appropriate box.)

- ☒ Owner
- ☐ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

Property Owner Affidavit

Applicant Name: SP58, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, Jennifer C. Felton aka Jennifer Traniello,
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 534-571-01

Printed Name Jennier C. Felton aka Jennifer Traniello

Signed

Address 590 Hunter Lake St
Las Vegas, NV 89138

Subscribed and sworn to before me this 8th day of August 2015.

(Notary Stamp)

Notary Public in and for said county and state

My commission expires: 11/25/2017

KAREN E. ALLEN
Notary Public, State of Nevada
Appointment No. 02-72949-5
My Appt. Expires Nov 25, 2017

*Owner refers to the following: (Please mark appropriate box.)

- ☑ Owner
- ☐ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

Property Owner Affidavit

Applicant Name: Sheila Caramella / JACIE LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, Sheila Caramella (Jacie LLC)
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 534-571-01

State of Nevada
County of Washoe

Printed Name Sheila Caramella (Jacie LLC)

Signed

Signed and sworn before me on 8-4-15
by Sheila Caramella

Address 6701 Hollywood Bd
LA 90028

Jennifer L Stanfield
Notary Public

Subscribed and sworn to before me this 4 day of August, 2015.

(Notary Stamp)

Jennifer L Stanfield
Notary Public in and for said county and state

JENNIFER L. STANFIELD
Notary Public - State of Nevada
County of Washoe
APPT. NO. 14-13949-2
My App. Expires Jun. 11, 2018

My commission expires: 6-11-2018

*Owner refers to the following: (Please mark appropriate box.)

- ☐ Owner
- ☑ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

Property Owner Affidavit

Applicant Name: SP58, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, Patrick Douglass on behalf of Nancie Malmquist,
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 534-571-01

Printed Name Patrick Douglass on behalf of Nancie Malmquist

Signed

Address 3820 Lone Tree Lane

Reno, NV 89511

KAREN E. ALLEN
Notary Public, State of Nevada
Appointment No. 02-72949-5
My Appt. Expires Nov 25, 2017

Subscribed and sworn to before me this 5th day of August, 2015.

(Notary Stamp)

Karen E. Allen
Notary Public in and for said county and state

My commission expires: November 25, 2017

KAREN E. ALLEN
Notary Public, State of Nevada
Appointment No. 02-72949-5
My Appt. Expires Nov 25, 2017

*Owner refers to the following: (Please mark appropriate box.)

- ☐ Owner
- ☐ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☑ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

STATUTORY FORM POWER OF ATTORNEY

THIS IS AN IMPORTANT LEGAL DOCUMENT. IT CREATES A DURABLE POWER OF ATTORNEY FOR FINANCIAL MATTERS. BEFORE EXECUTING THIS DOCUMENT, YOU SHOULD KNOW THESE IMPORTANT FACTS:

1. THIS DOCUMENT GIVES THE PERSON YOU DESIGNATE AS YOUR AGENT THE POWER TO MAKE DECISIONS CONCERNING YOUR PROPERTY FOR YOU. YOUR AGENT WILL BE ABLE TO MAKE DECISIONS AND ACT WITH RESPECT TO YOUR PROPERTY (INCLUDING YOUR MONEY) WHETHER OR NOT YOU ARE ABLE TO ACT FOR YOURSELF.

2. THIS POWER OF ATTORNEY BECOMES EFFECTIVE IMMEDIATELY UNLESS YOU STATE OTHERWISE IN THE SPECIAL INSTRUCTIONS.

3. THIS POWER OF ATTORNEY DOES NOT AUTHORIZE THE AGENT TO MAKE HEALTH CARE DECISIONS FOR YOU.

4. THE PERSON YOU DESIGNATE IN THIS DOCUMENT HAS A DUTY TO ACT CONSISTENT WITH YOUR DESIRES AS STATED IN THIS DOCUMENT OR OTHERWISE MADE KNOWN OR, IF YOUR DESIRES ARE UNKNOWN, TO ACT IN YOUR BEST INTERESTS.

5. YOU SHOULD SELECT SOMEONE YOU TRUST TO SERVE AS YOUR AGENT. UNLESS YOU SPECIFY OTHERWISE, GENERALLY THE AGENT'S AUTHORITY WILL CONTINUE UNTIL YOU DIE OR REVOKE THE POWER OF ATTORNEY OR THE AGENT RESIGNS OR IS UNABLE TO ACT FOR YOU.

6. YOUR AGENT IS ENTITLED TO REASONABLE COMPENSATION UNLESS YOU STATE OTHERWISE IN THE SPECIAL INSTRUCTIONS.

7. THIS FORM PROVIDES FOR DESIGNATION OF ONE AGENT. IF YOU WISH TO NAME MORE THAN ONE AGENT YOU MAY NAME A CO-AGENT IN THE SPECIAL INSTRUCTIONS. CO-AGENTS ARE NOT REQUIRED TO ACT TOGETHER UNLESS YOU INCLUDE THAT REQUIREMENT IN THE SPECIAL INSTRUCTIONS.

8. IF YOUR AGENT IS UNABLE OR UNWILLING TO ACT FOR YOU, YOUR POWER OF ATTORNEY WILL END UNLESS YOU HAVE NAMED A SUCCESSOR AGENT. YOU MAY ALSO NAME A SECOND SUCCESSOR AGENT.

9. YOU HAVE THE RIGHT TO REVOKE THE AUTHORITY GRANTED TO THE PERSON DESIGNATED IN THIS DOCUMENT.

10. THIS DOCUMENT REVOKES ANY PRIOR DURABLE POWER OF ATTORNEY.

11. IF THERE IS ANYTHING IN THIS DOCUMENT THAT YOU DO NOT UNDERSTAND, YOU SHOULD ASK A LAWYER TO EXPLAIN IT TO YOU.

1. DESIGNATION OF AGENT. I, NANCY MALMQUIST, do hereby designate and appoint PATRICK E. DOUGLASS, whose address is 3820 Lone Tree Lane, Reno, Nevada, 89511, and whose telephone number is (775) 771-2695, as my agent to make decisions for me and in my name, place and stead and for my use and benefit and to exercise the powers as authorized in this document.

2. DESIGNATION OF ALTERNATE AGENT. Not applicable.

3. OTHER POWERS OF ATTORNEY. Not applicable.

4. NOMINATION OF GUARDIAN. Not applicable.

5. GRANT OF GENERAL AUTHORITY. I grant my agent and any successor agent(s) general authority to act for me with respect to the following subjects:

(INITIAL each subject you want to include in the agents general authority. If you wish to grant general authority over all of the subjects you may initial "All Preceding Subjects" instead of initialing each subject.)

[NM] **Real Property**
[_____] Tangible Personal Property
[_____] Stocks and Bonds
[_____] Commodities and Options
[_____] Banks and Other Financial Institutions
[_____] Safe Deposit Boxes
[_____] Operation of Entity or Business
[_____] Insurance and Annuities
[_____] Estates, Trusts and Other Beneficial Interests
[_____] Legal Affairs, Claims and Litigation

[_____] Personal Maintenance
[_____] Benefits from Governmental Programs or Civil or Military Service
[_____] Retirement Plans
[_____] Taxes
[_____] All Preceding Subjects

6. GRANT OF SPECIFIC AUTHORITY. My agent MAY NOT do any of the following specific acts for me UNLESS I have INITIALED the specific authority listed below:

(**CAUTION**: Granting any of the following will give your agent the authority to take actions that could significantly reduce your property or change how your property is distributed at your death. INITIAL ONLY the specific authority you WANT to give your agent.)

[_____] Create, amend, revoke or terminate an inter vivos, family, living, irrevocable or revocable trust
[_____] Make a gift, subject to the limitations of NRS and any special instructions in this Power of Attorney
[_____] Create or change rights of survivorship
[_____] Create or change a beneficiary designation
[_____] Waive the principals right to be a beneficiary of a joint and survivor annuity, including a survivor benefit under a retirement plan
[_____] Exercise fiduciary powers that the principal has authority to delegate
[_____] Disclaim or refuse an interest in property, including a power of appointment

7. LIMITATION ON AGENT'S AUTHORITY. An agent that is not my spouse MAY NOT use my property to benefit the agent or a person to whom the agent owes an obligation of support unless I have included that authority in the Special Instructions.

8. SPECIAL INSTRUCTIONS OR OTHER OR ADDITIONAL AUTHORITY GRANTED TO AGENT: This Power is limited to the consummation of the sale and close of escrow of the real property located at 350 Calle De La Plata, Sparks, Nevada, with the Buyer Blackstone Development Group, Inc., including all zoning and entitlement issues.

9. DURABILITY AND EFFECTIVE DATE. (INITIAL the clause(s) that applies.)

[CMM] **DURABLE. This Power of Attorney shall not be affected by my subsequent disability or incapacity.**

[_____] SPRINGING POWER. Not applicable.

[NM] **I wish to have this Power of Attorney become effective immediately upon my signature.**

[NM] **I wish to have this Power of Attorney end on the close of escrow as referenced in paragraph 8, above.**

10. THIRD PARTY PROTECTION. Third parties may rely upon the validity of this Power of Attorney or a copy and the representations of my agent as to all matters relating to any power granted to my agent, and no person or agency who relies upon the representation of my agent, or the authority granted by my agent, shall incur any liability to me or my estate as a result of permitting my agent to exercise any power unless a third party knows or has reason to know this Power of Attorney has terminated or is invalid.

11. RELEASE OF INFORMATION. I agree to, authorize and allow full release of information, by any government agency, business, creditor or third party who may have information pertaining to my assets or income, to my agent named herein.

12. SIGNATURE AND ACKNOWLEDGMENT. YOU MUST DATE AND SIGN THIS POWER OF ATTORNEY. THIS POWER OF ATTORNEY WILL NOT BE VALID UNLESS IT IS ACKNOWLEDGED BEFORE A NOTARY PUBLIC.

I sign my name to this Power of Attorney on 22 July 2015, **at** RENO, NEVADA.

Nancy Malmquist

NANCY MALMQUIST

CERTIFICATE OF ACKNOWLEDGMENT OF NOTARY PUBLIC

STATE OF NEVADA)
}ss.
COUNTY OF WASHOE)

On this 22nd day of July, in the year 2015, before me, a Notary Public, personally appeared NANCY MALMQUIST personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument, and acknowledged that she executed it. I declare under penalty of perjury that the person whose name is ascribed to this instrument appears to be of sound mind and under no duress, fraud or undue influence.

RITA KOLVET
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 99-3324-2 - Expires May 10, 2019

Rita Kolvet
NOTARY PUBLIC

Community Services Department
Planning and Development
MASTER PLAN AMENDMENT
APPLICATION

Community Services Department
Planning and Development
1001 E Ninth St., Bldg A.
Reno, NV 89520

Telephone: 775.328.3600

MPA15-003 & RZA15-005
EXHIBIT O

Master Plan Amendment
Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to Master Plan amendments may be found in Article 820, Amendment of Master Plan.

The Washoe County Master Plan describes how the physical character of the County exists today and is planned for the future. The plan is adopted by the community and contains information, policies and a series of land use maps. The Master Plan provides the essential framework for creating a healthy community system and helps guide decisions about growth and development in the County. The following are general types of requests the County receives to amend the Master Plan. Please identify which type of amendment you are requesting:

☑	A request to change a master plan designation(s) from the adopted master plan and/or area plan maps
☐	A request to add, amend, modify or delete any of the adopted policies found in the elements of the Master Plan
☐	A request to add, amend, modify or delete any of the adopted policies in the area plans
☐	A request to add, amend, modify or delete specific language found in the area plans
☐	Other (please identify):

Please complete this questionnaire to ensure consistent review of your request to amend the Washoe County Master Plan. Staff will review the application to determine if the amendment request is in conformance with the policies and language within the elements and area plans of the Master Plan or if the information provided supports a change to the plan. Please provide a brief explanation to all questions.

1. What is the Master Plan amendment being requested at this time?

This applicaton requests that 58.49+/- acres within the Spanish Springs Area Plan be redesignated from a mix of Suburban Residential, Industrial, and Commercial to Suburban Residential. Please refer to the attached report for a detailed description, supporting exhibits, and analysis.

2. What conditions have changed and/or new studies have occurred since the adoption of the Washoe County Master Plan that supports the need for the amendment request?

The project site is located within the Suburban Character Management Area and identified as "most suitable for development" in the Spanish Springs Area Plan. The property is much better suited for residential use given its location and the over abundance of commercial and industrially designated properties in the area. Please refer to the attached report for a detailed description and analysis.

3. Please provide the following specific information.
   a. What is the location (address or distance and direction from nearest intersection)? Please attach a legal description.

The Washoe County Assessor's Office designates the property address as 350 Calle de la Plata. A legal description is included in the attached title report.

   b. Please list the following (attach additional sheet if necessary):

APN of Parcel	Master Plan Designation	Existing Acres	Proposed Master Plan Designation	Proposed Acres
534-571-01	SR, I, and NC	58.49	SR	58.49

c. What are the adopted land use designations of adjacent parcels?

North	Suburban Residential
South	Commercial
East	Suburban Residential and Industrial
West	Suburban Residential, Commercial, and General Rural

4. Describe the existing conditions and uses located at the site or in the vicinity (i.e. vacant land, roadways, buildings, etc.):

The property is currently vacant. Refer to attached report for detailed photos of the project site and existing conditions.

5. Describe the natural resources associated with the site under consideration. Your description should include resource characteristics such as water bodies, vegetation, topography, minerals, soils and wildlife habitat.

The site is undeveloped and contains flat terrain with slopes generally less than 2%. The property includes sagebrush, rabbit brush, and other native grasses. There are no water bodies, geologic hazards, cultural resources, or historical resources known on the property. Refer to attached report for a detailed site analysis and photos of the existing conditions.

6. Describe whether any of the following natural resources or systems are related to the proposed amendment:

   a. Is property located in the 100-year floodplain? (If yes, please attach documentation of the extent of the floodplain and any proposed floodplain map revisions in compliance with Washoe County Development Code, Article 416, Flood Hazards, and consultation with the Washoe County Department of Public Works.)

☐ Yes	☑ No

   Explanation:

   b. Does property contain wetlands? (If yes, please attach a preliminary delineation map and describe the impact the proposal will have on the wetlands. Impacts to the wetlands may require a permit issued from the U.S. Army Corps of Engineers.)

☐ Yes	☑ No

   Explanation:

   c. Does property contain slopes or hillsides in excess of 15 percent and/or significant ridgelines? (If yes, please note the slope analysis requirements contained in Article 424, Hillside Development of the Washoe County Development Code.)

☐ Yes	☑ No

   Explanation:

d. Does property contain geologic hazards such as active faults; hillside or mountainous areas; is subject to avalanches, landslides, or flash floods; is near a stream or riparian area such as the Truckee River, and/or an area of groundwater recharge?

❑ Yes	☑ No

Explanation:

e. Does property contain prime farmland; is within a wildfire hazard area, geothermal or mining area, and/or wildlife mitigation route?

❑ Yes	☑ No

Explanation:

7. Please describe whether any archaeological, historic, cultural, or scenic resources are in the vicinity or associated with the proposed amendment:

❑ Yes	☑ No

Explanation:

8. Do you own sufficient water rights to accommodate the proposed amendment? (Amendment requests in some groundwater hydrographic basins [e.g. Cold Springs, Warm Springs, etc.] require proof of water rights be submitted with applications. Please provide copies of all water rights documents, including chain of title to the original water right holder.)

❑ Yes	❑ No

If yes, please identify the following quantities and documentation numbers relative to the water rights:

a. Permit #		acre-feet per year	
b. Certificate #		acre-feet per year	
c. Surface Claim #		acre-feet per year	
d. Other #		acre-feet per year	

e. Please attach a copy(s) of the water rights title (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

Information on water rights will be provided with the forthcoming tentative map.

f. If the proposed amendment involves an intensification of land use, please identify how sufficient water rights will be available to serve the additional development.

The amendment represents a de-intensification in land use. Water rights will be dedicated in accordance with the policies included in the Spanish Springs Area Plan at time of final map. Details on water rights and service will be provided in the forthcoming tentative map request to be submitted in October 2015. Refer to attached report for additional details.

9. Please describe the source and timing of the water facilities necessary to serve the amendment:

   a. System Type:

☐ Individual wells		
☐ Private water	Provider:	
☑ Public water	Provider:	Truckee Meadows Water Authority

   b. Available:

☑ Now	☐ 1-3 years	☐ 3-5 years	☐ 5+ years

   c. Washoe County Capital Improvements Program project?

☐ Yes	☑ No

   d. If a public facility is proposed and is currently not listed in the Washoe County Capital Improvements Program and not available, please describe the funding mechanism for ensuring availability of water service:

Not applicable.

10. What is the nature and timing of sewer services necessary to accommodate the proposed amendment?

   a. System Type:

☐ Individual septic		
☑ Public system	Provider:	Washoe County

   b. Available:

☑ Now	☐ 1-3 years	☐ 3-5 years	☐ 5+ years

   c. Washoe County Capital Improvements Program project?

☐ Yes	☑ No

d. If a public facility is proposed and is currently not listed in the Washoe County Capital Improvements Program and not available, please describe the funding mechanism for ensuring availability of sewer service. If a private system is proposed, please describe the system and the recommended location(s) for the proposed facility.

Not applicable.

11. Please identify the street names and highways near the proposed amendment that will carry traffic to the regional freeway system.

Calle de la Plata and State Route 445 (Pyramid Highway). Please refer to attached traffic impact study.

12. Will the proposed amendment impact existing or planned transportation systems? (If yes, a traffic report will be required. See attached Traffic Impact Report Guidelines.)

☑ Yes	☐ No

13. Community Services (provided and nearest facility):

a. Fire Station	Truckee Meadowsd Fire Protection District - Spanish Springs Station
b. Health Care Facility	Renown or St. Mary's Urgent Care - Spanish Springs (Los Altos Pkwy.)
c. Elementary School	Spanish Springs Elementary School
d. Middle School	Yvonne Shaw Middle School
e. High School	Spanish Springs High School
f. Parks	Lazy 5 Regional Park, Eagle Canyon Park
g. Library	Washoe County Library - Spanish Springs Branch
h. Citifare Bus Stop	Pyramid Higway @ Queen Way

14. Describe how the proposed amendment fosters, promotes or complies with the policies of the adopted area plans and elements of the Washoe County Master Plan:

a. Population Element:

A detailed analysis of the Washoe County Master Plan is included in the attached report. Specifcially, the project supports and/or implements Goal 3 of the Population Element as described in the attached report.

b. Conservation Element:

The project supports 4 polices and 3 goals of the Conservation Element. These are listed and fully addressed in the attached report.

c. Housing Element:

The request supports policy 1.5 and program 1.5 of the Housing Element as described in detail in the attached report.

d. Land Use and Transportation Element:

A detailed analysis of the Land Use and Transportation Element is included in the attached report and includes numerous policies and goals.

e. Public Services and Facilities Element:

The attached report includes a section titled "Planning Policy Analysis" in which specific policies from the Public Services and Facilities Element are addressed.

f. Adopted area plan(s):

A highly detailed analysis of the Spanish Springs Area Plan is included in the attached report.

15. If the area plan includes a Plan Maintenance component, address all policies and attach all studies and analysis required by the Plan Maintenance criteria.

The applicable findings included in the Plan Maintenance section of the Spanish Spanish Springs Area Plan are addressed in detail in the attached report.

Applicant Comments

This page can be used by the applicant to support the master plan amendment request and should address, at a minimum, how one or more of the findings for an amendment are satisfied. (Please referrer to Article 820 of the Washoe County Development Code for the list of Findings.)

Please refer to the attached report for a highly detailed description and analysis of the proposed Master Plan Amendment, including analysis of the Spanish Springs Area Plan, Washoe County Master Plan and Truckee Meadows Regional Plan. The report also includes a detailed project description and supporting exhibits.

Community Services Department
Planning and Development
REGULATORY ZONE AMENDMENT APPLICATION

Community Services Department
Planning and Development
1001 E Ninth St., Bldg A.
Reno, NV 89520

Telephone: 775.328.3600

MPA15-003 & RZA15-005
EXHIBIT O

Regulatory Zone Amendment
Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to Regulatory Zone amendments may be found in Article 821, Amendment of Regulatory Zone.

Please complete this questionnaire to ensure consistent review of your request to amend the Washoe County Zoning Map. Please provide a brief explanation to all questions answered in the affirmative.

1. Please describe the Regulatory Zone amendment request:

This application requests that the subject site (58.49+/- acres) be rezoned from a mix of Low Density Suburban (LDS), Industrial (I), and Neighborhood Commercial (NC) to Medium Density Suburban (MDS). Please refer to attached report for a detailed description.

2. List the Following information regarding the property subject to the Regulatory Zone Amendment.

   a. What is the location (address, assessor's parcel number or distance and direction from nearest intersection)?

The Washoe County Assessor lists the site address as 350 Calle de la Plata.

b. Please list the following (attach additional sheet if necessary):

APN of Parcel	Master Plan Designation	Current Zoning	Existing Acres	Proposed Zoning	Proposed Acres
534-571-01	SR, I , Comm.	LDS, I, NC	58.49	MDS	58.49

c. What are the regulatory zone designations of adjacent parcels?

	Zoning	Use (residential, vacant, commercial, etc,)
North	LDS	Single Family
South	OS	Storm Water Detention Facility
East	NC and I	Vacant
West	NC, GR, HDR, LDS	Single Family and Vacant

3. Describe the existing conditions and uses located at the site or in the vicinity (i.e. vacant land, roadways, easements, buildings, etc.):

The project site is vacant and undeveloped. Refer to attached report for a detailed description and exhibits depicting existing onsite conditions.

4. Describe the natural resources associated with the site under consideration. Your description should include resource characteristics such as water bodies, vegetation, topography, minerals, soils and wildlife habitat.

The site is generally flat and does not contain water bodies, cultural or historical resources, wildlife habitats, etc. and is vegetated with natural plant materials. Refer to attached report for a detailed description and site photos.

5. Does the property contain development constraints such as floodplain or floodways, wetlands, slopes or hillsides in excess of 15%, geologic hazards such as active faults, significant hydrologic resources or major drainages or prime farmland?

❑ Yes	■ No

Explanation:

6. Please describe whether any archaeological, historic, cultural, or scenic resources are in the vicinity or associated with the proposed amendment:

❑ Yes	■ No

Explanation:

7. Do you own sufficient water rights to accommodate the proposed amendment? (Amendment requests in some groundwater hydrographic basins [e.g. Cold Springs, Warm Springs, etc.] require proof of water rights be submitted with applications. Please provide copies of all water rights documents, including chain of title to the original water right holder.)

❑ Yes	❑ No

If yes, please identify the following quantities and documentation numbers relative to the water rights:

a. Permit #		acre-feet per year	
b. Certificate #		acre-feet per year	
c. Surface Claim #		acre-feet per year	
d. Other #		acre-feet per year	

e. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

Information on water rights will be provided with a forthcoming tentative map. Refer to attached report for additional details.

f. If the proposed amendment involves an intensification of land use, please identify how sufficient water rights will be available to serve the additional development.

The zone change represents a de-intensification in land use. Refer to attached report for additional details.

8. Please describe the source and timing of the water facilities necessary to serve the amendment:

   a. System Type:

❑ Individual wells		
❑ Private water	Provider:	
■ Public water	Provider:	Truckee Meadows Water Authority

   b. Available:

■ Now	❑ 1-3 years	❑ 3-5 years	❑ 5+ years

   c. Is this part of a Washoe County Capital Improvements Program project?

❑ Yes	■ No

   d. If a public facility is proposed and is currently not listed in the Washoe County Capital Improvements Program and not available, please describe the funding mechanism for ensuring availability of water service:

9. What is the nature and timing of sewer services necessary to accommodate the proposed amendment?

   a. System Type:

❑ Individual septic		
■ Public system	Provider:	Washoe County

   b. Available:

■ Now	❑ 1-3 years	❑ 3-5 years	❑ 5+ years

   c. Is this part of a Washoe County Capital Improvements Program project?

❑ Yes	■ No

d. If a public facility is proposed and is currently not listed in the Washoe County Capital Improvements Program and not available, please describe the funding mechanism for ensuring availability of sewer service. If a private system is proposed, please describe the system and the recommended location(s) for the proposed facility.

Not applicable.

10. Please identify the street names and highways near the proposed amendment that will carry traffic to the regional freeway system.

Calle de la Plata and State Route 445 (Pyramid Highway). Refer to attached traffic impact study for in depth details.

11. Will the proposed amendment impact existing or planned transportation systems? (If yes, a traffic report will be required. See attached Traffic Impact Report Guidelines.)

■ Yes	❑ No

12. Community Services (provided and nearest facility):

a. Fire Station	Truckee Meadows Fire Protection District - Spanish Springs Station
b. Health Care Facility	Renown or St. Mary's Urgent Care - Los Altos Pkwy.
c. Elementary School	Spanish Springs
d. Middle School	Shaw
e. High School	Spanish Springs
f. Parks	Lazy 5 Regional Park, Eagle Canyon Park
g. Library	Washoe County - Spanish Springs Branch
h. Citifare Bus Stop	Pyramid Highway @ Queen Way

Projects of Regional Significance Information – for Regulatory Zone Amendments

Nevada Revised Statutes 278.026 defines "Projects of Regional Significance." Regulatory Zone amendment requests for properties within the jurisdiction of the Truckee Meadows Regional Planning Commission (TMRPC) must respond to the following questions. A "Yes" answer to any of the following questions may result in the application being referred first to the Truckee Meadows Regional Planning Agency for submission as a project of regional significance. Applicants should consult with County or Regional Planning staff if uncertain about the meaning or applicability of these questions.

1. Will the full development potential of the Regulatory Zone amendment increase employment by not less than 938 employees?

❑ Yes	■ No

2. Will the full development potential of the Regulatory Zone amendment increase housing by 625 or more units?

❑ Yes	■ No

3. Will the full development potential of the Regulatory Zone amendment increase hotel accommodations by 625 or more rooms?

❑ Yes	■ No

4. Will the full development potential of the Regulatory Zone amendment increase sewage by 187,500 gallons or more per day?

❑ Yes	■ No

5. Will the full development potential of the Regulatory Zone amendment increase water usage by 625 acre-feet or more per year?

❑ Yes	■ No

6. Will the full development potential of the Regulatory Zone amendment increase traffic by 6,250 or more average daily trips?

❑ Yes	■ No

7. Will the full development potential of the Regulatory Zone amendment increase the student population from kindergarten to 12th grade by 325 students or more?

❑ Yes	■ No

Applicant Comments

This page can be used by the applicant to support the regulatory zone amendment request and should address, at a minimum, how one or more of the findings for an amendment are satisfied. (Please referrer to Article 821 of the Washoe County Development Code for the list of Findings.)

Please refer to the attached report for a detailed project description, impact analysis, and analysis of applicable Washoe County policies and findings.

Washoe County Treasurer
P.O. Box 30039, Reno, NV 89520-3039
ph: (775) 328-2510 fax: (775) 328-2500

Washoe County Treasurer
Tammi Davis

Account Detail

Back to Search Results | Change of Address | Print this Page

Washoe County Parcel Information

Parcel ID	Status	Last Update
53457101	Active	9/12/2015 2:11:46 AM

Current Owner:
JACIE LLC
C/O DOUGLASS PROPERTIES LLC
3820 LONE TREE LN
RENO, NV 89511

SITUS:
350 CALLE DE LA PLATA
WCTY NV

Taxing District
4000

Geo CD:

Legal Description

Section 23 Lot 23 1 0 1 SubdivisionName _UNSPECIFIED Township 21 Range 20

Tax Bill (Click on desired tax year for due dates and further details)

Tax Year	Net Tax	Total Paid	Penalty/Fees	Interest	Balance Due
2015	$680.44	$680.44	$0.00	$0.00	$0.00
2014	$680.46	$680.46	$0.00	$0.00	$0.00
2013	$680.44	$680.44	$0.00	$0.00	$0.00
2012	$850.58	$850.58	$0.00	$0.00	$0.00
2011	$899.14	$899.14	$0.00	$0.00	$0.00
				Total	$0.00

Pay Online

No payment due for this account.

$0.00

Pay By Check

AMOUNT ABOVE WILL POPULATE AFTER PAYMENT TYPE IS SELECTED

Please make checks payable to:
WASHOE COUNTY TREASURER

Mailing Address:
P.O. Box 30039
Reno, NV 89520-3039

Overnight Address:
1001 E. Ninth St., Ste D140
Reno, NV 89512-2845

Payment Information

Special Assessment District

Installment Date Information

Assessment Information

Important Payment Information

- ALERTS: If your real property taxes are delinquent, the search results displayed may not reflect the correct amount owing. Please contact our office for the current amount due.
- For your convenience, online payment is available on this site. E-check payments are accepted without a fee. However, a service fee does apply for online credit card payments. See Payment Information for details.

The Washoe County Treasurer's Office makes every effort to produce and publish the most current and accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use, or its interpretation. If you have any questions, please contact us at (775) 328-2510 or tax@washoecounty.us

This site is best viewed using Google Chrome, Internet Explorer 11, Mozilla Firefox or Safari.

TRAFFIC IMPACT STUDY

FOR

SPANISH SPRINGS AT CALLE DE LA PLATA (LOTS 1-175)

Single Family Residential Development located in the Spanish Springs Planned Area situated in Section 23, Township 21 North, Range 20 East, Washoe County Nevada

APN #534-571-01
350 Calle de la Plata

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

MPA15-003 & RZA15-005
EXHIBIT O

TRAFFIC IMPACT STUDY

FOR

SPANISH SPRINGS AT CALLE DE LA PLATA (LOTS 1-186)

Single Family Residential Development located in the Spanish Springs Planned Area situated in Section 23, Township 21 North, Range 20 East, Washoe County Nevada

APN #534-571-01
350 Calle de la Plata

Prepared for:

Blackstone Development Group
333 N. Wilmot Road, Suite 340
Tucson, AZ 85711
(520) 618-5378

Prepared by:

STAR Consulting
439 W. Plumb Lane
Reno, NV 89509

SUBMITTED:
September 15, 2015

TABLE OF CONTENTS

TABLE OF CONTENTS 3
LIST OF APPENDICES 5

I. EXECUTIVE SUMMARY 6

A. PURPOSE OF REPORT AND STUDY OBJECTIVES 7
1. Washoe County 7
2. Nevada Department of Transportation 8
B. CONCLUSIONS & RECOMMENDATIONS 9
C. CONFORMANCE WITH SPANISH SPRINGS VISION AND CHARACTER STATEMENT 10

II. INTRODUCTION 11

A. SITE AND STUDY AREA BOUNDARIES 11
B. EXISTING AND PROPOSED SITE USES AND DENSITIES 13
C. EXISTING AND PROPOSED USES IN VICINITY OF SITE 17
D. EXISTING AND PROPOSED ROADWAYS AND INTERSECTIONS 21
1. State Road 445 (Pyramid Highway) 24
2. Calle de la Plata 24

III. SITE PLAN REQUIREMENTS 27

IV. EXISTING TRAFFIC COUNTS 28

V. TRIP GENERATION 29

A. NON-SITE TRAFFIC FORECASTING 32
B. TOTAL TRAFFIC 33

VI. TRAFFIC IMPACT AND CAPACITY ANALYSIS 34

A. LEVEL OF SERVICE 34
B. ROADWAY IMPROVEMENTS 37

VII. TRAFFIC SIGNALS 38

VIII. TRAFFIC ACCIDENT DATA 41

IX. NDOT ACCESS POLICY 41

X. REGIONAL ROAD IMPACT FEE (RRIF) 41

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

List of Figures and Tables

Exhibit II.A: Aerial Image and Existing Roadways 12
Exhibit II.B: Washoe County Standard Drawings (for reference) 14
Exhibit II.C.1: Washoe County GIS – Aerial Photo in Vicinity of Site 17
Exhibit II.C.2: Washoe County GIS – Topography in Vicinity of Site 18
Exhibit II.C.3: Washoe County GIS – Master Plan Designation in Vicinity of Site 19
Exhibit II.C.4: Washoe County GIS – Existing Zoning in Vicinity of Site 20
Exhibit II.D.1: Capital Improvement Project Plans 2013-2017 21
Exhibit II.D.2: Capital Improvement Project Plans 2018-2022 22
Exhibit II.D.3: Capital Improvement Project Plans 2023-2035 23
Exhibit II.D.4: Intersection Aerial and Photos 25
Exhibit IV: Existing Traffic 28
Table V.1: AM and PM Peak Trip Rates and Trip Generation 29
Table V.2: Average Daily Trip Rates and Trip Generation 29
Exhibit V.1: Site Trip Distribution 30
Exhibit V.2: Site Trips 31
Exhibit V.A: Future Traffic Volumes WITHOUT the Project 32
Exhibit V.B: Future Traffic Volumes WITH the Project 33
Exhibit VI.1: Level of Service Table - RTC 35
Exhibit VI.2: Intersection Level of Service Definitions 37

List of Appendices

APPENDIX A: PRELIMINARY SITE LAYOUT FOR SPANISH SPRINGS – CALLE DE LA PLATA

APPENDIX B: 2013 WASHOE COUNTY TRAFFIC COUNTS

APPENDIX C: INFORMATION REPORT: TRIP GENERATION BY ITE

APPENDIX D: TRIP GENERATION RATES, PLOTS AND EQUATIONS BY ITE, 6TH EDITION

APPENDIX E: TRIP GENERATION RATES, 9TH EDITION

APPENDIX F: VILLAGE AT THE PEAK TRAFFIC IMPACT STUDY (FEHR & PEERS, AUGUST 2009)

APPENDIX G: INTERSECTION CRASH DATA

APPENDIX H: TURNING MOVEMENT COUNT: PYRAMID HIGHWAY AND POSADA

APPENDIX I: 5TH EDITION RRIF BROCHURE

APPENDIX J: INTERSECTION TURNING MOVEMENT DATA

I. EXECUTIVE SUMMARY

This study evaluates the potential traffic impacts of the proposed residential subdivision Master Plan Amendments, Zoning Amendment and Tentative Map in northern Spanish Springs on the nearby roadway system.

PROJECT DESCRIPTION

The subject property is located on the northeast quadrant of the Calle de la Plata and Pyramid Highway intersection in Washoe County, Nevada. The proposed zoning is for residential development of a density of 3.0 dwelling units per acre.

PROJECT ACCESS

One primary entrance is proposed to serve the subdivision and is to be located on Calle de la Plata. Direct access to Pyramid Highway is under discussion with the adjacent land owners, but is not proposed at this time. A secondary emergency access is proposed on Calle de la Plata via a cross-access agreement with the property to the east of the subject property.

STUDY INTERSETIONS AND SCENARIOS

The following study intersections were analyzed, consistent with previous studies of the site:

- Calle de la Plata / Pyramid Highway
- Calle de la Plata / Project Primary Access

AM and PM weekday peak hour intersection level of service was analyzed for the following conditions:

- Existing Conditions
- 2016 Background Conditions
- 2016 Background plus Project

Daily roadway segment level of service was analyzed for the following conditions:

- Existing Conditions
- 2016 Background Conditions
- 2016 Background plus Project

EXISTING CONDITIONS

AM and PM weekday peak hour intersection turning movement volumes were collected and used to analyze intersection level of service. The Calle de la Plata/Pyramid Highway intersection currently operates at LOS F during the AM and PM peak hours.

PROJECT CONDITIONS

The estimated trip generation for the proposed development is 1,675 daily, 131 AM peak hour, and 177 PM peak hour vehicle trips. Internal capture and pass-by reductions are not applicable to the proposed use and have therefore been excluded in the trip generation estimate.

EXISTING PLUS PROJECT CONDITIONS

The Calle de la Plata / Pyramid Highway intersection operates at LOS F under existing plus project conditions without planned regional roadway improvements. The Calle de la Plata / Primary Access intersection will operate at acceptable levels of service with side-street stop controls.

REGIONAL IMPROVEMENTS

The following planned regional roadway improvements are listed in the RTP:

- Pyramid Highway – Widen from two lanes to four lanes, from Sunset Springs Lane to Calle de la Plata

The Spanish Springs Area Plan also recommends a traffic signal at the Calle de la Plata / Pyramid Highway intersection.

With the planned regional roadway improvements, the Calle de la Plata / Pyramid Highway intersection is expected to operate at LOS C and D during the AM and PM peak hours, respectively.

The Pyramid Highway and Calle de la Plata daily traffic volumes near the project site were compared to the Regional Transportation Commission's (RTC) daily level of service thresholds. The roadway segments will operate at LOS D or better with the planned roadway improvements.

The RTP avoids recommending specific intersection improvements, recognizing that the specific intersection configurations should be determined at the time when the corridor is improved and actual turning movements are known. The RTP project listed above assumes that intersection upgrades will be accomplished with the widenings.

A. Purpose of Report and Study Objectives

In order for Washoe County to operate and maintain the roadway network as safely and efficiently as possible, it is necessary to evaluate the impact of development generated traffic. Such impact can be identified by conducting a Traffic Impact Study (TIS). A Traffic Impact Study was completed by Fehr and Peers in August of 2009 at the time of the Zoning Amendment application for what was at that time called Village at the Peak. This study focuses on the impacts of a larger area consisting of single family residential, neighborhood commercial and industrial land uses. **The proposed use of 3.0 residents per acre single-family residential is a decrease from the projected traffic from the current zoning.**

1. Washoe County

A traffic impact report is required whenever the proposed development project will generate 80 or more weekday peak hour trips as determined using the latest edition Institute of Transportation

Engineers (ITE) trip generation rates or other such sources as may be accepted by the Washoe County Engineering. Projects with less than 200 peak hour trips may not need to perform an impact analysis for future years.

The proposed development will generate 177 PM peak hour trips. Due to this estimate of peak hour trips, a Traffic Impact Report is required for the proposed development. Impact analysis for future years is not required by Washoe County.

2. *Nevada Department of Transportation*

Traffic studies are required by the Department to adequately assess the impact of a proposed development on the existing and/or planned highway system. The developer will have the primary responsibility for assessing the traffic impacts associated with a proposed development, with the Department serving in a review and approval capacity. The traffic study will be the responsibility of the applicant and must be prepared and sealed by a Nevada Licensed Engineer who has expertise in traffic studies and transportation planning. Upon receipt of a draft traffic study the NDOT Traffic Engineering Division will review the study data (sources, methods and findings) and will respond with written comments. The developer and engineer will then have an opportunity to incorporate necessary revisions prior to submitting a final report. The NDOT Traffic Engineering Division then must approve the final report before an application will be accepted. All previous traffic studies that are more than two (2) years old at the time that construction commences on the project will require updating. This may be waived if conditions have not significantly changed.

More specifically, traffic studies will be required for the for residential subdivision developments that, although not directly accessing the Department's rights-of-way or highway, will have significant impact to the traffic on an existing highway.

Because this development will immediately access Pyramid Highway after exiting onto Calle de la Plata, this report will be provided to NDOT for a cursory review.

B. CONCLUSIONS & RECOMMENDATIONS

1: This project will generate
   131 morning peak hour trips
   177 evening peak hour trips
   1,675 average weekday trips
2: The number of trips generated by the proposed residential use is a decrease from the number of trips proposed with the current mixed use zoning. The proposed residential use is only 58% of the currently zoned uses (2,888 trips).
3: This analysis demonstrates adequate regional roadway improvements are planned to accommodate regional growth. Acceleration of the planned improvements is a viable option since regional projects are re-evaluated and prioritized every two years.
4: Although intersection improvements are planned by the RTC, the installation of a left turn lane at the Calle de la Plata / Pyramid Intersection should be considered with this development.
5: The proposed development will have no negative impact on the surrounding road network or intersections.
6: The proposed development will have no measureable impact on the level of service of the adjacent segments or intersections, when regional improvements (traffic signal at Calle de la Plata) are completed.
7: The adjacent roadways are currently operating under capacity.
8: When the new driveway is constructed, it is further recommended that curb access ramps be installed and care be taken to insure ADA slopes to match the existing sidewalk are maintained.
9: The project intersections must be designed to provide adequate sight distances, in conformance with Wahoe County standards.
10: All signs and pavement markings associated with the development must conform to the MUTCD or Washoe County requirements.

C. Conformance with Spanish Springs Vision and Character Statement

Policy SS.17.2 of the Spanish Springs Area Plan requires compliance with several traffic related criteria. Our response based on the traffic analysis follows the text for each specific item.

b. A traffic analysis has been conducted that clearly identifies the impacts to the adopted level of service with the (unincorporated) Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

RESPONSE: This study demonstrates that acceptable levels of service can be maintained on the regional roadway system.

e. If the proposed intensification will results in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

REPONSE: This study discusses the potential impacts and timing of improvements outlined in the RTC plan as well as developer financed improvements.

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in the Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

RESPONSE: The improvements necessary to accommodate regional traffic flows and this project can be timed appropriately to avoid adverse traffic impacts.

II. INTRODUCTION

A. SITE AND STUDY AREA BOUNDARIES

The proposed development is located on approximately 58.5 acres in the Spanish Springs Planned area within Washoe County. The project address is 350 Calle de la Plata. The parcel number is 534-571-01 and is situated in Section 23 of Township 21, Range 20. The existing topography is gently sloping in uniform slope toward the northwest.

The project is within the jurisdictional boundaries of Washoe County, in Spanish Springs. The proposed development is located just east of, but does not abut, State Road 445 (Pyramid Highway) and north of Calle de la Plata. The existing site is undeveloped and bordered by residential to the north and east as well as undeveloped areas and commercial uses to the west.

The existing zoning is neighborhood commercial (NC), industrial (I) and suburban residential (SR). **This report is being prepared in conjunction with a Master Plan Amendment Application, a Rezoning Application and a Tentative Map Application.** The proposed zoning is residential with a development density of 3.0 dwelling units per acre.

There are several existing roads and driveways in the vicinity of the subject parcel. State Road 445 (Pyramid Highway) is located west of the subject property. Calle de la Plata will serve as the primary access for the development. The existing road, Dykes Court, is located south of Calle de la Plata and is in the alignment of the proposed primary access point to the development. Direct access to Pyramid Highway is not proposed at this time but is being discussed as an alternative. If such access were to be pursued it would be in the alignment of and at the existing access point of Partel Road (called Sha Neva Road). The next access to Calle de la Plata is Echaniz Court, north side, located approximately 1,900 feet east of the proposed primary access point.

The study limits for this Traffic Impact Study are limited to the proposed primary access point at Calle de la Plata and the existing intersection of Calle de la Plata and Pyramid Highway.

An Aerial Image with existing roadways labeled is shown in Exhibit II.A for reference.

Exhibit II.A: Aerial Image and Existing Roadways

Source: Google Earth Imagery Date 04/29/14

B. EXISTING AND PROPOSED SITE USES AND DENSITIES

The proposed development, as shown on the site plan, is a residential subdivision with a density of 3.0 dwelling units per acre. The average proposed lot size is 7,000 – 8,000 SF. The balance of the site is proposed as common area to serve the drainage and recreation needs of the development. The proposed on-site roadways are public roads. Due to the lot size of less than 0.5 acre, standard roadway section B as shown in the Washoe County standard drawing W-1.2 is applicable to this site. The proposed right-of-way is 42' or 52' throughout the development.

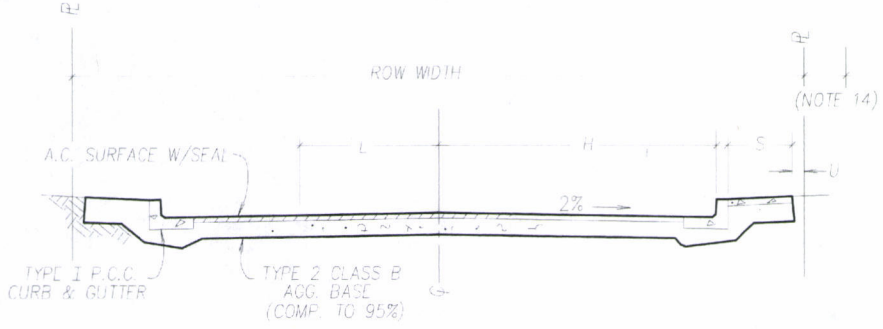
The use of a standard cul-de-sac, per Washoe County standard drawing W-7, is required at any end sections of roadway. This may be used as a temporary feature for phased development or as a permanent paved turnaround as needed for site design.

The proposed development currently has one access point from Calle de la Plata. While the access to SR 445 is under discussion, no agreement for access has been reached at the time of this report. A secondary, emergency access point may be necessary for a development of this size. The Washoe County standard drawing W-1.5 provides for a Permanent Emergency Access Road that can be used with the approval of the County Engineer. Furthermore, a cross-access agreement is under discussion with the property owner to the east. This is the recommended secondary access.

The standard drawings are shown for reference in Exhibit II.B.

SECTION 110.436.25-2: ROADWAY SECTIONS – B

GENERAL APPLICATIONS: URBAN AREAS, SUBURBAN AREAS, LOT SIZES LESS THAN 0.5 AC.



ROW	H	S	U	L	B	PL	ADT MAX PER 2 TRAVEL LANES	REMARKS
52	20	5	0.5	12	4	0	7300	COLLECTOR
42	16	4	0.5	11	0	2	1000	LOCAL

NOTES

1. ALL WIDTHS ARE IN FEET.
2. H IS MEASURED TO THE FRONT FACE OF CURB.
3. L IS TRAVEL LANE; S IS SIDEWALK; B IS BICYCLE LANE; PL IS MAX. NUMBER OF PARKING LANES ALLOWED; ROW IS RIGHT OF WAY; ADT IS AVERAGE DAILY TRAFFIC.
4. ADT REPRESENTS THE DESIGN VOLUME FOR A TWO LANE FACILITY.
5. BICYCLE LANE SHALL BE PROVIDED IN ACCORDANCE W/THE BICYCLE AND PEDESTRIAN ELEMENT OF THE REGIONAL TRANSPORTATION PLAN AND TO THE SATISFACTION OF THE COUNTY ENGINEER.
6. STRUCTURAL SECTIONS SHALL BE DETERMINED BY GEOTECHNICAL ENGINEERING DESIGN BUT IN NO CASE SHALL BE LESS THAN 4" A.C. OVER 6" GRAVEL BASE FOR COLLECTOR STREETS AND 3" A.C. OVER 6" GRAVEL BASE FOR LOCAL STREETS.
7. ALL CURB AND GUTTER IS MONOLITHIC CONC. AND L SHAPED PER STANDARD DETAIL.
8. SIDEWALK AREA IS CONC. BOTH SIDES FOR COLLECTORS, ONE SIDE FOR LOCALS. ALTERNATE SIDEWALK LOCATIONS/CONFIGURATIONS MUST BE APPROVED BY THE COUNTY ENGINEER.
9. ALL A.C. SURFACES SHALL BE SEALED IN ACCORDANCE WITH WASHOE CO. STANDARDS.
10. RESIDENTIAL DRIVEWAY ACCESS NOT ALLOWED TO STREETS ON WHICH 10YR. DESIGN ADT EXCEEDS 2000.
11. DESIGN OF IMPROVEMENTS TO BE DONE IN ACCORDANCE WITH ARTICLES 420 & 436 OF WASHOE COUNTY DEVELOPMENT STANDARDS AND DESIGN GUIDELINES.
12. ALL CONSTRUCTION IS TO BE DONE TO CURRENT WASHOE CO. STANDARDS & SPECIFICATIONS.
13. SLOPE EASEMENTS MAY BE REQ'D IN CERTAIN TERRAIN TO ACCOMMODATE THE ROADWAY SECTION.
14. MIN. 7.5' PUBLIC UTILITY/TRAFFIC CONTROL SIGNAGE/PLOWED SNOW EASEMENT IS REQ'D ON BOTH SIDES OF ROW.

NO.	REVISED	DATE
6	changed adt	12/05sw
3	Sub/Notes	1/94vp
4	Corr "U"	2/94/vp
5	Save As W-2.dwg	10/01vp

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

ROADWAY SECTIONS (B)

GENERAL APPLICATIONS

URBAN AREAS/SUBURBAN AREAS

LOT SIZE: LESS THAN 0.5 ACRE

SECTION: WASHOE

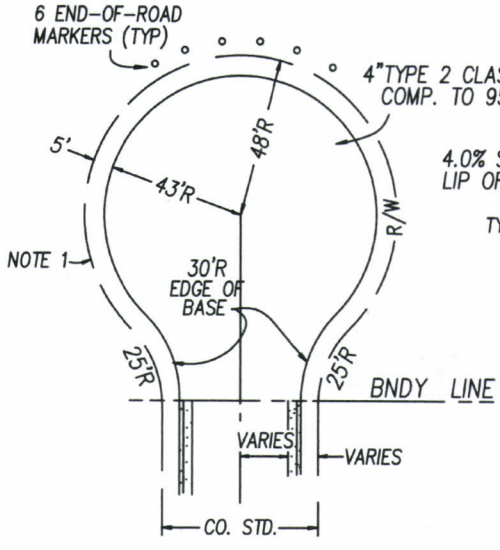
DRAWING NO: W–1.2

DATE: 2/93vp PAGE: 2

STAR Consulting

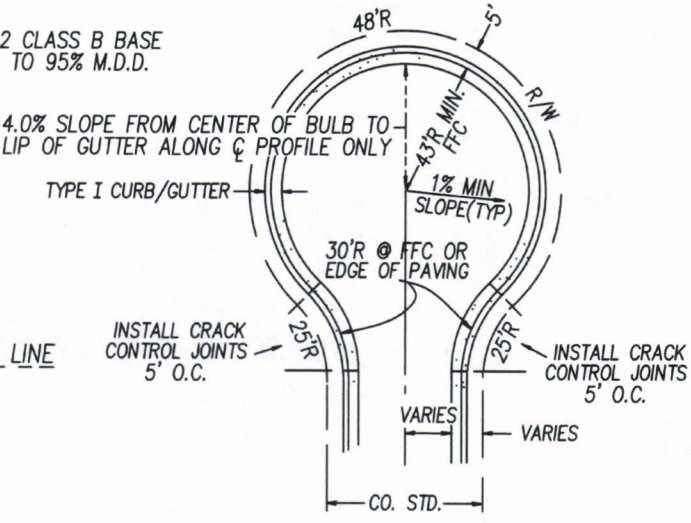
439 W. Plumb Lane Reno, NV 89509

Phone: (775) 352-4200 Email: erin@starconsultingnv.com



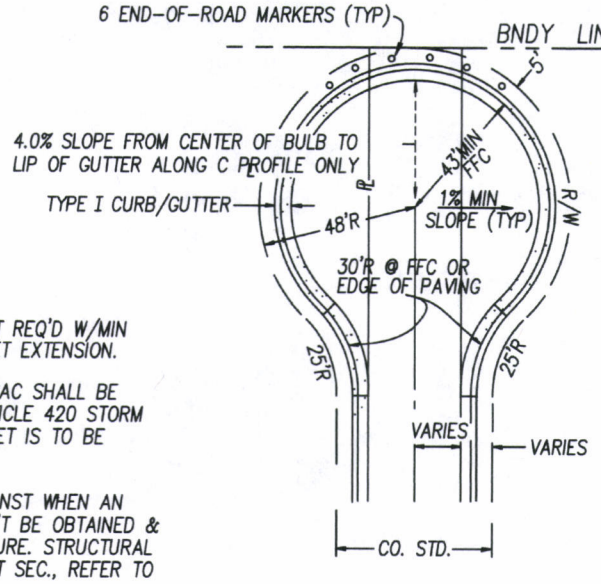
UNPAVED TEMPORARY

N.T.S.



PAVED PERMANENT

N.T.S.



PAVED TEMPORARY

N.T.S.

NOTES

1. TEMP TURNAROUND EASEMENT DOCUMENT REQ'D W/MIN 48' RADIUS TO BE ABANDONED W/STREET EXTENSION.
2. DRAINAGE OF UNPAVED TEMP CUL-DE-SAC SHALL BE CONSISTANT W/CO. STDS INCLUDING ARTICLE 420 STORM DRAINAGE & TO BE USED ONLY IF STREET IS TO BE EXTENDED WITHIN 1 YR.
3. PAVED TEMP TURNAROUND SHALL BE CONST WHEN AN OFF-SITE TEMP TURNAROUND EASE CAN'T BE OBTAINED & STREET IS TO BE EXTENDED IN THE FUTURE. STRUCTURAL SEC. OF TURNAROUND TO MATCH STREET SEC., REFER TO CODE 111.444 FOR CONSTRUCTION.
4. PAVED TEMPORARY TURNAROUND IS REQUIRED ON ALL FUTURE THROUGH-STREETS THAT FRONT LOTS, OR EXTEND MORE THAN 150 FT BEYOND THE NEAREST INTERSECTING STREET.

NO.	REVISED	DATE
1	REDRAWN	5/94 vp
2	4%-NOTE 4	10/96 vp
3	RADII	9/97 vp
4	Profile note	5/99vp

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

CUL-DE-SAC

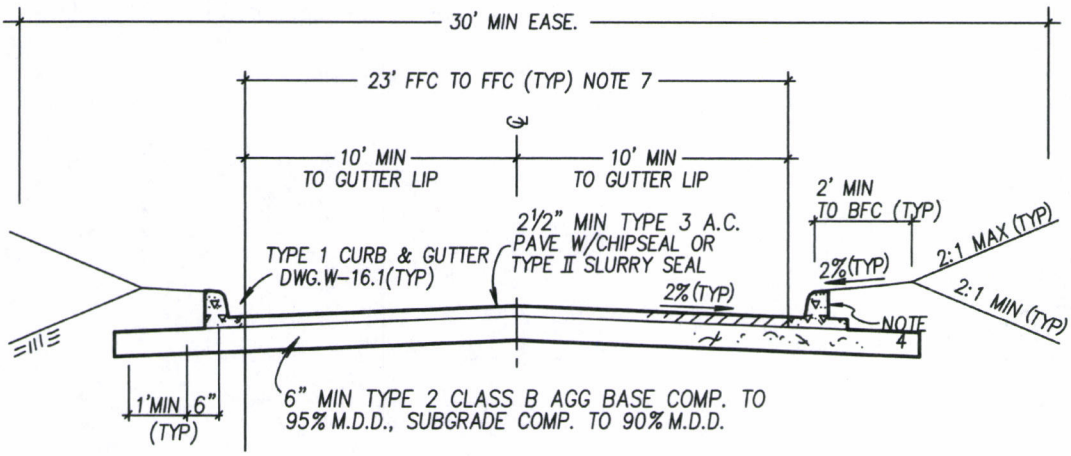
SECTION: WASHOE

DRAWING NO: W-7

DATE: 5/94 vp PAGE: 18

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com



TYP. SECTION

N.T.S.

NOTES

1. ALL CONST SHALL CONFORM TO LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONST., THE LATEST STANDARD DETAILS & ALL OTHER APPLICABLE CODES.
2. ONE 30"x30" SIGN SHALL BE PLACED ON EACH END OF EMERGENCY ACCESS ROAD & SHALL READ "EMERGENCY VEHICLES ONLY" – "NOT A PUBLIC STREET"
3. ADDITIONAL EASEMENT MAY BE REQ'D AT INTERSECTIONS.
4. BACKFILL FOR A MIN DIST OF 2' BEHIND CURB SHALL BE COMPACTED TO 90% M.D.D. & SHALL BE EITHER TYPE 2 CLASS B BASE OR CLASS A BACKFILL.
5. ADDITIONAL EASE & ROADWAY WIDTH MAY BE REQ'D BY COUNTY ENGINEER.
6. ALL GATES & PAVEMENT WIDTHS SHALL BE TO THE SATISFACTION OF COUNTY ENGINEER & LOCAL FIRE DEPT.

NO.	REVISION	DATE
1	REDRAWN	7/94 vp
2	TYPE 1 C&G	10/04 smw

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

PERMANENT
EMERGENCY ACCESS ROAD

TO BE USED ONLY WITH THE APPROVAL OF THE COUNTY ENGINEER

SECTIONS WASHOE

DRAWING NO. W-1.5

DATE 10/04 | PAGE 5

STAR Consulting

439 W. Plumb Lane Reno, NV 89509

Phone: (775) 352-4200 Email: erin@starconsultingnv.com

C. EXISTING AND PROPOSED USES IN VICINITY OF SITE

The Washoe County GIS provides access to vicinity maps which show the existing uses and zoning in the vicinity of the subject parcel.

The vicinity maps from the Washoe County GIS are shown for reference in Exhibit II.C.

Exhibit II.C.1: Washoe County GIS – Aerial Photo in Vicinity of Site

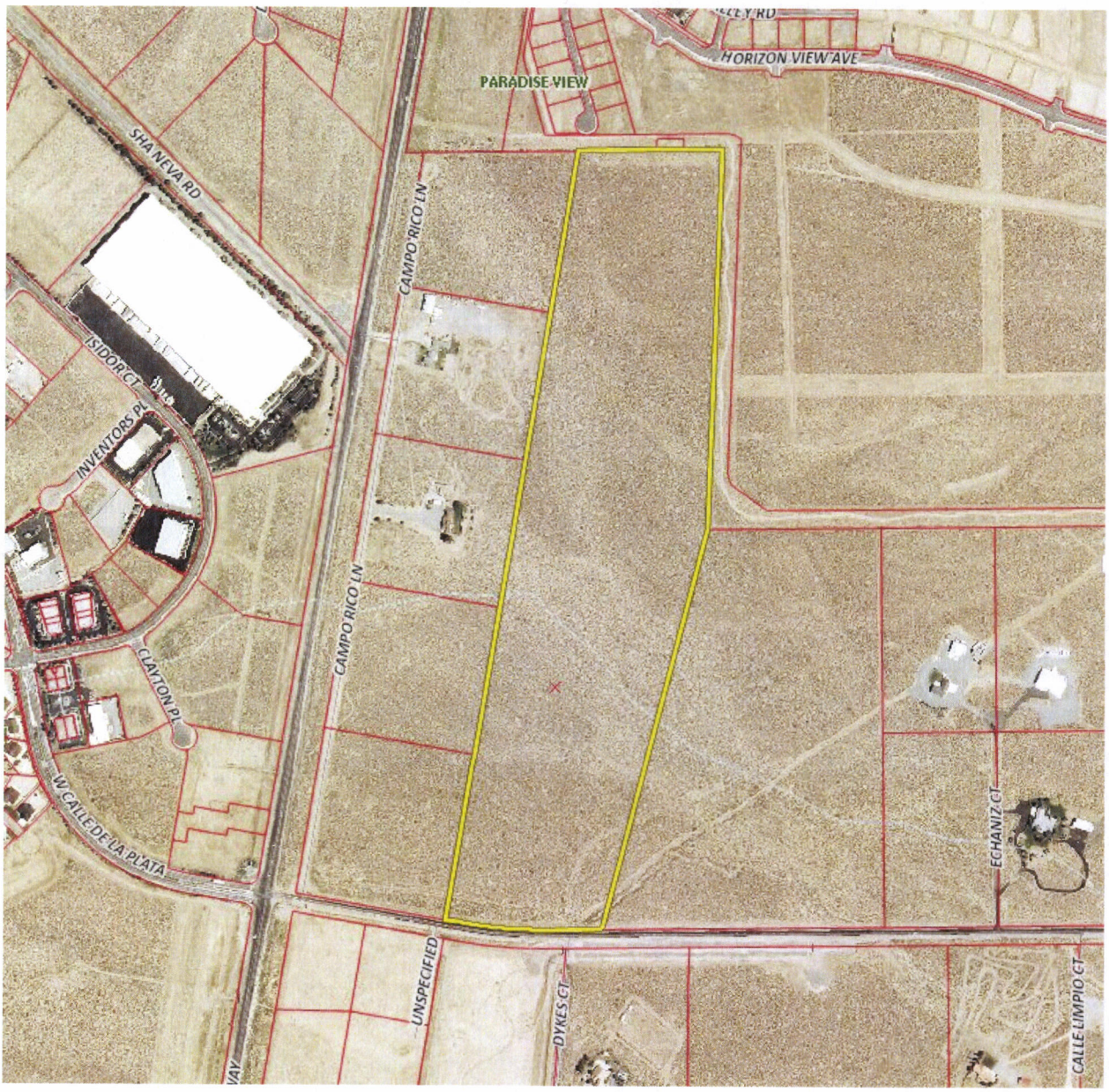


Exhibit II.C.2: Washoe County GIS – Topography in Vicinity of Site

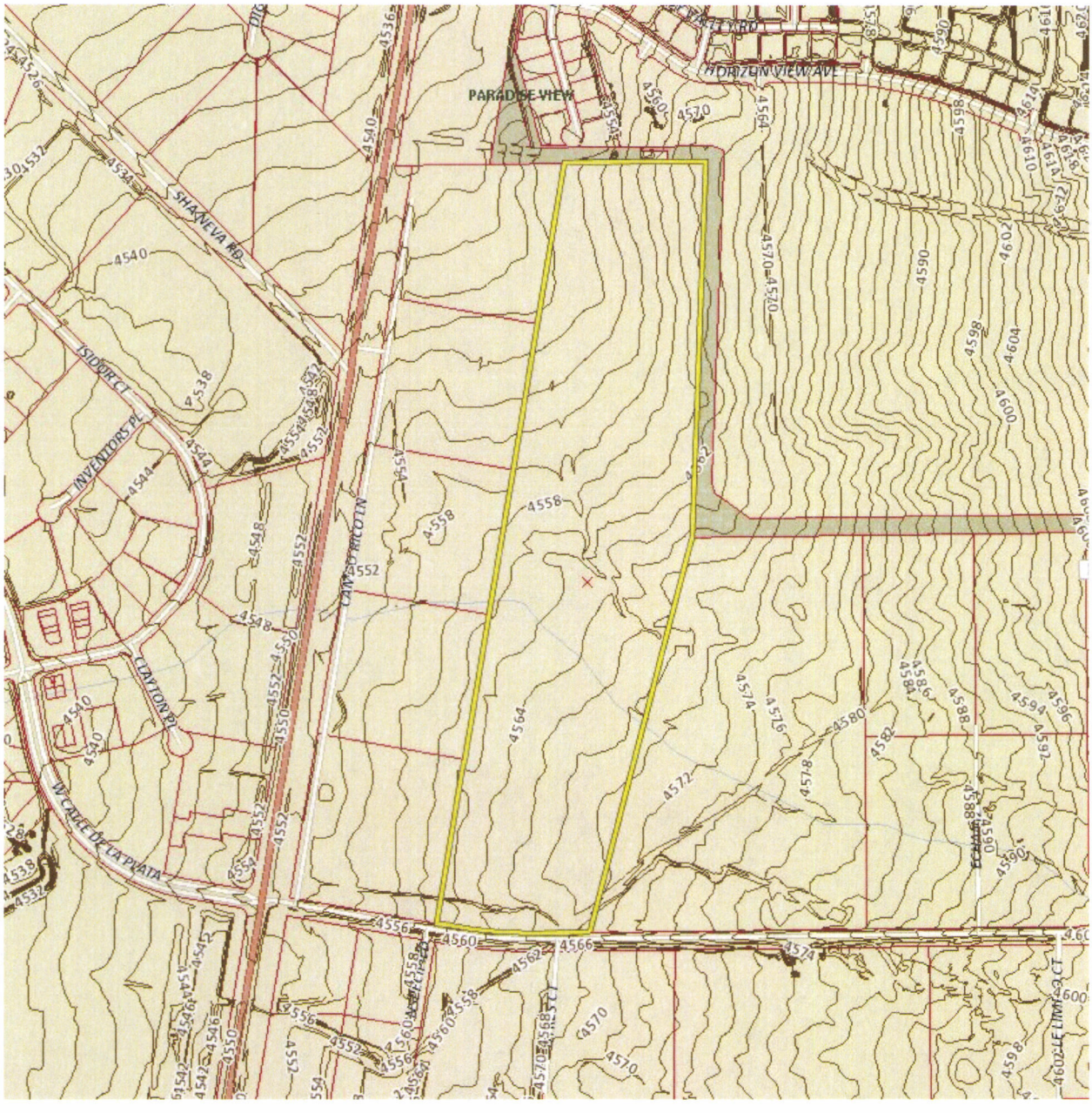
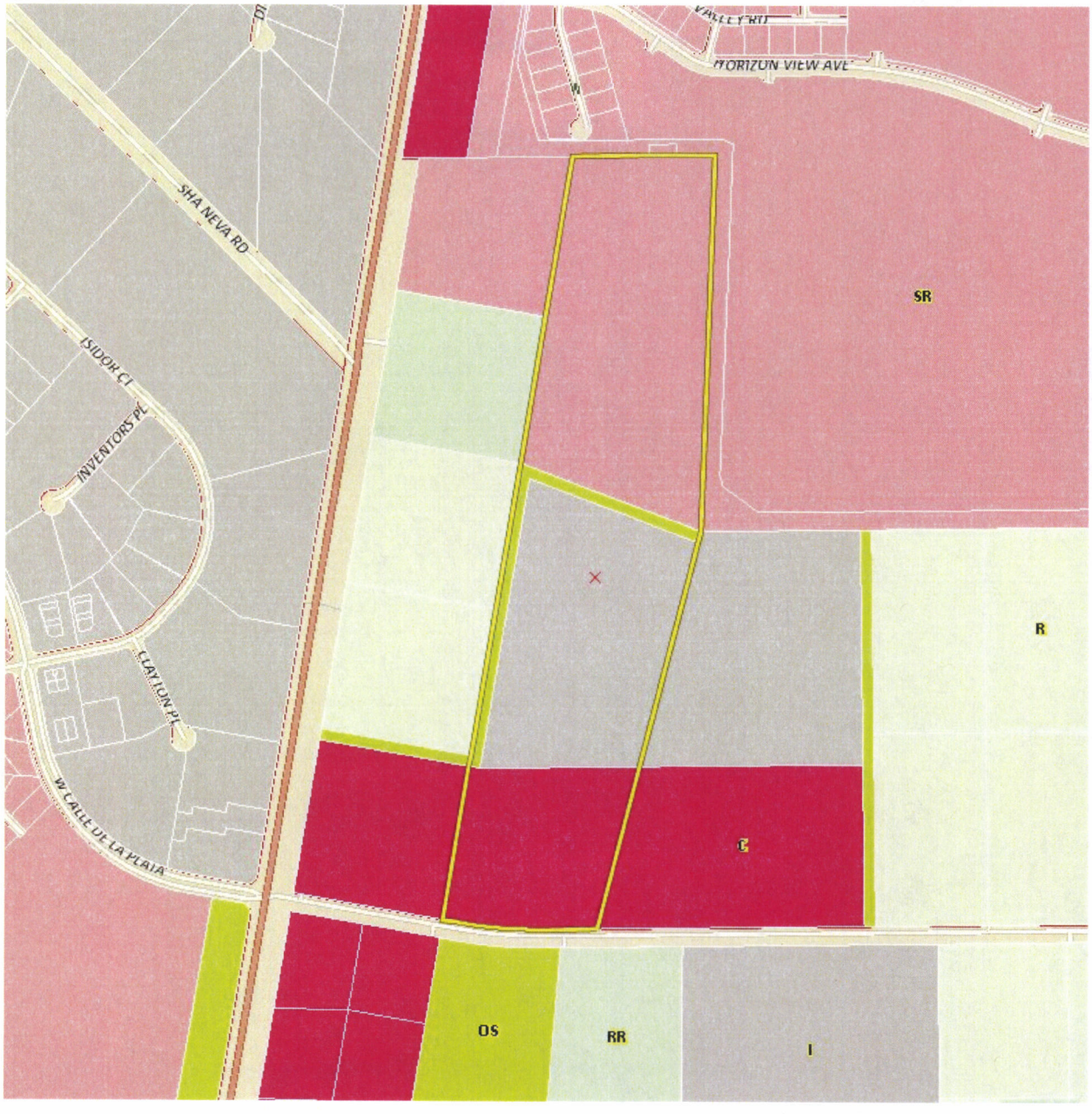


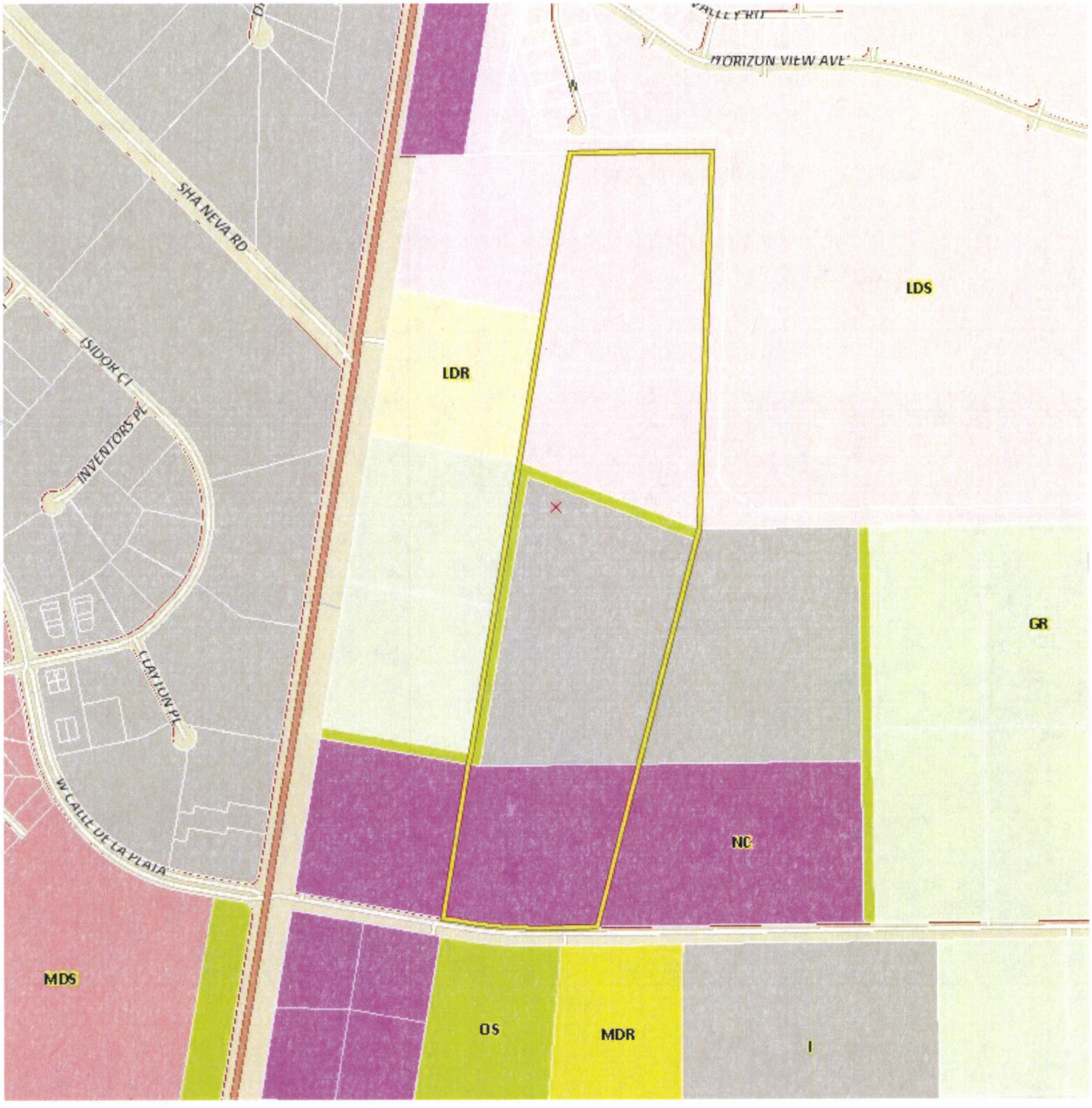
Exhibit II.C.3: Washoe County GIS – Master Plan Designation in Vicinity of Site



STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

Exhibit II.C.4: Washoe County GIS – Existing Zoning in Vicinity of Site



Trip Estimate for Current Zoning:

Residential: 718 trips
Industrial: 972 trips
Commercial: 1,198 trips
2,888 currently zoned daily trips

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

D. Existing and Proposed Roadways and Intersections

Existing roadways, intersections, geometrics, traffic control devices and improvements proposed by governmental agencies are planned from the current year through 2035. No publicly funded capital improvement projects are planned for the project vicinity until the 2023-2035 project plans. No further details are available for the projected improvements.

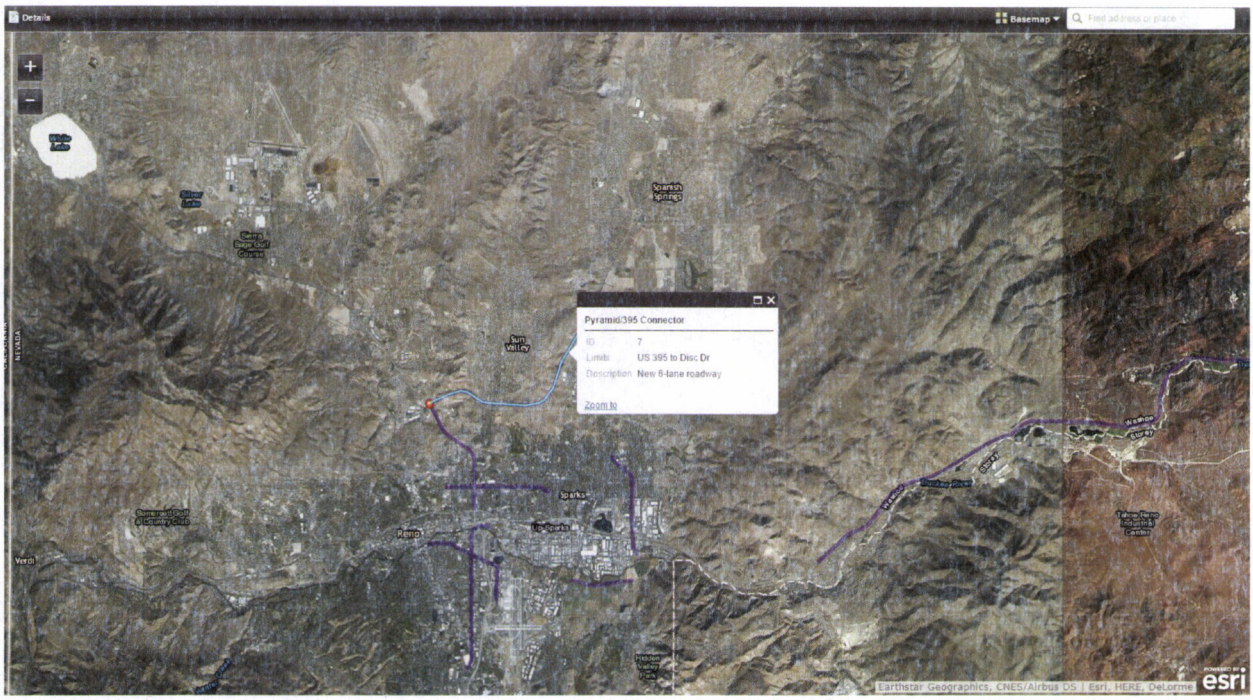
The project maps are shown in Exhibit II.D.

As shown in Exhibit II.D.1, the plans for Pyramid Highway for project years 2013-2017 are limited to south of US 395.

Exhibit II.D.1: Capital Improvement Project Plans 2013-2017

As shown in Exhibit II.D.2, the plans for Pyramid Highway for project years 2018-2022 are limited to south of US 395.

Exhibit II.D.2: Capital Improvement Project Plans 2018-2022



As shown in Exhibit II.D.3, the plans for Pyramid Highway for project years 2023-2035 include the Calle de la Plata intersection.

Exhibit II.D.3: Capital Improvement Project Plans 2023-2035

1. *STATE ROAD 445 (PYRAMID HIGHWAY)*

Pyramid Highway is a north-south NDOT facility that runs from Interstate 80 (I-80) in the south to Pyramid Lake in the north. Pyramid Highway is a two-lane roadway with posted speed limits of 55-65 MPH in the vicinity of the subject property. The RTP classifies Pyramid Highway as a High Access Control (HAC) Arterial south of Calle de la Plata and a Moderate Access Control (MAC) Arterial north of Calle de la Plata.

Existing R/W Width:	175'
Future R/W Width:	175'
Number of Thru Lanes:	2 (NB & SB)
Turn Lanes:	RTL (MB&SB)
	No Acceleration or Deceleration lanes
Posted Speed Limit:	55 MPH
AADT:	10,500
Medians:	No
On-street Parking:	No
Sidewalks:	No
Bike route:	No

Nevada Department of Transportation publishes traffic volumes for State Road 445. Traffic count station 0311032 is located .375 mi north of Sunset Springs Road, south of Calle de la Plata. This station indicates a consistent traffic count from 2008 to 2013 of approximately 10,500 trips. The traffic volume data has been included in Appendix B of this study.

2. *CALLE DE LA PLATA*

Calle de la Plata is a four lane roadway west of Pyramid Highway and a two lane roadway east of Pyramid Highway. The RTP lists Calle de la Plata as a Low Access Control (LAC) Collector west of Pyramid Highway.

Existing R/W Width:	80'
Future R/W Width:	80'
Number of Thru Lanes:	2
Turn Lanes:	0
Posted Speed Limit:	40 MPH
AADT:	3,900
Medians:	No
On-street Parking:	No
Sidewalks:	No
Bike route:	No

TRANSIT, BICYCLE AND PEDESTRIAN FACLITIES

No existing or planned transit routes access Pyramid Highway or Calle de la Plata in the vicinity of the project. Bike lanes and sidewalks are present on Calle de la Plata west of Pyramid Highway.

Exhibit II.D.4: Intersection Aerial and Photos

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

Calle de la Plata looking east, toward subject property

Calle de la Plata looking west, toward Pyramid Highway

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

III. SITE PLAN REQUIREMENTS

Provide a scaled site plan, including building locations, driveways, and internal traffic and parking areas. Identify all points of access, existing and proposed, and tie to existing highway engineering stationing. This shall include all access points both adjacent to and on the opposite side of the highway for the length of the proposed development. The site plan shall show the locations and dimensions of all proposed and existing roadway accesses, highway traffic lanes, medians, pavement striping and markings, and signs involved in the analysis and proposal. The site plan shall also show the existing and proposed facilities for pedestrian traffic. The site plan shall include provisions for service and delivery vehicle traffic generated by the site. Access points expected to be used by service vehicles shall have turning paths sufficient to allow service vehicles to enter and exit the site without encroaching upon opposing lanes, curbed areas or unpaved areas.

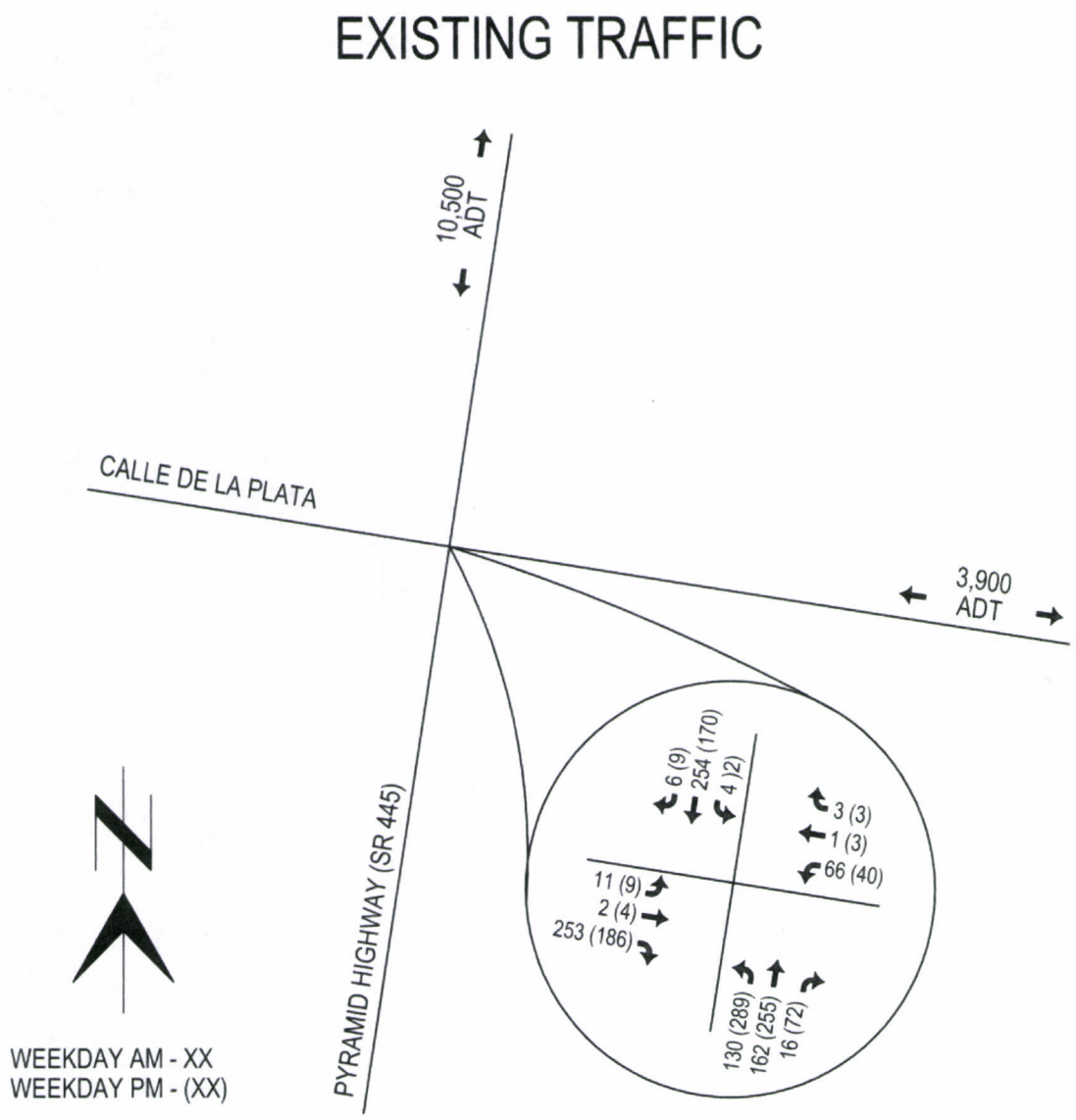
The Preliminary Site Layout is included in Appendix A of this report for reference. At the time of this report, the Map Amendment and Rezoning Application for this project is under review with Washoe County Community Development.

IV. EXISTING TRAFFIC COUNTS

Intersection turning movement counts were collected at the Calle da la Plata/ Pyramid Highway intersection during the AM (7:00AM to 9:00AM) and PM (4:00PM to 6:00PM) peak periods in August 2008 for the previously completed analysis. Nothing significant has changed in the vicinity or collected data to indicate that new traffic counts would reflect anything different from previously reported. For that reason, the previous data has been maintained for this report. The existing volumes, shown in Exhibit IV, were used to analyze the level of service at the study intersection. Detailed intersection movement data is provided in Appendix J.

The Calle de la Plata / Pyramid Highway side street approach operates at LOS F during the AM and PM peak hours. The overall intersection is shown to operate at LOS A.

Exhibit IV: Existing Traffic



STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

V. TRIP GENERATION

The future traffic from the project is estimated using the trip rates contained in the Institute of Traffic Engineers' Trip Generation, 9th Edition, as well as additional studies, data and estimations. All referenced ITE material is provided in the Appendix of this report. The number of trips generated is the mathematical product of land use intensity and the trip generation rate. The result is the total number of one-way trips (not round trips) expected to be generated by the project. These trips represent the number of vehicles estimated to enter and leave the project. All of the estimates are based on the number of dwelling units (homes). The ITE land use code 210 is specific to the single-family detached residential home. The ITE estimated 9.57 ADT per dwelling unit, 1.01 PM Peak Hour trips per dwelling unit and 0.75 AM Peak Hour trips per dwelling unit.

It should be noted that the proposed action is a zoning amendment, and as this study analyzes the potential impacts results from an amendment, trip generation for the existing zoning should be subtracted to show the difference in traffic levels. However, because the existing zoning is more intense from a traffic perspective, that calculation would result in negative intersection movements. Alternatively, this analysis is showing the impact of the residential development regardless of the existing zoning and evaluating the impact of that development without a credit for the zone amendment.

Based on the above trip generation rates, the AM and PM peak trip generation is estimated as shown in Table V.1.

The average daily trips are shown in Table V.2.

Table V.1: AM and PM Peak Trip Rates and Trip Generation

Land Use	Unit	No. Units	ITE Categ.	AM Peak Trips Per Unit	PM Peak Trips Per Unit
Single-family	Dwelling Unit	175	210	0.75	1.01

AM Peak Hour Trips:

175 units X 0.75 trips/unit = 131 AM Peak Hour trips
Distribution: Enter: 25% (33 trips)
Exit: 75% (98 trips)

PM Peak Hour Trips:

175 units X 1.01 trips/unit = 177 PM Peak Hour trips
Distribution: Enter: 64% (113 trips)
Exit: 36% (64 trips)

Table V.2: Average Daily Trip Rates and Trip Generation

Land Use	Unit	No. Units	ITE Categ.	Trips/ Unit	ADT
Single-family	Dwelling Unit	175	210	9.57	1,675

SITE TRIP DISTRIBUTION

The estimated trip distribution for the subject property shown in the following exhibits and described as follows:

- 35% to/from the north on Pyramid Highway
- 45% to/from the south on Pyramid Highway
- 20% to/from the west on Calle de la Plata
- 5% to/from the east on Calle de la Plata

Exhibit V.1 demonstrates a summary of the Trip Distribution and Exhibit V.2 demonstrates the Site Trips.

Exhibit V.1: Site Trip Distribution

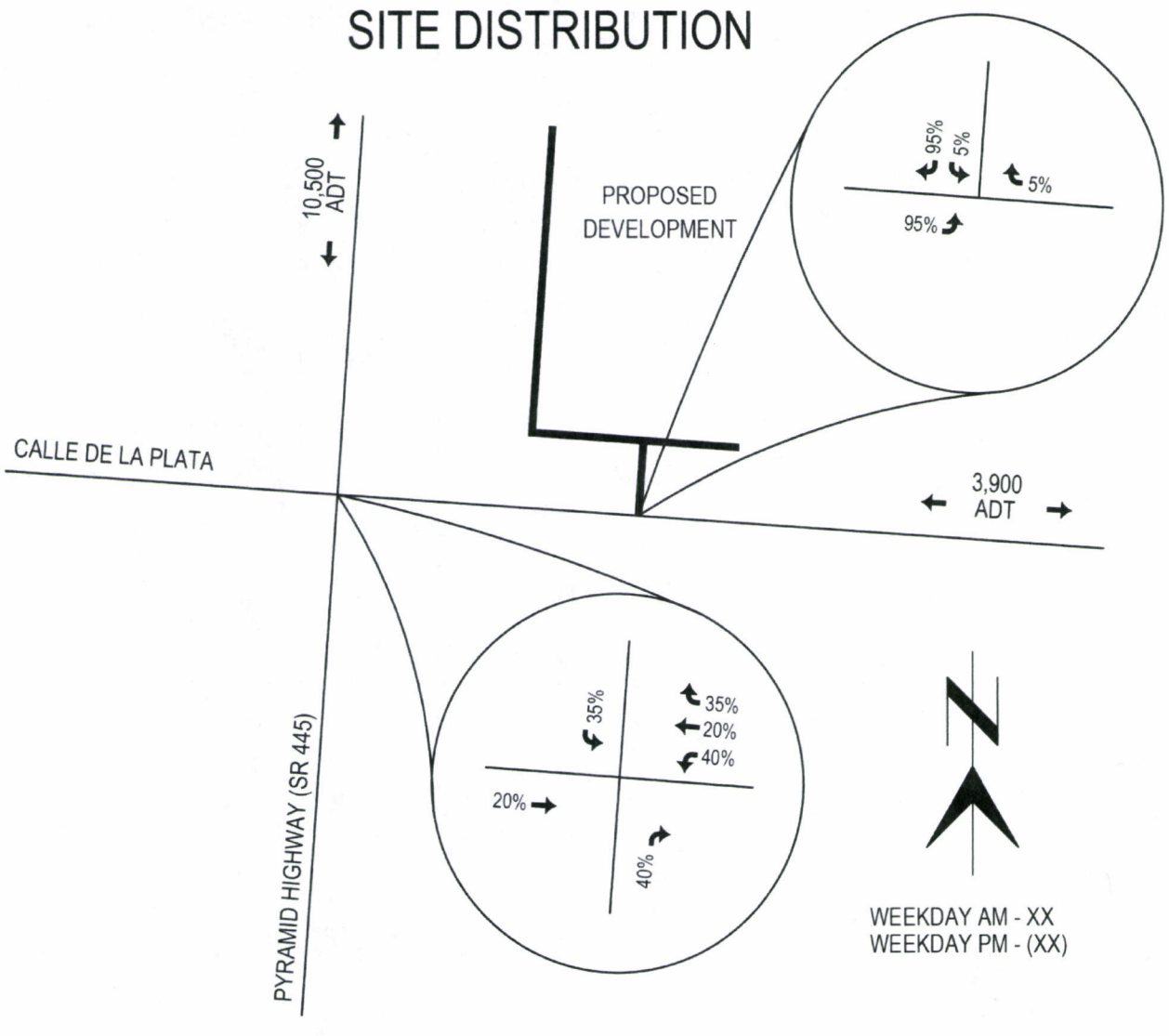
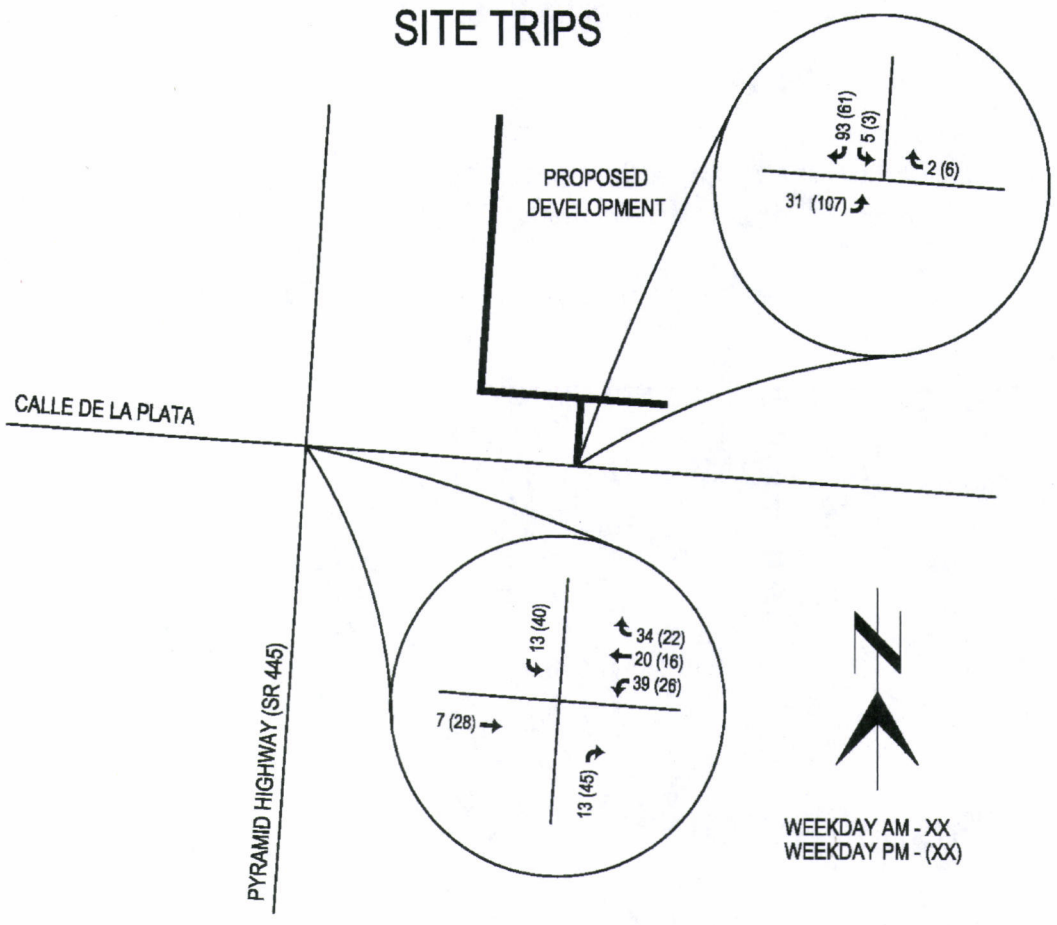


Exhibit V.2: Site Trips



STAR Consulting

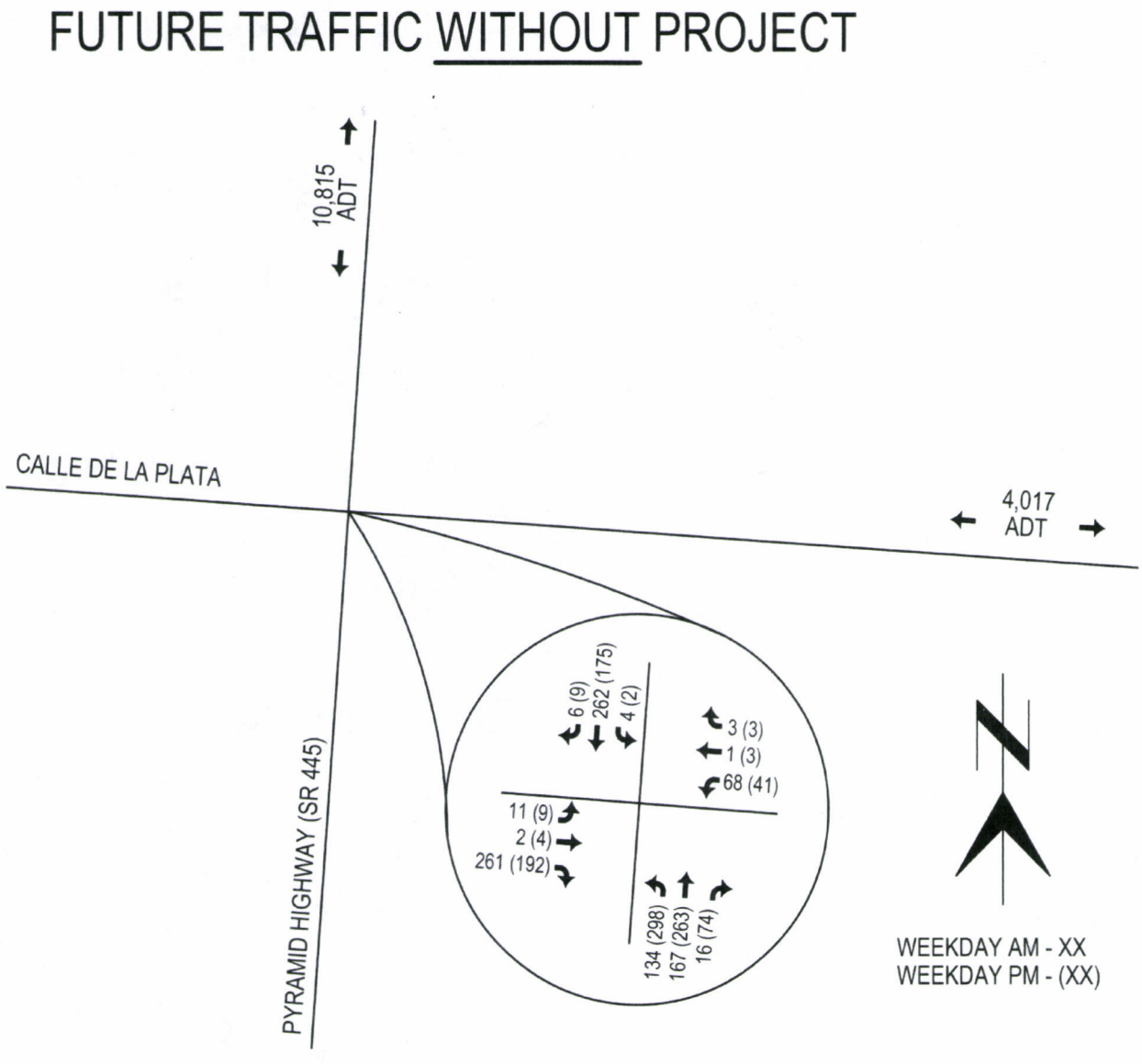
439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

A. Non-Site Traffic Forecasting

Based on the traffic volume counts provided by Nevada Department of Transportation, traffic volumes have remained relatively steady or decreased over the past few years. In order to account for potential economic rebounding, we estimated a conservative 3% increase per year in background traffic for the "no-project" condition.

Exhibit V.A demonstrates a summary of the Future Traffic Volumes without the Project for 2016.

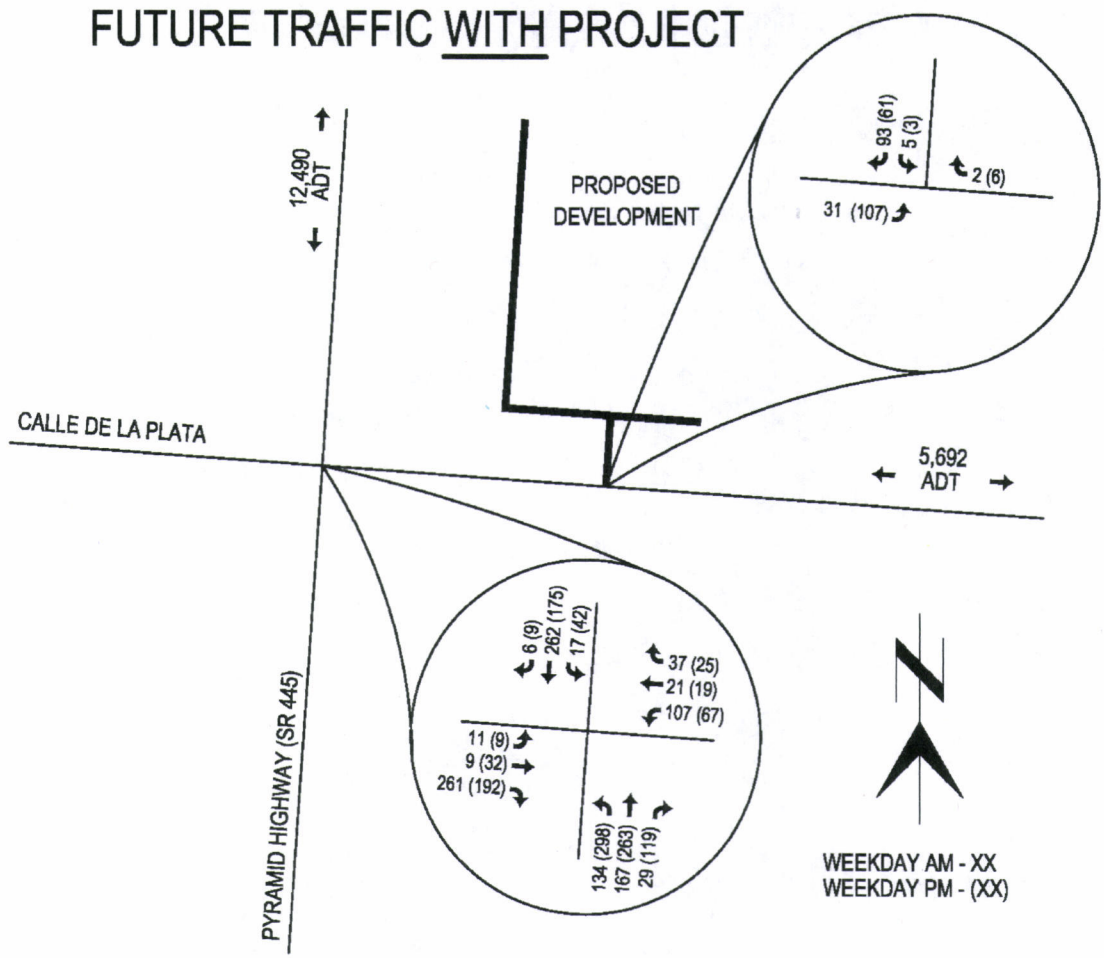
Exhibit V.A: Future Traffic Volumes WITHOUT the Project



B. TOTAL TRAFFIC

Site traffic volumes were added to the background traffic to project total traffic for the horizon year 2016. The resulting peak hour turning volumes at the project intersection and driveways are demonstrated on Exhibit V.B.

Exhibit V.B: Future Traffic Volumes WITH the Project



VI. TRAFFIC IMPACT AND CAPACITY ANALYSIS

A. LEVEL OF SERVICE

Level of service is a qualitative description of how well a roadway or intersection operates under prevailing traffic conditions based on traffic volumes and capacity. A grading system of A through F is utilized. LOS A is free-flowing traffic, whereas LOC F is forced flow and extreme congestion.

ROADWAY ANALYSIS

The following excerpt from the Washoe County Regional Transportation Plan gives a detailed qualitative description of the conditions that correspond to each level of service:

LOS	Condition of Traffic Flow
A	Free flow; individual users are virtually unaffected by the presence of others in the traffic stream
B	Reasonably free flow; the presence of other users in the traffic stream begins to be noticeable
C	Stable flow; each user is significantly affected by the presence of others
D	Approaching unstable flow; users experience poor level of comfort and convenience
E	Unstable flow; users experience decreasing speed and increasing traffic
F	Forced or breakdown flow; users experience frequent slowing and vehicles move in lockstep with the vehicle in front of it

The level of service standards used by the RTC for assessing the need for street and highway improvements at a planning level are shown in in the following table:

Regional Level of Service Standards	
LOS D	• All regional roadway facilities projected to carry less than 27,000 ADT at the latest RTP horizon
LOS E	• All regional roadway facilities projected to carry 27,000 or more ADT at the latest RTP horizon
LOS F	• Plumas Street—Plumb Lane to California Avenue • Rock Boulevard—Glendale Avenue to Victorian Avenue • South Virginia Street—Kietzke Lane to South McCarran Boulevard • Sun Valley Boulevard—2nd Avenue to 5th Avenue • Intersection of North Virginia Street and Interstate 80 ramps
Except as noted above, all intersections shall be designed to provide a level of service consistent with maintaining the policy level of service of the intersecting corridors.	

In previous years and at the time of the previous study for this area, the RTC utilized maximum service flow rates based on the facility type, number of lanes and the average daily traffic on the facility. New software

allows the RTC to perform more a refined analysis of the level of service on the region's roadways. The current method of establishing the level of service on a roadway is based on the ratio of the volume of traffic to the capacity of the road (V/C). This methodology is widely accepted in the industry as a more accurate method of calculating level of service. The following table shows the projected LOS based on the V/C ratio:

LOS	V/C
A	0.00 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90
E	0.91 to 1.00
F	Greater than 1.00

The following table presents the previously accepted level of service thresholds for roadway segments:

Exhibit VI.1: Level of Service Table - RTC

TABLE 2
RTC AVERAGE DAILY TRAFFIC ROADWAY LEVEL OF SERVICE
THRESHOLDS BY FACILITY TYPE

Facility Type	Maximum Service Flow Rate (Daily) for Given Service Level				
Number of Lanes	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway					
4	≤ 28,600	42,700	63,500	80,000	90,200
6	≤ 38,300	61,200	91,100	114,000	135,300
8	51,100	81,500	121,400	153,200	180,400
10	63,800	101,900	151,800	191,500	225,500
Arterial – High Access Control (HAC)					
2	n/a	9,400	17,300	19,200	20,300
4	n/a	20,400	36,100	38,400	40,600
6	n/a	31,600	54,700	57,600	60,900
8	n/a	42,500	73,200	76,800	81,300
Arterial – Moderate Access Control (MAC)					
2	n/a	5,500	14,800	17,500	18,600
4	n/a	12,000	32,200	35,200	36,900
6	n/a	18,800	49,600	52,900	55,400
8	n/a	25,600	66,800	70,600	73,900
Arterial – Low Access Control (LAC)					
2	n/a	n/a	6,900	13,400	15,100
4	n/a	n/a	15,700	28,400	30,200
6	n/a	n/a	24,800	43,100	45,400
8	n/a	n/a	34,000	57,600	60,600
Arterial – Ultra-Low Access Control (ULAC)					
2	n/a	n/a	6,500	13,300	14,200
4	n/a	n/a	15,300	27,300	28,600
6	n/a	n/a	24,100	41,200	43,000
8	n/a	n/a	33,300	55,200	57,400
Arterial – Ultra-Low Access Control (ULAC)					
2	n/a	n/a	6,500	13,300	14,200
4	n/a	n/a	15,300	27,300	28,600
6	n/a	n/a	24,100	41,200	43,000
8	n/a	n/a	33,300	55,200	57,400
Collector – Ultra-Low Access Control (ULAC)					
2	n/a	n/a	7,300	8,500	9,100

* Contact the RTC Planning Department for LOS threshold for collector facilities with access controls other than ultra-low access control.
Source: Washoe County 2040 Regional Transportation Plan, RTC

The Nevada Department of Transportation (NDOT) maintains a policy of LOS D or better on their facilities. Since Pyramid Highway is an NDOT facility, LOS D or better was used as the standard for analysis. Any intersections or roadway segments that degrade from LOS A, B, C, or D to LOS E or F shall be considered an impact.

Based on the above RTC guidelines, the LOS D threshold for Pyramid Highway south of Calle de la Plata is 19,200 trips and north of Calle de la Plata is 17,500. The expected volume on Pyramid Highway with the proposed development and an increase for future regional traffic is 12,595 trips (V/C=0.71).

The expected level of service for Pyramid Highway with the future development is LOS C.

Based on the above RTC guidelines, the LOS E threshold for Calle de la Plata east of Pyramid Highway is 9,100 trips. The expected volume on Calle de la Plata with the proposed development and an increase for future regional traffic is 5,692 trips (V/C=0.63).

The expected level of service for Calle de la Plata with the future development is LOS B.

INTERSECTION ANALYSIS

Signalized Intersections

Signalized intersections were analyzed using the methodology contained in the Highway Capacity Manual. This methodology determines the level of service by comparing the average control delay for all vehicles approaching the intersection to the standard delay thresholds.

Un-signalized Intersections:

Un-signalized intersections (side-street stop-controlled) intersection level of service calculations were conducted using the methods contained in Chapter 17 of the Highway Capacity Manual. The LOS rating is based on the average control delay expressed in seconds per vehicle. At side-street stop-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left-turn movement from the major street, and for the entire intersection. For controlled approaches composed of a single lane, the control delay is computed as the average of all movements in the lane.

Table VI.2 on the following page, an excerpt from the previously completed study, shows the Intersection Level of Service Definitions.

Exhibit VI.2: Intersection Level of Service Definitions

TABLE 1
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Signalized Intersections (Average Control Delay) [1]	Unsignalized Intersections (Average Control Delay) [2]
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10	≤10
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	> 10 to 20	> 10 to 15
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	> 20 to 35	> 15 to 25
D	Represents high-density, but stable flow.	> 35 to 55	> 25 to 35
E	Represents operating conditions at or near the capacity level.	> 55 to 80	> 35 to 50
F	Represents forced or breakdown flow.	> 80	> 50

Sources:
[1] *HCM 2000*, Chapter 16, Signalized Intersections. Values shown are in seconds/vehicle.
[2] *HCM 2000*, Chapter 17, Unsignalized Intersections. Values shown are in seconds/vehicle.

The Calle de la Plate/Pyramid Highway intersection operates at LOS F with and without the addition of the proposed project generated traffic. The primary entrance will operate at acceptable levels of service with side street stop controls.

A traffic signal is planned at the Calle de la Plata/Pyramid Highway intersection to improve operations to an acceptable level.

Overall, the proposed development, with the planned improvements, will have no perceived or measureable impact on the level of service of the adjacent segments or intersections.

B. Roadway Improvements

This project was evaluated for the need to install turn lanes at the existing intersection of Calle de la Plata and Pyramid Highway. A turn lane "warrant" is a justification for constructing a turn lane, based on traffic volumes at an intersection. Turn lanes are warranted based on these criteria when the peak hour turn lane volume exceeds a trigger based on the two-way daily volume (ADT) on the roadway. The thresholds are as follows:

ADT:	2,500-5,000	Max Peak Hour Trips:	100
	5,000-10,000		70
	>10,000		40

There are more than 10,000 vpd and more than 40 peak hour trips at the existing intersection. **A left turn lane is warranted.**

VII. TRAFFIC SIGNALS

The public often views traffic signals as a cure-all for traffic problems at intersections. As a result, traffic signals have often been installed at intersections where less restrictive traffic control would have been more appropriate and effective. Traffic signal warrants have been developed to establish minimum criteria for evaluating the need for a traffic signal at a specific intersection. These warrants do not define the need for a traffic signal, but merely indicate where further study of a traffic signal installation is justified. When properly justified and installed, traffic signals can have many positive benefits. However, traffic signals also have negative impacts, particularly if the signal is improperly justified or installed. The nine warrants outlined by the MUTCD, Section 4C have been evaluated for the proposed intersection. It should be noted that these warrants have been evaluated using average daily traffic counts and not hourly counts. For that reason, the trips applied to each warrant have been conservatively estimated using the available data.

Warrant 1: Eight Hour Vehicular Volume

The project ADT for Pyramid Highway is 12,595 trips (524 vph) and for Calle de la Plata is 5,797 trips (242 vph). The estimated volumes indicate that while Pyramid Highway is one lane in each direction, this warrant would apply. However, the planned improvements to widen Pyramid Highway remove the warrant.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

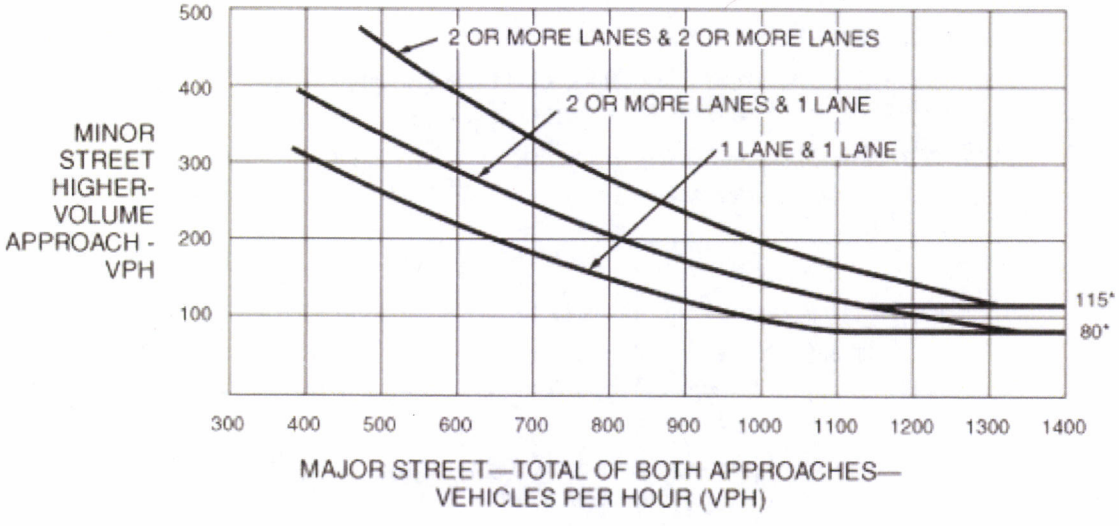
Condition A—Minimum Vehicular Volume									
Number of lanes for moving traffic on each approach		**Vehicles per hour on major street (total of both approaches)**				**Vehicles per hour on higher-volume minor-street approach (one direction only)**			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112
Condition B—Interruption of Continuous Traffic									
Number of lanes for moving traffic on each approach		**Vehicles per hour on major street (total of both approaches)**				**Vehicles per hour on higher-volume minor-street approach (one direction only)**			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Warrant 2: Four-hour Vehicular Volume

For a vehicle per hour on the major street (total of both approaches) of 524vph, the minimum number of vehicles per hour on the minor street (higher volume approach) is 265vph. The estimated 242 vph for Calle de la Plata is below this threshold.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3: Peak Hour

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. This warrant does not apply to a residential project.

Warrant 4: Pedestrian Volume

The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street. Pyramid Highway is not utilized by pedestrians.

Warrant 5: School Crossing

The School Crossing signal warrant is intended for application where the fact that schoolchildren cross the major street is the principal reason to consider installing a traffic control signal. For the purposes of this warrant, the word "schoolchildren" includes elementary through high school students. School children are not anticipated at this intersection. This warrant does not apply to this section of Pyramid Highway.

Warrant 6: Coordinated Signal System

Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles. This warrant does not apply to this section of Pyramid Highway.

Warrant 7: Crash Experience

The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. This warrant does not apply to this section of Pyramid Highway.

Warrant 8: Roadway Network

Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network. The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or
B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday).

A major route as used in this signal warrant shall have at least one of the following characteristics:

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
B. It includes rural or suburban highways outside, entering, or traversing a city.
C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

The intersection of Pyramid Highway and Calle de la Plata is scheduled for improvement with Pyramid Highway is widened.

Warrant 9: Intersection Near a Grade Crossing

The Intersection Near a Grade Crossing signal warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal. This warrant does not apply to the proposed intersection or this section of Pyramid Highway.

VIII. Traffic Accident Data

Intersection crash data for Pyramid Highway and Calle de la Plata was requested and provided by NDOT and is included in Appendix G of this report for reference. For the five year study period of July 1, 2009 to July 1, 2014 six crashes were reported. Of these crashes, one was fatal; three reported injuries and two were property damage only. The fatality was a one-vehicle crash where the driver apparently over-corrected and ran off the road. It is estimated that the increase in trips at this intersection will not significantly impact the low number of reported crashes.

Safety related deficiencies for Pyramid Highway (SR445) have not been noted in recent studies or shown in recent crash data.

IX. NDOT Access Policy

All projects which have or propose to have access to NDOT roadways must include a separate section which discusses adherence to the NDOT access policy, Access Management System and Standards.

Direct access to Pyramid Highway (SR445) is not proposed with this development.

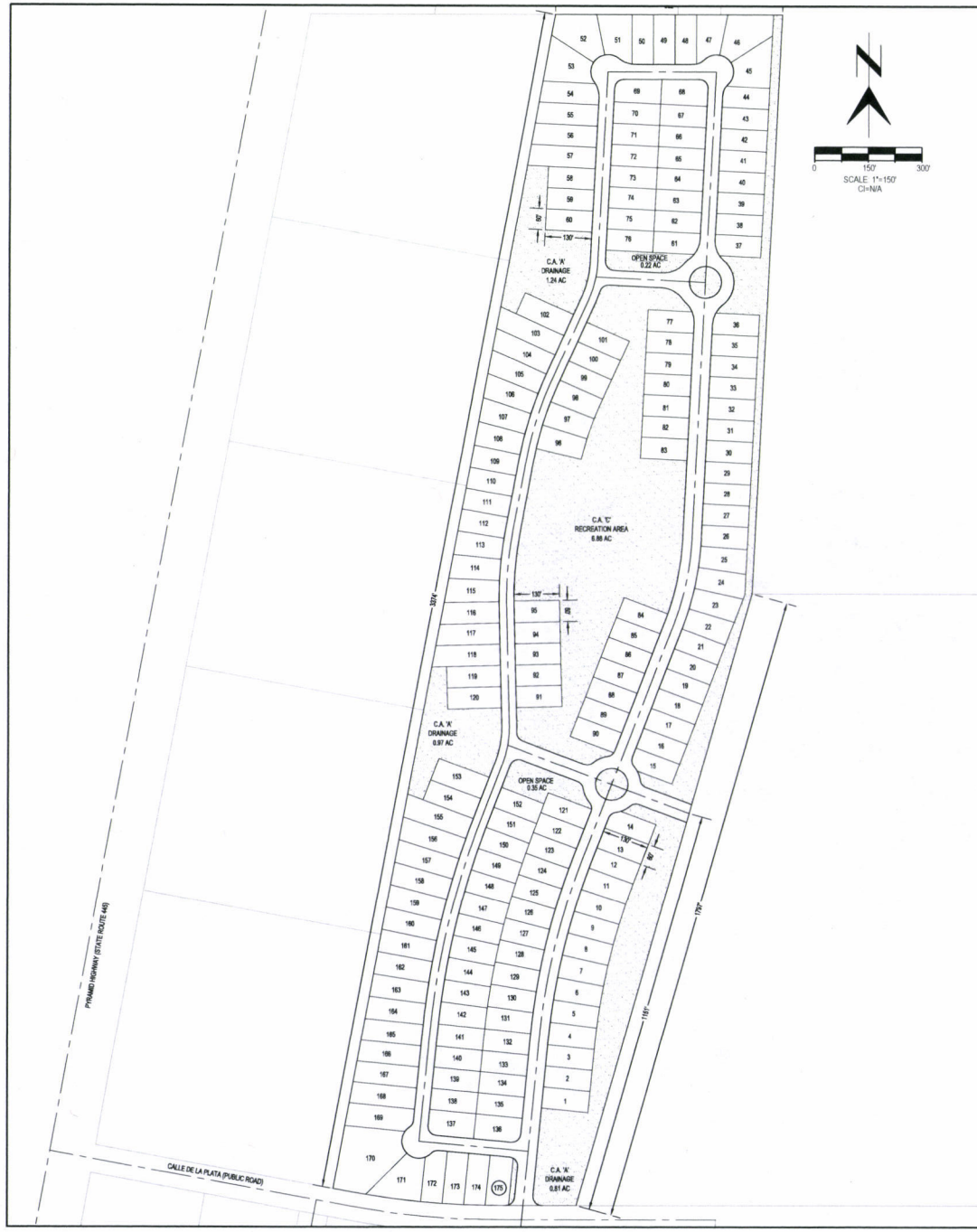
There has been some discussion regarding the possibility of adding direct access to the highway through an adjacent parcel in alignment with the existing Sha Neva Road (Parteli Road). The spacing requirement for Rural Highways at 55 mph is 0.25 mile. This location would meet the spacing requirements should the Developer pursue this option for access.

X. Regional Road Impact Fee (RRIF)

New development creates a demand for new roadway capacity. The Regional Road Impact Fee (RRIF) is a tool to collect the cost of providing the new capacity for new development. The RRIF is divided into the north service area and the south service area. The funds collected in each service area are to be spent in the same service area. I-80 is the dividing line between the service areas. The proposed development falls in the **North Service Area**. The RRIF fee is $3,783.11 per single-family dwelling. The RRIF funds are designed to build capacity improvements such as new roads and ramps, road widening and intersection improvements, and to preserve right of way for future capacity improvements. The fee previously discussed is based on the current fee schedule as of the date of this study. The current fee schedule went into effect March 2, 2015. The amount of impact fees shall be determined as of the date of payment. The RRIF needs to be paid at the time a building permit is issued or may be deferred to the Certificate of Occupancy, as approved by the local jurisdiction. RRIF Waivers are issued for capital improvements constructed by new development. Waivers may only be used to pay the impact fee due within the designated development of record associated with the waivers.

APPENDIX A:

PRELIMINARY SITE LAYOUT FOR SPANISH SPRINGS – CALLE DE LA PLATA



SITE PLAN NOTES:

1. THIS PRELIMINARY SITE PLAN WAS CREATED WITHOUT THE BENEFIT OF A BOUNDARY OR TOPOGRAPHICAL SURVEY. ALL MEASUREMENTS ARE APPROXIMATE.
2. PARCEL NUMBER: 534-571-01
3. LOCATED AT 350 CALLE DE LA PLATA IN SPANISH SPRINGS
4. DEVELOPMENT REGULATED BY WASHOE COUNTY, NEVADA
5. APPROXIMATELY 58.5 ACRES WITHIN THE SPANISH SPRINGS PLANNED AREA OF THE WASHOE COUNTY LAND DEVELOPMENT CODE
6. EXISTING TOPOGRAPHY IS GENTLY SLOPING IN UNIFORM SLOPE TOWARD THE NORTHWEST
7. EXISTING ZONING IS NEIGHBORHOOD COMMERCIAL/OFFICE (NC), INDUSTRIAL (I) AND SUBURBAN
8. MASTER PLAN DESIGNATION IS SUBURBAN RESIDENTIAL (SR), INDUSTRIAL (I) AND COMMERCIAL (C)
9. TOWNSHIP 21, RANGE 20, SECTION 23
10. SERVED BY THE TRUCKEE MEADOWS FIRE PROTECTION DISTRICT

CLUSTER OPEN SPACE OPTION:
60' BY 130' PROPOSED LOT (MINIMUM LOT SIZE 7,800 SF) - MAX DENSITY OF 3 RAC = 175 LOTS
IN LIEU OF MDS MINIMUM OF 80' BY 150' (12,000 SF) - PROVIDE CENTRAL PARK AREA OF 4 ACRE OR GREATER

52' ROW (7,600 ADT) USED FOR PORTION OF DEVELOPMENT
42' ROW (1,000 ADT) USED FOR REMAINDER

PROVIDE 30' EMERGENCY ACCESS EASEMENT

BLACKSTONE DEVELOPMENT GROUP

NO.	DATE	REVISION	BY	CHKD.	APPR.

PRELIMINARY SITE LAYOUT
SPANISH SPRINGS
LOTS 1-175 AND COMMON AREA
TYPICAL LOT SIZE: 60' BY 130'

3.0 RESIDENTS PER ACRE - 175 LOTS
7.67 AC CENTRAL PARK & DRAINAGE BASIN
ADDITIONAL 3.92 AC DRAINAGE & 0.5 AC OPEN SPACE

STAR CONSULTING
439 W. PLUMB LANE
RENO, NV 89509
(775) 352-4200
PROJECT NO 14021

DRWN BY	EEH
DSGN BY	EEH
CHKD BY	GWH

CASE NO.
SHEET NO. 1 OF 1

MPA15-003 & RZA15-005 - EXHIBIT O

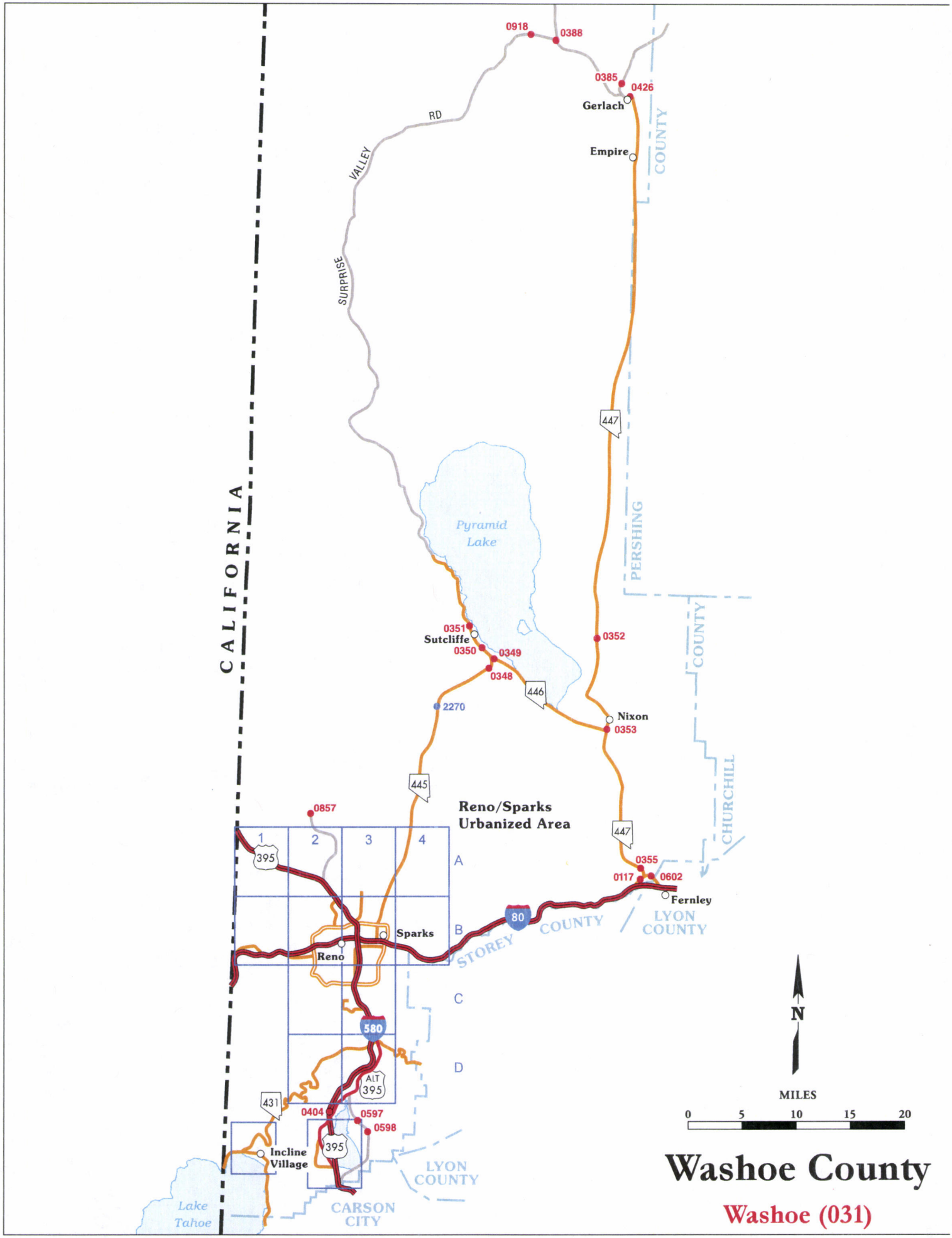
APPENDIX B:

2013 WASHOE COUNTY TRAFFIC COUNTS

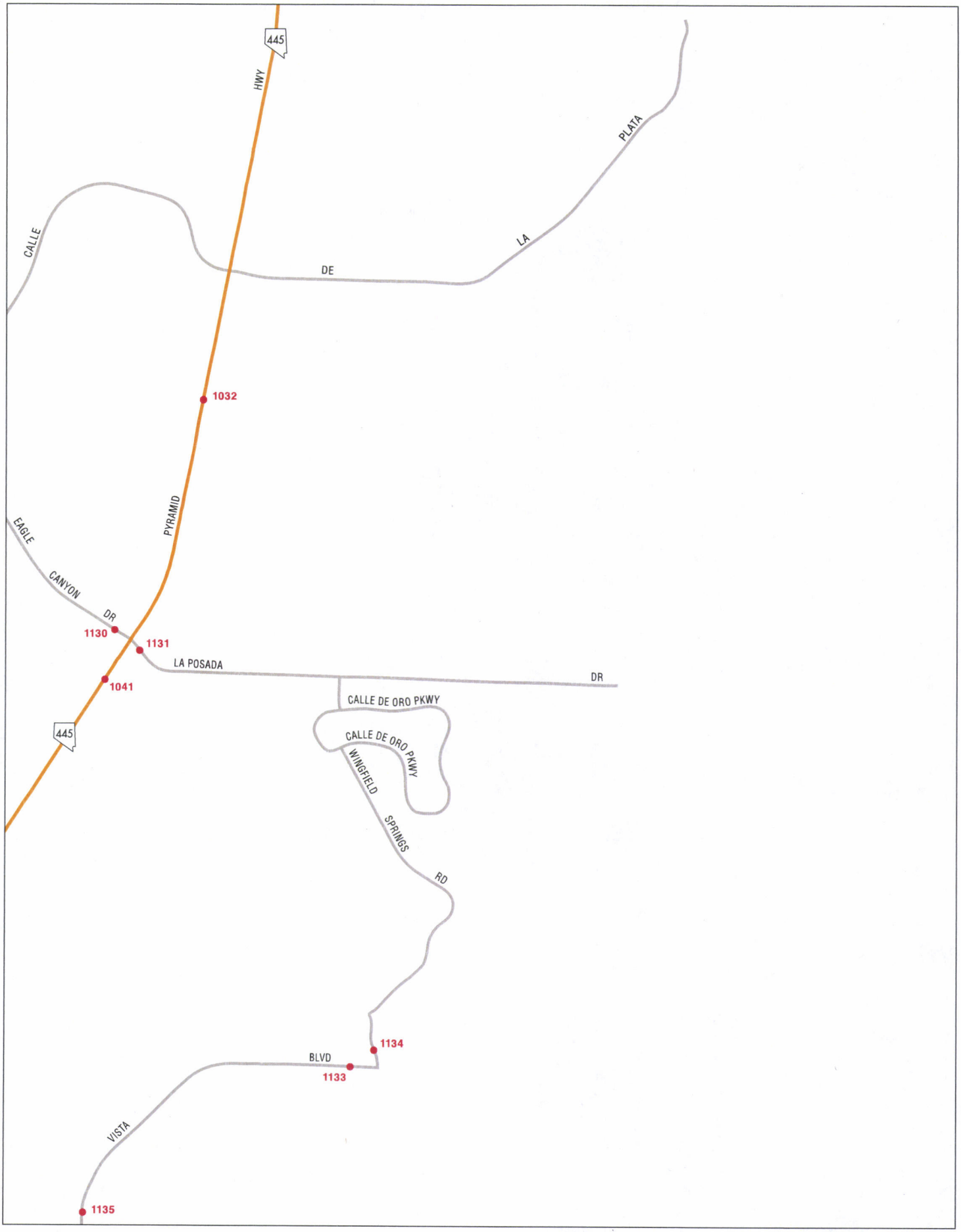
STAR CONSULTING

MPA15-003 & RZA15-005
EXHIBIT O

MPA15-003 & RZA15-005 - EXHIBIT O



MPA15-003 & RZA15-005 - EXHIBIT O



Reno/Sparks
Urbanized Area

MPA15-003 & RZA15-005 - EXHIBIT O
MILES
0 0.5 1

N

Sheet A-4
Washoe (031)

Return to Maps

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT
Station	Route / Location										
0311017	SR659, McCarran Bl, 500ft N of Plumb Ln.	25,500	25,500	26,600	24,000	21,000	20,000	22,000*	22,000*	23,000	22,500*
0311018	SR659, McCarran Bl, 365ft S of Plumb Ln.	19,100	19,400	19,900	18,000	16,000	15,000	16,000*	16,000	16,000	15,500*
0311019	IR580, 400ft S of Damonte Ranch Intch N/B off-ramp.	53,000	54,500*	57,000*	59,000	58,000*	56,000	56,000*	55,000*	54,500*	62,500*
0311027	US395, N/B on-ramp of the US-395/Clear Acre Intch.				1,200*	1,200	1,400	1,300	1,500	1,500	1,500
0311028	US395, N/B off-ramp of the US-395/Clear Acre Intch.				8,900*	8,400	8,400	8,300	8,700	7,600	8,500
0311031	SR341, 'C St', btwn Pinion & Kivett Ln	4,700	5,000	5,350	5,000	4,900	4,800	4,500	5,000	3,700	3,600
0311032	SR445, .375 mi N of Sunset Springs Rd.					10,000	10,000	10,000	10,000	9,600*	10,500
0311033	IR80, W/B off-ramp to US-395 N/B and S/B.				30,000	29,000	30,000*	29,000	30,000	28,000	29,000
0311035	IR80, W of Thisbe/Derby Dam Intch 'Exit 36'					25,000*	24,000*	24,000*	23,000*	23,000	24,500
0311039	Queens Wy, .1 mi E of Probasco Wy.	1,500	1,350	1,500	1,300	1,400	1,300	1,200	1,200	1,100	1,100
0311040	Lincoln Wy, 350 ft W of E McCarran Bl.	2,650	2,600	2,450	2,400	2,100	2,200	2,000	4,900	4,600	2,000
0311041	SR445, Pyramid Hw, .1 mi S of La Posada Rd.	26,100	28,800	30,500	31,000	27,000	27,000	28,000	28,000*	26,000	27,000
0311042	Red Baron Bl, 150ft N of Silver Lake Bl.	1,900	1,850	1,750	1,500	1,500	1,400	1,300	1,200	1,200*	1,200
0311043	Silver Lake Bl, 500ft S of Stead Bl.	6,500	6,550	5,900	6,000	5,700	5,600	5,800	5,600	5,200	6,300
0311044	Hunter Lake Dr, 300ft N of California Av.	4,100	3,950	4,050	3,700	3,100	2,600	2,300	2,300*	2,300	2,600
0311045	Greensburg Cr, .2 mi N of McCarran Bl.	400	420	390	380	360	350	330	330	350*	300*
0311046	Gibraltar Dr, 90ft S of Cashill Bl.	540	460	440	480	460	420	410	440	400	450

MPA15-003 & RZA15-005
EXHIBIT O

* Data Adjusted or Estimated

APPENDIX C:

INFORMATION REPORT: TRIP GENERATION BY ITE

INFORMATIONAL REPORT

Trip Generation

By ITE Technical Council Committee 6A6

The primary objective of Committee 6A6's report, here summarized, is to provide traffic and transportation engineers with a single document and guide on trip generation rates for all land uses and building types. It is intended that the full report, soon to be published by the Institute, will be updated periodically.

Members of Committee 6A6 were: Dan Cherepacha (M); Juergen A. Fehr (M); Christopher R. Fleet (A); Lawrence Gassman (M); Lawrence V. Hammel (M); Herman A. J. Kuhn (M); Clinton L. Lefler (M); Gary D. Long (M); and James B. Saag (M). Special thanks are given to the U.S. Department of Transportation, Federal Highway Administration for its assistance in computer programming and analysis.

Carl H. Buttke (M)
Chairman

Trip generation rates have been developed for the average weekday, Saturday and Sunday for the peak hours of the generator and of the adjacent street traffic. However, in some cases, only limited data could be obtained and thus may not be too indicative of a particular building type. This report is intended as a guide in estimating the number of trips which may be generated by a specific building or land use.

Variations in generation rates for the same building or land use type exist and have been identified in the report. Because of these variations, sample size and special characteristics of a site being analyzed, extreme care must be made in the use of the rates. The data in this report represents weighted averages of those collected throughout the United States since 1966. At specific sites, the traffic and transportation engineer may wish to modify the generation rate presented in this report because of public transportation service, proximity to other developments which may reduce vehicle trip making through walking or combining trips or because of special characteristics of the site or the surrounding area.

Definition of Terms. The following definitions of terms are presented to clarify the terminology used throughout the text and tables:

Trip: A single or one-direction vehicle movement with either the origin or destination (exiting or entering) inside the study site.

Trip End: The origin or destination of a trip. Each trip has two ends. On a daily basis, each end has two trips: one entering and one exiting for an attractor of trips, and one exiting and one entering for a producer of trips. In this report, trip end refers to a two-direction vehicle movement at the origin or destination of a trip.

Average Trip Rate: A weighted average of the number of trips or trip ends per unit of related independent variable, i.e., trip ends per dwelling unit, employee, etc. The average rate was calculated by summing all trips or trip ends and all independent variables where paired data was available and then dividing the trip sum by the sum of the independent variable to obtain a weighted average.

Average Weekday Vehicle Trip Ends (AWDVTE): The weighted 24-hour total of all vehicle trips counted to and from a study site from Monday through Friday.

Average Trip Rate for Peak Hour of Adjacent Street Traffic: The weighted average trip rate during the hour of the highest volume of traffic passing the site on adjacent streets between 7 and 9 A.M. or between 4 and 6 P.M.

Average Trip Rate for Peak Hour of Generator: The weighted trip rate during the hour of highest volume of traffic entering and exiting the study site in the A.M. or in the P.M. It may or may not coincide in time or volume with the trip rate for the peak hour of the adjacent street traffic.

Independent Variable: A physical measureable and predictable unit quantifying the study site or generator, i.e., building area, employees, seats, acres, dwelling units, etc.

Regression Equation: An expression of the optimal mathematical relationship between two or more related items (variables) according to a specified criterion, as: $Y = a + bX$.

The objective in developing the relationship between X (independent variable) and Y (dependent variable) is to determine values of the parameters "a" and "b" so that the expected error involved in estimating the dependent variable given estimates of the independent variable will be a minimum.

Correlation Coefficient (R): A measure of the degree of linear association between two variables. The correlation coefficient indicates the degree of which the model estimated values account for the deviations in the individual observed values of the dependent variable from their mean value. Numerical magnitudes for "least squares" models range from -1 to $+1$ with larger absolute values representing higher degrees of linear association. The correlation coefficient for rate models is undefined when the use of a constant of trips is better than the use of the rate model (this does not occur with least square models) (Figure 1).

Data Collection Procedure

The data analyzed in this report was obtained from various local governmental agencies, consulting engineers, universities and colleges and technical reports from sections of the Institute of Transportation Engineers. No attempt was made to conduct original field surveys for this initial report.

Field Data Collection. Generally, the data has been collected with automatic counters varying from one weekday to seven days, by counting vehicular traffic entering and exiting a site. These counts cordoned the site and did not include through traffic. They were made on driveways of sufficient length to avoid double counts of turning vehicles. In some cases, counts were nondirectional and therefore did not separate entering from exiting vehicles. Manual counts supplemented some of the automatic counts to obtain vehicle occupancy and classification, to check the reliability of

MPA15-003 & RZA15-005
EXHIBIT O

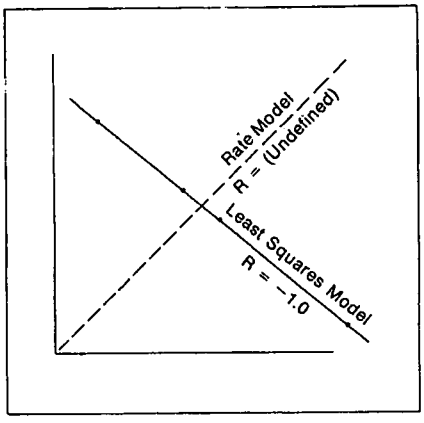


Figure 1.

the automatic counters and to obtain directional counts during peak periods where a nondirectional automatic count was being made. In other cases, only manual counts were made during peak periods. Therefore, all data summarized in this report results in vehicle trip generation rather than person trip generation.

Because some data provided only average weekday volumes, some only nondirectional peak hour volumes and some directional peak hour and average weekday volumes, separate analyses were made for each type of measurement to obtain generation rates for various time periods of the day or week. Therefore, in most cases, the peak hour entering plus exiting rates do not equal the total two-way rates. Before the reader uses these rates, an adjustment in the entering and exiting rates usually must be made to equal the total two-way rate.

Data concerning the generator or site was obtained either through personal interviews, actual measurements, telephone conversations or mail-back questionnaires.

Data Reports. In almost all cases, the data analyzed in this report was contained in published reports listed in the References, which appear in the full report. Additional data was provided from unpublished analyses by governmental agencies, firms or individuals. The References provide detailed information concerning specific generators; numbers at the bottom of the trip generation rates tables refer to References.

Generation Rate Analyses

The generation rate analyses were performed by coding the data from each source document and then, by use of computer, determining the related variables, the average trip generation rates and regression equations.

Coding Format. All data was coded uniformly on a six-page input form. This form was established to permit additional land uses not studied thus far and to add other variables, if necessary. All data was coded to a Standard Metropolitan Statistical Area (SMSA) when known. The SMSA four-digit code was obtained from the 1970 Geographic Identification Code Scheme of the Bureau of the Census.

A three-digit land use code was established to identify the types of uses studied or requiring study. This code (see Appendix) can easily be expanded to include uses not presently identified.

The data coded and keypunched on cards permits additional computer analyses for any one land use or building type and an opportunity to examine the data from each set and source.

Statistical Programs. Three statistical computer programs were used to produce the rates and regression equations and their associated statistics:

1. Statistics. Statistics for each variable were developed using program BMDO1D "Simple Data Description."* This program, part of a series of statistical programs developed by the University of California at Los Angeles, computes simple averages and provides measures of dispersion of the variables specified.

Certain methods for handling blanks and special values can be specified by the user. For this analysis, blanks were not counted and did not enter the computations as this situation was the result of missing data or data that was not available from the source studies.

The output of this program includes: means; standard deviations; standard errors of the means; maximum values; minimum values; ranges; and sample sizes. All items were calculated for each land use activity measured, e.g., number of employees, persons, vehicles, etc., and each trip variable. Only the maximum and minimum values and sample sizes were used from this program as the means produced are developed by averaging the mean of each set, and thus not a weighted average.

2. Rates. The rates (for all combinations of paired variables) were developed using program MATCH** which was written to obtain rates based on the totals of each variable that had valid data coded for each source study. These rates can be quite different from rates developed using BMDO1D, which develops a rate for each case first, then computes an average rate.

The output from this program (in matrix format) includes: number of observations; means of each dependent variable with respect to all independent variables; means of each independent variable with respect to all dependent variables; and trip rates for each independent/dependent variable combination. A flow chart of the program logic is included in the full report together with an example of the computer program output.

3. Equations. Equations were developed using the "Sub-Program Regression" in the Statistical Package for the Social Sciences (SSPS).* This is a stepwise multiple regression program which allows the choice of independent variables that will give the "best" final equation so that certain statistical limitations are satisfied. Use of a specified option allowed the deletion of cases which contain missing data values. Thus, if a value of either an independent or dependent variable were missing from the data, the case involving that variable was eliminated from the calculations.

The output of the program includes: variable means and standard deviations; simple correlation coefficients; and, for each step: the variables in the equation; variables not in the equation; the regression coefficients for each variable; the equation constant; R^2; standard error of estimate; degrees of freedom; and the F value.

Generation Rates

Vehicle trip generation rates, correlation analyses between average weekday vehicle trip ends and the independent variables and regression equations were made for land uses and/or building types within the following categories:

ITE Land Use Code	*Description*
000	Ports and Terminals
100	Industrial and Agricultural
200	Residential
300	Lodging
400	Recreation
500	Institutions
600	Medical
700	Office
800	Retail
900	Services

Table 1 summarizes the average weekday vehicle trip ends generation rates for each land use/building type studied. For each measured building or land use within the categories in the table, a description of each has been presented to-

*Complete user documentation, including brief descriptions of the statistical principles involved, is available in "BMD Biomedical Computer Programs Manual," published and distributed by the University of California Press, 2223 Fulton, Berkeley, California 94720.

** Documentation and source deck can be obtained from Dan H. Bryant, Urban Planning Division, Federal Highway Administration, Washington, D.C. 20590.

* Nie, Norman, Dale H. Bent and C. Hadlai Hull, *Statistical Package for the Social Sciences*, New York City: McGraw-Hill Book Co., 1970.

MPA15-003 & RZA15-005 - EXHIBIT O

Table 1. Average Weekday Vehicle Trip Ends Generation Rate Summary.

ITE Land Use Code	Land Use of Building Type	Vehicle Trip Ends Rate
021	Commercial Airport	11.8/Employee
022	General Aviation Airport	6.5/Employee
110	General Light Industrial	3.2/Employee
130	Industrial Park	4.1/Employee
140	Manufacturing	2.2/Employee
150	Warehousing	4.3/Employee
210	Single Family Detached Unit	10.0/Unit
220	Apartment	6.1/Unit
230	Condominium	5.6/Unit
240	Mobile Home	5.4/Unit
310	Hotel	10.5/Occupied Room
320	Motel	9.6/Occupied Room
330	Resort Hotel	10.2/Occupied Room
411	City Park	60.0/Acre
412	County Park	5.1/Acre
413	State Park	0.6/Acre
420	Marina	3.8/Boat Berth
430	Golf Course	9.1/Acre
501	Military Base	1.8/Employee
520	Elementary School	0.5/Student
530	High School	1.2/Student
540	Junior/Community College	1.6/Student
550	University	2.4/Student
590	Library	41.8/1,000 gross square feet
610	Hospital	12.2/Bed
620	Nursing Home	2.7/Bed
630	Clinic	5.9/Employee
710	General Office Building	11.7/1,000 Gross Square Feet
720	Medical Office	75.0/1,000 Gross Square Feet
820	Shopping Center	116.0 to 26.5/1,000 Gross Square Feet
831	Quality Restaurant	56.3/1,000 Gross Square Feet
832	High Turnover Restaurant	164.4/1,000 Gross Square Feet
833	Drive-in Restaurant	553.0/1,000 Gross Square Feet
844	Auto Service Station	748.0/Station
850	Supermarket	125.0/1,000 Gross Square Feet
851	Convenience Market	578.0/1,000 Gross Square Feet

Table 2. Summarization of Rate Tables of Different Types of Dwelling Units.

Type of Dwelling Unit	Average Weekday Average	Vehicle Trip Maximum	Ends per Unit Minimum
210—Single Family Detached Unit	10.0	21.9	4.3
220—General Apartment	6.1	12.3	0.5
221—Low-Rise Apartment	5.4	5.5	4.7
222—High-Rise Apartment	4.3	6.4	3.1
230—Condominium	5.6	5.6	5.6
240—Mobile Home	5.4	6.8	2.8
250—Retirement Community	3.3	4.9	2.8
270—Planned Unit Development	7.9	10.0	6.2

Table 3. Correlation Between Average Weekday Vehicle Trip Ends and Independent Variables for Single Family Detached Houses.

Independent Variable	Correlation Coefficient (R)
Persons	0.995
Number of Units	0.937
Number of Vehicles Owned	0.999
Units per Acre	0.999
Acres	0.339

gether with the trip characteristics, trip generation rate tables and data limitations. The following is an example of the detail provided for each building type, taken from the section concerning residential land uses (200) and, more specifically, single family detached housing (210).

Residential 200. This section summarizes trip generation for all types of residential dwellings. Each category of residential housing, particularly single-family detached housing and apartments, used data from a wide range of units with varying sizes, price ranges, locations and ages. Consequently, there could be as wide a variation in trips generated within each category as there is between different categories. As expected, dwelling units that were larger in size, more expensive or farther away from the Central Business District (CBD) had a higher trip generation rate per unit than those smaller in size, less expensive or closer to the CBD. However, other factors such as geographic location within the country and type of adjacent and nearby development also had an effect on the generation rate. Thus, only the above general statement (instead of some linear relationship) concerning size, cost and location of dwelling unit and the income of the occupant could be made.

Table 2 summarizes the rate tables of the different types of dwelling units. As expected, the single family detached unit has the highest generation rate of all residential uses. This is followed by apartments, with retirement communities having the lowest rate. The rate for planned unit developments which have a mix of single family, detached units and apartments is in between these two types. The single family detached unit has the highest rate because: they are the largest units in size and have more people and more vehicles per unit than the other types of units; they are generally located farther away from shopping centers, employment areas and other attractors than are other types; and they have fewer alternate modes available because they are not as concentrated as other types of units.

Single Family Detached Housing 210. Any single family detached home on an individual lot is included in this category. A typical example is a home in a modern subdivision.

Slightly over 200 different studies were made of subdivisions containing single family homes. The average size subdivision contained 506 dwelling units for a total of more than 105,000 dwellings studied. These subdivisions were located primarily in suburban areas throughout the United States.

The average development density was 3.5 units per acre with 3.7 persons per

MPA15-003 & RZA15-005 - EXHIBIT O

Table 4.

SUMMARY OF TRIP GENERATION RATES

Land Use/Building Type Single Family Detached House ITE Land Use Code 210

Independent Variable—Trips per Dwelling Unit

			Average Trip Rate	Maximum Rate	Minimum Rate	Correlation Coefficient	Number of Studies	Average Size of Independent Variable/Study
Average Weekday Vehicle Trip Ends			10.0	21.9	4.3		208	506
Peak Hour of Adjacent Street Traffic	A.M. Between 7 and 9	Enter	0.3	0.6	0.1		37	248
		Exit	0.6	1.7	0.2		38	258
		Total	0.8	2.3	0.4		173	269
	P.M. Between 4 and 6	Enter	0.7	1.8	0.3		38	245
		Exit	0.4	1.2	0.1		38	245
		Total	1.0	3.0	0.4		196	292
Peak Hour of Generator	A.M.	Enter	0.3	0.6	0.1		38	245
		Exit	0.6	1.7	0.2		38	245
		Total	0.8	2.3	0.4		175	271
	P.M.	Enter	0.7	1.8	0.3		40	252
		Exit	0.4	1.2	0.1		38	245
		Total	1.0	3.0	0.4		193	261
Saturday Vehicle Trip Ends			10.1	14.7	6.3		43	292
Peak Hour of Generator		Enter	0.5	1.0	0.4		21	273
		Exit	0.5	0.7	0.3		21	273
		Total	1.0	1.7	0.7		35	296
Sunday Vehicle Trip Ends			8.8	11.7	0.5		38	301
Peak Hour of Generator		Enter	0.5	0.8	0.3		19	252
		Exit	0.5	1.2	0.4		19	252
		Total	1.0	2.0	0.7		34	284

Source Numbers 1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 16, 19, 20, 21, 24, 26, 34, 35, 36, 38, 40, 71, 72 (references appear in the committee's full report, available from ITE).

ITE Technical Committee 6A-6—Trip Generation Rates

Date:

MPA15-003 & RZA15-005 - EXHIBIT O

unit. The average automobile ownership measured was 1.6 vehicles per unit.

Trip Characteristics. The analysis of correlation between average weekday vehicle trip ends and all measured independent variables is shown in Table 3.

Although the number of vehicles and number of residents have the highest correlations with average weekday trip ends, these variables have limited use. This is because the number of vehicles and residents is difficult to obtain and very few of the studies contained this data, and because the data is also difficult to predict. The number of units has a high correlation with average weekday vehicle trip ends. This variable is best because it is contained in most studies, it is easy to project and convenient to use.

As indicated in Table 4, single family dwellings generate on the average 10 vehicle trip ends per weekday per dwelling unit. Saturday vehicle trip generation is slightly higher; on Sunday, it is lower.

The regression equations developed for calculating the average weekday vehicle trip ends (AWDVTE) are as follows:

$$\begin{aligned} \text{AWDVTE} &= 138 + 8.17 \times \text{Units} \\ &\qquad R = 0.937 \\ &= -100 + 2.55 \times \text{Persons} \\ &\qquad R = 0.995 \\ &= -185 + 6.76 \times \text{Vehicles} \\ &\qquad R = 0.999 \end{aligned}$$

Some data is from studies conducted in the late 1960s and therefore should be updated. Additional data concerning auto occupancy and other modes of transportation is necessary.

Data Limitations

As indicated in the trip generation table, the data presented has limitations. The basic limitation, and one reason for variations in rates, is the sample size of counts at some generators and for peak hours for most generators. Additional data is needed for most generators to state more accurately the peak hour entering and exiting rates.

Another reason for variation in the generation rates is caused by different lengths of count periods and the time of the year the traffic volumes were counted. There exist daily and seasonal variations for most generators. In some cases, full week counts were made to define the average weekday and in other cases, a single day's count was obtained. In almost no case was the generation measurement adjusted for seasonal variations. This is especially true for shopping centers.

Variations in generation rates may also exist because of the location of the generator studied either within a metropolitan area or within the U.S. These locations have been identified in the data sets but no separate analyses have been made to determine if a difference exists because of location.

In all cases, the generation rates presented in this report represent driveway volumes of vehicles entering and exiting the site. For some building types, such as retail establishments, the generation rate could overstate the volume of traffic when assigned to the adjacent street system because some traffic is attracted to the site from the passing stream of traffic. That portion of the total generated traffic attracted to the site would pass on the adjacent street system whether or not the site were developed. It is essential that heavy effort be focused on defining how much of the total generated traffic to all building types would be attracted from the passing adjacent street traffic in order to define more accurately the traffic impact on the street system caused by development of a site.

The data summarized in this report is only for vehicle trip ends and does not include all person trip ends by mode. More data is needed for each building and land use type to define vehicle occupancy rates and person trip generation rates by mode of travel.

More data is also needed to define generation rates for the following types of buildings or land uses:

- water ports
- truck terminals
- railroad terminals
- low- and high-rise apartments
- condominiums
- retirement communities
- residential planned unit developments containing a mixture of duplexes, apartments and/or single family units
- day care centers
- churches
- museums
- libraries
- hospitals
- nursing homes
- clinics
- medical offices
- government buildings
- specialty shopping centers containing a mixture of small specialty shops and restaurants
- building materials retail establishments
- high quality restaurants
- drinking establishments
- banks, savings and loans, real estate offices, insurance offices and other financial services
- recreational uses.

Update Procedure

The Institute is establishing a formal procedure to update this report and to add data for additional land uses or building types not sufficiently covered in the report and to develop information on person trip ends by mode.

It is recommended that all ITE districts and sections be involved in this continual update procedure. These organizations, through their respective technical committees, can collect data from at least one or more sites annually and send it either on keypunch cards or on the trip generation coding sheets to the ITE Technical Council. In many cases, traffic counters, or even personnel, may be available from time to time to conduct a generation study in a given area.

It is also proposed that ITE work with the U.S. Department of Transportation, state, county and city departments of transportation or traffic engineering and with private consultants to obtain additional current data and include it in the updated reports. In this manner, a continual, uniform method of obtaining and summarizing the current trip generation data for all types of special generators, land uses and building types will be produced.

To implement this update procedure, the ITE Technical Council is establishing a permanent committee on trip generation rates for special generators, land uses or building types to update this report at least every two years.

The function of this committee will be to:

1. Store all trip generation data.
2. Coordinate with ITE district and section technical committees, government agencies and private consultants for the collection of additional data.
3. Distribute trip generation coding sheets and instructions to those collecting data.
4. Maintain computer program for trip generation analyses and summarization.
5. Maintain and modify when necessary a uniform procedure for collecting data.
6. Summarize trip generation data.
7. Conduct special trip generation analyses when appropriate.
8. Revise trip generation rate tables and appropriate text of report on basis of the additional data.
9. Establish data collection needs in areas where deficiencies exist or where little information is available.

The following procedure is presented to obtain new generation data from actual traffic volume counts. It is recommended that it be followed when collecting data and to transmit it on the coding sheets shown in the full report or on keypunch cards.

- Count a special generator where automatic counts can be made on drives without double-counting turning vehicles and without counting through traffic. Preferably, directional counts should be made. The site should be self-contained with adequate parking not shared by other activities.

MPA15-003 & RZA15-005 - EXHIBIT O

• Conduct seven-day automatic counts during a typical week of the year to provide data concerning the average weekday, Saturday and Sunday and peak hours.
• Supplement automatic counts with a manual count for several hours on a weekday to record hourly inbound and outbound vehicular traffic by classification and vehicle occupancy and to compare with corresponding automatic counters to determine a counter factor for adjusting the raw automatic counts.
• Where recording or directional counts cannot be made automatically, manual counts should be made on a typical weekday during the A.M. and P.M. peak two-hour periods of the special generator being counted and that of the adjacent street traffic to record the peak-hour entering and exiting volumes.
• Where recording or directional counts cannot be made automatically, manual counts should be made on a typical weekday during the A.M. and P.M. peak two-hour periods of the special generator being counted and that of the adjacent street traffic to record the peak-hour entering and exiting volumes.
• Where possible, supplement the above work with manual counts or controlled interviews to determine average weekday person trip ends by mode and determine how many trips were actually generated by the site and how many trips were attracted to the site from the adjacent street traffic normally passing the site.
• Data concerning the site should be obtained through interviews with the site owner or manager and through physical measurements, if necessary. Information on the maximum number of related variables should be obtained to determine which is the best related to trip generation. In all cases, it is essential to obtain the number of employees, the gross building area, the number of occupied rooms or dwelling units, the population and the acreage of development.
• Code data on coding forms by following instructions contained in the full report.
• Obtain trip generation bibliography number from permanent committee and, if necessary, a new land use or building type code if one does not already exist.
• Transmit data to Technical Council.

APPENDIX

Trip Generation Land Use Code

000 Port and Terminal
010 Water Port
020 Airport
021 Commercial Airport
022 General Aviation Airport
030 Truck Terminal
040 Railroad Terminal

100 Industrial/Agricultural
110 General Light Industrial
120 General Heavy Industrial
130 Industrial Park
140 Manufacturing
150 Warehousing
160 Construction
170 Utility
180 Agricultural

200 Residential
210 Single Family Detached Housing
220 Apartment
221 Low-Rise Apartment
230 Condominium
231 Low-Rise Condominium
232 High-Rise Condominium
240 Mobile Home
250 Retirement Community
260 Recreational Home
270 Planned Unit Development

300 Lodging
310 Hotel
320 Motel
330 Resort Hotel

400 Recreational
410 Park
411 City Park
412 County Park
413 State Park
420 Marina
430 Golf Course
440 Theater
441 Live Theater
442 Music Theater
443 Movie-Theater (sit down)
444 Drive-In Theater
450 Stadium
451 Baseball/Football
452 Horse Race
453 Auto Race
454 Dog Race
460 Camp
480 Amusement Park

500 Institutional
501 Military Base
510 Preschool
520 Elementary School
530 High School
540 Junior/Community College
550 University
560 Church
570 Court
580 Museums/Gallery
590 Library

600 Medical
610 Hospital
620 Nursing Home
630 Clinic

700 Office
710 General Office Building
720 Medical Office Building
730 Government Office Building
740 Civic Center
750 Office Park
760 Research Center

800 Retail
810 Retail/General Merchandise
820 Shopping Center
821 Regional Shopping Center—over 500,000 G.L.F.A.
822 Community Shopping Center—100,000 to 500,000 G.L.F.A.
823 Neighborhood Shopping Center—under 100,000 G.L.F.A.
824 Discount Shopping Center
825 Specialty Retail Center
826 Specialty Store
827 Building Material
830 Restaurant
831 Quality Restaurant
832 High Turnover Sit-Down Restaurant
833 Drive-In Restaurant
834 Drinking Place
840 Auto
841 New Car Sale
842 Used Car Sale
843 Auto Parts Sale
844 Service Station
845 Tire, Battery and Accessory
846 Car Wash
847 Auto Repair
848 Highway Oasis (including truck fuel, minimal trucker and mechanical services)
849 Truck Stop (including food, auto and truck mechanical services, trucker supplies and trucker overnight sleeping accommodations)
850 Food Store
851 Convenience Market
860 Wholesale
870 Apparel
890 Furniture

900 Services
910 Financial
911 Bank (walk-in)
912 Drive-In Bank
913 Savings and Loan (walk-in)
914 Drive-In Savings and Loan
915 Stock Broker
916 Lending Agency
920 Real Estate
930 Insurance

MPA15-003 & RZA15-005 - EXHIBIT O

APPENDIX D:

TRIP GENERATION RATES, PLOTS AND EQUATIONS BY ITE, 6TH EDITION

INSTITUTE OF TRANSPORTATION ENGINEERS
COMMON TRIP GENERATION RATES (PM Peak Hour)

(Trip Generation Manual, 9th Edition)

Code	Description	Unit of Measure	Trips Per Unit	
PORT AND TERMINAL				
30	Truck Terminal	Acres	6.55	
90	Park and Ride Lot with Bus Service	Parking Spaces	0.62	
INDUSTRIAL				
110	General Light Industrial	1,000 SF	0.97	
120	General Heavy Industrial	Acres	2.16	
130	Industrial Park	1,000 SF	0.85	
140	Manufacturing	1,000 SF	0.73	
150	Warehousing	1,000 SF	0.32	
151	Mini-Warehouse	1,000 SF	0.26	
152	High-Cube Warehouse	1,000 SF	0.12	
170	Utilities	1,000 SF	0.76	
RESIDENTIAL				
210	Single-Family Detached Housing	Dwelling Units	1.00	
220	Apartment	Dwelling Units	0.62	
221	Low-Rise Apartment	Dwelling Units	0.58	
230	Residential Condominium / Townhouse	Dwelling Units	0.52	
240	Mobile Home Park	Dwelling Units	0.59	
251	Senior Adult Housing - Detached	Dwelling Units	0.27	
252	Senior Adult Housing - Attached	Dwelling Units	0.25	
253	Congregate Care Facility	Dwelling Units	0.17	
254	Assisted Living	Beds	0.22	
255	Continuing Care Retirement Community	Dwelling Units	0.16	
LODGING				
310	Hotel	Rooms	0.60	
320	Motel	Rooms	0.47	
330	Resort Hotel	Rooms	0.42	
RECREATIONAL				*
411	City Park	Acres	0.19	
412	County Park	Acres	0.09	*
413	State Park	Acres	0.07	
415	Beach Park	Acres	1.30	
416	Campground / Recreation Vehicle Park	Camp Sites	0.27	
417	Regional Park	Acres	0.20	
420	Marina	Berths	0.19	
430	Golf Course	Acres	0.30	
431	Miniature Golf Course	Holes	0.33	

Code	Description	Unit of Measure	Trips Per Unit	
432	Golf Driving Range	Tees / Driving Positions	1.25	
433	Batting Cages	Cages	2.22	
435	Multi-Purpose Recreational Facility	Acres	5.77	
437	Bowling Alley	1,000 SF	1.71	
441	Live Theater	Seats	0.02	
443	Movie Theater without Matinee	1,000 SF	6.16	
444	Movie Theater with Matinee	1,000 SF	3.80	
445	Multiplex Movie Theater	1,000 SF	4.91	
452	Horse Race Track	Acres	4.30	*
454	Dog Race Track	Attendance Capacity	0.15	
460	Arena	Acres	3.33	*
473	Casino / Video Lottery Establishment	1,000 SF	13.43	
480	Amusement Park	Acres	3.95	
488	Soccer Complex	Fields	17.70	
490	Tennis Courts	Courts	3.88	
491	Racquet/ Tennis Club	Courts	3.35	
492	Health / Fitness Club	1,000 SF	3.53	
493	Athletic Club	1,000 SF	5.96	
495	Recreational Community Center	1,000 SF	1.45	
INSTITUTIONAL				
520	Elementary School	1,000 SF	1.21	
522	Middle School / Junior High School	1,000 SF	1.19	
530	High School	1,000 SF	0.97	
536	Private School (K-12)	Students	0.17	
540	Junior / Community College	1,000 SF	2.54	
560	Church	1,000 SF	0.55	
565	Daycare Center	1,000 SF	12.46	
566	Cemetery	Acres	0.84	
571	Prison	1,000 SF	2.91	
580	Museum	1,000 SF	0.18	
590	Library	1,000 SF	7.30	
591	Lodge / Fraternal Organization	Members	0.03	
MEDICAL				
610	Hospital	1,000 SF	0.93	
620	Nursing Home	1,000 SF	0.74	
630	Clinic	1,000 SF	5.18	
640	Animal Hospital / Veterinary Clinic	1,000 SF	4.72	

Code	Description	Unit of Measure	Trips Per Unit
OFFICE			
710	General Office Building	1,000 SF	1.49
714	Corporate Headquarters Building	1,000 SF	1.41
715	Single Tenant Office Building	1,000 SF	1.74
720	Medical-Dental Office Building	1,000 SF	3.57
730	Government Office Building	1,000 SF	1.21
732	United States Post Office	1,000 SF	1.22
733	Government Office Complex	1,000 SF	2.85
750	Office Park	1,000 SF	1.48
760	Research and Development Center	1,000 SF	1.07
770	Business Park	1,000 SF	1.29
RETAIL			
812	Building Materials and Lumber Store	1,000 SF	4.49
813	Free-Standing Discount Superstore	1,000 SF	4.35
814	Variety Store	1,000 SF	6.82
815	Free Standing Discount Store	1,000 SF	4.98
816	Hardware / Paint Store	1,000 SF	4.84
817	Nursery (Garden Center)	1,000 SF	6.94
818	Nursery (Wholesale)	1,000 SF	5.17
820	Shopping Center	1,000 SF	3.71
823	Factory Outlet Center	1,000 SF	2.29
826	Specialty Retail Center	1,000 SF	2.71
841	New Car Sales	1,000 SF	2.62
842	Recreational Vehicle Sales	1,000 SF	2.54
843	Automobile Parts Sales	1,000 SF	5.98
848	Tire Store	1,000 SF	4.15
850	Supermarket	1,000 SF	9.48
851	Convenience Market (Open 24 Hours)	1,000 SF	52.41
852	Convenience Market (Open 15-16 Hours)	1,000 SF	34.57
853	Convenience Market with Gasoline Pumps	1,000 SF	50.92
854	Discount Supermarket	1,000 SF	8.34
857	Discount Club	1,000 SF	4.18
860	Wholesale Market	1,000 SF	0.88
861	Sporting Goods Superstore	1,000 SF	1.84
862	Home Improvement Superstore	1,000 SF	2.33
863	Electronics Superstore	1,000 SF	4.50
864	Toy / Children's Superstore	1,000 SF	4.99
866	Pet Supply Superstore	1,000 SF	3.38
867	Office Supply Superstore	1,000 SF	3.40
875	Department Store	1,000 SF	1.87

Code	Description	Unit of Measure	Trips Per Unit
876	Apparel Store	1,000 SF	3.83
879	Arts and Craft Store	1,000 SF	6.21
880	Pharmacy / Drugstore without Drive-Through Window	1,000 SF	8.4
881	Pharmacy / Drugstore with Drive-Through Window	1,000 SF	9.91
890	Furniture Store	1,000 SF	0.45
896	DVD/Video Rental Store	1,000 SF	13.60
SERVICES			
911	Walk-In Bank	1,000 SF	12.13
912	Drive-In Bank	1,000 SF	24.30
918	Hair Salon	1,000 SF	1.93
925	Drinking Place	1,000 SF	11.34
931	Quality Restaurant	1,000 SF	7.49
932	High-Turnover (Sit-Down) Restaurant	1,000 SF	11.15
933	Fast Food Restaurant without Drive-Through Window	1,000 SF	26.15
934	Fast Food Restaurant with Drive-Through Window	1,000 SF	33.84
935	Fast Food Restaurant with Drive-Through Window and No Indoor Seating	1,000 SF	153.85
936	Coffee / Donut Shop without Drive-Through Window	1,000 SF	40.75
937	Coffee / Donut Shop with Drive-Through Window	1,000 SF	42.8
938	Coffee / Donut Shop with Drive-Through Window and No Indoor Seating	1,000 SF	75
940	Bread / Donut / Bagel Shop with Drive-Through Window	1,000 SF	18.99
941	Quick Lubrication Vehicle Shop	Service Bays	5.19
942	Automobile Care Center	1,000 SF	3.11
943	Automobile Parts and Service Center	1,000 SF	4.46
944	Gasoline / Service Station	Fueling Positions	13.87
945	Gasoline / Service Station with Convenience Market	Fueling Positions	13.51
946	Gasoline / Service Station with Convenience Market and Car Wash	Fueling Positions	13.94
947	Self Service Car Wash	Stalls	5.54
948	Automated Car Wash	1,000 SF	14.12
950	Truck Stop	1,000 SF	13.63

Note: All land uses in the 800 and 900 series are entitled to a "passby" trip reduction of 60% if less than 50,000 ft^2 or a reduction of 40% if equal to or greater than 50,000 ft^2.

* Approximated by 10% of Weekday average rate.

APPENDIX E:

TRIP GENERATION RATES, 9TH EDITION

STAR CONSULTING

MPA15-003 & RZA15-005
EXHIBIT O

TRIP GENERATION

6th Edition • Volume 1 of 3

TRIP GENERATION RATES, PLOTS, AND EQUATIONS

- Port and Terminal (Land Uses 000-099)
- Industrial/Agricultural (Land Uses 100-199)
- Residential (Land Uses 200-299)
- Lodging (Land Uses 300-399)
- Recreational (Land Uses 400-499)

ite
Institute of Transportation Engineers

MPA15-003 & RZA15-005
EXHIBIT O

Trip Generation, 6th Edition

An Informational Report of the
Institute of Transportation Engineers

Volume 1 of 3

The Institute of Transportation Engineers (ITE) is an international educational and scientific association of transportation and traffic engineers and other professionals who are responsible for meeting mobility and safety needs. The Institute facilitates the application of technology and scientific principles to research, planning, functional design, implementation, operation, policy development and management for any mode of transportation by promoting professional development of members, supporting and encouraging education, stimulating research, developing public awareness, and exchanging professional information, and by maintaining of a central point of reference and action.

Founded in 1930, the Institute serves as a gateway to knowledge and advancement through meetings, seminars, and publications, and through our network of approximately 15,000 members working in some 80 countries. The Institute also has more than 70 local and regional chapters and more than 90 student chapters that provide additional opportunities for information exchange, participation and networking.

Institute of Transportation Engineers
525 School St., S.W., Suite 410
Washington, D.C. 20024-2797 USA
Telephone: +1 (202) 554-8050
Fax: +1 (202) 863-5486
ITE on the Web: http://www.ite.org

©1997 Institute of Transportation Engineers. All rights reserved.
Publication No. IR-016D
First Printing
1,000/AGS/1097

ISBN 0-935403-09-4
Printed in the United States of America

Single-Family Detached Housing
(210)

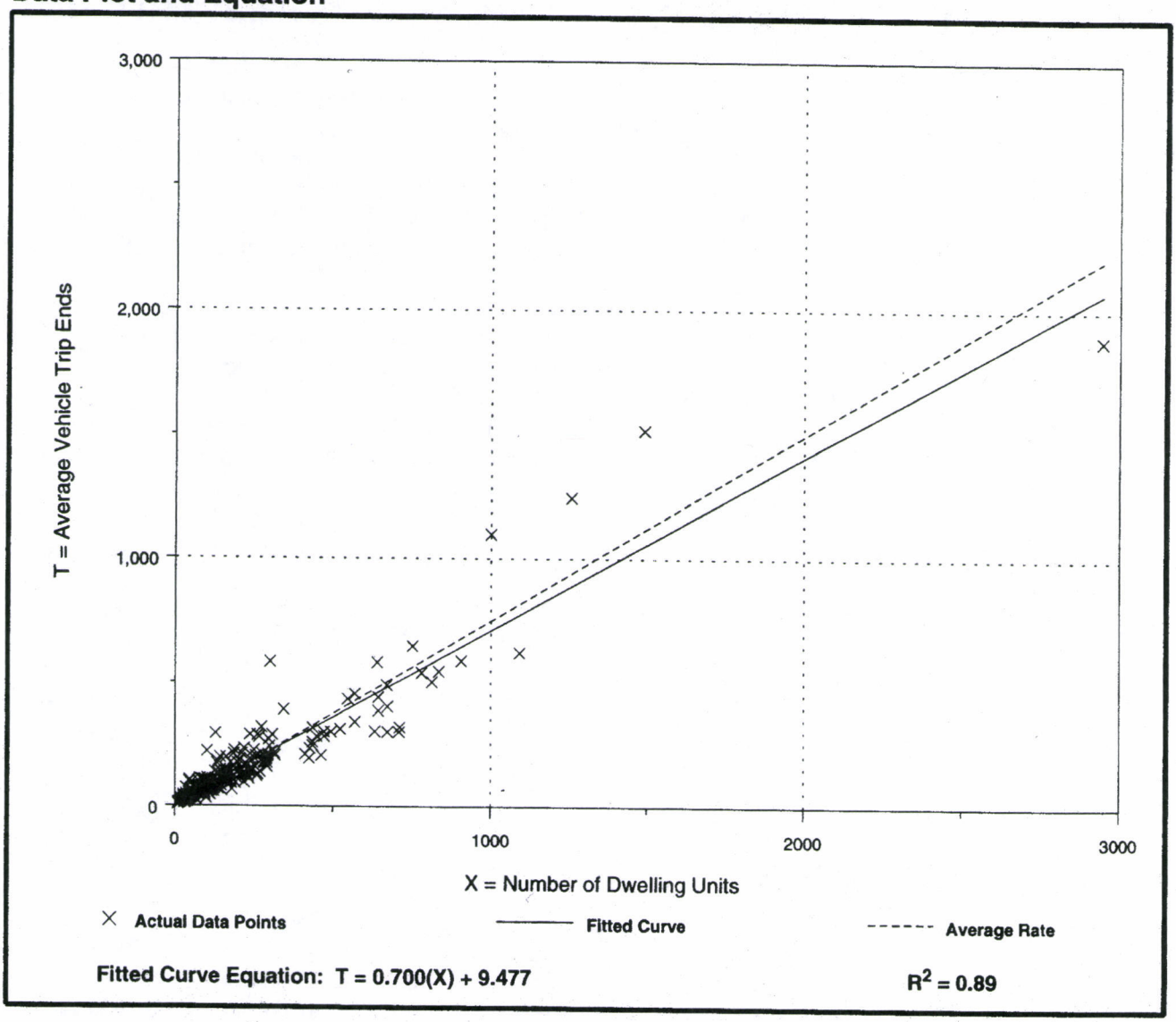
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 271
Avg. Number of Dwelling Units: 202
Directional Distribution: 25% entering, 75% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.75	0.33 - 2.27	0.90

Data Plot and Equation



Fitted Curve Equation: T = 0.700(X) + 9.477

R^2 = 0.89

MPA15-003 & RZA15-005
EXHIBIT O

Land Use: 210
Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The peak hour of the generator typically coincides with the peak hour of the adjacent street traffic.

The sites were surveyed from the late 1960s to the mid-1990s throughout the United States and Canada.

The number of vehicles and the number of residents have a high correlation with average weekday vehicle trip ends. The use of these variables is limited, however, because the number of vehicles and residents is often difficult to obtain or predict. The number of dwelling units is generally used as the independent variable of choice because it is usually readily available, easy to project, and has a high correlation with average weekday vehicle trip ends.

This land use includes data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there is a wide variation in trips generated within this category. As expected, dwelling units that were larger in size, more expensive, or farther away from the central business district (CBD) had a higher rate of trip generation per unit than those smaller in size, less expensive, or closer to the CBD. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units have the highest trip generation rate per dwelling unit of all residential uses, because they are the largest units in size and have more residents and more vehicles per unit than other residential land uses; they are generally located farther away from shopping centers, employment areas, and other trip attractors than are other residential land uses; and they generally have fewer alternate modes of transportation available, because they are typically not as concentrated as other residential land uses.

Source Numbers

1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 16, 19, 20, 21, 26, 34, 35, 36, 38, 40, 71, 72, 84, 91, 98, 100, 105, 108, 110, 114, 117, 119, 157, 167, 177, 187, 192, 207, 211, 246, 275, 283, 293, 300, 319, 320, 357, 384, 435

MPA15-003 & RZA15-005
EXHIBIT O

Single-Family Detached Housing
(210)

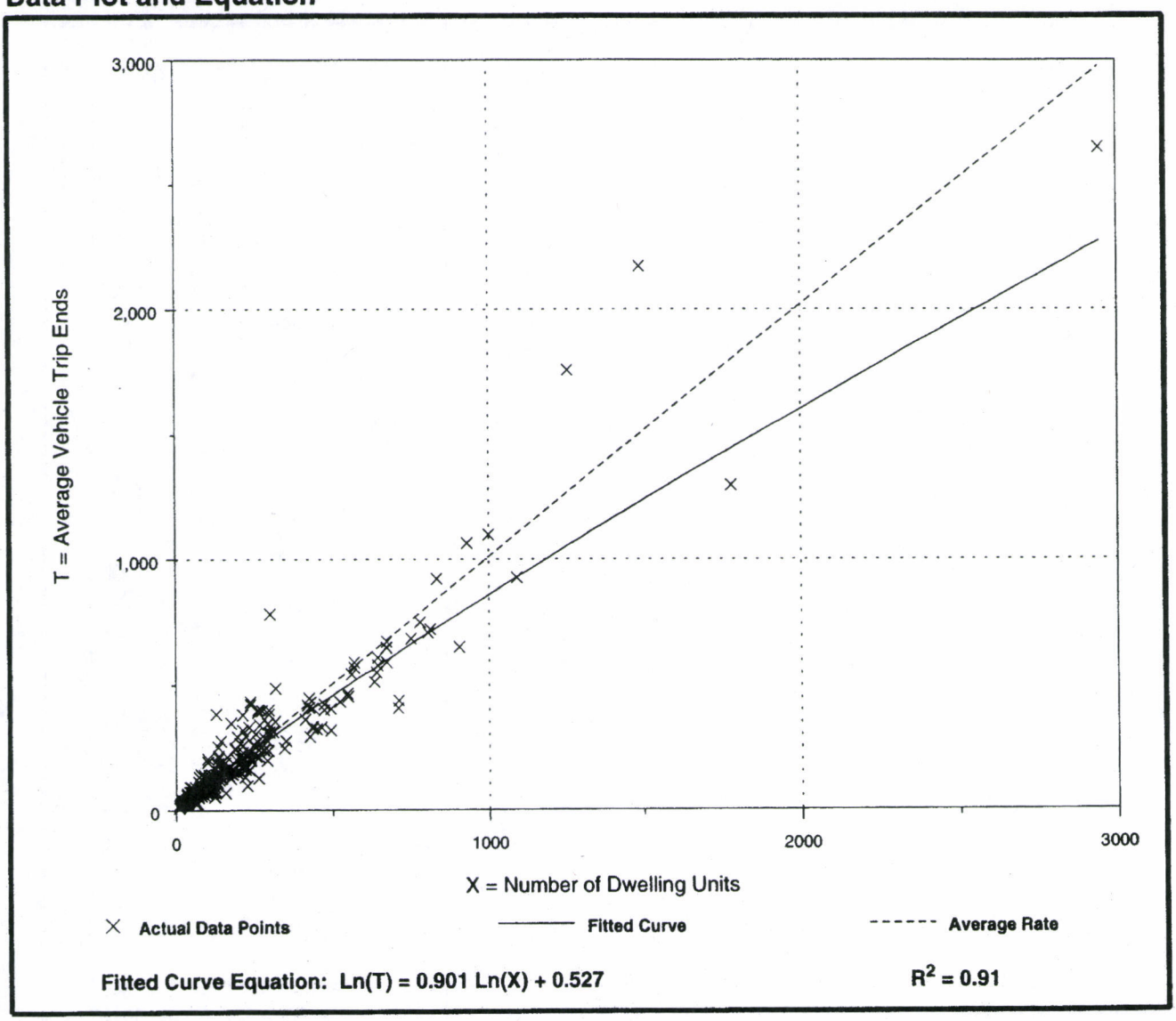
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 294
Avg. Number of Dwelling Units: 216
Directional Distribution: 64% entering, 36% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
1.01	0.42 - 2.98	1.05

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.901 Ln(X) + 0.527

R^2 = 0.91

MPA15-003 & RZA15-005
EXHIBIT O

Single-Family Detached Housing
(210)

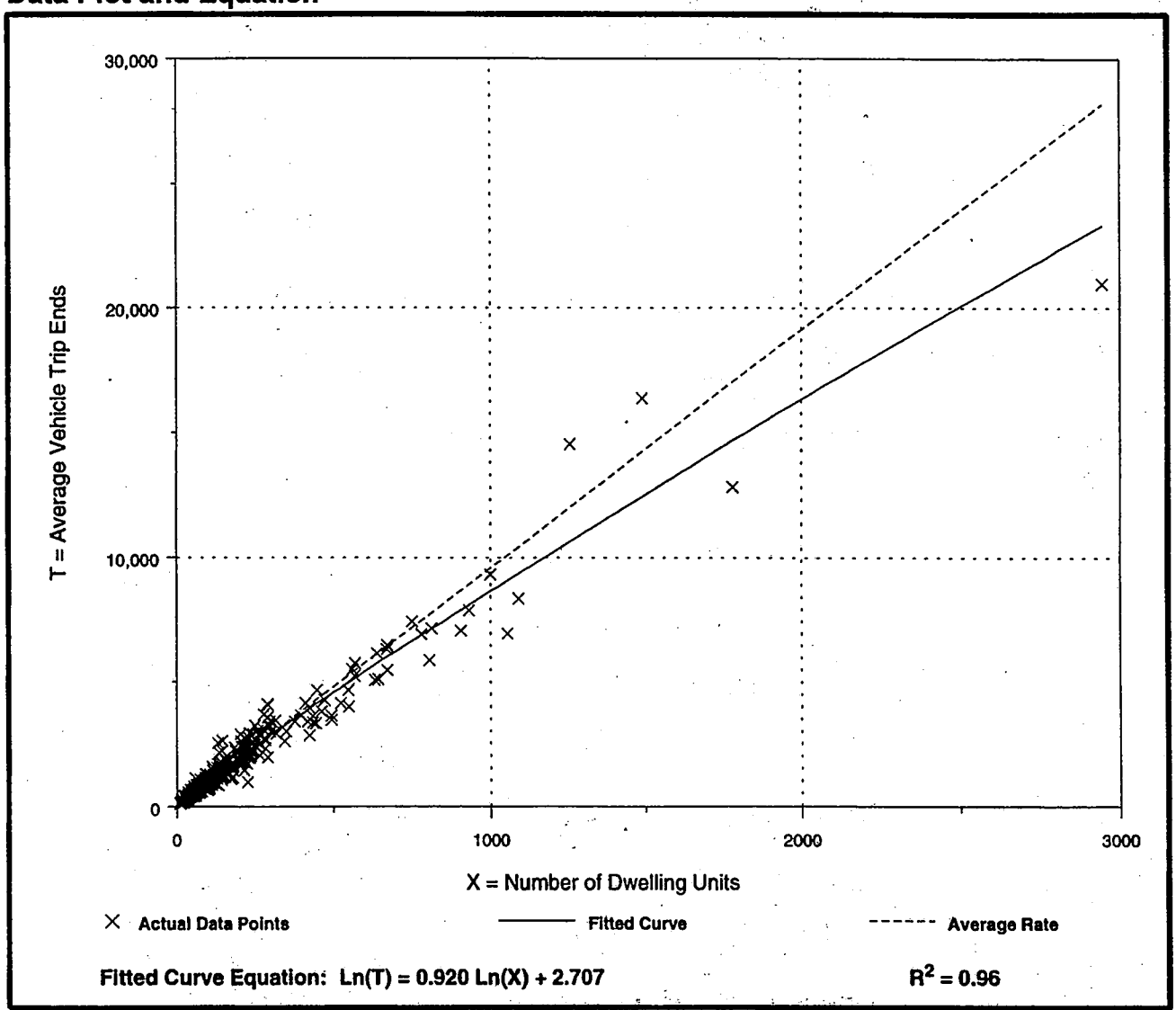
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Number of Studies: 348
Avg. Number of Dwelling Units: 198
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.57	4.31 - 21.85	3.69

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.920 Ln(X) + 2.707

R^2 = 0.96

MPA15-003 & RZA15-005
EXHIBIT O

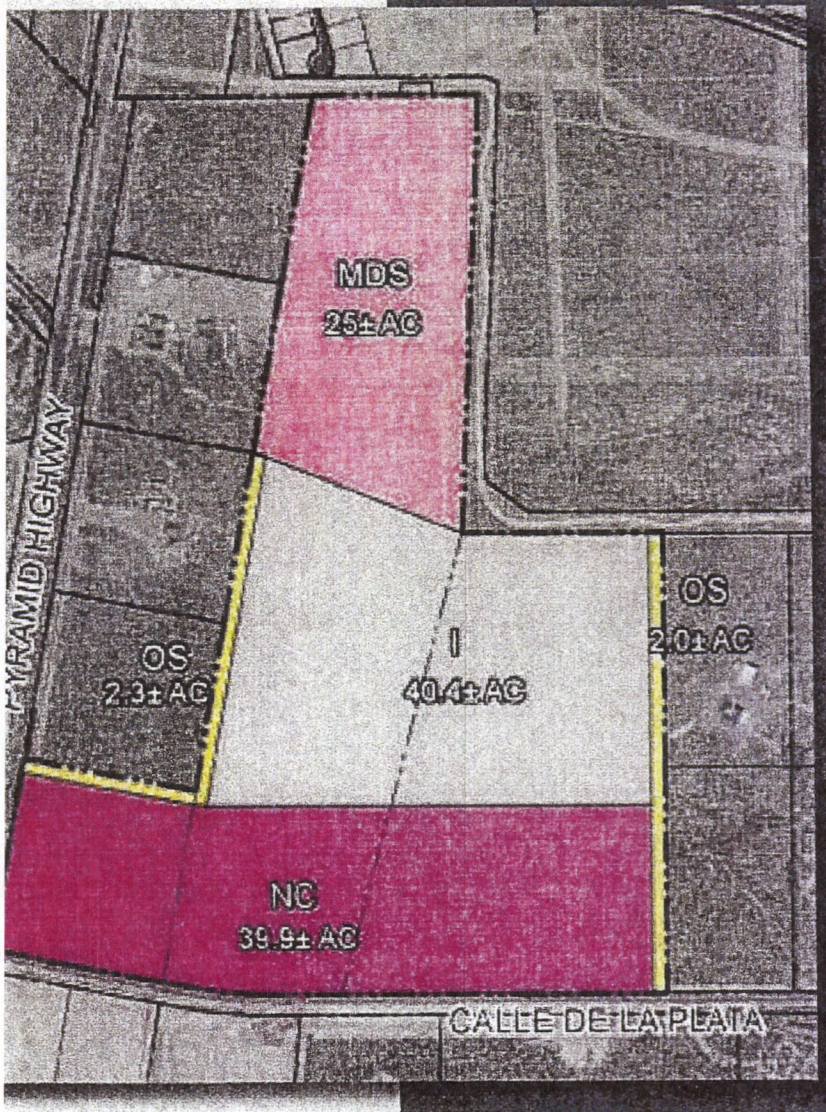
APPENDIX F:

VILLAGE AT THE PEAK TRAFFIC IMPACT STUDY

(FEHR & PEERS, AUGUST 2009)

STAR CONSULTING

VILLAGE AT THE PEAK
TRAFFIC IMPACT STUDY



Submitted to: **Village at the Peak**

Submitted by: **Fehr & Peers**
50 W. Liberty Street, Suite 301
Reno, NV 89501

August 2009

MPA15-003 & RZA15-005
EXHIBIT O

TABLE OF CONTENTS

EXECUTIVE SUMMARY i
- Project Description i
- Project Access i
- Study Intersections and Scenarios i
- Existing Conditions i
- Project Conditions ii
- Existing Plus Project Conditions ii
- 2018 Background Conditions ii
- 2018 Background Plus Project Conditions ii
- 2040 and 2040 Plus Project Conditions iii
- Conclusions and Recommendations iii

1. INTRODUCTION 1
- Project Description 1
- Scope of Study 1
- Study Conditions 1
- Intersection Analysis Methodology 2
- Level of Service Standards 3

2. EXISTING CONDITIONS 5
- Roadway System 5
- Existing Traffic Volumes and Level of Service 5
- Transit, Bicycle, and Pedestrian Facilities 5

3. PROJECT CONDITIONS 6
- Project Description 6
- Trip Generation 6
- Trip Distribution and Assignment 7

4. EXISTING PLUS PROJECT CONDITIONS 9
- Existing Plus Project Level of Service 9

5. 2018 BACKGROUND CONDITIONS 10
- 2018 Background Traffic Volumes 10
- Roadway Network and Intersection Improvements By Others 10
- Intersection Level of Service Analysis 10
- 2018 Average Daily Traffic Volumes 11

6. 2018 BACKGROUND PLUS PROJECT CONDITIONS 12
- Intersection Level of Service Analysis 12
- Daily Roadway Segment Analysis 12

6. 2040 AND 2040 PLUS PROJECT CONDITIONS 14
- 2040 Volume Development 14
- 2040 Background Plus project Conditions 16

7. CONCLUSIONS AND RECOMMENDATIONS 17

APPENDICES

Appendix A: Intersection Turning Movement Count Data

Appendix B: Existing and Existing Plus Project Technical Analysis

Appendix C: 2018 and 2018 Plus Project Technical Analysis

LIST OF FIGURES

Figure 1. Project Location

Figure 2. Existing Conditions Traffic Volumes and Lane Configurations

Figure 3. Proposed Site Plan

Figure 4. Project Trip Distribution and Assignment

Figure 5. Existing Plus Project Traffic Volumes and Lane Configurations

Figure 6. 2018 Background Traffic Volumes and Lane Configurations

Figure 7. 2018 Plus Project Traffic Volumes and Lane Configurations

LIST OF TABLES

Table 1 Intersection Level of Service Definitions 2

Table 2 RTC Average Daily Traffic Roadway Level of Service Thresholds By Facility Type 4

Table 3 Existing Conditions Intersection Level of Service Results 5

Table 4 Trip Generation Estimate 7

Table 5 Existing Plus Project Conditions Intersection Level of Service Results 9

Table 6 2018 Background Conditions Intersection Level of Service Results 11

Table 7 2018 Background Conditions Roadway Segment Capacity Results 11

Table 8 2018 background Plus Project Conditions Intersection Level of Service Results 12

Table 9 2018 Background Plus Project Conditions Roadway Segment Capacity Results 13

Table 10 2040 Traffic Volume development 15

Table 11 2040 Background Conditions Roadway Segment Capacity Results 16

Table 12 2040 Background Plus Project Conditions Roadway Segment Capacity Results 16

EXECUTIVE SUMMARY

This study evaluates the potential traffic impacts of the proposed Village at the Peak zoning amendment in northern Spanish Springs on the nearby roadway system.

PROJECT DESCRIPTION

The Village at the Peak site is located on the northeast quadrant of the Calle de la Plata/Pyramid Highway intersection in Washoe County, Nevada. The proposed zoning consists of single family residential, neighborhood commercial, and industrial land uses.

PROJECT ACCESS

Two driveways are proposed to serve the Village at the Peak site. Driveway A and Driveway B are to be located on Calle de la Plata. Driveway A was analyzed as a four leg, two lane roundabout intersection, and Driveway B was analyzed as a three leg, side-street stop controlled intersection.

STUDY INTERSECTIONS AND SCENARIOS

The following study intersections were analyzed consistent with previous studies of this site:

- Calle de la Plata/Pyramid Highway
- Calle de la Plata/Project Driveway A (plus project conditions only)
- Calle de la Plata/Project Driveway B (plus project conditions only)

AM and PM weekday peak hour intersection level of service was analyzed for the following conditions:

- Existing Conditions
- 2018 Background Conditions
- 2018 Background Plus Project Conditions

Daily roadway segment level of service was analyzed for the following conditions:

- 2018 Background Conditions and 2018 Background Plus Project Conditions
- 2040 Background Conditions and 2040 Background Plus Project Conditions

EXISTING CONDITIONS

AM and PM weekday peak hour intersection turning movement volumes were collected in August 2008 and used to analyze intersection level of service. The Calle de la Plata/Pyramid Highway intersection currently operates at LOS F during the AM and PM peak hours.

PROJECT CONDITIONS

The estimated trip generation for the proposed Village at the Peak zoning is 6,190 daily, 662 AM peak hour, and 877 PM peak hour vehicle trips. Internal capture and pass-by reductions are included in the trip generation estimate.

EXISTING PLUS PROJECT CONDITIONS

The Calle de la Plata/Pyramid Highway intersection operates at LOS F under existing plus project conditions without planned regional roadway improvements. The Calle de la Plata/Driveway A and Calle de la Plata/Driveway B intersections will operate at acceptable levels of service with side-street stop controls.

2018 BACKGROUND CONDITIONS

2018 background condition intersection turning movement volumes include regional growth and trips generated by the following project in the surrounding area:

- Village Green Commercial Center (southeast corner of Pyramid Highway/Calle de la Plata intersection)
- Campo Rico Business Center (north of Calle de la Plata along Pyramid Highway)
- Calle de la Plata Retail Project (northwest corner of Pyramid Highway/Calle de la Plata intersection)

The following planned regional roadway improvements listed in the 2040 RTP were also included in the 2018 background conditions analysis:

- Pyramid Highway – Widen from two lanes to four lanes, from Egyptian Drive to Calle de la Plata
- Pyramid Highway – Widen from two lanes to four lanes, from Calle de la Plata to Winnemucca Ranch Road
- Pyramid Highway – Widen from four lanes to six lanes, from Egyptian Drive to Calle de la Plata

The Spanish Springs Area Plan also recommends a traffic signal at the Calle de la Plata/Pyramid Highway intersection which was included in the analysis.

With planned regional roadway improvements, the Calle de la Plata/Pyramid Highway intersection is expected to operate at LOS C and D during the AM and PM peak hours, respectively.

The Pyramid Highway and Calle de la Plata daily traffic volumes near the project site were compared to the Regional Transportation Commission's (RTC) daily level of service thresholds. The roadway segments will operate at LOS D or better with planned roadway improvements.

2018 BACKGROUND PLUS PROJECT CONDITIONS

The Calle de la Plata/Pyramid Highway intersection will operate at LOS D during the AM and PM peak periods under 2018 plus project conditions. The Calle de la Plata/Driveway A was analyzed as a two-lane roundabout and is expected to operate at LOS A during both the AM and PM peak hours. The Calle de la Plata/Driveway B intersection will operate at LOS B and C during the AM and PM peak hours, respectively, with side-street stop control.

The daily roadway segment level of service analysis indicated that the Pyramid Highway and Calle de la Plata roadway segments near the project site will operate at LOS D or better under 2018 plus project conditions.

2040 AND 2040 PLUS PROJECT CONDITIONS

The daily roadway segment level of service analysis indicates that Pyramid Highway north and south of Calle de la Plata will operate at LOS F with or without the project unless improvements are made. The Calle de la Plata roadway segments near the project site will operate at acceptable levels of service (LOS C) with planned regional roadway improvements. Pyramid Highway will need to be eight lanes south of Calle de la Plata and six lanes north of Calle de la Plata to operate at acceptable levels of service in the year 2040.

CONCLUSIONS AND RECOMMENDATIONS

The Calle de la Plata/Pyramid Highway intersection currently operates at LOS F during peak hours due to side street delay. The Spanish Springs Area Plan recognizes a traffic signal will be needed at the Calle de la Plata/Pyramid Highway intersection to address the current situation.

The 2040 RTP also recognizes and includes future regional roadway improvements to increase capacity on Pyramid Highway in the project vicinity. The 2040 RTP specifically indicates the following improvements:

- Pyramid Highway – Widen from two lanes to four lanes, from Egyptian Drive to Calle de la Plata by 2018
- Pyramid Highway – Widen from two lanes to four lanes, from Calle de la Plata to Winnemucca Ranch Road by 2030
- Pyramid Highway – Widen from four lanes to six lanes, from Egyptian Drive to Calle de la Plata by 2030

The 2040 RTP intentionally avoids recommending specific intersection improvements, recognizing that the specific intersection configurations should be determined at the time when the corridor is improved and actual turning movements are known. The RTP projects listed above assume that intersection upgrades will be accomplished with the widenings.

It is important to note this analysis is ultra conservative and comprehensive with regard to Year 2018 future traffic volumes because it assumes that, in addition to background traffic growth, the following projects will be built out:

- Village Green Commercial Center (southeast corner of Pyramid Highway/Calle de la Plata intersection)
- Campo Rico Business Center (north of Calle de la Plata along Pyramid Highway)
- Calle de la Plata Retail Project (northwest corner of Pyramid Highway/Calle de la Plata intersection)

It is highly unlikely that these projects and the subject site could all build out within the next 10 years. A 20 plus year horizon (Year 2030) is more realistic. Additionally, the first two projects above (and this application) are limited to zoning amendments and no specific projects have been proposed.

The 2018 analysis demonstrates adequate regional roadway improvements are planned to accommodate regional growth, the previously approved zoning amendments listed above, and rezoning of the subject site. In the unlikely event all the project sites were to develop by 2018, RTP improvements planned for the 2018 to 2030 timeframe would need to be accelerated. Acceleration of projects is a viable option since regional projects are re-evaluated and prioritized every two years with updates of the RTC's Capital Improvement Program. Furthermore, additional traffic studies will be required as specific projects are proposed within the recently proposed and

approved zoning amendment areas and there will be numerous opportunities to assess the necessary phasing of roadway improvements relative to actual development levels.

Finally, the benefits associated with providing zoning for employment and commercial services in the north Spanish Springs area should not be overlooked. The presence of these land uses closer to the heavy concentration of residential communities in north Spanish Springs will ultimately reduce the number and length of trips on Pyramid Highway south of the study area. The presence of jobs in the northern reaches of Spanish Springs will cause a redistribution or "reversing" of work based trips, and provide a higher utilization of the available roadway capacity.

Conformance with Spanish Springs Vision and Character Statement

Policy SS.17.2 of the Spanish Springs Area Plan requires compliance with several traffic related criteria. Our response based on the traffic analysis follows the text for each specific item.

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

   RESPONSE: This study demonstrates that acceptable levels of service can maintained on the regional roadway system.

e. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

   RESPONSE: This study discusses the potential impacts and timing of improvements outlined in the RTC's 2040 Regional Transportation Plan (2040 RTP).

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

   RESPONSE: The improvements necessary to accommodate regional traffic flows and this project can be timed appropriately to avoid adverse traffic impacts.

1. INTRODUCTION

This study evaluates the potential traffic impacts of the proposed Village at the Peak zoning amendment in northern Spanish Springs on the nearby roadway system.

PROJECT DESCRIPTION

The Village at the Peak site is located on the northeast quadrant of the Calle de la Plata/Pyramid Highway intersection in Washoe County, Nevada. The proposed zoning consists of single family residential, neighborhood commercial, and industrial land uses.

The proposed project site location is shown on **Figure 1** and the zoning land use plan is shown on **Figure 3**.

SCOPE OF STUDY

Consistent with the previous traffic impact report for this project site, the following intersections were studied:

- Calle de la Plata/Pyramid Highway
- Calle de la Plata/Project Driveway A (plus project conditions only)
- Calle de la Plata/Project Driveway B (plus project conditions only)

STUDY CONDITIONS

The following six conditions were analyzed for this study with the corresponding volumes and roadway network configurations indicated:

1. Existing Conditions – Intersection level of service analysis was performed for the AM and PM peak periods using intersection turning movement counts collected in August 2008.
2. Existing Plus Project Conditions - Intersection level of service analysis was performed for the AM and PM peak periods using existing volumes plus the addition of project generated traffic volumes.
3. 2018 Background Conditions – 2018 background conditions analysis included regional growth plus trip generation volumes from any planned/approved projects in the area. Daily roadway, and AM and PM peak hour intersection level of service analysis was performed.
4. 2018 Background Plus Project Conditions – Daily roadway, and AM and PM intersection level of service analysis was performed using 2018 background volumes plus the addition of project generated traffic volumes.
5. 2040 Background Conditions – 2040 background conditions analysis included regional growth plus trip generation volumes from any planned/approved projects in the area. Daily roadway segment level of service analysis was performed.
6. 2040 Background Plus Project Conditions – Daily roadway segment level of service analysis was performed using 2040 background volumes plus the addition of project generated traffic volumes.

INTERSECTION ANALYSIS METHODOLOGY

Transportation engineers and planners commonly use the term level of service (LOS) to measure and describe the operational status of the local roadway network. An intersection or roadway segment's level of service can range from LOS A (indicating free-flow traffic conditions with little or no delay), to LOS F (representing oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays).

The analysis methods presented in the Transportation Research Board's *Highway Capacity Manual 2000* (*HCM 2000*) were used to calculate LOS for signalized and unsignalized intersections.

Signalized Intersections

Signalized intersections were analyzed using the methodology contained in HCM 2000. This methodology determines the level of service by comparing the average control delay for all vehicles approaching the intersection to the delay thresholds shown in **Table 1**.

Unsignalized Intersections

Unsignalized (side-street stop-controlled) intersection level of service calculations were conducted using the methods contained in Chapter 17 of HCM 2000. The LOS rating is based on the average control delay expressed in seconds per vehicle. At side-street stop-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left-turn movement from the major street, and for the entire intersection. For controlled approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. **Table 1** presents the thresholds for unsignalized intersections.

TABLE 1
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Signalized Intersections (Average Control Delay) [1]	Unsignalized Intersections (Average Control Delay) [2]
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10	≤10
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	> 10 to 20	> 10 to 15
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	> 20 to 35	> 15 to 25
D	Represents high-density, but stable flow.	> 35 to 55	> 25 to 35
E	Represents operating conditions at or near the capacity level.	> 55 to 80	> 35 to 50
F	Represents forced or breakdown flow.	> 80	> 50

Sources:
[1] *HCM 2000*, Chapter 16, Signalized Intersections. Values shown are in seconds/vehicle.
[2] *HCM 2000*, Chapter 17, Unsignalized Intersections. Values shown are in seconds/vehicle.

LEVEL OF SERVICE STANDARDS

The Washoe County Regional Transportation Commission (RTC) has established level of service criteria for regionally significant roadways and intersections in the *2040 Regional Transportation Plan* (2040 RTP). The 2040 RTP level of service standards for regional roadways and intersections are as follows:

- All regional roadway facilities projected to carry less than 27,000 ADT at the latest RTP horizon – LOS D or better.
- All regional roadway facilities projected to carry 27,000 or more ADT at the latest RTP horizon – LOS E or better
- All intersections shall be designed to provide a level of service consistent with maintaining the policy level of service of the intersecting roadways.

The Nevada Department of Transportation (NDOT) maintains a policy of LOS D or better on their facilities.

Since Pyramid Highway is an NDOT facility, LOS D or better was used as the standard for this analysis. Any intersections or roadway segments that degrade from LOS A, B, C, or D to LOS E or F shall be considered an impact.

Table 2 presents the level of service thresholds for roadway segments as established in the 2040 RTP.

TABLE 2
RTC AVERAGE DAILY TRAFFIC ROADWAY LEVEL OF SERVICE
THRESHOLDS BY FACILITY TYPE

Facility Type	Maximum Service Flow Rate (Daily) for Given Service Level				
Number of Lanes	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway					
4	≤ 28,600	42,700	63,500	80,000	90,200
6	≤ 38,300	61,200	91,100	114,000	135,300
8	51,100	81,500	121,400	153,200	180,400
10	63,800	101,900	151,800	191,500	225,500
Arterial – High Access Control (HAC)					
2	n/a	9,400	17,300	19,200	20,300
4	n/a	20,400	36,100	38,400	40,600
6	n/a	31,600	54,700	57,600	60,900
8	n/a	42,500	73,200	76,800	81,300
Arterial – Moderate Access Control (MAC)					
2	n/a	5,500	14,800	17,500	18,600
4	n/a	12,000	32,200	35,200	36,900
6	n/a	18,800	49,600	52,900	55,400
8	n/a	25,600	66,800	70,600	73,900
Arterial – Low Access Control (LAC)					
2	n/a	n/a	6,900	13,400	15,100
4	n/a	n/a	15,700	28,400	30,200
6	n/a	n/a	24,800	43,100	45,400
8	n/a	n/a	34,000	57,600	60,600
Arterial – Ultra-Low Access Control (ULAC)					
2	n/a	n/a	6,500	13,300	14,200
4	n/a	n/a	15,300	27,300	28,600
6	n/a	n/a	24,100	41,200	43,000
8	n/a	n/a	33,300	55,200	57,400
Arterial – Ultra-Low Access Control (ULAC)					
2	n/a	n/a	6,500	13,300	14,200
4	n/a	n/a	15,300	27,300	28,600
6	n/a	n/a	24,100	41,200	43,000
8	n/a	n/a	33,300	55,200	57,400
Collector – Ultra-Low Access Control (ULAC)					
2	n/a	n/a	7,300	8,500	9,100

* Contact the RTC Planning Department for LOS threshold for collector facilities with access controls other than ultra-low access control.
Source: Washoe County 2040 Regional Transportation Plan, RTC

2. EXISTING CONDITIONS

This chapter describes the transportation characteristics of the project study area including area roadways, existing traffic volumes, and existing bicycle, pedestrian and transit facilities.

ROADWAY SYSTEM

Pyramid Highway is a north-south NDOT facility that runs from Interstate 80 (I-80) in the south to Pyramid Lake in the north. Pyramid Highway is a two-lane roadway with posted speed limits of 55 – 65 miles per hour (mph) in the vicinity of the project. The 2040 RTP classifies Pyramid Highway as a High Access Control (HAC) Arterial south of Calle de la Plata and a Moderate Access Control (MAC) Arterial north of Calle de la Plata.

Calle de la Plata is a four-lane roadway west of Pyramid Highway and a two-lane roadway east of Pyramid Highway. The 2040 RTP lists Calle de la Plata as a Low Access Control (LAC) Collector west of Pyramid Highway.

EXISTING TRAFFIC VOLUMES AND LEVEL OF SERVICE

Intersection turning movement counts were collected at the Calle de la Plata/Pyramid Highway intersection during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods in August 2008. The existing volumes, shown on **Figure 2,** were used to analyze the level of service at the study intersection. **Table 3** displays the results. Detailed intersection LOS calculation worksheets are provided in **Appendix A**.

TABLE 3
EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE RESULTS

Intersection	Control Type [1]	AM Peak Hour		PM Peak Hour	
		Delay [2]	LOS	Delay	LOS
Calle de la Plata/Pyramid Highway	SSSC	10 (>50)	A (F)	10 (>50)	A (F)

Notes: [1] SSSC = Side Street Stop Control
[2] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for unsignalized intersections.
Bold indicates deficient operations.
Source: Fehr & Peers, 2008

As shown in Table 3 the Calle de la Plata/Pyramid Highway side street approaches operates at LOS F during the AM and PM peak hours. The overall intersection is shown to operate at LOS A.

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

No existing or planned transit routes access Pyramid Highway or Calle de la Plata in the vicinity of the project. Bike lanes and sidewalks are present on Calle de la Plata west of Pyramid Highway.

3. PROJECT CONDITIONS

PROJECT DESCRIPTION

The project site is currently zoned for 25 acres of Low Density Suburban (LDS) and approximately 85 acres of General Rural land use. Under the existing zoning 27 single family residential housing units are allowed.

The proposed land use plan includes the following zonings:

- 4.3 acres of Open Space.
- 25 acres of Medium Density Suburban (MDS) containing 75 single family residences.
- 40.4 acres for Industrial use.
- 39.9 acres of Neighborhood Commercial.

It is important to note that the current application is for a zoning amendment only. There is no specific project or land use mix proposed at this time. In order to estimate project trips and potential impacts we considered a range of possible specific land uses that would fit within the proposed zonings and have provided our best estimate of future development potential. Additional traffic studies will be prepared with future project specific applications.

The proposed land use plan is included as **Figure 3**.

Two driveways are proposed to serve the Village at the Peak site. Both Driveway A and B are proposed to be located on Calle de la Plata east of Pyramid Highway. Driveway A is recommended to consist of a four legged, two-lane roundabout, and Driveway B is recommended to consist of a three legged, side-street stop controlled intersection. Driveway A could also serve the Village Green Commercial Center located on the south side of Calle de la Plata.

There is a possibility that an additional access could eventually be created to the north (to Horizon Hills Drive through the adjacent subdivision) or west to Pyramid Highway via an easement. Either alternative would require agreements with adjacent land owners, which have not been pursued since this is only a zoning request. This traffic study takes a conservative approach and assumes only the driveways on Calle de la Plata.

TRIP GENERATION

Trips were generated for the proposed project based on average trip rates in *Trip Generation* (Institute of Transportation Engineers (ITE), Seventh Edition, 2003). Adjustments were made consistent with ITE methodologies to account for internally captured trips (trips between different land uses within the project site) and pass-by trips. Pass-by trips are trips made as intermediate stops to a final destination, for example, a driver who stops at the proposed project on the way home from work. Neither internally captured trips or pass-by trips add new traffic to the roadway network.

The proposed zonings for Village at the Peak will create a mixed-use project. As noted above, in order to perform traffic analysis, we have assumed a land use mix for the site based on the types of services that would be likely and reasonable in this area. These estimations will be revisited with project specific applications.

The assumed land use mix for the 39.9 acre Neighborhood Commercial area is as follows:

- 10 acres of typical shopping center retail
- 10 acres of commercial and civic uses allowed within the Neighborhood Commercial (NC) zone. This area could include services such as a veterinarian hospital, adult care/nursing home, church, health club, bowling alley, copy/print/ship store, nursery, or a tire store for example.
- 20 acres of general office buildings

Based on the broad variety of land uses likely on this site including jobs, housing, retail, and support services, we estimate that approximately 22% of the trips generated by the project will be internally captured. This figure is consistent with documented studies of mixed-use projects and well within the range of 20%-30% internal capture typically found in smaller scale mixed-use developments.

Based on the ITE trip generation handbook, 34% of the trips generated by the commercial/retail uses will be "pass-by" trips.

Since the proposed action is a zoning amendment, and this study analyzes the potential impacts resulting from an amendment, trip generation for the existing zoning has been subtracted to show the difference in traffic levels.

The projected trip generation is summarized in **Table 4**.

TABLE 4
TRIP GENERATION ESTIMATE

Land Use	Units	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
			Trips	In	Out	Total	In	Out	Total
Single Family Residential	75	210	**718**	14	42	**56**	48	28	**76**
Industrial	40.4 AC	140	**1,571**	249	51	**301**	74	263	**337**
Shopping Center/Retail	10 AC	820	**3,737**	53	34	**87**	159	166	**325**
Commercial/Civic	10 AC	*	**2,614**	192	39	**231**	93	330	**423**
Office	20 AC	710	**2,396**	280	57	**338**	71	253	**325**
RAW Trip Generation			**11,035**	789	224	**1,012**	446	1,040	**1,485**
Internal Capture			**-2,428**	-173	-49	**-223**	-98	-229	**-327**
Pass-By Trips			**-2,159**	-83	-25	**-108**	-86	-168	**-254**
Reduction for Trips Allowed by Existing Zoning			**-258**	-5	-15	**-20**	-17	-10	**-27**
NET NEW TRIPS			**6,190**	527	135	**662**	245	632	**877**

Notes: * Composite rate based on an average of the eight allowable example land uses listed above.
Source: Fehr and Peers 2009

TRIP DISTRIBUTION AND ASSIGNMENT

The site-generated trips were distributed to the study intersections based on the location of the site relative to existing and planned development in the study area. There are a number of planned developments and recent

roadway connections along Pyramid Highway between Egyptian Drive and the Pebble Creek residential area that will change travel patterns in the study vicinity. As these projects develop the directional distribution of local trips (and some regional trips) will reverse, creating more balanced flows on Pyramid Highway. The creation of jobs in the northern Spanish Springs area will in fact reduce and better balance regional traffic flow on Pyramid Highway.

The estimated trip distribution for the project site is displayed on **Figure 4** and described below:

- 35% to/from the north on Pyramid Highway
- 45% to/from the south on Pyramid Highway
- 20% to/from the west on Calle de la Plata
- 5% to/from the east on Calle de la Plata

Pass-by trips were routed from Pyramid Highway to the site based on the future trip distribution pattern. Using the above distribution, trips were assigned to the roadway system as shown in **Figure 4**.

4. EXISTING PLUS PROJECT CONDITIONS

EXISTING PLUS PROJECT LEVEL OF SERVICE

Vehicle trips generated by the Village at the Peak land use proposal were distributed to the surrounding roadway network and added to the existing traffic volumes for existing plus project conditions analysis. **Table 5** presents the level of service results. **Figure 5** shows the existing plus project traffic volumes and lane configurations.

TABLE 5
EXISTING PLUS PROJECT CONDITIONS INTERSECTION LEVEL OF SERVICE RESULTS

Intersection	Control Type[1]	Existing Conditions				Existing Plus Project Conditions			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay [2]	LOS	Delay [2]	LOS	Delay [2]	LOS	Delay [2]	LOS
Calle de la Plata/ Pyramid Highway	SSSC	10 (>50)	A (F)	10 (>50)	A (F)	>50 (>50)	F (F)	>50 (>50)	F (F)
Calle de la Plata/ Driveway A	SSSC	--	--	--	--	6 (10)	A (A)	12 (25)	A (D)
Calle de la Plata/ Driveway B	SSSC	--	--	--	--	6 (9)	A (A)	7 (11)	A (B)

Notes: [1] SSSC = Side Street Stop Control, AWSC = All Way Stop Control

[2] Delay is reported in seconds per vehicle for the overall intersection for signalized intersections and the overall intersection (worst approach) for SSSC intersections.

-- Not Applicable

Bold indicates deficient operations.

Source: Fehr & Peers, 2009

The Calle de la Plata/Pyramid Highway intersection operates at LOS F with and without the addition of project generated traffic. Driveway A and Driveway B operate at acceptable levels of service with side street stop controls.

A traffic signal is planned at the Calle de la Plata/Pyramid Highway intersection to improve operations to an acceptable level.

5. 2018 BACKGROUND CONDITIONS

2018 background conditions analysis includes roadway network and intersection improvements listed in the 2040 RTP, as well traffic volume increases from regional growth and planned/approved zoning amendment and development projects in the area.

2018 BACKGROUND TRAFFIC VOLUMES

2018 background traffic volumes were developed using several sources. The initial 2018 background traffic volumes (accounting for regional growth in the area) were extracted from the approved Frear Comprehensive Plan Amendment (also known as Village Green Commercial Center) Traffic Analysis (Solaegui Engineers, 2008) as provided by the RTC's regional travel demand model. Additionally, project generated traffic volumes for the Frear Comprehensive Plan Amendment and two other planned/approved project studies in the area (Campo Rico Business Center Traffic Analysis, Solaegui Engineers, 2008 and Calle de la Plata/Pyramid Highway Retail Project Traffic Impact Study, Fehr & Peers, 2007) were included in the 2018 background traffic volumes.

ROADWAY NETWORK AND INTERSECTION IMPROVEMENTS BY OTHERS

The 2040 RTP lists regional roadway improvements to be completed by 2018 and 2030. The 2018 planned improvements include widening Pyramid Highway, from Egyptian Drive to Calle de la Plata, from two lanes to four lanes. The 2030 planned improvements include widening Pyramid Highway, from Egyptian Drive to Calle de la Plata, from four lanes to six lanes, and from Calle de la Plata to Winnemucca Ranch Road, from two lanes to four lanes. Considering the magnitude of the planned/approved projects included in the 2018 background conditions analysis, it is highly unlikely that these projects will build out completely in the next ten years. Therefore, this analysis assumes that the 2018 and 2030 improvements will likely be in place by the time the projects are completed. If the projects were to build out by 2018, the 2030 planned improvements could be accelerated to accommodate traffic volumes generated by the projects earlier than expected.

Traffic analyses for the three planned/approved projects listed above all discuss the need for a traffic signal at the Calle de la Plata/Pyramid Highway intersection, as recognized in the Spanish Springs Area Plan. Therefore, under 2018 conditions, the study intersection was analyzed with a traffic signal.

Intersection improvements, including left and right turn pockets, were determined during the 2018 background conditions analysis. Improvements necessary to achieve level of service D or better at the Calle de la Plata/Pyramid Highway intersection were determined with AM and PM peak hour intersection analysis. These improvements would most likely be constructed with the RTP planned widening of Pyramid Highway south of Calle de la Plata before 2018.

Figure 6 shows the 2018 background traffic volumes and the assumed intersection lane configurations.

INTERSECTION LEVEL OF SERVICE ANALYSIS

Table 6 presents the level of service results for 2018 background conditions.

TABLE 6
2018 BACKGROUND CONDITIONS INTERSECTION LEVEL OF SERVICE RESULTS

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay [1]	LOS	Delay	LOS
Calle de la Plata/Pyramid Highway	Signal	32	C	40	D

Notes: [1] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for unsignalized intersections.
Source: Fehr & Peers, 2008

The Calle de la Plata/Pyramid Highway intersection will operate at acceptable levels of service during the AM and PM peak hours with the recommended lane configurations shown in **Figure 6** and the planned widenings.

2018 AVERAGE DAILY TRAFFIC VOLUMES

2018 avarage daily traffic (ADT) volumes were developed for the roadway segments adjacent to the project site using the same methodology and sources used to obtain the intersection turning movement volumes previously described.

ADT volumes were compared to the RTC's Average Daily Traffic Roadway Level of Service Thresholds (shown in Table 2 of this report) to determine 2018 roadway segment level of service. The results are shown in **Table 7**.

TABLE 7
2018 BACKGROUND CONDITIONS ROADWAY SEGMENT CAPACITY RESULTS

Roadway	Location	Functional Classification [1]	Lanes	Daily Two-Way Traffic Volume	LOS
Pyramid Highway	South of Calle de la Plata	HAC Arterial	6	37,000	C
Pyramid Highway	North of Calle de la Plata	MAC Arterial	4	24,500	C
Calle de la Plata	West of Pyramid Highway	ULAC Arterial	4	10,550	C
Calle de la Plata	East of Pyramid Highway	ULAC Arterial	4	7,550	C

Notes: [1] ULAC = Ultra-Low Access Control, LAC = Low Access Control, MAC = Moderate Access Control, HAC = High Access Control
Source: Fehr & Peers, 2009

All of the study roadway segments will operate within level of service standards under 2018 background conditions.

6. 2018 BACKGROUND PLUS PROJECT CONDITIONS

INTERSECTION LEVEL OF SERVICE ANALYSIS

Project generated traffic volumes were added to the study intersections for 2018 plus project conditions analysis. Based on the previous traffic study for this project, a two-lane roundabout was assumed for Driveway A. The 2018 plus project traffic volumes and lane configurations are shown in **Figure 7**. **Table 8** shows the level of service results.

TABLE 8
2018 BACKGROUND PLUS PROJECT CONDITIONS INTERSECTION LEVEL OF SERVICE RESULTS

Intersection	Control Type[1]	2018 Background Conditions				2018 Background Plus Project Conditions			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay [2]	LOS	Delay [2]	LOS	Delay [2]	LOS	Delay [2]	LOS
Calle de la Plata/ Pyramid Highway	Signal	32	C	40	D	47	D	53	D
Calle de la Plata/ Driveway A	Roundabout	--	--	--	--	7	A	10	A
Calle de la Plata/ Driveway B	SSSC	--	--	--	--	3 (12)	A (B)	6 (18)	A (C)

Notes: [1] SSSC = Side Street Stop Control, AWSC = All Way Stop Control

[2] Delay is reported in seconds per vehicle for the overall intersection for signalized intersections and the overall intersection (worst approach) for SSSC intersections.

-- Not Applicable

Source: Fehr & Peers, 2009

The study intersections are expected to operate at acceptable levels of service under 2018 background plus project conditions. A side-street stop control will operate sufficiently at Driveway B.

DAILY ROADWAY SEGMENT ANALYSIS

Daily trip generation volumes were added to 2018 background volumes for roadway segment level of service analysis. **Table 9** shows the level of service results.

TABLE 9
2018 BACKGROUND PLUS PROJECT CONDITIONS ROADWAY SEGMENT CAPACITY RESULTS

Roadway	Location	Functional Classification 1	Lanes	Daily Two-Way Traffic Volume	LOS
Pyramid Highway	South of Calle de la Plata	HAC Arterial	6	39,500	C
Pyramid Highway	North of Calle de la Plata	MAC Arterial	4	26,650	C
Calle de la Plata	West of Pyramid Highway	ULAC Arterial	4	11,800	C
Calle de la Plata	East of Pyramid Highway	ULAC Arterial	4	7,850	C

Notes: [1] ULAC = Ultra-Low Access Control, LAC = Low Access Control, MAC = Moderate Access Control, HAC = High Access Control
Source: Fehr & Peers, 2009

This analysis assumes that Calle de la Plata will have a four-lane section between Pyramid Highway and Driveway B. Two lanes would be sufficient east of Driveway B. All studied roadway segments are shown to operate at acceptable levels of service with the planned improvements.

6. 2040 AND 2040 PLUS PROJECT CONDITIONS

2040 daily roadway segment analysis was performed for 2040 background conditions and 2040 background plus project conditions.

2040 VOLUME DEVELOPMENT

2040 background traffic volumes were developed using the same methodology and sources used to obtain 2018 background traffic volumes. The initial 2040 background traffic volumes (accounting for regional growth in the area) were extracted from the Village Green Traffic Analysis as provided by the RTC's regional travel demand model. Additionally, project generated traffic volumes for the three projects discussed previously were included in the 2040 background traffic volumes. **Table 10** shows the 2040 background and 2040 background plus project traffic volumes.

TABLE 10
2040 TRAFFIC VOLUME DEVELOPMENT

Roadway Segment, Location		
Volume Source (Project)	**Daily Volume**	**Percent of Total Volume**
Pyramid Highway, South of Calle de la Plata		
2040 Background	50,000	72%
Village Green Commercial Center	9,700	14%
Campo Rico Business Center	5,400	8%
Calle de la Plata Retail Center	1,300	2%
Village at the Peak	2,500	4%
Total	68,900	
Pyramid Highway, North of Calle de la Plata		
2040 Background	33,150	74%
Village Green Commercial Center	2,250	5%
Campo Rico Business Center	5,700	13%
Calle de la Plata Retail Center	1,300	3%
Village at the Peak	2,150	5%
Total	44,550	
Calle de la Plata, West of Pyramid Highway		
2040 Background	6,400	52%
Village Green Commercial Center	2,500	20%
Campo Rico Business Center	2,100	17%
Calle de la Plata Retail Center	150	1%
Village at the Peak	1,250	10%
Total	12,400	
Calle de la Plata, East of Pyramid Highway		
2040 Background	3,900	46%
Village Green Commercial Center	3,300	39%
Campo Rico Business Center	890	10%
Calle de la Plata Retail Center	150	2%
Village at the Peak	310	3%
Total	8,550	

Notes: [1] Delay is reported in seconds per vehicle for the overall intersection (worst movement) for unsignalized intersections.
Source: Fehr & Peers, 2008

Table 11 shows the daily roadway segment level of service results for 2040 background conditions.

TABLE 11
2040 BACKGROUND CONDITIONS ROADWAY SEGMENT CAPACITY RESULTS

Roadway	Location	Functional Classification [1]	Lanes	Daily Two-Way Traffic Volume	LOS
Pyramid Highway	South of Calle de la Plata	HAC Arterial	6/8	66,400	F/C
Pyramid Highway	North of Calle de la Plata	MAC Arterial	4/6	42,400	F/C
Calle de la Plata	West of Pyramid Highway	ULAC Arterial	4	11,150	C
Calle de la Plata	East of Pyramid Highway	ULAC Arterial	4	8,250	C

Notes: [1] ULAC = Ultra-Low Access Control, LAC = Low Access Control, MAC = Moderate Access Control, HAC = High Access Control
Source: Fehr & Peers, 2009

Pyramid Highway north and south of Calle de la Plata is expected to operate at LOS F under 2040 background conditions. Calle de la Plata will operate within level of service standards.

2040 BACKGROUND PLUS PROJECT CONDITIONS

Village at the Peak project generated traffic volumes were added to the 2040 background volumes for 2040 background plus project conditions daily roadway segment level of service analysis. **Table 12** shows the results.

TABLE 12
2040 BACKGROUND PLUS PROJECT CONDITIONS ROADWAY SEGMENT CAPACITY RESULTS

Roadway	Location	Functional Classification 1	Lanes	Daily Two-Way Traffic Volume	LOS
Pyramid Highway	South of Calle de la Plata	HAC Arterial	6/8	68,900	F/C
Pyramid Highway	North of Calle de la Plata	MAC Arterial	4/6	44,550	F/C
Calle de la Plata	West of Pyramid Highway	ULAC Arterial	4	12,400	C
Calle de la Plata	East of Pyramid Highway	ULAC Arterial	4	8,550	C

Notes: [1] ULAC = Ultra-Low Access Control, LAC = Low Access Control, MAC = Moderate Access Control, HAC = High Access Control
Source: Fehr & Peers, 2009

Unless improved, Pyramid Highway north and south of Calle de la Plata will operate at LOS F with or without the traffic generated by the proposed project. Calle de la Plata will operate within level of service standards.

2040 daily roadway segment level of service analysis shows that Pyramid Highway will need to be eight lanes south of Calle de la Plata and six lanes north of Calle de la Plata to operate at acceptable levels of service in the year 2040. The 2040 analysis should be considered "planning level" and needs further refinement through future studies.

7. CONCLUSIONS AND RECOMMENDATIONS

The Calle de la Plata/Pyramid Highway intersection currently operates at LOS F during peak hours due to side street delay. The Spanish Springs Area Plan recognizes a traffic signal will be needed at the Calle de la Plata/Pyramid Highway intersection to address the current situation.

The 2040 RTP also recognizes and includes future regional roadway improvements to increase capacity on Pyramid Highway in the project vicinity. The 2040 RTP specifically indicates the following improvements:

- Pyramid Highway – Widen from two lanes to four lanes, from Egyptian Drive to Calle de la Plata by 2018
- Pyramid Highway – Widen from two lanes to four lanes, from Calle de la Plata to Winnemucca Ranch Road by 2030
- Pyramid Highway – Widen from four lanes to six lanes, from Egyptian Drive to Calle de la Plata by 2030

The 2040 RTP intentionally avoids recommending specific intersection improvements, recognizing that the specific intersection configurations should be determined at the time when the corridor is improved and actual turning movements are known. The RTP projects listed above assume that intersection upgrades will be accomplished with the widenings.

It is important to note this analysis is ultra conservative and comprehensive with regard to Year 2018 future traffic volumes because it assumes that, in addition to background traffic growth, the following projects will be built out:

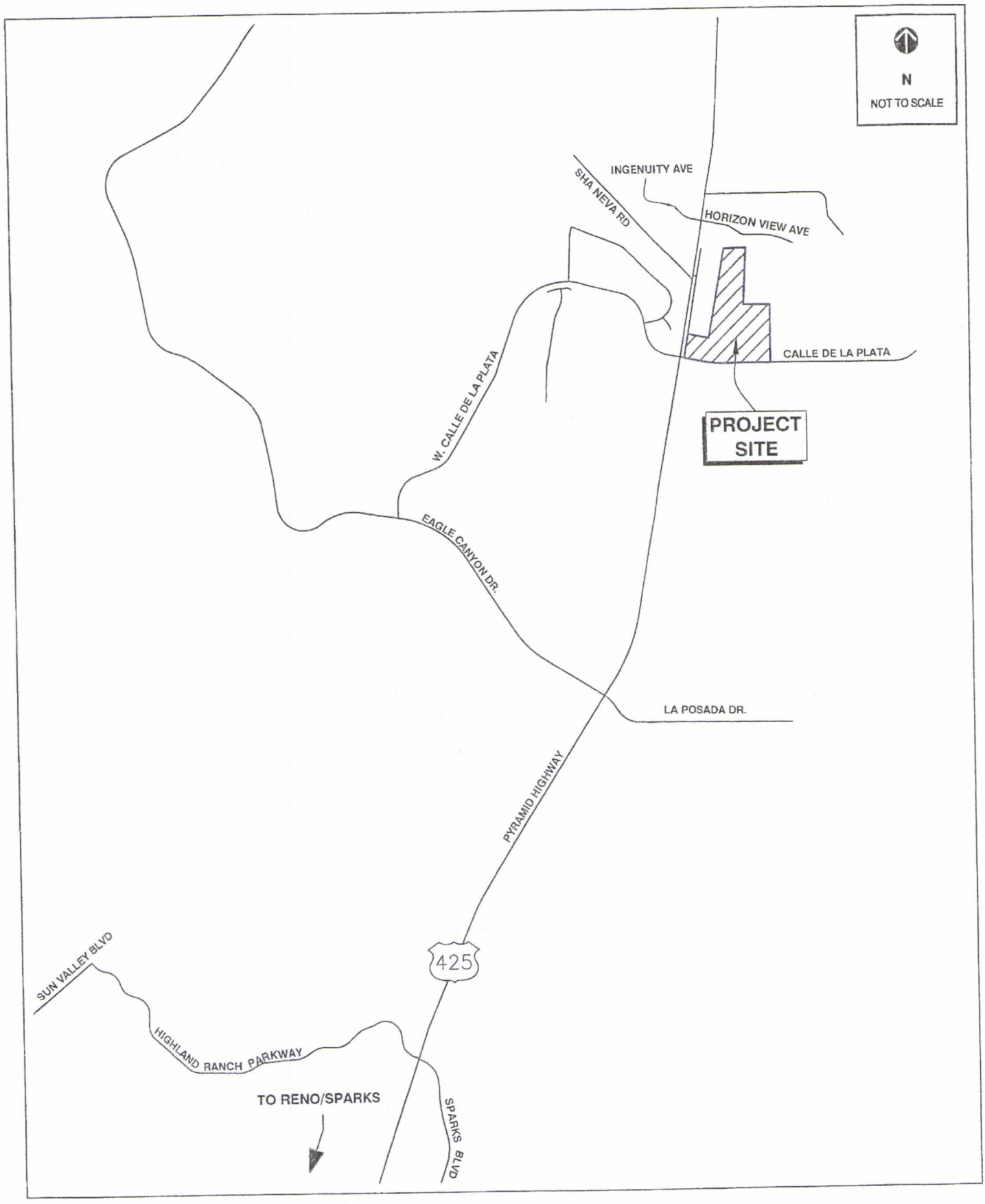
- Village Green Commercial Center (southeast corner of Pyramid Highway/Calle de la Plata intersection)
- Campo Rico Business Center (north of Calle de la Plata along Pyramid Highway)
- Calle de la Plata Retail Project (northwest corner of Pyramid Highway/Calle de la Plata intersection)

It is highly unlikely that these projects and the subject site could all build out within the next 10 years. A 20 plus year horizon (Year 2030) is more realistic. Additionally, the first two projects above (and this application) are limited to zoning amendments and no specific projects have been proposed.

The 2018 analysis demonstrates adequate regional roadway improvements are planned to accommodate regional growth, the previously approved zoning amendments listed above, and rezoning of the subject site. In the unlikely event all the project sites were to develop by 2018, RTP improvements planned for the 2018 to 2030 timeframe would need to be accelerated. Acceleration of projects is a viable option since regional projects are re-evaluated and prioritized every two years with updates of the RTC's Capital Improvement Program. Furthermore, additional traffic studies will be required as specific projects are proposed within the recently proposed and approved zoning amendment areas and there will be numerous opportunities to assess the necessary phasing of roadway improvements relative to actual development levels.

Finally, the benefits associated with providing zoning for employment and commercial services in the north Spanish Springs area should not be overlooked. The presence of these land uses closer to the heavy concentration of residential communities in north Spanish Springs will ultimately reduce the number and length of trips on Pyramid Highway south of the study area. The presence of jobs in the northern reaches of Spanish Springs will cause a redistribution or "reversing" of work based trips, and provide a higher utilization of the available roadway capacity.

FIGURES



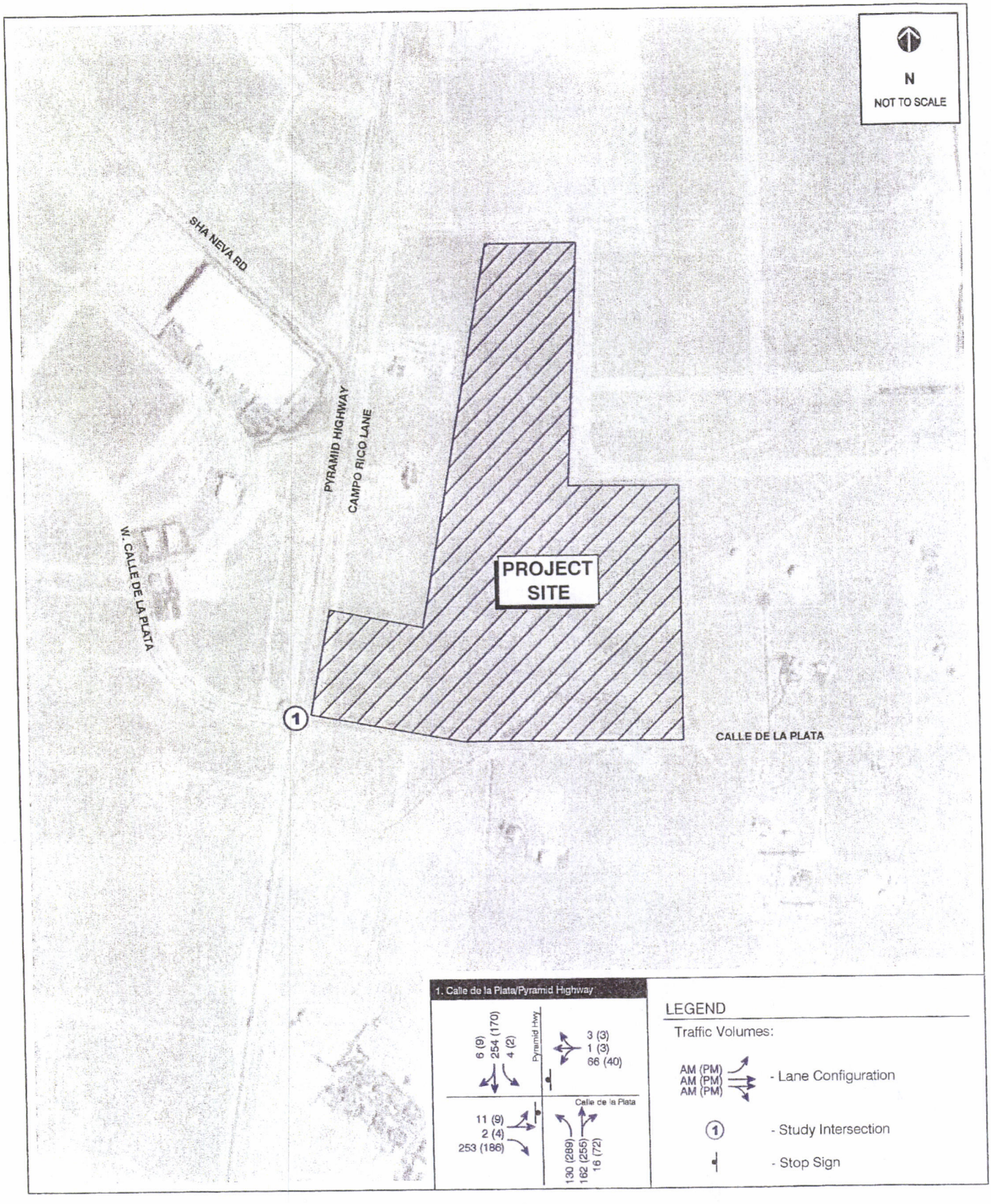
FEHR & PEERS
TRANSPORTATION CONSULTANTS

Aug 11, 2009 FPA
N:\Reno Projects\2009\RN09-0443 (Village at the Peak)\Graphics\443 figures.dwg

Village at the Peak
Traffic Impact Study
Project Location

Figure 1

MPA15-003 & RZA15-005 - EXHIBIT O



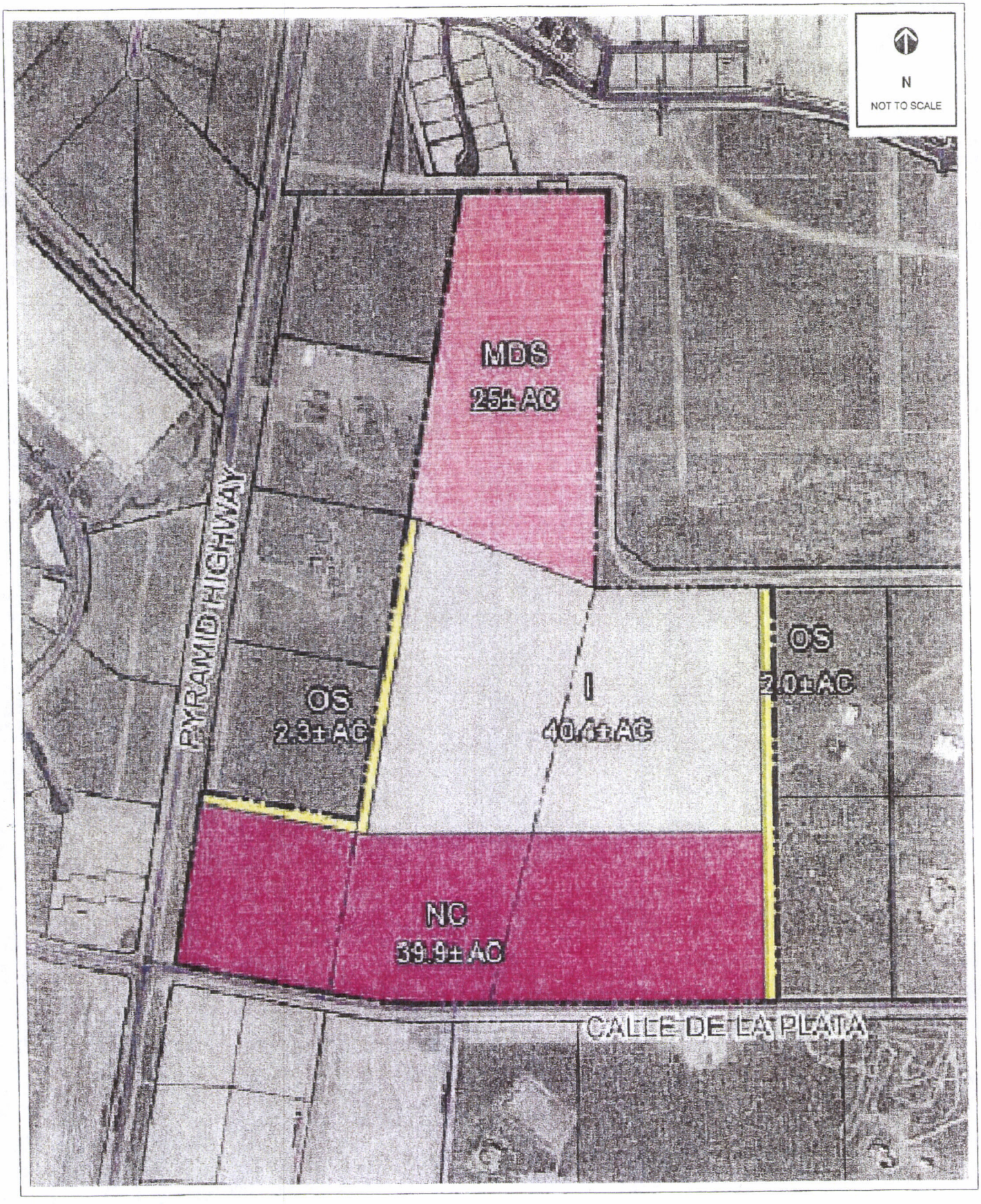
FEHR & PEERS
TRANSPORTATION CONSULTANTS

Aug 11, 2009 FPA
N:\Reno Projects\2009\RN09-0443 (Village at the Peak)\Graphics\443 figures.dwg

Village at the Peak
Traffic Impact Study
Existing Conditions

Figure 2

MPA15-003 & RZA15-005 - EXHIBIT O

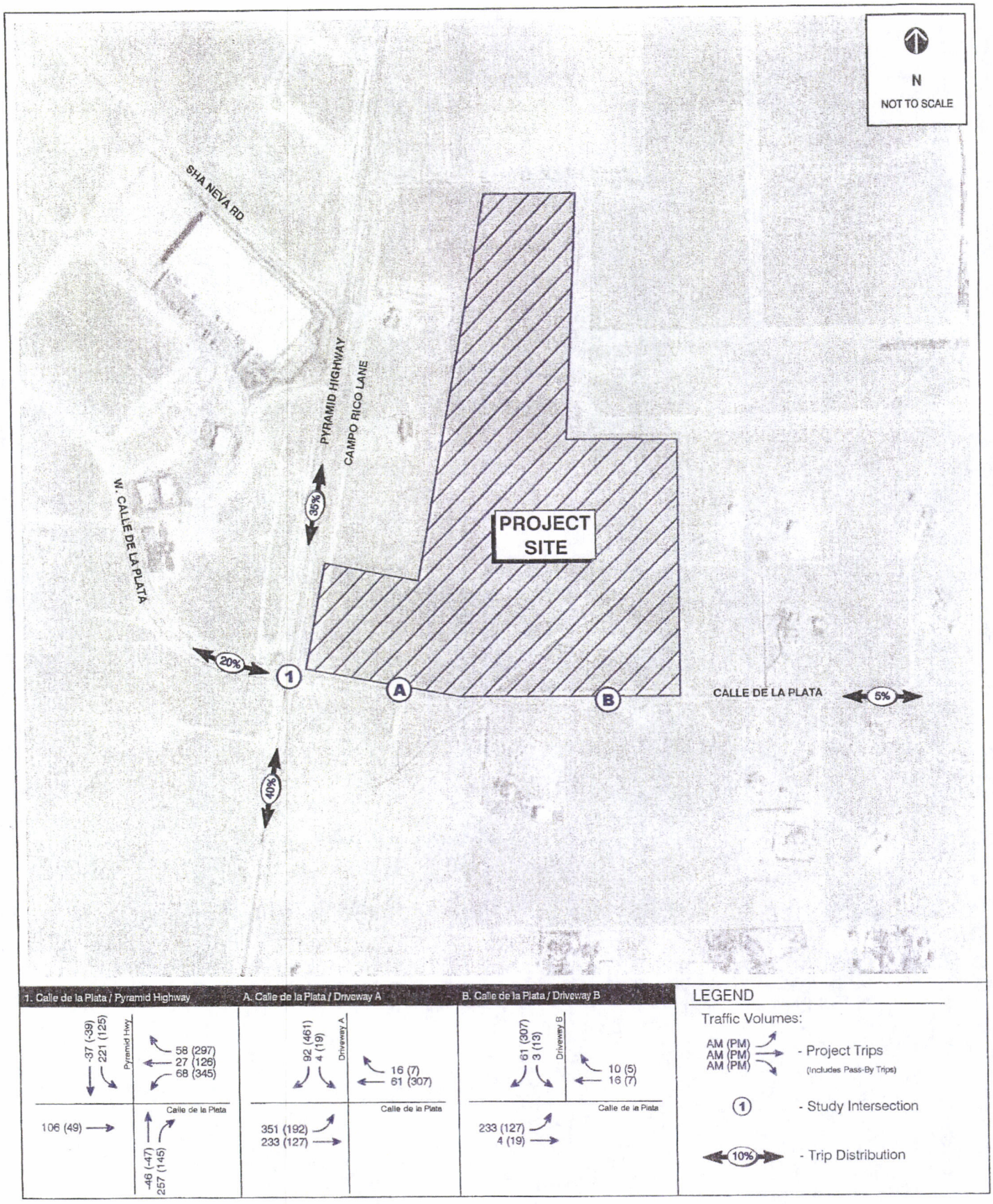


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Village at the Peak
Traffic Impact Study
Land Use Plan

Figure 3

MPA15-003 & RZA15-005 - EXHIBIT O



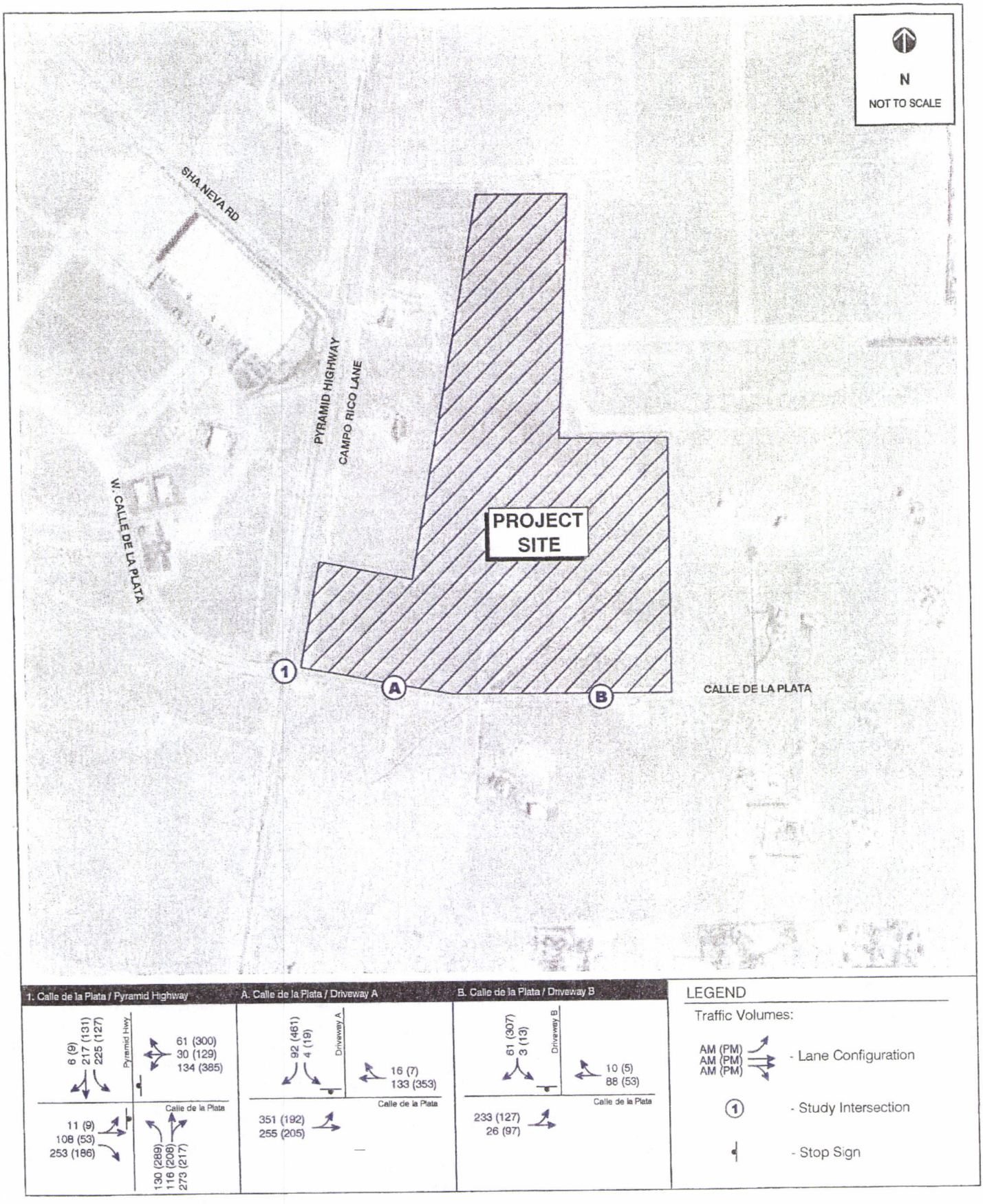
FEHR & PEERS
TRANSPORTATION CONSULTANTS

Aug 11, 2009 FPA
N:\Reno Projects\2009\RN09-0443 (Village at the Peck)\Graphics\443 figures.dwg

Village at the Peak
Traffic Impact Study
Trip Distribution and Assignment

Figure 4

MPA15-003 & RZA15-005 - EXHIBIT O



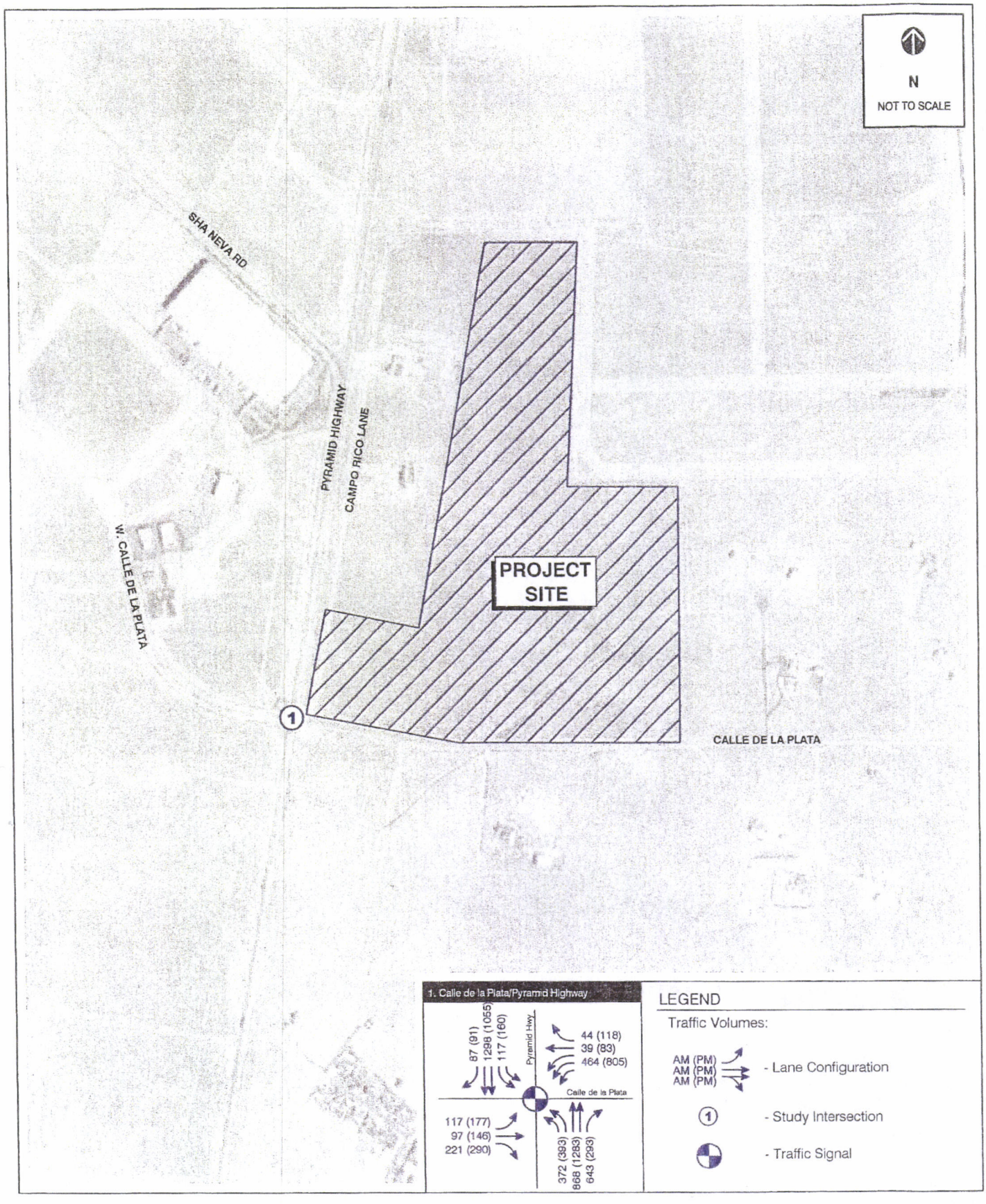
FEHR & PEERS
TRANSPORTATION CONSULTANTS

Aug 11, 2009 FPA
N:\Reno Projects\2009\RN09-0443 (Village at the Peak)\Graphics\443 figures.dwg

Village at the Peak
Traffic Impact Study
Existing Plus Project Conditions

Figure 5

MPA15-003 & RZA15-005 - EXHIBIT O



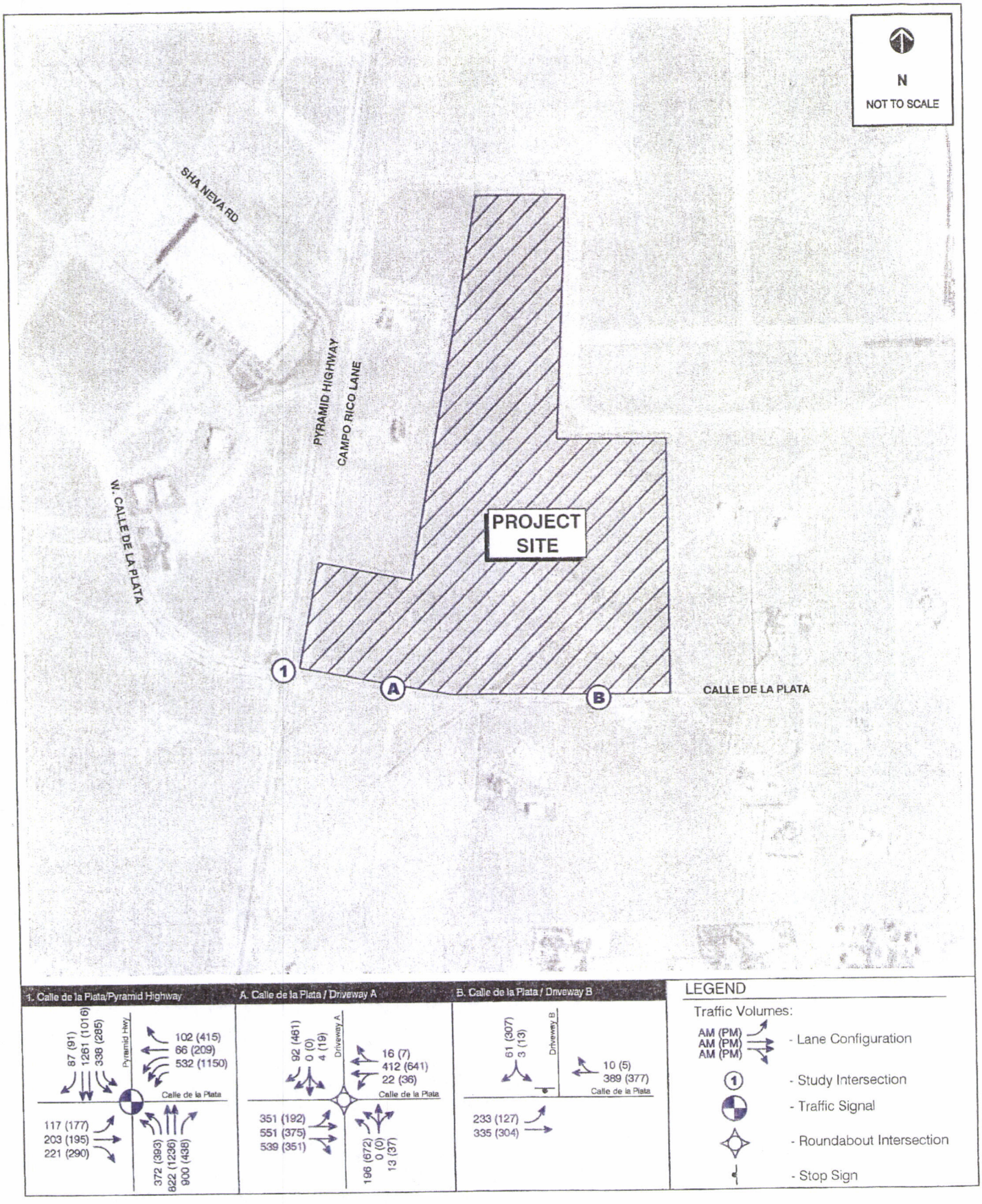
FEHR & PEERS
TRANSPORTATION CONSULTANTS

Aug 11, 2009 FPA
N:\Reno Projects\2009\RN09-0443 (Village at the Peak)\Graphics\443 figures.dwg

Village at the Peak
Traffic Impact Study
2018 Background Conditions

Figure 6

MPA15-003 & RZA15-005 - EXHIBIT O



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Aug 11, 2009 FPA
N:\Reno Projects\2009\RN09-0443 (Village at the Peak)\Graphics\443 figures.dwg

Village at the Peak
Traffic Impact Study
2018 Plus Project Conditions

Figure 7

MPA15-003 & RZA15-005 - EXHIBIT O

APPENDIX A:

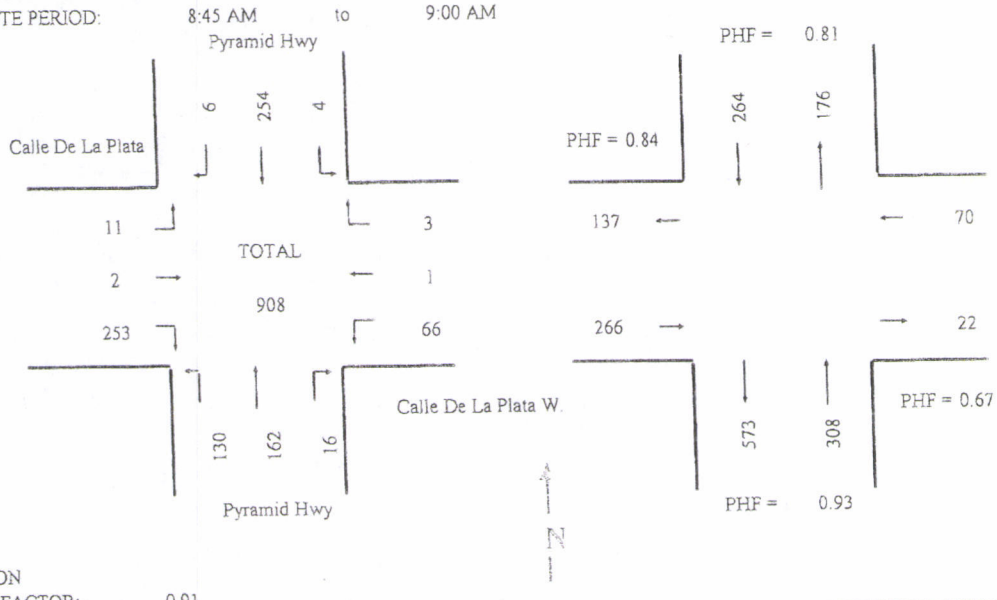
INTERSECTION TURNING MOVEMENT DATA

INTERSECTION TURNING MOVEMENT SUMMARY

INTERSECTION: Calle De La Plata West/Pyramid Hwy
JURISDICTION:
PROJECT TITLE: Calle De La Plata West

TIME: 7:00 AM to 9:00 AM
DATE: Thur 8-21-08
PROJECT NO: RN08-0405

PEAK HOUR PERIOD: 8:00 AM to 9:00 AM
PEAK 15 MINUTE PERIOD: 8:45 AM to 9:00 AM



INTERSECTION PEAK HOUR FACTOR: 0.91

RUNNING COUNTS	Calle De La Plata Eastbound			Calle De La Plata W. Westbound			Pyramid Hwy Northbound			Pyramid Hwy Southbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Period End	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
7:15 AM	4	1	71	22	1	0	23	36	3	1	65	1	228
7:30 AM	6	2	147	37	1	0	46	75	8	1	145	5	473
7:45 AM	11	2	201	50	2	1	75	107	8	2	185	5	649
8:00 AM	11	2	258	61	2	1	104	145	14	3	240	6	847
8:15 AM	14	2	302	69	2	2	130	187	18	3	296	7	1032
8:30 AM	15	3	364	89	2	4	164	232	22	6	356	8	1265
8:45 AM	20	4	434	114	3	4	201	267	26	7	415	10	1505
9:00 AM	22	4	511	127	3	4	234	307	30	7	494	12	1755

PERIOD COUNTS													
Period End	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
7:15 AM	4	1	71	22	1	0	23	36	3	1	65	1	228
7:30 AM	2	1	76	15	0	0	23	39	5	0	80	4	245
7:45 AM	5	0	54	13	1	1	29	32	0	1	40	0	176
8:00 AM	0	0	57	11	0	0	29	38	6	1	55	1	198
8:15 AM	3	0	44	8	0	1	26	42	4	0	56	1	185
8:30 AM	1	1	62	20	0	2	34	45	4	3	60	1	233
8:45 AM	5	1	70	25	1	0	37	35	4	1	59	2	240
9:00 AM	2	0	77	13	0	0	33	40	4	0	79	2	250

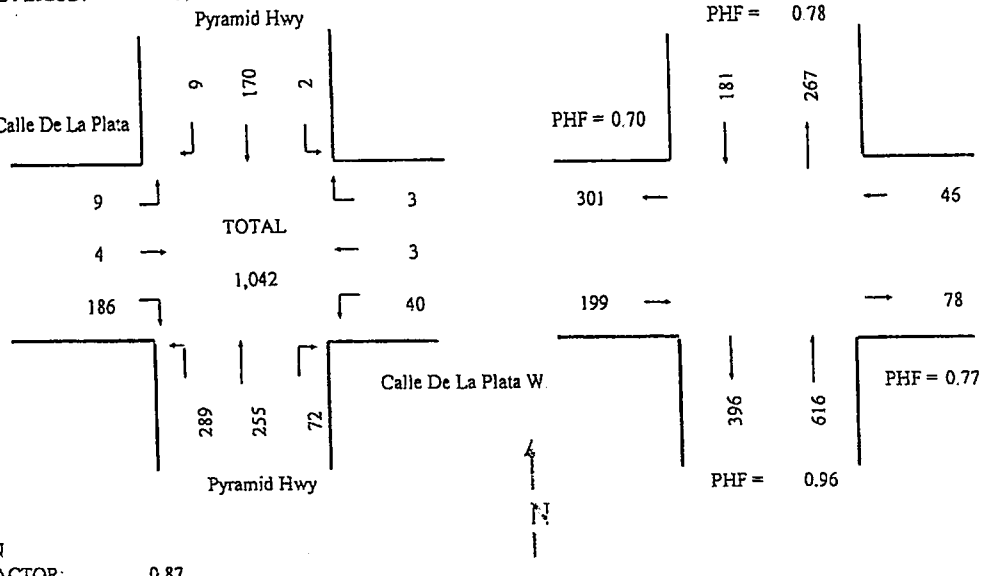
HOURLY TOTALS													
Beginning At	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
7:00 AM	11	2	258	61	2	1	104	145	14	3	240	6	847
7:15 AM	10	1	231	47	1	2	107	151	15	2	231	6	804
7:30 AM	9	1	217	52	1	4	118	157	14	5	211	3	792
7:45 AM	9	2	233	64	1	3	126	160	18	5	230	5	856
8:00 AM	11	2	253	66	1	3	130	162	16	4	254	6	908

INTERSECTION TURNING MOVEMENT SUMMARY

INTERSECTION: Calle De La Plata West/Pyramid Hwy
JURISDICTION:
PROJECT TITLE: Calle De La Plata West

TIME: 4:00 PM to 6:00 PM
DATE: Thur 8-21-08
PROJECT NO: RN08-0405

PEAK HOUR PERIOD: 5:00 PM to 6:00 PM
PEAK 15 MINUTE PERIOD: 5:30 PM to 5:45 PM



INTERSECTION PEAK HOUR FACTOR: 0.87

RUNNING COUNTS	Calle De La Plata Eastbound			Calle De La Plata W. Westbound			Pyramid Hwy Northbound			Pyramid Hwy Southbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Period End	A	B	C	D	E	F	G	H	I	J	K	L	TOTAL
4:15 PM	0	0	59	11	2	1	49	64	21	0	29	1	237
4:30 PM	5	1	100	24	2	1	84	116	35	0	76	4	448
4:45 PM	6	2	141	29	3	1	128	170	53	0	117	4	654
5:00 PM	6	4	170	36	3	1	177	214	73	2	146	8	840
5:15 PM	8	4	223	47	3	3	260	271	92	3	186	10	1110
5:30 PM	12	4	255	58	6	4	326	330	106	4	225	15	1345
5:45 PM	15	7	320	69	6	4	394	402	124	4	282	16	1643
6:00 PM	15	8	356	76	6	4	466	469	145	4	316	17	1882

PERIOD COUNTS

Period End	A	B	C	D	E	F	G	H	I	J	K	L	TOTAL
4:15 PM	0	0	59	11	2	1	49	64	21	0	29	1	237
4:30 PM	5	1	41	13	0	0	35	52	14	0	47	3	211
4:45 PM	1	1	41	5	1	0	44	54	18	0	41	0	206
5:00 PM	0	2	29	7	0	0	49	44	20	2	29	4	186
5:15 PM	2	0	53	11	0	2	83	57	19	1	40	2	270
5:30 PM	4	0	32	11	3	1	66	59	14	1	39	5	235
5:45 PM	3	3	65	11	0	0	68	72	18	0	57	1	298
6:00 PM	0	1	36	7	0	0	72	67	21	0	34	1	239

HOURLY TOTALS

Beginning At	A	B	C	D	E	F	G	H	I	J	K	L	TOTAL
4:00 PM	6	4	170	36	3	1	177	214	73	2	146	8	840
4:15 PM	8	4	164	36	1	2	211	207	71	3	157	9	873
4:30 PM	7	3	155	34	4	3	242	214	71	4	149	11	897
4:45 PM	9	5	179	40	3	3	266	232	71	4	165	12	989
5:00 PM	9	4	186	40	3	3	289	255	72	2	170	9	1042

APPENDIX B:

EXISTING & EXISTING PLUS PROJECT CONDITIONS TECHNICAL ANALYSIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	11	2	253	66	1	3	130	162	16	4	254	6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	12	2	278	73	1	3	143	178	18	4	279	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	759	773	282	1040	767	187	286			196		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	759	773	282	1040	767	187	286			196		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	99	63	39	100	100	89			100		
cM capacity (veh/h)	293	292	756	120	294	855	1276			1377		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	14	278	77	143	196	4	286
Volume Left	12	0	73	143	0	4	0
Volume Right	0	278	3	0	18	0	7
cSH	293	756	125	1276	1700	1377	1700
Volume to Capacity	0.05	0.37	0.61	0.11	0.12	0.00	0.17
Queue Length 95th (ft)	4	42	78	9	0	0	0
Control Delay (s)	17.9	12.5	71.3	8.2	0.0	7.6	0.0
Lane LOS	C	B	F	A		A	
Approach Delay (s)	12.8		71.3	3.5		0.1	
Approach LOS	B		F				

Intersection Summary				
Average Delay	10.4			
Intersection Capacity Utilization	43.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	4	186	40	3	3	289	255	72	2	170	9
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	10	5	214	46	3	3	332	293	83	2	195	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1168	1245	201	1415	1209	334	206			376		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1168	1245	201	1415	1209	334	206			376		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	96	75	32	98	100	76			100		
cM capacity (veh/h)	135	131	840	68	138	707	1366			1183		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	15	214	53	332	376	2	206
Volume Left	10	0	46	332	0	2	0
Volume Right	0	214	3	0	83	0	10
cSH	134	840	75	1366	1700	1183	1700
Volume to Capacity	0.11	0.25	0.71	0.24	0.22	0.00	0.12
Queue Length 95th (ft)	9	25	82	24	0	0	0
Control Delay (s)	35.2	10.7	127.8	8.5	0.0	8.1	0.0
Lane LOS	E	B	F	A		A	
Approach Delay (s)	12.3		127.8	4.0		0.1	
Approach LOS	B		F				

Intersection Summary			
Average Delay	10.4		
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	11	108	253	134	30	61	130	116	273	225	217	6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	12	119	278	147	33	67	143	127	300	247	238	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1233	1449	242	1634	1303	277	245			427		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1233	1449	242	1634	1303	277	245			427		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	0	65	0	71	91	89			78		
cM capacity (veh/h)	84	91	797	0	112	761	1321			1132		

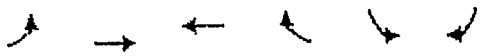
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	131	278	247	143	427	247	245
Volume Left	12	0	147	143	0	247	0
Volume Right	0	278	67	0	300	0	7
cSH	91	797	0	1321	1700	1132	1700
Volume to Capacity	1.44	0.35	Err	0.11	0.25	0.22	0.14
Queue Length 95th (ft)	249	39	Err	9	0	21	0
Control Delay (s)	333.9	11.9	Err	8.1	0.0	9.1	0.0
Lane LOS	F	B	F	A		A	
Approach Delay (s)	114.9		Err	2.0		4.6	
Approach LOS	F		F				

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	351	255	133	16	4	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	382	277	145	17	4	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	162				1193	153
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162				1193	153
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	73				97	89
cM capacity (veh/h)	1417				151	893

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	659	162	4	100
Volume Left	382	0	4	0
Volume Right	0	17	0	100
cSH	1417	1700	151	893
Volume to Capacity	0.27	0.10	0.03	0.11
Queue Length 95th (ft)	27	0	2	9
Control Delay (s)	6.1	0.0	29.6	9.5
Lane LOS	A		D	A
Approach Delay (s)	6.1	0.0	10.4	
Approach LOS			B	

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	233	26	88	10	3	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	253	28	96	11	3	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	107				636	101
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	107				636	101
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				99	93
cM capacity (veh/h)	1484				367	954

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	282	107	70
Volume Left	253	0	3
Volume Right	0	11	66
cSH	1484	1700	888
Volume to Capacity	0.17	0.06	0.08
Queue Length 95th (ft)	15	0	6
Control Delay (s)	7.3	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	7.3	0.0	9.4
Approach LOS			A

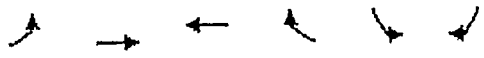
Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	53	186	385	129	300	289	208	217	127	131	9
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	10	61	214	443	148	345	332	239	249	146	151	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1770	1601	156	1715	1481	364	161			489		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1770	1601	156	1715	1481	364	161			489		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	13	76	0	0	49	77			86		
cM capacity (veh/h)	0	70	890	11	83	681	1418			1075		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	71	214	936	332	489	146	161
Volume Left	10	0	443	332	0	146	0
Volume Right	0	214	345	0	249	0	10
cSH	0	890	22	1418	1700	1075	1700
Volume to Capacity	Err	0.24	42.36	0.23	0.29	0.14	0.09
Queue Length 95th (ft)	Err	23	Err	23	0	12	0
Control Delay (s)	Err	10.3	Err	8.3	0.0	8.9	0.0
Lane LOS	F	B	F	A		A	
Approach Delay (s)	Err		Err	3.4		4.2	
Approach LOS	F		F				

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

MPA15-003 & RZA15-005 - EXHIBIT O



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	192	205	353	7	19	461
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	209	223	384	8	21	501
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	391				1028	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				1028	388
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				90	24
cM capacity (veh/h)	1167				213	661

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	432	391	21	501
Volume Left	209	0	21	0
Volume Right	0	8	0	501
cSH	1167	1700	213	661
Volume to Capacity	0.18	0.23	0.10	0.76
Queue Length 95th (ft)	16	0	8	175
Control Delay (s)	5.2	0.0	23.7	25.5
Lane LOS	A		C	D
Approach Delay (s)	5.2	0.0	25.4	
Approach LOS			D	

Intersection Summary			
Average Delay	11.5		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	127	97	53	5	13	307
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	138	105	58	5	14	334
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	63				442	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	63				442	60
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				97	67
cM capacity (veh/h)	1540				522	1005

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	243	63	348
Volume Left	138	0	14
Volume Right	0	5	334
cSH	1540	1700	969
Volume to Capacity	0.09	0.04	0.36
Queue Length 95th (ft)	7	0	41
Control Delay (s)	4.6	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	4.6	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

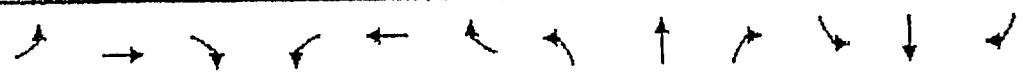
APPENDIX C:

2018 & 2018 PLUS PROJECT CONDITIONS TECHNICAL ANALYSIS

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.94	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	117	97	221	464	39	44	372	868	643	117	1298	87
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	102	233	488	41	46	392	914	677	123	1366	92
RTOR Reduction (vph)	0	0	132	0	0	38	0	0	179	0	0	52
Lane Group Flow (vph)	123	102	101	488	41	8	392	914	498	123	1366	40
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.4	11.6	11.6	12.5	14.7	14.7	10.0	37.5	50.0	5.5	33.0	33.0
Effective Green, g (s)	9.4	11.6	11.6	12.5	14.7	14.7	10.0	37.5	50.0	5.5	33.0	33.0
Actuated g/C Ratio	0.11	0.14	0.14	0.15	0.18	0.18	0.12	0.45	0.60	0.07	0.40	0.40
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	200	260	221	751	330	280	413	1597	1029	227	1405	629
v/s Ratio Prot	0.07	0.05		c0.10	c0.02		c0.11	0.26	0.07	0.04	c0.39	
v/s Ratio Perm			c0.06			0.01			0.24			0.02
v/c Ratio	0.62	0.39	0.46	0.65	0.12	0.03	0.95	0.57	0.48	0.54	0.97	0.06
Uniform Delay, d1	35.1	32.5	32.9	33.2	28.8	28.3	36.3	16.9	9.3	37.6	24.6	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	1.0	1.5	2.0	0.2	0.0	31.1	0.5	0.4	2.6	17.7	0.0
Delay (s)	40.6	33.5	34.4	35.2	29.0	28.3	67.4	17.4	9.7	40.2	42.3	15.5
Level of Service	D	C	C	D	C	C	E	B	A	D	D	B
Approach Delay (s)		35.9			34.2			24.6			40.6	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	83.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.94	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	177	146	290	805	83	118	393	1283	293	160	1055	91
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	154	305	847	87	124	414	1351	308	168	1111	96
RTOR Reduction (vph)	0	0	125	0	0	106	0	0	111	0	0	63
Lane Group Flow (vph)	186	154	180	847	87	18	414	1351	197	168	1111	33
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.6	14.0	14.0	16.1	12.5	12.5	11.1	35.7	51.8	5.0	29.6	29.6
Effective Green, g (s)	17.6	14.0	14.0	16.1	12.5	12.5	11.1	35.7	51.8	5.0	29.6	29.6
Actuated g/C Ratio	0.20	0.16	0.16	0.19	0.14	0.14	0.13	0.41	0.60	0.06	0.34	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	359	300	255	926	268	228	439	1456	1018	198	1207	540
v/s Ratio Prot	0.11	0.08		c0.17	0.05		c0.12	c0.38	0.04	0.05	0.31	
v/s Ratio Perm			c0.11			0.01			0.09			0.02
v/c Ratio	0.52	0.51	0.71	0.91	0.32	0.08	0.94	0.93	0.19	0.85	0.92	0.06
Uniform Delay, d1	30.8	33.3	34.5	34.7	33.4	32.2	37.5	24.3	8.0	40.5	27.5	19.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	1.5	8.6	13.3	0.7	0.1	28.9	10.5	0.1	27.1	11.4	0.0
Delay (s)	32.1	34.8	43.0	47.9	34.1	32.3	66.4	34.8	8.1	67.6	38.9	19.3
Level of Service	C	C	D	D	C	C	E	C	A	E	D	B
Approach Delay (s)		37.9			45.0			37.1			41.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.94	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	117	203	221	532	66	102	372	822	900	338	1261	87
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	214	233	560	69	107	392	865	947	356	1327	92
RTOR Reduction (vph)	0	0	170	0	0	81	0	0	42	0	0	47
Lane Group Flow (vph)	123	214	63	560	69	26	392	865	905	356	1327	45
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.2	15.0	15.0	23.7	26.5	26.5	12.0	39.6	63.3	13.5	41.1	41.1
Effective Green, g (s)	12.2	15.0	15.0	23.7	26.5	26.5	12.0	39.6	63.3	13.5	41.1	41.1
Actuated g/C Ratio	0.11	0.14	0.14	0.22	0.25	0.25	0.11	0.37	0.59	0.13	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	200	259	220	1097	458	389	382	1300	988	430	1349	604
v/s Ratio Prot	0.07	c0.11		0.11	0.04		c0.11	0.24	c0.20	0.10	c0.37	
v/s Ratio Perm			0.04			0.02			0.37			0.03
v/c Ratio	0.62	0.83	0.28	0.51	0.15	0.07	1.03	0.67	0.92	0.83	0.98	0.07
Uniform Delay, d1	45.6	45.1	41.6	37.0	31.8	31.2	47.9	28.6	19.9	46.0	33.0	21.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	18.9	0.7	0.4	0.2	0.1	52.9	1.3	12.8	12.4	20.5	0.1
Delay (s)	51.1	64.1	42.3	37.4	32.0	31.2	100.8	29.9	32.6	58.4	53.5	21.3
Level of Service	D	E	D	D	C	C	F	C	C	E	D	C
Approach Delay (s)		52.4			36.0			43.7			52.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	107.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

SIDRA INTERSECTION

Movement Summary

Village at the Peak - Calle de la Plata/Driveway A

2018 Plus Project Conditions - AM Peak

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
Frear Driveway NB										
3L	L	206	1.9	0.163	13.2	LOS B	23	0.63	0.86	21.9
8T	T	1	50.0	0.167	4.2	LOS A	23	0.63	0.62	22.9
8R	R	14	6.7	0.163	7.2	LOS A	23	0.63	0.69	23.3
Approach		**223**	**2.7**	**0.164**	**12.7**	**LOS B**	**23**	**0.63**	**0.84**	**22.0**
Calle de la Plata WB										
1L	L	24	4.2	0.293	12.3	LOS B	46	0.59	0.81	27.9
6T	T	448	2.0	0.293	8.1	LOS A	46	0.59	0.68	31.6
6R	R	17	5.6	0.295	8.2	LOS A	46	0.59	0.74	30.8
Approach		**490**	**2.2**	**0.293**	**8.3**	**LOS A**	**46**	**0.59**	**0.69**	**31.4**
Driveway A SB										
7L	L	4	20.0	0.068	11.5	LOS B	9	0.53	0.78	22.4
4T	T	1	50.0	0.069	2.6	LOS A	9	0.53	0.38	23.2
4R	R	100	2.0	0.069	5.4	LOS A	9	0.53	0.58	23.6
Approach		**107**	**3.7**	**0.069**	**5.6**	**LOS A**	**9**	**0.53**	**0.59**	**23.6**
Calle de la Plata EB										
5L	L	382	2.1	0.540	9.6	LOS A	136	0.20	0.59	29.1
2T	T	599	2.0	0.540	5.4	LOS A	137	0.19	0.42	33.7
2R	R	586	2.0	0.540	5.5	LOS A	137	0.19	0.45	32.8
Approach		**1567**	**2.0**	**0.539**	**6.5**	**LOS A**	**137**	**0.19**	**0.47**	**32.1**
All Vehicles		**2387**	**2.2**	**0.540**	**7.4**	**LOS A**	**137**	**0.33**	**0.56**	**30.1**

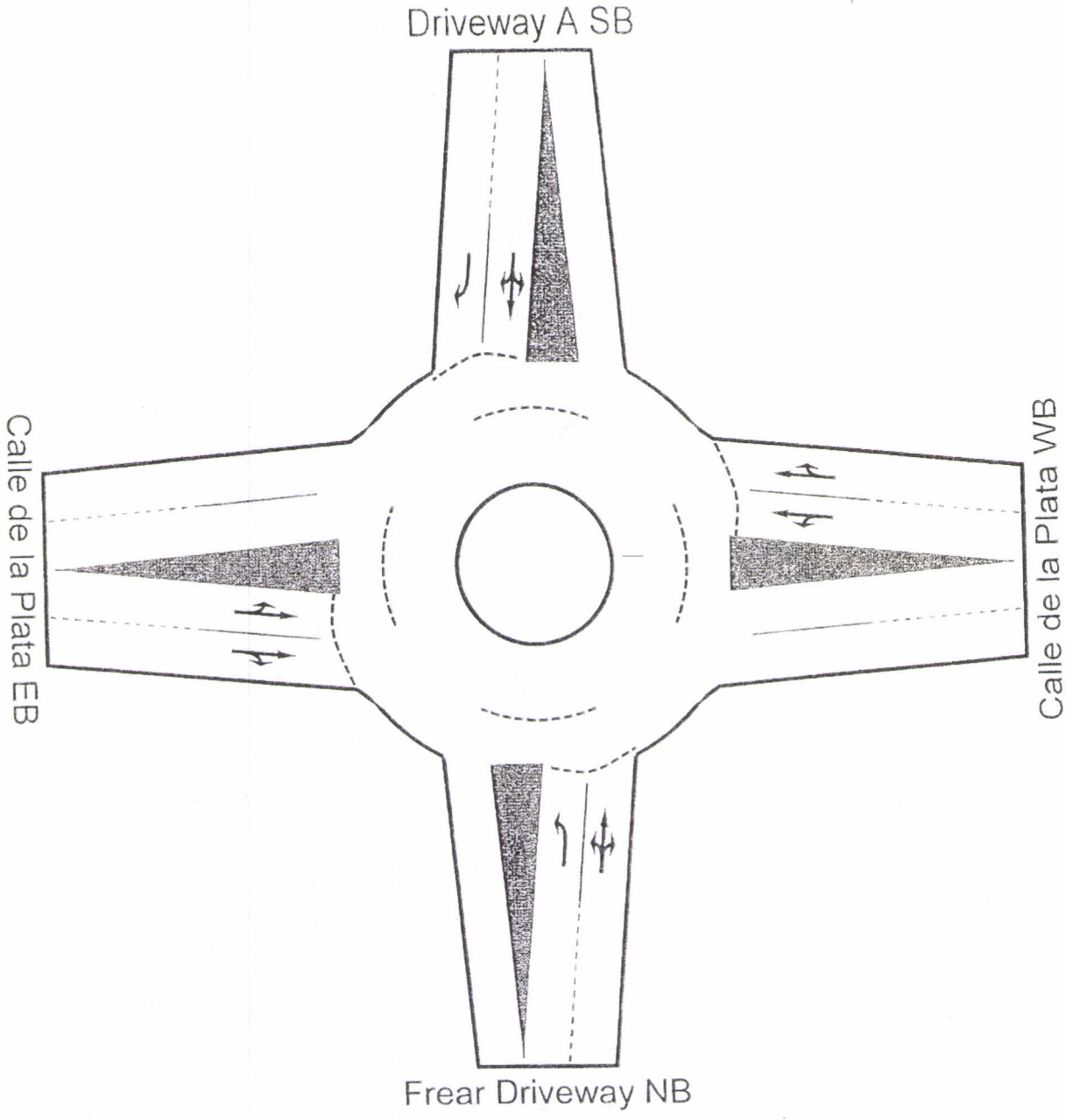
Symbols which may appear in this table:

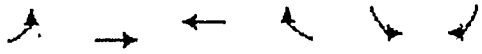
Following Degree of Saturation
x = 1.00 for Short Lane with resulting Excess Flow
* x = 1.00 due to minimum capacity

Following LOS
Based on density for continuous movements

Following Queue

MPA15-003 & RZA15-005 - EXHIBIT O


Driveway A SB
Calle de la Plata EB
Calle de la Plata WB
Frear Driveway NB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	233	335	389	10	3	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	245	353	409	11	3	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420				1258	415
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420				1258	415
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	78				98	90
cM capacity (veh/h)	1139				148	638

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	245	353	420	67
Volume Left	245	0	0	3
Volume Right	0	0	11	64
cSH	1139	1700	1700	552
Volume to Capacity	0.22	0.21	0.25	0.12
Queue Length 95th (ft)	20	0	0	10
Control Delay (s)	9.0	0.0	0.0	12.4
Lane LOS	A			B
Approach Delay (s)	3.7		0.0	12.4
Approach LOS				B

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.94	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	4990	1863	1583	3433	3539	1583	3433	3539	1583
Volume (vph)	177	195	290	1150	209	415	393	1236	438	285	1016	91
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	205	305	1211	220	437	414	1301	461	300	1069	96
RTOR Reduction (vph)	0	0	144	0	0	186	0	0	54	0	0	66
Lane Group Flow (vph)	186	205	161	1211	220	251	414	1301	407	300	1069	30
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.0	14.4	14.4	24.0	24.4	24.4	13.0	35.0	59.0	9.0	31.0	31.0
Effective Green, g (s)	14.0	14.4	14.4	24.0	24.4	24.4	13.0	35.0	59.0	9.0	31.0	31.0
Actuated g/C Ratio	0.14	0.15	0.15	0.24	0.25	0.25	0.13	0.36	0.60	0.09	0.32	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	252	273	232	1217	462	393	454	1259	1014	314	1115	499
v/s Ratio Prot	0.11	c0.11		c0.24	0.12		c0.12	c0.37	0.10	0.09	0.30	
v/s Ratio Perm			0.10			0.16			0.16			0.02
v/c Ratio	0.74	0.75	0.69	1.00	0.48	0.64	0.91	1.03	0.40	0.96	0.96	0.06
Uniform Delay, d1	40.4	40.3	39.9	37.1	31.6	33.1	42.1	31.7	10.4	44.5	33.1	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.7	11.0	8.6	24.4	0.8	3.4	22.4	34.4	0.3	38.6	17.7	0.1
Delay (s)	51.2	51.3	48.5	61.6	32.3	36.5	64.6	66.1	10.6	83.1	50.8	23.6
Level of Service	D	D	D	E	C	D	E	E	B	F	D	C
Approach Delay (s)		50.1			52.3			54.0			55.6	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	53.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

SIDRA INTERSECTION

Movement Summary

Village at the Peak - Calle de la Plata/Driveway A

2018 Plus Project Conditions - PM Peak

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
Frear Driveway NB										
3L	L	707	2.0	0.451	12.8	LOS B	81	0.65	0.90	22.0
8T	T	1	50.0	0.500	3.9	LOS A	81	0.65	0.61	22.8
8R	R	40	2.5	0.449	6.9	LOS A	81	0.65	0.75	23.3
Approach		**749**	**2.1**	**0.451**	**12.5**	**LOS B**	**81**	**0.65**	**0.90**	**22.1**
Calle de la Plata WB										
1L	L	39	2.6	0.565	15.6	LOS B	114	0.79	1.00	26.1
6T	T	697	2.0	0.562	11.3	LOS B	115	0.79	0.95	30.2
6R	R	8	12.5	0.571	11.3	LOS B	115	0.79	0.96	28.9
Approach		**744**	**2.2**	**0.562**	**11.5**	**LOS B**	**115**	**0.79**	**0.96**	**29.9**
Driveway A SB										
7L	L	21	4.8	0.488	16.9	LOS B	81	0.79	1.02	20.7
4T	T	1	50.0	0.500	8.0	LOS A	81	0.79	0.88	21.4
4R	R	501	2.0	0.493	10.4	LOS B	84	0.79	0.96	22.0
Approach		**524**	**2.3**	**0.493**	**10.7**	**LOS B**	**84**	**0.79**	**0.96**	**22.0**
Calle de la Plata EB										
5L	L	209	1.9	0.374	9.8	LOS A	74	0.23	0.60	29.0
2T	T	408	2.0	0.374	5.5	LOS A	74	0.23	0.43	33.5
2R	R	382	2.1	0.374	5.6	LOS A	74	0.23	0.47	32.6
Approach		**998**	**2.0**	**0.374**	**6.4**	**LOS A**	**74**	**0.23**	**0.48**	**32.1**
All Vehicles		**3015**	**2.1**	**0.571**	**9.9**	**LOS A**	**115**	**0.57**	**0.78**	**26.3**

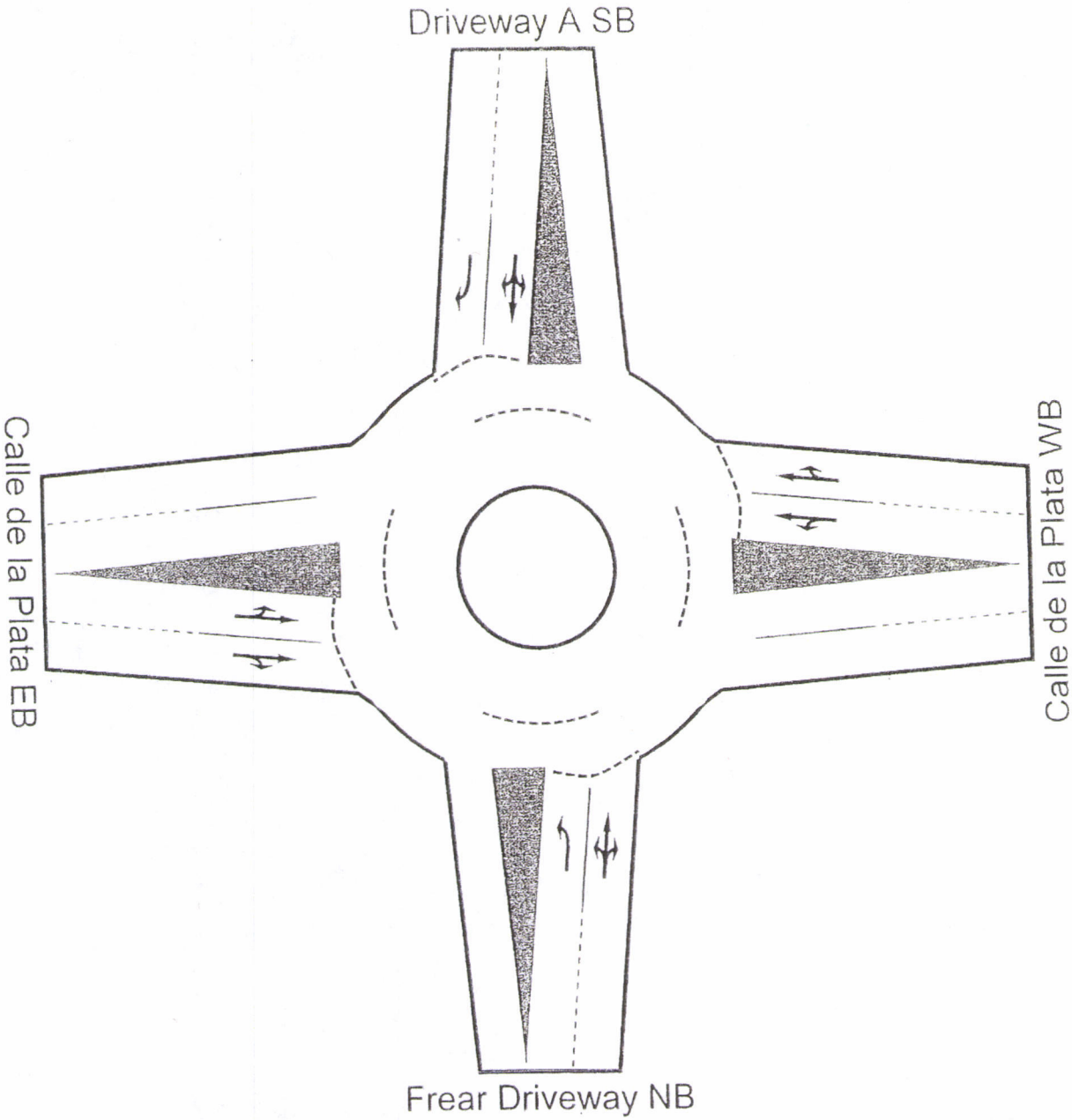
Symbols which may appear in this table:

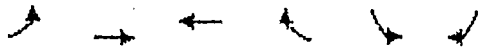
Following Degree of Saturation
x = 1.00 for Short Lane with resulting Excess Flow
* x = 1.00 due to minimum capacity

Following LOS
- Based on density for continuous movements

Following Queue

MPA15-003 & RZA15-005 - EXHIBIT O


Driveway A SB
Calle de la Plata EB
Calle de la Plata WB
Frear Driveway NB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	127	304	377	5	13	307
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	134	320	397	5	14	323
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	402				987	399
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402				987	399
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				94	50
cM capacity (veh/h)	1157				243	650

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	134	320	402	337
Volume Left	134	0	0	14
Volume Right	0	0	5	323
cSH	1157	1700	1700	609
Volume to Capacity	0.12	0.19	0.24	0.55
Queue Length 95th (ft)	10	0	0	84
Control Delay (s)	8.5	0.0	0.0	18.0
Lane LOS	A			C
Approach Delay (s)	2.5		0.0	18.0
Approach LOS				C

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

APPENDIX G:

INTERSECTION CRASH DATA

STAR CONSULTING

MPA15-003 & RZA15-005
EXHIBIT O

INTERSECTION DETAIL
SR445 @ CALLE DE LA PLATA
01 JUL 09 - 01 JUL 14
County: WASHOE

Crash Severity	Crash Date	Crash Year	Crash Time	Primary Street	Distance	Dir	Secondary Street
INJURY CRASH	24-Mar-2011	2011	07:11 PM	CALLE DE LA PLATA		AT INT	CALLE DE LA PLATA
PROPERTY DAMAGE	08-Mar-2014	2014	11:20 AM	CALLE DE LA PLATA		AT INT	SR445
INJURY CRASH	15-Jan-2014	2014	08:58 AM	SR445		AT INT	CALLE DE LA PLATA
PROPERTY DAMAGE	30-Jan-2014	2014	05:25 PM	SR445	100	S	CALLE DE LA PLATA
FATAL CRASH	13-Oct-2011	2011	12:29 PM	SR445		AT INT	CALLE DE LA PLATA
INJURY CRASH	15-Mar-2012	2012	08:25 PM	SR445		AT INT	CALLE DE LA PLATA

Weather	Fatalities	Injured	Property Damage Only	Injury Type	Crash Type	Total Vehicles	V1 Type	V1 Dir	V1 Drvr Age
SNOW		1		B	NON-COLLISION	1	PICKUP	E	64
UNKNOWN			PDO		REAR-END	2	SEDAN, 4 DOOR	U	28
CLEAR		3		B	HEAD-ON	2	PICKUP	U	44
RAIN			PDO		NON-COLLISION	1	UTILITY	U	
UNKNOWN	1			K	NON-COLLISION	1	CARRY-ALL	S	
RAIN		1		C	ANGLE	2	PICKUP	W	41
	Sum: 1	Sum: 5	Count: 2						
	Count: 1	Count: 3							
	TOTAL	Count: 6							

V1 Lane Num	V1 Action	V1 Driver Factor	V1 Drvr Distracted
1	NOT REPORTED	APPARENTLY NORMAL	
1	TURNING RIGHT		
	TURNING LEFT	INATTENTION/DISTRACTED	UNKNOWN
	GOING STRAIGHT	APPARENTLY NORMAL	
	GOING STRAIGHT		
	TURNING LEFT	APPARENTLY NORMAL	

V1 Vehicle Factor	V1 Most Harmful Event	V1 Event 1
RAN OFF ROAD		DITCH
OTHER IMPROPER DRIVING		SLOW/STOPPED VEHICLE
FAILED TO YIELD RIGHT OF WAY		
FAILURE TO KEEP IN PROPER LANE OR RUNNING OFF ROAD; UNSAFE LANE CHANGE		
FAILURE TO KEEP IN PROPER LANE OR RUNNING OFF ROAD; OVER CORRECTING/OVER STEERING		RAN OFF ROAD RIGHT
FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	

V1 Event 2	V2 Type	V2 Dir	V2 Drvr Age	V2 Lane Num	V2 Action
RAN OFF ROAD LEFT					
	CARRY-ALL	U	62	1	STOPPED
	UTILITY	U	36		GOING STRAIGHT
	HATCHBACK, 4 DOOR	S	40		GOING STRAIGHT

V2 Factors Driver	V2 Factors Veh	V2 Most Harm Event	V2 Seq Event1	Factors Roadway
				DRY
			SLOW/STOPPED VEHICLE	DRY
APPARENTLY NORMAL				DRY
				DRY
APPARENTLY NORMAL		MOTOR VEHICLE IN TRANSPORT		DRY

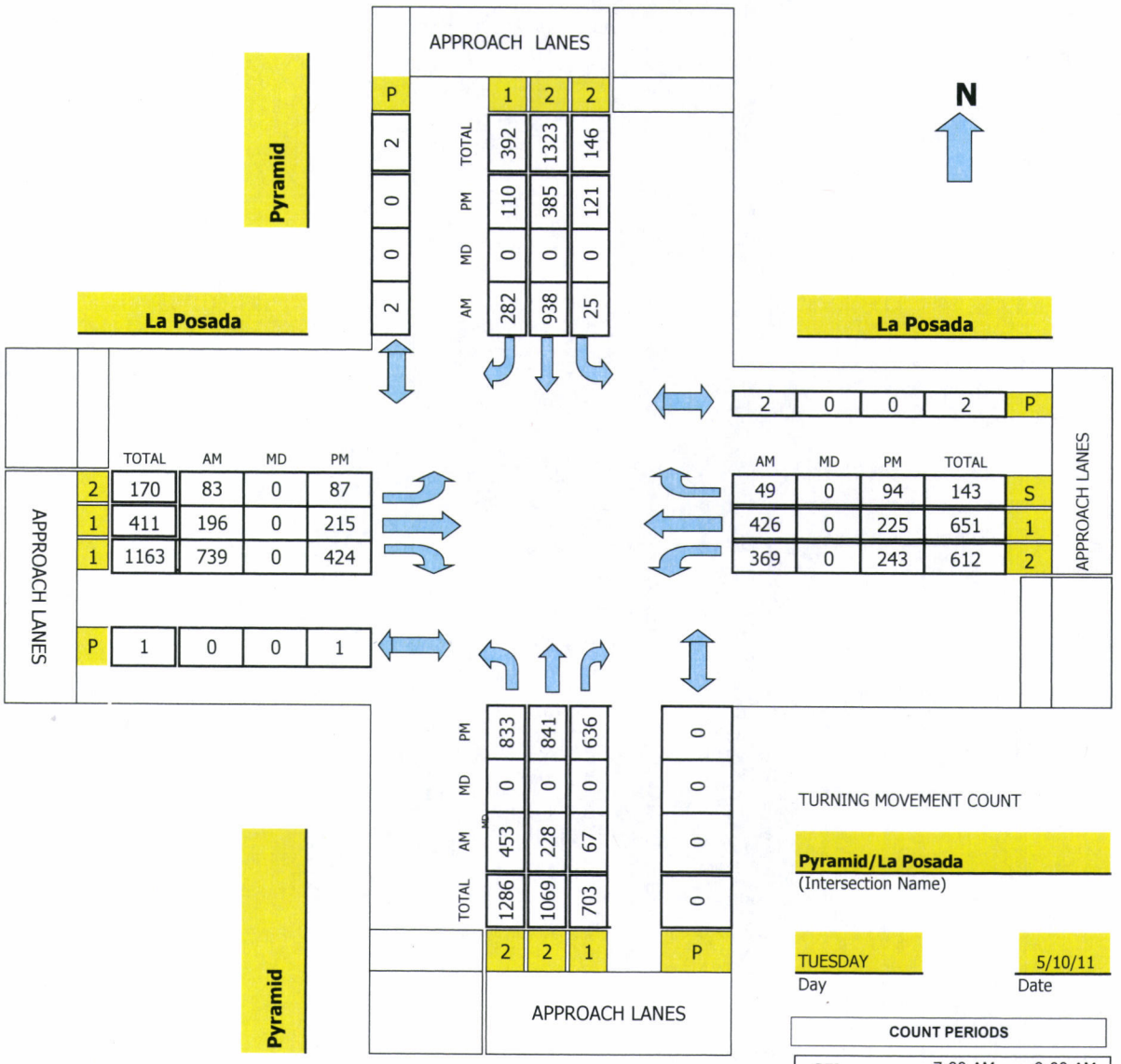
Lighting	HWY Factors	Agency	Accident Rec Num
DARK - NO LIGHTING	WEATHER	WASO	1855109
DAYLIGHT	NONE	WASO	2121766
DAYLIGHT	NONE	NHP	2100243
		NHP	2100906
DAYLIGHT	UNKNOWN	NHP	1915704
DARK - SPOT LIGHTING	NONE	NHP	1903118

APPENDIX H:

TURNING MOVEMENT COUNT: PYRAMID HIGHWAY AND POSADA

TMC Summary of Pyramid/La Posada

Project #: 0



TURNING MOVEMENT COUNT

Pyramid/La Posada
(Intersection Name)

TUESDAY
Day

5/10/11
Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

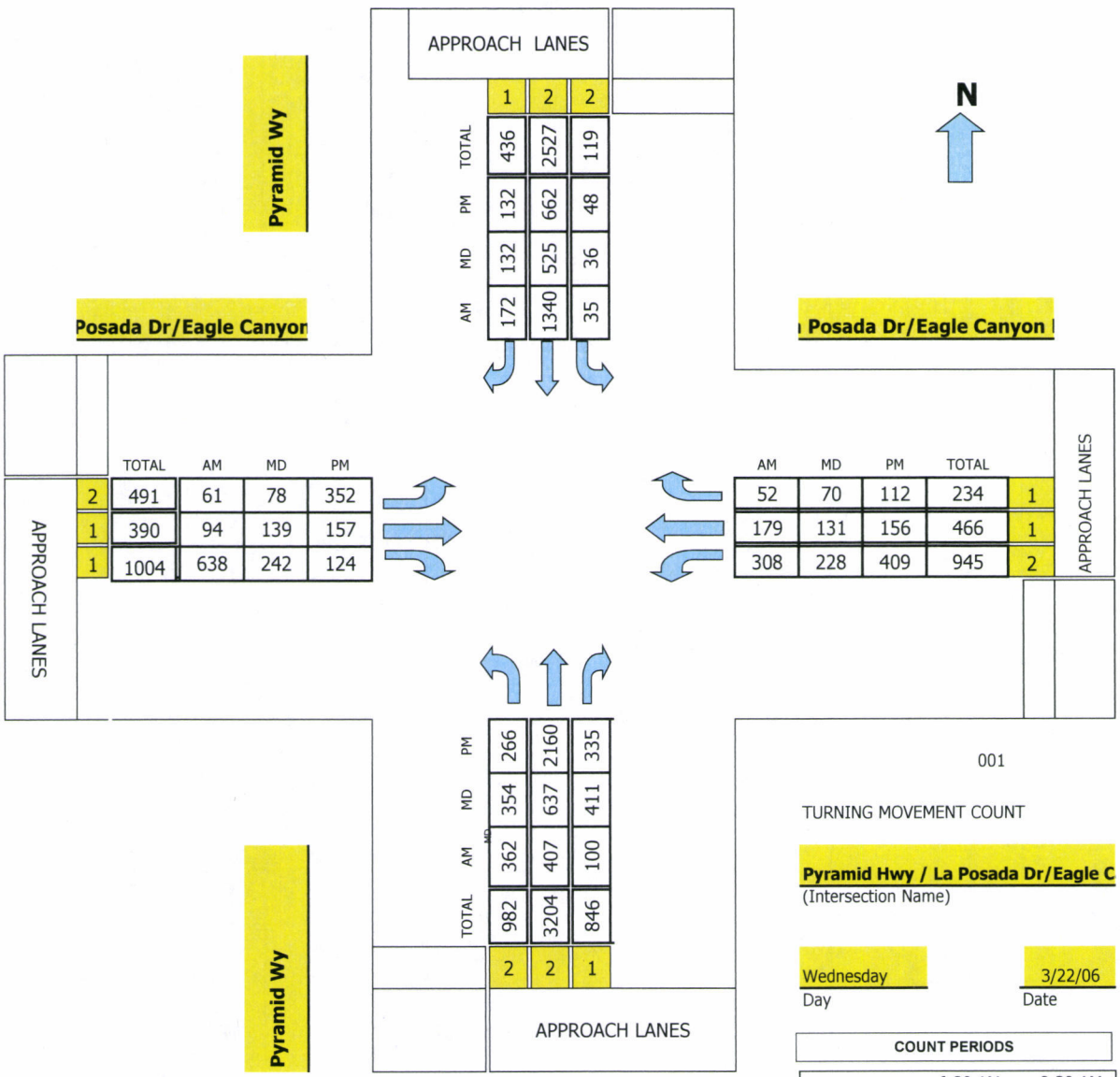
AM PEAK HOUR	700 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	500 PM

Heavy Vehicle Percentage 0.00%

MPA15-003 & RZA15-005
EXHIBIT O

TMC Summary of Pyramid Wy/La Posada Dr/Eagle Canyon Dr

Project #: 06-8039-061



001

TURNING MOVEMENT COUNT

Pyramid Hwy / La Posada Dr/Eagle C
(Intersection Name)

Wednesday — Day

3/22/06 — Date

COUNT PERIODS			
am	6:30 AM	-	8:30 AM
noon	2:00 PM	-	4:00 PM
pm	4:30 PM	-	6:30 PM

AM PEAK HOUR	700 AM
NOON PEAK HOUR	245 PM
PM PEAK HOUR	500 PM

MPA15-003 & RZA15-005
EXHIBIT O

APPENDIX I:

5TH EDITING RRIF BROCHURE

REGIONAL ROAD IMPACT FEE SCHEDULE

Land Use		North Service Area		South Service Area	
Residential	**Unit**	**VMT**	**Dollars ($253.39/VMT)**	**VMT**	**Dollars ($287.05/VMT)**
Single-Family	Dwelling	14.93	$3,783.11	14.67	$4,211.02
Multi-Family	Dwelling	9.70	$2,457.88	9.53	$2,735.59
Industrial					
General Light Industrial	1,000 GFA	7.30	$1,849.75	7.17	$2,058.15
Manufacturing	1,000 GFA	4.00	$1,013.56	3.93	$1,128.11
Warehouse	1,000 GFA	3.73	$945.14	3.66	$1,050.60
Mini-Warehouse	1,000 GFA	2.62	$663.88	2.57	$737.72
Commercial/Retail					
Commercial/Retail	1,000 GFA	26.69	$6,762.98	26.23	$7,529.32
Eating/Drinking Places	1,000 GFA	26.69	$6,762.98	26.23	$7,529.32
Casino/Gaming	1,000 GFA	48.24	$12,223.53	47.40	$13,606.17
Office and Other Services					
Schools	1,000 GFA	10.67	$2,703.67	10.48	$3,008.28
Day Care	1,000 GFA	10.67	$2,703.67	10.48	$3,008.28
Lodging	Room	5.90	$1,495.00	5.79	$1,662.02
Hospital	1,000 GFA	13.85	$3,509.45	13.61	$3,906.75
Nursing Home	1,000 GFA	7.96	$2,016.98	7.82	$2,244.73
Medical Office	1,000 GFA	37.85	$9,590.81	37.19	$10,675.39
Office and Other Services	1,000 GFA	11.55	$2,926.65	11.35	$3,258.02
Regional Recreational Facility	Acre	2.39	$605.60	2.35	$674.57

Regional Road Impact Fee (RRIF)

5th Edition

March 2, 2015

An informational brochure brought to you by the

RTC

www.rtcwashoe.com

MPA15-003 & RZA15-005 - EXHIBIT O

5th Edition Regional Road Impact Fees

General Information

1. **What is the Regional Road Impact Fee (RRIF)?**
   New development creates a demand for new roadway capacity. The RRIF is a tool to collect the cost of providing the new capacity for new development.

2. **What is the cost of the RRIF?**
   See the impact fee schedule on the reverse side of this brochure.

3. **How will the RRIF funds be used?**
   To build capacity improvements such as new roads and ramps, road widening and intersection improvements, and to preserve right of way for future capacity improvements.

4. **When does the 5th Edition of the impact fees take effect?**
   The new fee schedule goes into effect March 2, 2015. The amount of impact fees shall be determined as of the date of payment.

5. **When will the RRIF need to be paid?**
   At the time a building permit is issued or may be deferred to the Certificate of Occupancy, as approved by the local jurisdiction.

6. **Payment Options?**
   Pay impact fees due with check or money order. Or pay impact fees due with credits or waivers earned for constructing capacity improvements or right-of-way dedication included in the RRIF Capital Improvements Plan (CIP).

Regional Road Impact Fee Administrators

City of Reno – Bill Gall, P.E.
Engineering Manager
City of Reno, Community Development
One East First Street, 2nd Floor
Reno, Nevada 89501
(775) 334-2028, fax (775) 334-2382
e-mail: gallw@reno.gov

City of Sparks – John Martini, P.E. Assistant Community Services Director City of Sparks, City Works
431 Prater Way
Sparks, NV 89431
(775) 353-4080, fax (775) 353-1608
e-mail: jmartini@cityofsparks.us

Washoe County - Clara Lawson, P.E.
Washoe County Public Works
Engineering Division
1001 E 9th Street, Reno, NV 89520
(775) 328-3603, fax (775) 328-3699
e-mail: clawson@mail.co.washoe.nv.us

RTC – Jeffrey D. Hale, P.E.
Engineering Director
Regional Transportation Commission
Engineering Department
1105 Terminal Way, Suite 108
(775) 348-0171, fax (775) 348-0170
e-mail: jhale@rtcwashoe.com

or **Julie Masterpool, P.E.**
Senior Traffic Engineer
(775)335-1897, fax (775) 348-0170
e-mail: jmasterpool@rtcwashoe.com

Significant Changes in the 5th Edition RRIF

Service Areas – North and South Service Areas are divided by I-80. Fees collected within a service area will be spent in the same service area to construct capacity improvements from the RRIF Capital Improvement Plan.

Simplified Land Use Categories – Reduction in the number of land use categories, in particular related to commercial/ retail uses.

Change of Use Fees – For modification of a previous land use requiring a permit, the impact fee will be based on the net increase of the new use to the previous use. The feepayer must provide documentation of the most recent previous use and there is no time limit for the last use determination.

RRIF Waivers – Issued for capital improvements constructed by new development after adoption of the 5th Edition RRIF. Waivers may only be used to pay the impact fee due within the designated development of record associated with the waivers.

RRIF Credits – Issued for capital improvements constructed by new development prior to the adoption of the 5th Edition RRIF. Credits may be used only within the CCFEA Benefit District associated with the credits and per the CCFEA agreement.

To find out more information on the RRIF Program, please visit www.rtcwashoe.com and type "RRIF" in the search box.

APPENDIX J:

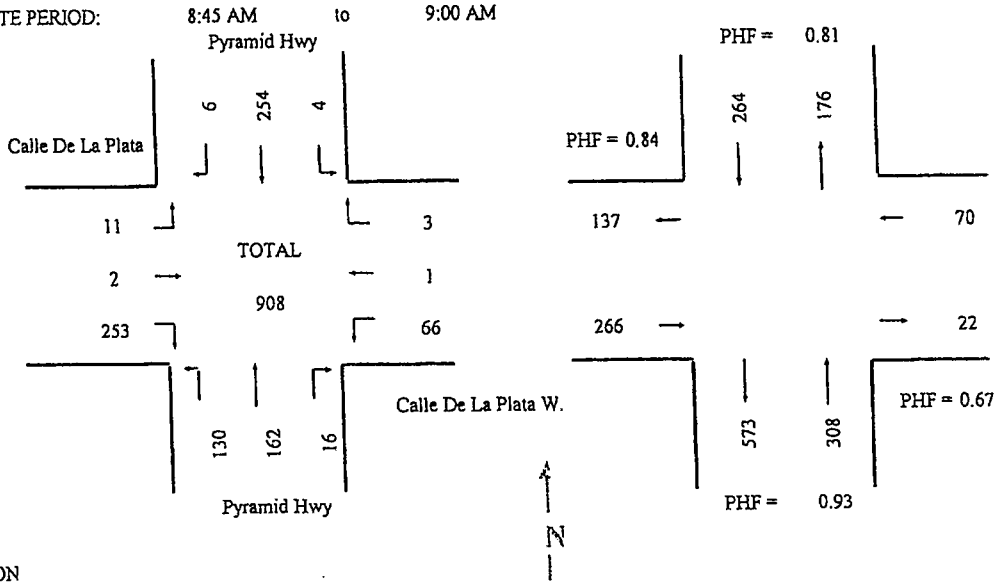
INTERSECTION TURNING MOVEMENT DATA

INTERSECTION TURNING MOVEMENT SUMMARY

INTERSECTION: Calle De La Plata West/Pyramid Hwy
JURISDICTION:
PROJECT TITLE: Calle De La Plata West

TIME: 7:00 AM to 9:00 AM
DATE: Thur 8-21-08
PROJECT NO: RN08-0405

PEAK HOUR PERIOD: 8:00 AM to 9:00 AM
PEAK 15 MINUTE PERIOD: 8:45 AM to 9:00 AM



INTERSECTION PEAK HOUR FACTOR: 0.91

RUNNING COUNTS	Calle De La Plata Eastbound			Calle De La Plata W. Westbound			Pyramid Hwy Northbound			Pyramid Hwy Southbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Period End	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
7:15 AM	4	1	71	22	1	0	23	36	3	1	65	1	228
7:30 AM	6	2	147	37	1	0	46	75	8	1	145	5	473
7:45 AM	11	2	201	50	2	1	75	107	8	2	185	5	649
8:00 AM	11	2	258	61	2	1	104	145	14	3	240	6	847
8:15 AM	14	2	302	69	2	2	130	187	18	3	296	7	1032
8:30 AM	15	3	364	89	2	4	164	232	22	6	356	8	1265
8:45 AM	20	4	434	114	3	4	201	267	26	7	415	10	1505
9:00 AM	22	4	511	127	3	4	234	307	30	7	494	12	1755

PERIOD COUNTS

Period End	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
7:15 AM	4	1	71	22	1	0	23	36	3	1	65	1	228
7:30 AM	2	1	76	15	0	0	23	39	5	0	80	4	245
7:45 AM	5	0	54	13	1	1	29	32	0	1	40	0	176
8:00 AM	0	0	57	11	0	0	29	38	6	1	55	1	198
8:15 AM	3	0	44	8	0	1	26	42	4	0	56	1	185
8:30 AM	1	1	62	20	0	2	34	45	4	3	60	1	233
8:45 AM	5	1	70	25	1	0	37	35	4	1	59	2	240
9:00 AM	2	0	77	13	0	0	33	40	4	0	79	2	250

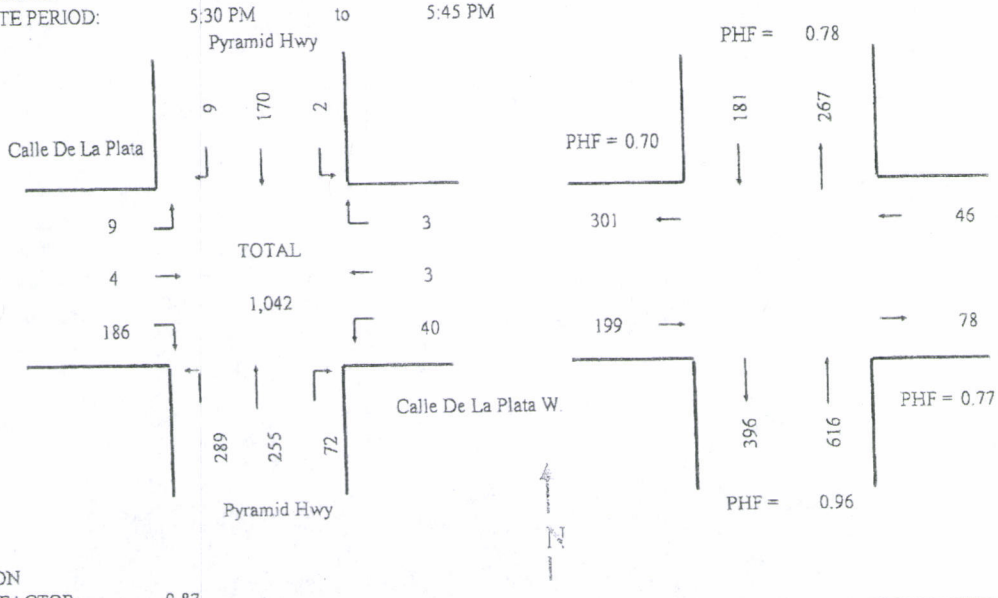
HOURLY TOTALS

Beginning At	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
7:00 AM	11	2	258	61	2	1	104	145	14	3	240	6	847
7:15 AM	10	1	231	47	1	2	107	151	15	2	231	6	804
7:30 AM	9	1	217	52	1	4	118	157	14	5	211	3	792
7:45 AM	9	2	233	64	1	3	126	160	18	5	230	5	856
8:00 AM	11	2	253	66	1	3	130	162	16	4	254	6	908

INTERSECTION TURNING MOVEMENT SUMMARY

INTERSECTION:	Calle De La Plata West/Pyramid Hwy	TIME:	4:00 PM to 6:00 PM
JURISDICTION:		DATE:	Thur 8-21-08
PROJECT TITLE:	Calle De La Plata West	PROJECT NO:	RN08-0405

PEAK HOUR PERIOD: 5:00 PM to 6:00 PM
PEAK 15 MINUTE PERIOD: 5:30 PM to 5:45 PM



INTERSECTION PEAK HOUR FACTOR: 0.87

RUNNING COUNTS	Calle De La Plata Eastbound			Calle De La Plata W. Westbound			Pyramid Hwy Northbound			Pyramid Hwy Southbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Period End	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
4:15 PM	0	0	59	11	2	1	49	64	21	0	29	1	237
4:30 PM	5	1	100	24	2	1	84	116	35	0	76	4	448
4:45 PM	6	2	141	29	3	1	128	170	53	0	117	4	654
5:00 PM	6	4	170	36	3	1	177	214	73	2	146	8	840
5:15 PM	8	4	223	47	3	3	260	271	92	3	186	10	1110
5:30 PM	12	4	255	58	6	4	326	330	106	4	225	15	1345
5:45 PM	15	7	320	69	6	4	394	402	124	4	282	16	1643
6:00 PM	15	8	356	76	6	4	466	469	145	4	316	17	1882

PERIOD COUNTS													
Period End	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
4:15 PM	0	0	59	11	2	1	49	64	21	0	29	1	237
4:30 PM	5	1	41	13	0	0	35	52	14	0	47	3	211
4:45 PM	1	1	41	5	1	0	44	54	18	0	41	0	206
5:00 PM	0	2	29	7	0	0	49	44	20	2	29	4	186
5:15 PM	2	0	53	11	0	2	83	57	19	1	40	2	270
5:30 PM	4	0	32	11	3	1	66	59	14	1	39	5	235
5:45 PM	3	3	65	11	0	0	58	72	18	0	57	1	298
6:00 PM	0	1	36	7	0	0	72	67	21	0	34	1	239

HOURLY TOTALS													
Beginning At	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**TOTAL**
4:00 PM	6	4	170	36	3	1	177	214	73	2	146	8	840
4:15 PM	8	4	164	36	1	2	211	207	71	3	157	9	873
4:30 PM	7	3	155	34	4	3	242	214	71	4	149	11	897
4:45 PM	9	5	179	40	3	3	266	232	71	4	165	12	989
5:00 PM	9	4	186	40	3	3	289	255	72	2	170	9	1042

September 14, 2015

FEASIBILITY GEOTECHNICAL INVESTIGATION

APN #534-571-01

Converse Consultants
Geotechnical Engineering
Environmental & Groundwater Science
Inspection & Testing Services

Job Number 15-25114-01

Prepared For:

Mr. Michael S. Railey
Rubicon Design Group
100 California Avenue, Suite 202
Reno, Nevada 89509

Prepared By:

Converse Consultants
4840 Mill Street, Suite 5
Reno, Nevada 89502
www.converseconsultants.com

MPA15-003 & RZA15-005
EXHIBIT O

Converse Consultants

Geotechnical Engineering, Environmental and Groundwater Science, Inspection and Testing Services

September 14, 2015 15-25114-01

Mr. Michael S. Railey, Partner
Rubicon Design Group
100 California Avenue, Suite 202
Reno, Nevada 89509

SUBJECT: FEASIBILITY GEOTECHNICAL INVESTIGATION
Proposed 172 Home Subdivision
APN #534-571-01
Spanish Springs, Nevada

Dear Mr. Railey:

In accordance with your written authorization to proceed, we have prepared our "Feasibility Geotechnical Investigation" report for the subject site location near the intersection of Pyramid Highway and Calle de la Plata. Our scope of services included a literature review, field exploration, soil, groundwater, and flooding conditions as well as engineering analyses, and the preparation of this report.

It must be understood that the conclusions presented herein are preliminary in nature and subject to confirmation by a Final Geotechnical Investigation based on the final project design.

The opportunity to be of service to you is sincerely appreciated. If we can assist you further on this project, or if you have any questions, please call.

Respectfully submitted,

Converse Consultants

H. Edward Dawson, P.E., M.B.A.
Senior Staff Engineer

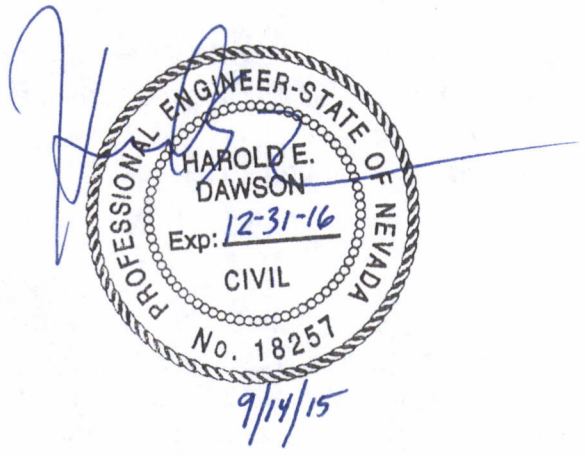
Kathi Brandmueller, P.E.
Senior Engineer/Office Manager

4840 Mill Street, Suite 5, Reno, Nevada 89502
Telephone: (775) 856-3833 ◆ Facsimile: (775) 856-3513 ◆ email: reno@converseconsultants.com

PROFESSIONAL CERTIFICATION

This report has been prepared by the staff of Converse Consultants under the professional supervision of the registered engineer(s) whose seals and signatures appear hereon.

The findings, recommendations and professional opinions presented in this report were prepared in accordance with generally accepted professional engineering practice at this time in the State of Nevada. There is no other warranty, either expressed or implied.



H. Edward Dawson, P.E.
Senior Staff Engineer

FEASIBILITY GEOTECHNICAL INVESTIGATION
APN #534-571-01
Spanish Springs, Nevada

PROJECT DESCRIPTION

The project site is located near the corner of Nevada State Route 445, Pyramid Highway and Calle de la Plata and fronts Campo Rico Lane. The site is rectangular shaped. Proposed on the site is a 172 home subdivision. The size of the proposed project site is 58.487 acres. The property has an average elevation of approximately 4557 feet. Due to the flat topography of the site, relatively light structural loads and minimal cuts and/or fills are anticipated.

SITE DESCRIPTION

The site description is based on our field observations and information provided by you. We have included a vicinity map depicting the location of the proposed project as "Drawing No. 1."

Currently, the site is relatively flat, sloping slightly from east to west, and is vacant with native vegetation consisting of sagebrush. Near the southern boundary of the parcel is an approximate 3 or 4 foot deep drainage ditch running in an east-west direction. The project site is located in an area of single family homes and warehouses. Adjacent to the site is non-developed land and single family homes.

GEOLOGY AND GEOLOGIC HAZARDS

Geology

As shown on the "Geologic Map of Washoe and Storey Counties, Nevada" (Bonham, 1969) the site is underlain by Quaternary Alluvium deposits consisting of stream deposits, talus, slop wash, alluvial fan and eolian deposits. Soils consist of gravel, sand, clay and silt mixtures.

Faulting

The project site as well as all of Reno and Sparks is located near active faults which are considered capable of producing significant ground motion due to seismic events. Based on the USGS Quaternary Fault Fold Database, there are no known active faults (Holocene-age, exhibiting displacement with the last 11,000 years) crossing the subject site.

Liquefaction

The site also appears to be outside any zones prone to seismically-induced liquefaction. Liquefaction of granular soils is caused by strong earthquake motion on loose saturated granular soils. The depth to groundwater is approximately 135 feet below ground surface. The probability of liquefaction is very low in the site area.

FIELD INVESTIGATION AND SOIL CONDITIONS

Five hand-auger borings were advanced to a maximum depth of 3 feet at the site as shown on the attached Drawing No. 1 titled "Boring Location Map". Soils in the hand auger borings were relatively consistent with the Natural Resources Conservation Service (NRCS) mapping and related data calling it sandy loam consistent with alluvial deposits. Sandy loam is typically comprised of sand, silt, and small amounts of clay. The soils observed in the hand auger excavations consisted of silty sands, silty sand with gravel, clayey sand, poorly graded sand, and well graded sand with gravel. These alluvial deposits were loose in some areas and dense in others and all were dry at the surface and slightly moist with depth. Soils were field classified. Refer to Appendix A for representation of all hand auger borings.

LABORATORY ANALYSIS

Laboratory analysis was not included in our current scope of services. Laboratory testing will be required during the final geotechnical investigation.

GROUNDWATER CONDITIONS

Groundwater

Groundwater is not expected to be a constraint to development. Based on the State of Nevada Division of Water Resources interactive monitoring well website, there is a monitoring well approximately one-half mile to the south east with a consistent water elevation of approximately 135 feet below existing ground surface.

FLOODING AND DEBRIS FLOW

The Flood Insurance Rate Map (FIRM) produced by the Federal Emergency Management Agency (FEMA) shows the majority of the site lies in an area designated as Zone X. This area is determined to be outside of the 0.2% annual chance floodplain; however, Zone X is defined as "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with

average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." The southern portion of the site lies in an area of Zone AO which is within the 100 Year Flood zone. Zone AO is defined as "Flood depths of 1 to 3 feet (usually sheet flowing on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined."

A majority of the site lies in an area of Zone X; however, the Zone AO portion of the site will need to be mitigated during the Civil design phase of the project. Upon incorporating current drainage standards, flooding and debris flow should not be an issue. Below, Figure 1 depicts the zone designator areas for the parcel.

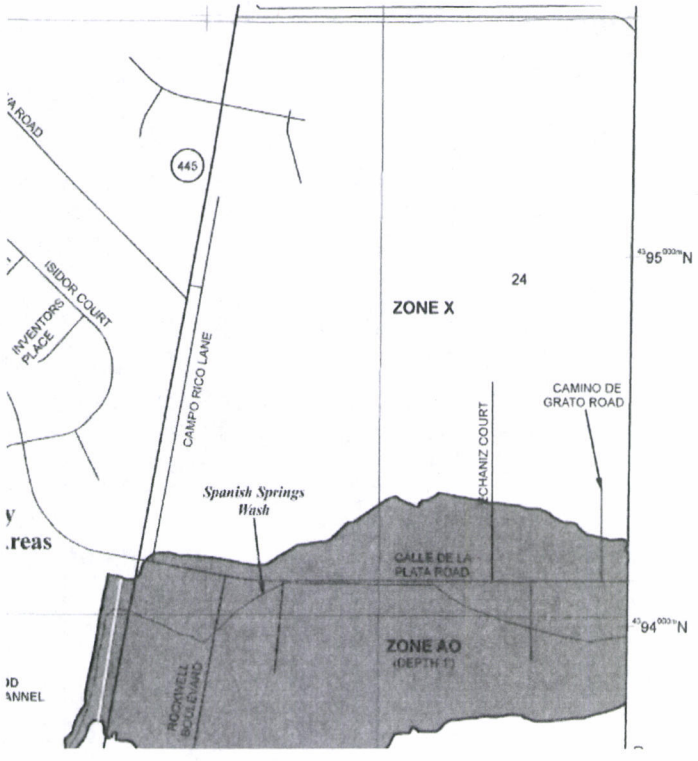


FIGURE 1 – FIRM BY FEMA FOR PARCEL 534-571-01

ENGINEERING PROPERTIES OF SOILS

The engineering properties of the native soils observed are relatively good and should be generally suitable for the support of the structure proposed (to be verified through laboratory and field investigation performed during the Final Geotechnical Report). Some over excavation and re-compaction to provide uniform soil conditions beneath footings and slabs and to address any encountered expansive soils, should be anticipated.

SLOPE STABILITY

No features that would indicate slope instability were observed.

PRELIMINARY CONCLUSIONS

Based on our observations and research, it is our opinion that the proposed project is feasible from a geotechnical standpoint. Specific recommendations would be provided in the Final Geotechnical Investigation.

CLOSURE

This report has been prepared for the sole benefit and exclusive use of the owner and project design team in accordance with the terms and conditions of our signed authorization under which these services have been provided. Any reliance on this report by third parties shall be at the third party's sole risk. Our services have been performed in

accordance with applicable state and local ordinances, and generally accepted practice within our profession. No warranty, either expressed or implied, is made.

Converse Consultants is not responsible or liable for any claims or damages associated with the interpretation of available information provided by others. Site exploration identifies actual soil conditions only at those points where samples are taken, or observations made, when they are performed. Data derived through sampling and analytical testing are extrapolated by Converse employees who then render an opinion about overall soil conditions. Actual conditions in areas not sampled, or observed, may differ. In the event that changes to the property occur, or additional, relevant information about the property is brought to our attention, the recommendations contained in this report may not be valid unless these changes and additional relevant information are reviewed and the recommendation of this report are modified or verified in writing.

REFERENCES

For the preparation of this document, the following documents were reviewed and websites accessed:

- Parcel Map, Washoe County Assessor's Office
  https://www.washoecounty.us/assessor/
- U.S. Geological Survey Quaternary Fault and Fold Database of the United States, accessed September 3, 2015
  http://earthquake.usgs.gov/hazards/qfaults/
- State of Nevada Division of Water Resources – Nevada Hydrology Data on Monitoring Wells
  http://webgis.water.nv.gov/
- USDA & NRCS Custom Soil Resource Report for Washoe County, Nevada, South Part
  http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
- Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map #32031C2865G, retrieved from the following website
  http://msc.fema.gov/portal
- Geologic Map of Washoe and Storey Counties, Nevada, by Harold F. Bonham, 1969, Scale 1:250,000

VICINITY MAP

RUBICON DESIGN GROUP

Parcel # 534-571-01

Reno, Nevada

0 1 2 4 Miles

Converse Consultants

Over 60 Years of Dedication and Geotechnical and Environmental Services

Scale	1 inch = 2 miles
File Name	Vicinity Map
Date	09/10/15
Project No.	15-25114-01
Created By	KJP
Drawing No.	1
Checked By	ED
Approved By	

MPA15-003 & RZA15-005 - EXHIBIT O

BORING LOCATION MAP

RUBICON DESIGN GROUP

Parcel #534-571-01
Reno, Nevada

Drawing No. 2

N
W E
S

1 inch = 500 feet

0 500 1,000 Feet

Legend

- Boring Locations
- Project Boundary
- Washoe Parcels

Date: 09/10/15 Project No: 15-25114-01

MPA15-003 & RZA15-005 EXHIBIT O

Log No. H-1

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples: Drive	Samples: Bulk	Samples: Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		SILTY SAND (SM), Light Brown, Medium Grained, Slightly Moist, Dense							
1		SILTY SAND WITH GRAVEL (SM), Light Brown, Fine Grained Gravel, Slightly Moist, Subangular, Dense							
2		Boring Terminated Due to Refusal							
3									
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 2.0' | Converse Sampler (white symbol=no recovery) | SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-1

MPA15-003 & RZA15-005
EXHIBIT O

Log No. H-2

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples: Drive	Samples: Bulk	Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		SILTY SAND (SM), Light Brown, Medium Grained, Slightly Moist, Dense							
1		SILTY SAND WITH GRAVEL (SM), Light Brown, Medium Grained Sand, Fine Grained Gravel, Slightly Moist, Dense Subangular							
		Boring Terminated Due to Refusal							
2									
3									
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 1.5'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-2

MPA15-003 & RZA15-005
EXHIBIT O

Log No. H-3

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples: Drive	Samples: Bulk	Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		SILTY, CLAYEY SAND (SC-SM), Light Brown, Medium Grained, Slightly Moist							
1		CLAYEY SAND (SC), Light Brown, Medium Grained, Slightly Moist, Dense							
2		Boring Terminated Due to Refusal							
3									
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 2.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-3

MPA15-003 & RZA15-005
EXHIBIT O

Log No. H-4

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples: Drive	Samples: Bulk	Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		POORLY GRADED SAND WITH SILT (SP), Light Brown, Medium Grained, Slightly Moist							
1		POORLY GRADED SAND (SP), Light Brown, Medium Grained, Slightly Moist							
2		WELL GRADED SAND (SW), Light Brown, Medium Grained, Slightly Moist							
3		Boring Terminated							
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 3.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-4

MPA15-003 & RZA15-005
EXHIBIT O

Log No. H-5

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples: Drive	Samples: Bulk	Samples: Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		POORLY GRADED SAND WITH SILT (SP), Light Brown, Medium Grained, Slightly Moist							
1		POORLY GRADED SAND (SP), Light Brown, Medium Grained, Slightly Moist							
2		WELL GRADED SAND (SW), Light Brown, Medium Grained, Slightly Moist							
3		Boring Terminated							
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 3.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-5

MPA15-003 & RZA15-005
EXHIBIT O

KEY TO SYMBOLS

Symbol Description

Strata symbols

Silty Sands, sand -silt mixtures (SM)

Silty Sand with Gravel

Silty Clayey Sand

Clayey Sand

PG Sand with Silt

Poorly Graded Sand with Gravel and Silt (SP)

WG Sand

Soil Samplers

Auger

Notes:

1.Five hand auger borings (H-1 through H-5) were drilled on 9/8/15.

2. Groundwater was not encountered during our investigation.

3. Boring locations are approximate.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

EXHIBIT O-1

TRUCKEE MEADOWS WATER AUTHORITY
www.tmwa.com

Quality. Delivered.

1355 Capital Blvd. • P.O. Box 30013 • Reno, NV 89520-3013
P 775.834.8080 • F 775.834.8003

June 3, 2015

To: Pam Parenti

Thru: Scott Estes SJE

From: Holly Flores HMF

Re: 350 Calle De La Plata Discovery – Preliminary Water Facility Requirements

PURPOSE:
Determine the least cost facility plan to provide water service to the proposed 186 unit subdivision in the Spanish Springs Valley. The preliminary Tentative Map for the subdivision is attached.

CONCLUSIONS AND RECOMMENDATIONS:
The project will require annexation to TMWA's retail water service territory prior to service. Once successfully annexed, water service can be provided by the Desert Springs System by extending at least two water mains to the property and constructing at least one new pressure regulating station. There are several main extension options shown on the attached exhibit. The preliminary cost estimate for service to the 350 Calle De La Plata project is approximately $1,542,848 not including the off-site main extension costs. The included costs consist of Rate Schedule WSF charges for Area 12 and Supply and Treatment and one new pressure regulating station and do not include off-site main extensions or onsite water facilities.

DISCUSSION:
Location:
The 350 Calle De La Plata subdivision consists of 186 single-family residential units on APN 534-571-01 in Section 23 in T21N, R20E, MDM in the Spanish Springs Valley. The project is located north of Calle De La Plata and east of Pyramid Way in Washoe County. Current development plans include 186 single-family residential units on 58.5 acres with average lot size of 8,000 square feet. The project is located outside the Truckee Meadows Water Authority's retail service territory and must be annexed prior to service. An exhibit is attached showing the project location in relation to existing water facilities and retail service boundary.

Estimated Demands:
The maximum day domestic demand for the project has been estimated at 149 gpm. No separate potable irrigation demand was included in this analysis as it is unknown at this time. In addition, fire requirements are unknown and must be set by the Fire Authority prior to service.

Water Facility Requirements and Cost Estimates:
The project can be served by extending at least two water mains as shown on the attached hydraulic analyses exhibit and construction of at least one new pressure regulating station. Option 1 includes extending a main in Calle De La Plata from the existing 14-inch main near

Isidor Court to the project's eastern boundary and a new pressure regulating station near the project entrance. Option 2 involves connecting to the existing water main on the west side of Pyramid Way and extending a water main through the access road shown and construction of a new pressure regulating station. Both Options 1 and 2 will require crossing Pyramid Way which NDOT will most likely require jack and bore as opposed to open cutting installation methods. Option 3 involves connection to an existing regulated zone at Paradise View Drive or other route through the Donovan Ranch Subdivision as yet unbuilt. Option 3 will require the developer acquire easements acceptable to TMWA across properties owned by others and a route to connect to the street main through planned lots.

Two of the three off-site main extensions will be necessary to meet looping requirements under the NAC445A code and TMWA standards. Since no phasing plan was submitted, it is not known which options the builder may prefer. TMWA prefers Option 1 over Option 2 and will share costs in the main extension only in Calle De La Plata. Option 3 is intended as a secondary supply only and therefore, Option 1 or 2 must be constructed for primary service.

The preliminary water system facility requirements based on the estimated maximum day demand are summarized in the table below:

Table 1: Estimated Major Water Facility Costs

Facility Description	Quantity	Unit	Unit Cost	Total Cost	Comments
Area 12 Facility Charge	149	per gpm	$5,789	$862,561	Rate Schedule WSF
Supply and Treatment Facility Charge	149	per gpm	$4,163	$620,287	Rate Schedule WSF
Pressure Regulating Station	1 or 2	each	$60,000	$60,000	Depends on Option Chosen
Offsite Main Extensions	varies			unknown	Depends on Option Chosen
Estimated Cost				**$1,542,848**	2015 planning level estimate only

ASSUMPTIONS:

1. The 350 Calle De La Plata subdivision will be annexed into the Truckee Meadows Water Authority's retail water service territory.
2. This preliminary study was based on information provided by Star Consulting in May 2015 including a preliminary Tentative Map and average lot sizes of 8,000 square feet.
3. The water facility plan options shown on the included exhibit are preliminary and subject to change.
4. Potable irrigation demands are unknown at this time.
5. Privately owned individual pressure regulating valves will be installed by the builder per TMWA design standards.
6. The estimated maximum day domestic demand for the project is 149 gpm. Actual demands will be determined at the time of application for service.
7. The fire flow requirement and duration has not been set by the governing fire agency and must be set prior to finalizing the water facility plan.

8. All cost estimates are preliminary and subject to change. The costs represented are preliminary planning level cost estimates that are based on the best information available today. Actual costs will be determined at the time of application for service.
9. This estimate does not include the cost of off-site main extensions, onsite facilities, water rights for the project or contribution to the water meter retrofit fund.
10. Dead ends must be eliminated and a looped water system designed, to the extent possible, per NAC 445A requirements. The Health Authority may require changes to the ultimate water facility plan that may in turn affect the included cost estimates.
11. The water facility plan proposed by TMWA must be reviewed for compliance with state and local codes and regulations and approved by the local health authority prior to service.

SUMMARY AND CONCLUSIONS:

The proposed 350 Calle De La Plata subdivision can be served by the Truckee Meadows Water Authority within the Desert Springs System. The partial 2015 planning level estimated cost for service to this project for is $1,542,848. Annexation to the Truckee Meadows Water Authority's retail water service territory is required.

/hmf

Attachments: Preliminary Tentative Map by Star Consulting – reduced
TMWA Retail Service Boundary Figure
Off-Site Main Extension Options Hydraulic Analyses Schematic - Preliminary

cc: Erin Harris, Star Consulting
File 15-4370

TRUCKEE MEADOWS WATER
AUTHORITY
www.tmh2o.com

1355 Capital Blvd. • PO Box 30013 • Reno, NV 89520-3013
775.834.8080 • 775.834.8003

Date: May 7, 2015

To: Pam Parenti

From: Susan Whittet SW

RE: 15-4370, 350 Calle de la Plata - 186 Single Family Residence Lots
Assessor's Parcel Numbers APN: 534-571-01

Applicant: CN Properties, LLC c/o Blackstone Development Group

The New Business/Water Resource team will answer the following assumptions on each new discovery:

- Is the property within Truckee Meadows Water Authority's water service territory?
- Does the property have Truckee River water rights appurtenant to the property or resource credits associated with the property?
  - If yes, what is the status of the water right: Agricultural or Municipal and Domestic use?
- Estimated water demand for residential and or commercial projects.
- Any special conditions, or issues, that are a concern to TMWA or the customer.

The following information is provided to complete the Discovery as requested:

- The subject parcel (APN 534-571-01) is **not** within Truckee Meadows Water Authority's (TMWA's) service territory. An annexation is required; which is paralleling this discovery.

- There are no Truckee River decreed water rights appurtenant to this project. The Applicant and/or owner will be required to follow TMWA's current rules, specifically Rule 7, and pay all fees associated with the water rights needed in order to obtain a will serve commitment letter. In the event owner/applicant owns permitted surface or ground water rights, those water rights would need to be dedicated by applicant/owner towards the project. Any remaining water rights required for the project, may be purchased from TMWA. Ground or surface water rights dedicated by the applicant/owner for this project must be permitted and must be reviewed and deemed acceptable by TMWA.

- Based on the information provided, 186 Single Family Residential (SFR) lots at 8,000 sq.ft/lot are estimated to require a domestic demand of **79.98(AF)**. Plans were not submitted for the recreational elements or irrigation with your new business application; therefore, the estimated demand calculation can only be provided for the proposed single family residential lots. Once final plans are submitted, a more accurate demand will be calculated. *Please note, additional dedication for return flow may be required for irrigation and for domestic use if residential lots are not sewered back to the Truckee River.*

- Any existing right of ways and public easements would need to be reviewed, and if needed the property owner will need to grant TMWA the proper easements and/or land dedications to provide water service to the subject properties. Property owner will be required, at its sole expense, to provide TMWA with a current preliminary title report for all subject properties. Owner will represent and warrant such property offered for dedication or easements to TMWA shall be free and clear of all liens and encumbrances. Owner is solely responsible for obtaining all appropriate permits, licenses, construction easements, subordination agreements, consents from lenders, and other necessary rights from all necessary parties to dedicate property or easements with title acceptable to TMWA.

TRUCKEE MEADOWS WATER AUTHORITY

WATER RIGHTS AND METER FUND CONTRIBUTION CALCULATION WORKSHEET FOR MULTI-TENANT APPLICATIONS

				Demand (Acre Feet)		
1	Existing demand (current usage) at Service Property			0.00		
2	Number of units	186	x 0.43AF (average per SFR)	79.98		
3	Retail floor space:		x 0.0004 per sq.ft.	0.00		
4	Fixture units:		x 15x 365x 3.07/ 1 mil	0.00		
5	Landscaping: TBD	Turf	sq ft	0.00		
6	Drip: TBD					
7	Other calculated demand:			0.00		
8	New or additional demand at Service Property (lines 2+3+4+5+6)			79.98		
9	**Total Demand at Service Property (lines 1+8)**			79.98		
10	Less: Prior demand commitments at service property			0.00		
11	Less: Other resource credits			0.00		
12	**Total Credits (lines 10+11)**			0.00		
13	Subtotal: Required resource dedication/commitment (lines 9-12)			79.98		
14	Factor amount (0.11 x Line 13)			0.00		
15	No return flow required			0.00		
16	**TOTAL RESOURCES REQUIRED (lines 13+14+15)**			79.98		
17	Price of Water Rights per AF	$7,500			$	599,850
18	Will Serve Commitment Letter Preparation Fee ($100 per letter)				$	100
19	Due Diligence Fee ($150.00 per parcel)				$	0
20	Document Preparation Fees ($100.00 per document)				$	0
21	Meter Contribution ($1,830 x 79.98 acre feet of demand)				$	0
22	**TOTAL FEES DUE (lines 17+18+19+20+21)**				$	599,950

Project: 350 Calle de la Plata

Contact: Blackstone Development Company, Joshua Myers **Quote date:** 5/7/2015

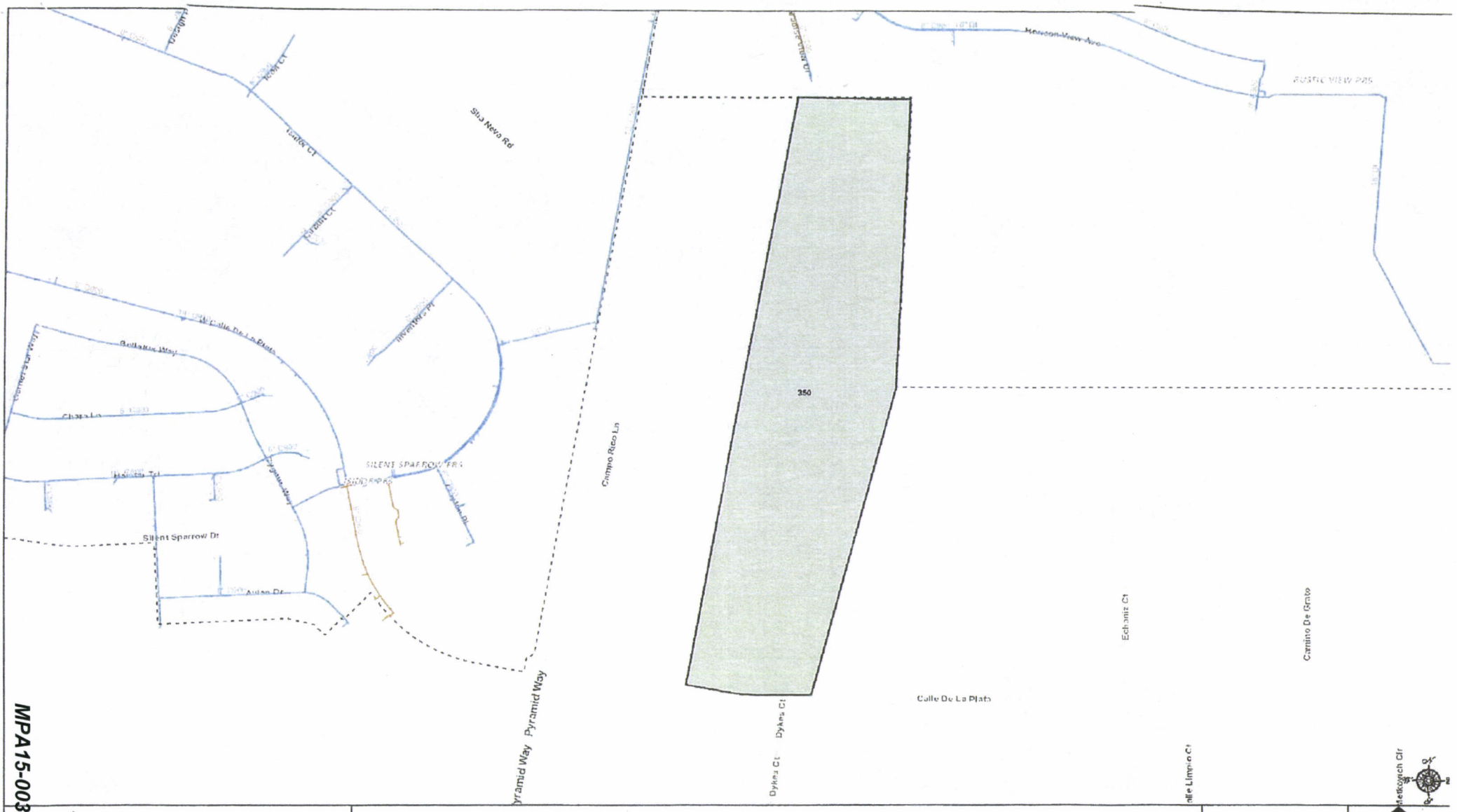
Phone: (775) 352-4200 **Tech contact:** Sue Whittet

APN: 534-571-01 **Project No:** 15-4370

Remarks: **Demand shown using TMWA's groundwater. Additional fees and demand will apply if surface water is dedicated for this project. Fees quoted are valid only within 15 calendar days of quote date.**

Note: There are no landscaping or recreational area plans associated with this Discovery, therefore, no demand was calculated. Applicant only supplied average lot size of 8,000 sq.ft./lot for 186 SFR lots.

MPA15-003 & RZA15-005
EXHIBIT O-1



MPA15-003 & RZA15-005
EXHIBIT O-1

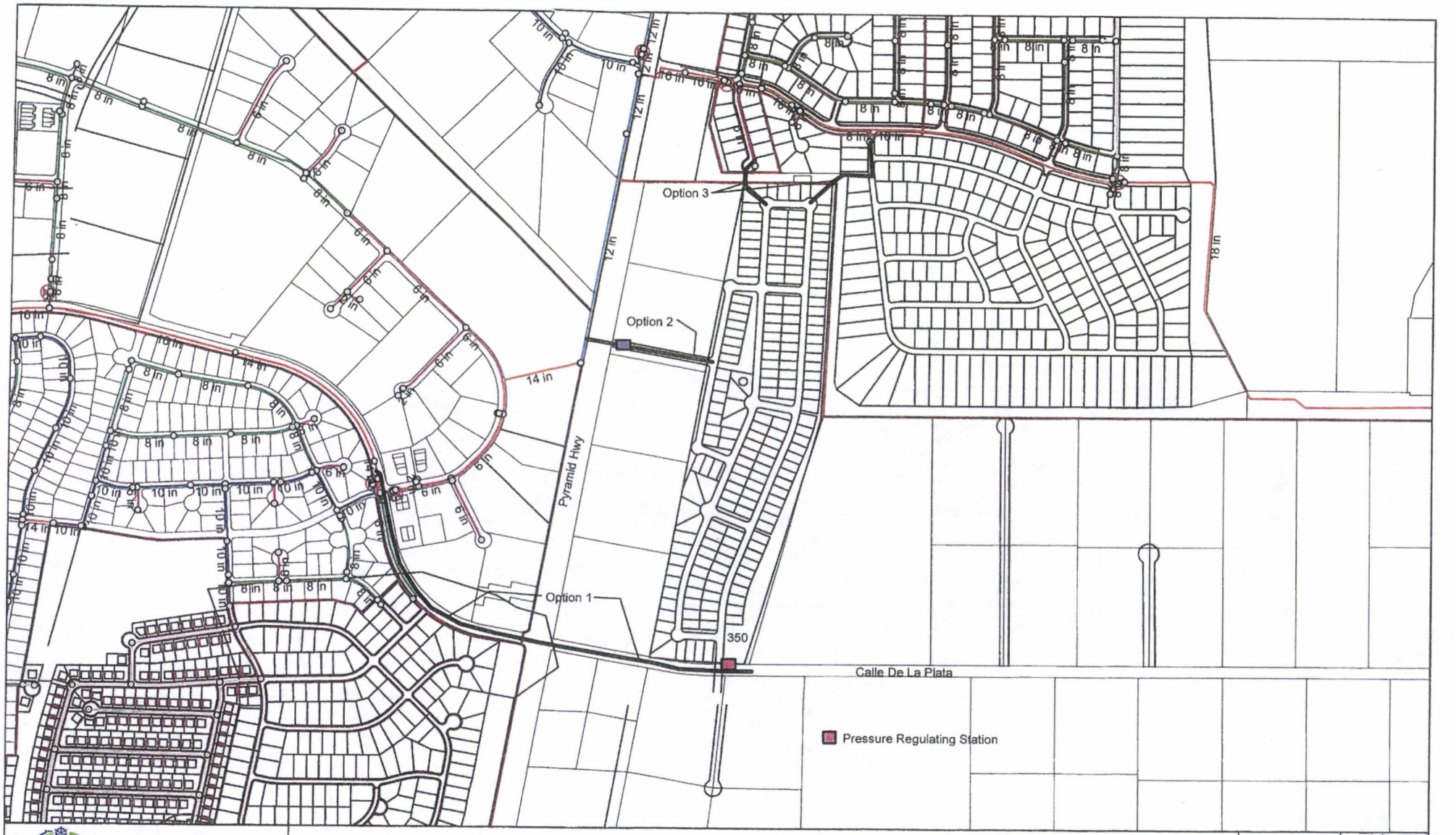
TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

350 CALLE DE LA PLATA DISCOVERY

EXISTING WATER FACILITIES AND RETAIL SERVICE BOUNDARY

DATE: Jun 03, 2015	
MAP BY:	
WORK ORDER #:	
SCALE: NTS	

NAD 83 NEVADA STATE PLANE WEST FEET



TRUCKEE MEADOWS WATER AUTHORITY
Quality. Delivered.

350 Calle De La Plata Discovery - 186 SFR
Potential Off-Site Water Service Extension Options
Desert Springs System

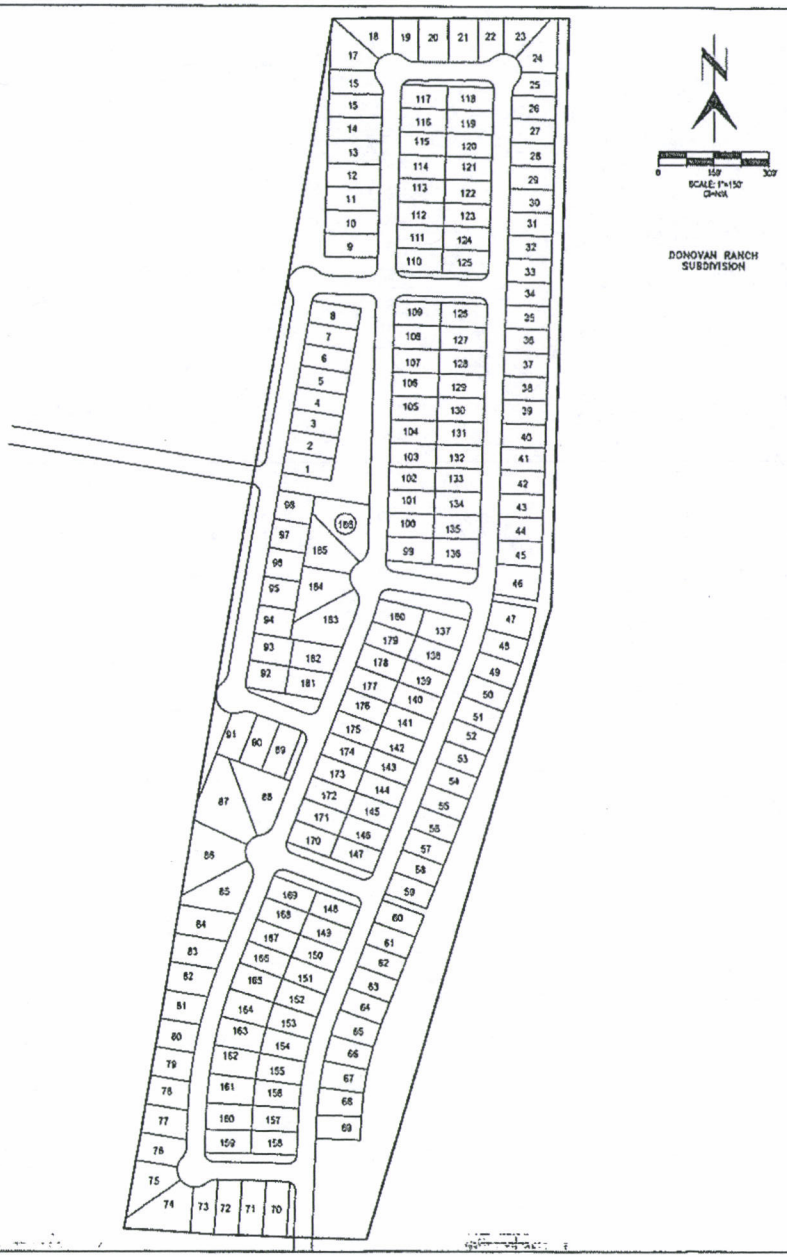
15-4370

DATE: 6/2/2015
MAP BY: hmf
REQUESTED BY:
SCALE: 1 inch = 616 feet

NAD 83 NEVADA STATE PLANE WEST FEET

MPA15-003 & RZA15-005
EXHIBIT O-1

doc path:\\use\file\path\stamp\tool\to copy and paste\doc path\here



SCALE: 1"=150'
GRAPHIC

DONOVAN RANCH
SUBDIVISION

SITE PLAN NOTES:

1. THIS PRELIMINARY SITE PLAN WAS CREATED WITHOUT THE BENEFIT OF A BOUNDARY OR TOPOGRAPHICAL SURVEY. ALL MEASUREMENTS ARE APPROXIMATE.
2. PARCEL NUMBER: 534-571-01
3. LOCATED AT 359 CALLE DE LA PLATA IN SPANISH SPRINGS
4. DEVELOPMENT REGULATED BY WASHOE COUNTY, NEVADA
5. APPROXIMATELY 58.5 ACRES WITHIN THE SPANISH SPRINGS PLANNED AREA OF THE WASHOE COUNTY LAND DEVELOPMENT CODE
6. EXISTING TOPOGRAPHY IS GENTLY SLOPING IN UNIFORM SLOPE TOWARD THE NORTHWEST
7. EXISTING ZONING IS NEIGHBORHOOD COMMERCIAL/OFFICE (NC), INDUSTRIAL (I) AND SUBURBAN
8. MASTER PLAN DESIGNATION IS SUBURBAN RESIDENTIAL (SR), INDUSTRIAL (I) AND COMMERCIAL (C)
9. TOWNSHIP 21, RANGE 20, SECTION 23
10. SERVED BY THE TRUCKEE MEADOWS FIRE PROTECTION DISTRICT

CALL FOR NE BLUE STAKES
800-782-5348

NO.	DATE	REVISIONS	BY	CHK'D	APP'D

PRELIMINARY TENTATIVE MAP
SPANISH SPRINGS
LOTS 1-188 AND COMMON AREA

XXX
XXX
XXX

STAR CONSULTING
439 W. PLUMB LANE
RENO, NV 89509
(775) 352-4200
PROJECT NO. 14023.1...

DRAWN BY	EEH	CASE NO.	XXX
DESIGN BY	EEH		
CHKD BY	GWH	SHEET NO.	1 OF 1

MPA15-003 & RZA15-005
EXHIBIT O-1

EXHIBIT O-2

September 14, 2015

FEASIBILITY GEOTECHNICAL INVESTIGATION

APN #534-571-01

Converse Consultants
Geotechnical Engineering
Environmental & Groundwater Science
Inspection & Testing Services

Job Number 15-25114-01

Prepared For:

Mr. Michael S. Railey
Rubicon Design Group
100 California Avenue, Suite 202
Reno, Nevada 89509

Prepared By:

Converse Consultants
4840 Mill Street, Suite 5
Reno, Nevada 89502
www.converseconsultants.com

Converse Consultants

Geotechnical Engineering, Environmental and Groundwater Science, Inspection and Testing Services

September 14, 2015

15-25114-01

Mr. Michael S. Railey, Partner
Rubicon Design Group
100 California Avenue, Suite 202
Reno, Nevada 89509

SUBJECT: FEASIBILITY GEOTECHNICAL INVESTIGATION
Proposed 172 Home Subdivision
APN #534-571-01
Spanish Springs, Nevada

Dear Mr. Railey:

In accordance with your written authorization to proceed, we have prepared our "Feasibility Geotechnical Investigation" report for the subject site location near the intersection of Pyramid Highway and Calle de la Plata. Our scope of services included a literature review, field exploration, soil, groundwater, and flooding conditions as well as engineering analyses, and the preparation of this report.

It must be understood that the conclusions presented herein are preliminary in nature and subject to confirmation by a Final Geotechnical Investigation based on the final project design.

The opportunity to be of service to you is sincerely appreciated. If we can assist you further on this project, or if you have any questions, please call.

Respectfully submitted,

Converse Consultants

H. Edward Dawson, P.E., M.B.A.
Senior Staff Engineer

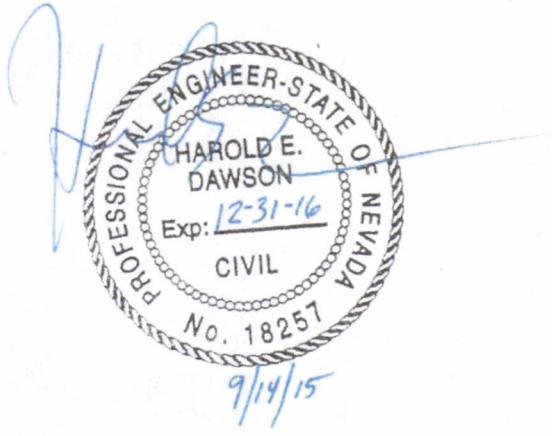
Kathi Brandmueller, P.E.
Senior Engineer/Office Manager

4840 Mill Street, Suite 5, Reno, Nevada 89502
Telephone: (775) 856-3833 ◆ Facsimile: (775) 856-3513 ◆ email: reno@converseconsultants.com

PROFESSIONAL CERTIFICATION

This report has been prepared by the staff of Converse Consultants under the professional supervision of the registered engineer(s) whose seals and signatures appear hereon.

The findings, recommendations and professional opinions presented in this report were prepared in accordance with generally accepted professional engineering practice at this time in the State of Nevada. There is no other warranty, either expressed or implied.



H. Edward Dawson, P.E.
Senior Staff Engineer

FEASIBILITY GEOTECHNICAL INVESTIGATION
APN #534-571-01
Spanish Springs, Nevada

PROJECT DESCRIPTION

The project site is located near the corner of Nevada State Route 445, Pyramid Highway and Calle de la Plata and fronts Campo Rico Lane. The site is rectangular shaped. Proposed on the site is a 172 home subdivision. The size of the proposed project site is 58.487 acres. The property has an average elevation of approximately 4557 feet. Due to the flat topography of the site, relatively light structural loads and minimal cuts and/or fills are anticipated.

SITE DESCRIPTION

The site description is based on our field observations and information provided by you. We have included a vicinity map depicting the location of the proposed project as "Drawing No. 1."

Currently, the site is relatively flat, sloping slightly from east to west, and is vacant with native vegetation consisting of sagebrush. Near the southern boundary of the parcel is an approximate 3 or 4 foot deep drainage ditch running in an east-west direction. The project site is located in an area of single family homes and warehouses. Adjacent to the site is non-developed land and single family homes.

GEOLOGY AND GEOLOGIC HAZARDS

Geology

As shown on the "Geologic Map of Washoe and Storey Counties, Nevada" (Bonham, 1969) the site is underlain by Quaternary Alluvium deposits consisting of stream deposits, talus, slop wash, alluvial fan and eolian deposits. Soils consist of gravel, sand, clay and silt mixtures.

Faulting

The project site as well as all of Reno and Sparks is located near active faults which are considered capable of producing significant ground motion due to seismic events. Based on the USGS Quaternary Fault Fold Database, there are no known active faults (Holocene-age, exhibiting displacement with the last 11,000 years) crossing the subject site.

Liquefaction

The site also appears to be outside any zones prone to seismically-induced liquefaction. Liquefaction of granular soils is caused by strong earthquake motion on loose saturated granular soils. The depth to groundwater is approximately 135 feet below ground surface. The probability of liquefaction is very low in the site area.

FIELD INVESTIGATION AND SOIL CONDITIONS

Five hand-auger borings were advanced to a maximum depth of 3 feet at the site as shown on the attached Drawing No. 1 titled "Boring Location Map". Soils in the hand auger borings were relatively consistent with the Natural Resources Conservation Service (NRCS) mapping and related data calling it sandy loam consistent with alluvial deposits. Sandy loam is typically comprised of sand, silt, and small amounts of clay. The soils observed in the hand auger excavations consisted of silty sands, silty sand with gravel, clayey sand, poorly graded sand, and well graded sand with gravel. These alluvial deposits were loose in some areas and dense in others and all were dry at the surface and slightly moist with depth. Soils were field classified. Refer to Appendix A for representation of all hand auger borings.

LABORATORY ANALYSIS

Laboratory analysis was not included in our current scope of services. Laboratory testing will be required during the final geotechnical investigation.

GROUNDWATER CONDITIONS

Groundwater

Groundwater is not expected to be a constraint to development. Based on the State of Nevada Division of Water Resources interactive monitoring well website, there is a monitoring well approximately one-half mile to the south east with a consistent water elevation of approximately 135 feet below existing ground surface.

FLOODING AND DEBRIS FLOW

The Flood Insurance Rate Map (FIRM) produced by the Federal Emergency Management Agency (FEMA) shows the majority of the site lies in an area designated as Zone X. This area is determined to be outside of the 0.2% annual chance floodplain; however, Zone X is defined as "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with

average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." The southern portion of the site lies in an area of Zone AO which is within the 100 Year Flood zone. Zone AO is defined as "Flood depths of 1 to 3 feet (usually sheet flowing on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined."

A majority of the site lies in an area of Zone X; however, the Zone AO portion of the site will need to be mitigated during the Civil design phase of the project. Upon incorporating current drainage standards, flooding and debris flow should not be an issue. Below, Figure 1 depicts the zone designator areas for the parcel.

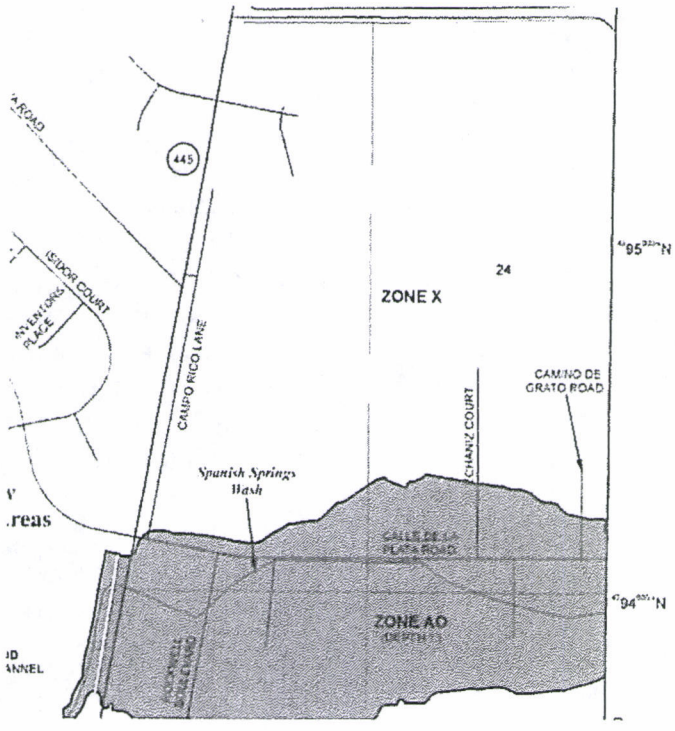


FIGURE 1 – FIRM BY FEMA FOR PARCEL 534-571-01

ENGINEERING PROPERTIES OF SOILS

The engineering properties of the native soils observed are relatively good and should be generally suitable for the support of the structure proposed (to be verified through laboratory and field investigation performed during the Final Geotechnical Report). Some over excavation and re-compaction to provide uniform soil conditions beneath footings and slabs and to address any encountered expansive soils, should be anticipated.

SLOPE STABILITY

No features that would indicate slope instability were observed.

PRELIMINARY CONCLUSIONS

Based on our observations and research, it is our opinion that the proposed project is feasible from a geotechnical standpoint. Specific recommendations would be provided in the Final Geotechnical Investigation.

CLOSURE

This report has been prepared for the sole benefit and exclusive use of the owner and project design team in accordance with the terms and conditions of our signed authorization under which these services have been provided. Any reliance on this report by third parties shall be at the third party's sole risk. Our services have been performed in

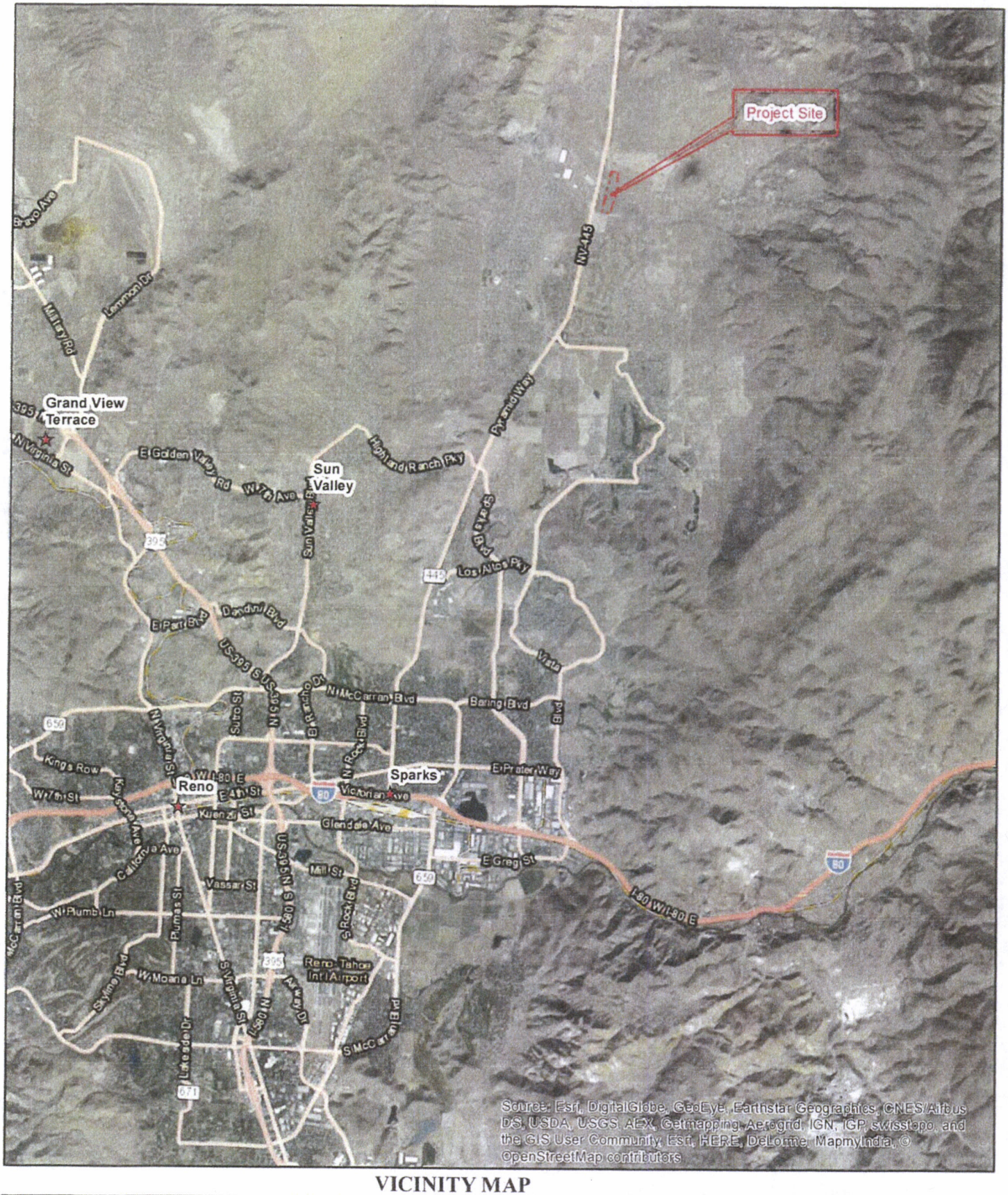
accordance with applicable state and local ordinances, and generally accepted practice within our profession. No warranty, either expressed or implied, is made.

Converse Consultants is not responsible or liable for any claims or damages associated with the interpretation of available information provided by others. Site exploration identifies actual soil conditions only at those points where samples are taken, or observations made, when they are performed. Data derived through sampling and analytical testing are extrapolated by Converse employees who then render an opinion about overall soil conditions. Actual conditions in areas not sampled, or observed, may differ. In the event that changes to the property occur, or additional, relevant information about the property is brought to our attention, the recommendations contained in this report may not be valid unless these changes and additional relevant information are reviewed and the recommendation of this report are modified or verified in writing.

REFERENCES

For the preparation of this document, the following documents were reviewed and websites accessed:

- Parcel Map, Washoe County Assessor's Office
  https://www.washoecounty.us/assessor/
- U.S. Geological Survey Quaternary Fault and Fold Database of the United States, accessed September 3, 2015
  http://earthquake.usgs.gov/hazards/qfaults/
- State of Nevada Division of Water Resources – Nevada Hydrology Data on Monitoring Wells
  http://webgis.water.nv.gov/
- USDA & NRCS Custom Soil Resource Report for Washoe County, Nevada, South Part
  http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
- Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map #32031C2865G, retrieved from the following website
  http://msc.fema.gov/portal
- Geologic Map of Washoe and Storey Counties, Nevada, by Harold F. Bonham, 1969, Scale 1:250,000



VICINITY MAP

RUBICON DESIGN GROUP
Parcel # 534-571-01
Reno, Nevada

0 1 2 4 Miles

Converse Consultants
Over 60 Years of Dedication and Geotechnical and Environmental Services

Scale	1 inch = 2 miles
File Name	Vicinity Map
Date	09/10/15
Project No.	15-25114-01
Created By	KJP
Drawing No.	1
Checked By	ED
Approved By	

BORING LOCATION MAP

RUBICON DESIGN GROUP

Parcel #534-571-01
Reno, Nevada

Drawing No. 2

N
W E
S

1 inch = 500 feet

0 500 1,000 Feet

Legend

- Boring Locations
- Project Boundary
- Washoe Parcels

Date 09/10/15 Project No 15-25114-01

MPA15-003 & RZA15-005 - EXHIBIT O-2

APPENDIX A

Log No. H-1

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	Samples: Drive	Samples: Bulk	Samples: Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.							
0		SILTY SAND (SM), Light Brown, Medium Grained, Slightly Moist, Dense							
1		SILTY SAND WITH GRAVEL (SM), Light Brown, Fine Grained Gravel, Slightly Moist, Subangular, Dense							
2		Boring Terminated Due to Refusal							
3									
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 2.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-1

MPA15-003 & RZA15-005
EXHIBIT O-2

Log No. H-2

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 | Location: Parcel 534-571-01 | Elevation (ft): 4557 feet
Driller: N/A | Borehole Diameter: 3 inch | Equipment: Hand Auger
Logged By: Ed Dawson | Groundwater Depth (ft): None Encountered | Driving Wt. and Drop: N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples: Drive	Samples: Bulk	Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		SILTY SAND (SM), Light Brown, Medium Grained, Slightly Moist, Dense							
1		SILTY SAND WITH GRAVEL (SM), Light Brown, Medium Grained Sand, Fine Grained Gravel, Slightly Moist, Dense Subangular							
		Boring Terminated Due to Refusal							
2									
3									
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 1.5'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-2

Log No. H-3

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 **Location:** Parcel 534-571-01 **Elevation (ft):** 4557 feet
Driller: N/A **Borehole Diameter:** 3 inch **Equipment:** Hand Auger
Logged By: Ed Dawson **Groundwater Depth (ft):** None Encountered **Driving Wt. and Drop:** N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	Samples: Drive	Samples: Bulk	Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.							
1		SILTY, CLAYEY SAND (SC-SM), Light Brown, Medium Grained, Slightly Moist							
2		CLAYEY SAND (SC), Light Brown, Medium Grained, Slightly Moist, Dense							
3		Boring Terminated Due to Refusal							
4									
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 2.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-3

Log No. H-4

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 | Location: Parcel 534-571-01 | Elevation (ft): 4557 feet
Driller: N/A | Borehole Diameter: 3 inch | Equipment: Hand Auger
Logged By: Ed Dawson | Groundwater Depth (ft): None Encountered | Driving Wt. and Drop: N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	Samples: Drive	Samples: Bulk	Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.							
1		POORLY GRADED SAND WITH SILT (SP), Light Brown, Medium Grained, Slightly Moist							
2		POORLY GRADED SAND (SP), Light Brown, Medium Grained, Slightly Moist							
3		WELL GRADED SAND (SW), Light Brown, Medium Grained, Slightly Moist							
4		Boring Terminated							
5									
6									
7									
8									
9									
10									

APPROVED BY ON

End of Exploration at 3.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-4

Log No. H-5

DRAFTED BY Ed Dawson

Date of Drilling: 9/8/2015 | Location: Parcel 534-571-01 | Elevation (ft): 4557 feet
Driller: N/A | Borehole Diameter: 3 inch | Equipment: Hand Auger
Logged By: Ed Dawson | Groundwater Depth (ft): None Encountered | Driving Wt. and Drop: N/A

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	Samples: Drive	Samples: Bulk	Samples: Blow Count	Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
0		POORLY GRADED SAND WITH SILT (SP), Light Brown, Medium Grained, Slightly Moist							
1		POORLY GRADED SAND (SP), Light Brown, Medium Grained, Slightly Moist							
2		WELL GRADED SAND (SW), Light Brown, Medium Grained, Slightly Moist							
3		Boring Terminated							
4									
5									
6									
7									
8									
9									
10									

This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.

APPROVED BY ON

End of Exploration at 3.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Parcel 534-571-01
Near the intersection of Pyramid Hwy and Calle de la Plata
Spanish Springs, Nevada

Project No.
15-25114-01

Converse Consultants

Over 60 Years of Dedication in Engineering and Environmental Sciences

Drawing No.
A-5

MPA15-003 & RZA15-005
EXHIBIT O-2

KEY TO SYMBOLS

Symbol Description

Strata symbols

Silty Sands, sand -silt mixtures (SM)

Silty Sand with Gravel

Silty Clayey Sand

Clayey Sand

PG Sand with Silt

Poorly Graded Sand with Gravel and Silt (SP)

WG Sand

Soil Samplers

Auger

Notes:

1.Five hand auger borings (H-1 through H-5) were drilled on 9/8/15.

2. Groundwater was not encountered during our investigation.

3. Boring locations are approximate.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

CONCEPTUAL DRAINAGE REPORT

FOR

BLACKSTONE ESTATES

A Portion of Spanish Springs Planned Area
Located in the East Half, Section 23, Township
21 North, Range 20 East, Washoe County, Nevada

APN #534-571-01
350 Calle de la Plata

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email:erin@starconsultingnv.com

MPA15-003 & RZA15-005
EXHIBIT O-2

CONCEPTUAL DRAINAGE REPORT

FOR

BLACKSTONE ESTATES

A Portion of Spanish Springs Planned Area
Located in the East Half, Section 23, Township
21 North, Range 20 East, Washoe County, Nevada

Prepared for:

Blackstone Development Group
333 N. Wilmot Road, Suite 340
Tucson, AZ 85711
(520) 618-5378

Prepared by:

Erin Harris, PE
STAR Consulting
439 W. Plumb Lane
Reno, NV 89509

October 2015

TABLE OF CONTENTS

TABLE OF CONTENTS 3
LIST OF FIGURES AND TABLES 4

I. INTRODUCTION 5

A. PROJECT LOCATION 5
B. PROJECT DESCRIPTION 5
C. EXISTING SITE CONDITIONS 5
D. PREVIOUS STUDIES 5

II. EXISTING AND PROPOSED HYDROLOGY 7

A. DRAINAGE BASINS 7
B. STORM FLOW CALCULATIONS 9
C. EXISTING DRAINAGE PROBLEMS 12

III. PROPOSED DRAINAGE FACILITIES 13

A. DRAINAGE ROUTING AND STRUCTURES 13
1. Upstream Runoff 13
2. Street Runoff 14
3. Culvert 15
4. Catch Basins 15
5. Storm Drains 17
6. Curb Inlets 17
7. Erosion Control 18
B. DETENTION REQUIREMENTS 20
1. Detention Basin A: 20
2. Detention Basin B: 21
3. Erosion Control at Basin Outlets: 22
C. FLOOD PLAINS 23
D. OUTFALL SYSTEM 23

IV. CONCLUSIONS 24

A. POLICIES AND REQUIREMENTS 24
B. MANUAL EXEMPTIONS 24
C. ALL WEATHER ACCESS 24
D. FLOOD PLAIN REGULATIONS 24
E. DOWNSTREAM EFFECTS 24

V. CALCULATIONS APPENDIX 25

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

List of Figures and Tables

Figure I: Location Map 6
Figure II: Off-site Basin Map 8
Table I: Existing Watershed Data 9
Table II: Developed Watershed Data 10
Figure III: Drainage Plan 11
Table III: Sub-Watershed Flow Estimates 14
Table IV: Catch Basin Capacity 16
Table V: Curb Inlet Capacity 18
Table VI: HMS Detention Routing Results – Basin A 21
Table VII: HMS Detention Routing Results – Basin B 22
Table VIII: Downstream Discharge Changes 24

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

I. INTRODUCTION

A. PROJECT LOCATION

The subject property is a 58 acre parcel located in the northeast quadrant of the Calle de la Plata and Pyramid Highway intersection in Washoe County, Nevada. The parcel is situated in the northeast and southeast quarters of Section 23, Township 21 North, Range 20 East. A Location Map is provided as Figure I of this report.

B. PROJECT DESCRIPTION

The proposed development is residential subdivision with an overall density of 3.5 dwelling units per acre.

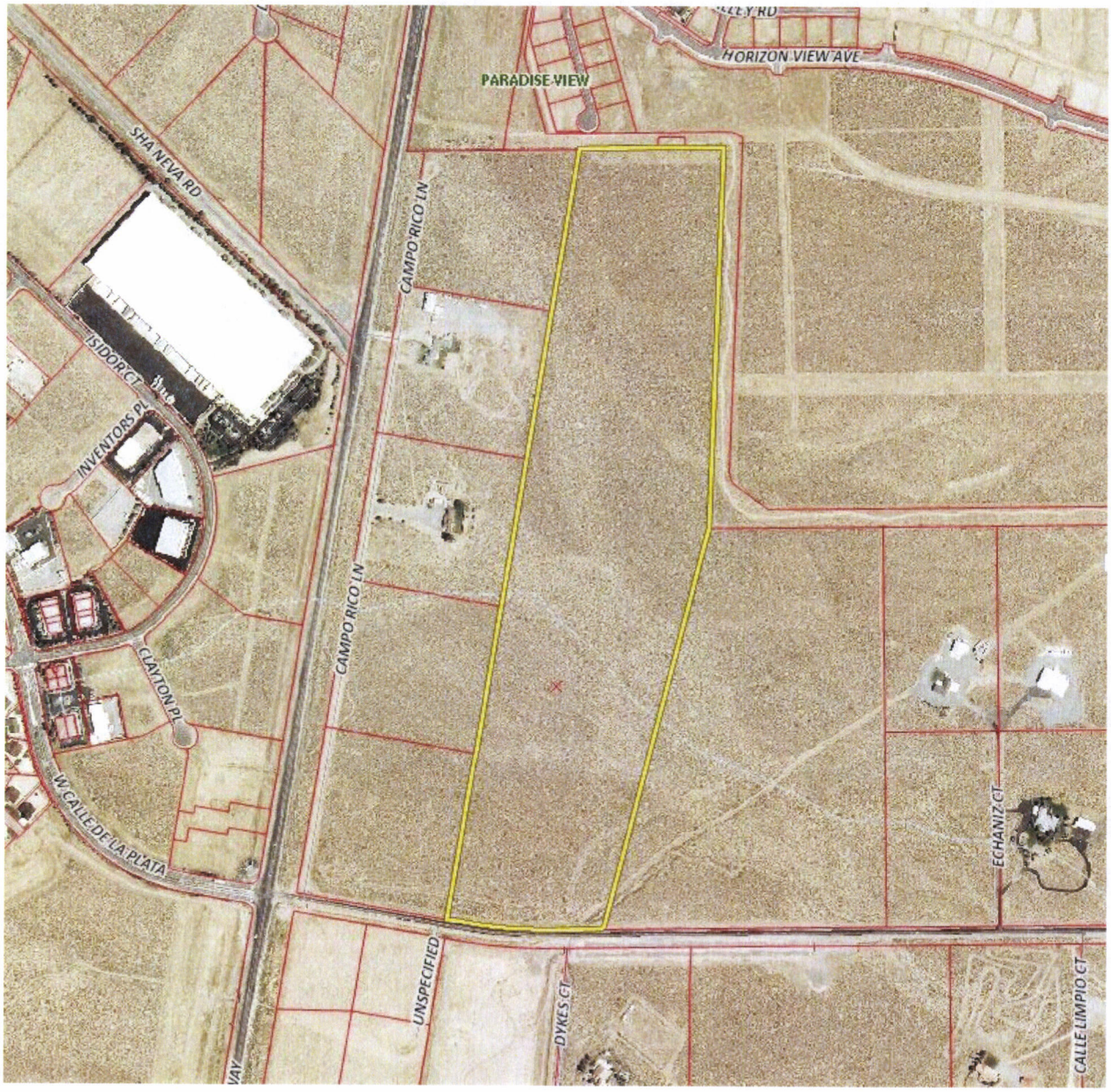
C. EXISTING SITE CONDITIONS

The site is currently vacant. The land surrounding the project site is mostly vacant, with a mix residential and commercial properties in the vicinity. The area drains generally from the east to the west. Runoff from the area upstream of the property enters the property along the eastern boundary, mostly in a shallow, sheet-flow manner. The terrain within the subject property is variable, with ground slopes ranging from approximately 1% to 5%, and drains toward the west and northwest. Natural runoff exits the property along the west boundary, mostly in a shallow, sheet-flow manner, and is conveyed toward Pyramid Way. The property is bounded to the north and east by the Donovan Ranch subdivision, and to the south by Calle de la Plata.

D. PREVIOUS STUDIES

In 2005 the Master Drainage Study for Donovan Ranch was prepared by Matrix Engineering & Consulting, Inc., referred to in this report as the Matrix Study. Information about the Donovan Ranch development from the Matrix Study was used to determine offsite conditions affecting the subject property. In 2009 a LOMR was issued by FEMA, (Case No. 09-09-1277X), to revised FIRM Panel 32031C2865G. This map revision has not yet been incorporated into the latest DFIRM mapping available from FEMA. The map revision exhibit from the approved LOMR has been used to establish the limits of flooding for the Spanish Springs Wash within this project.

FIGURE I: LOCATION MAP



STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

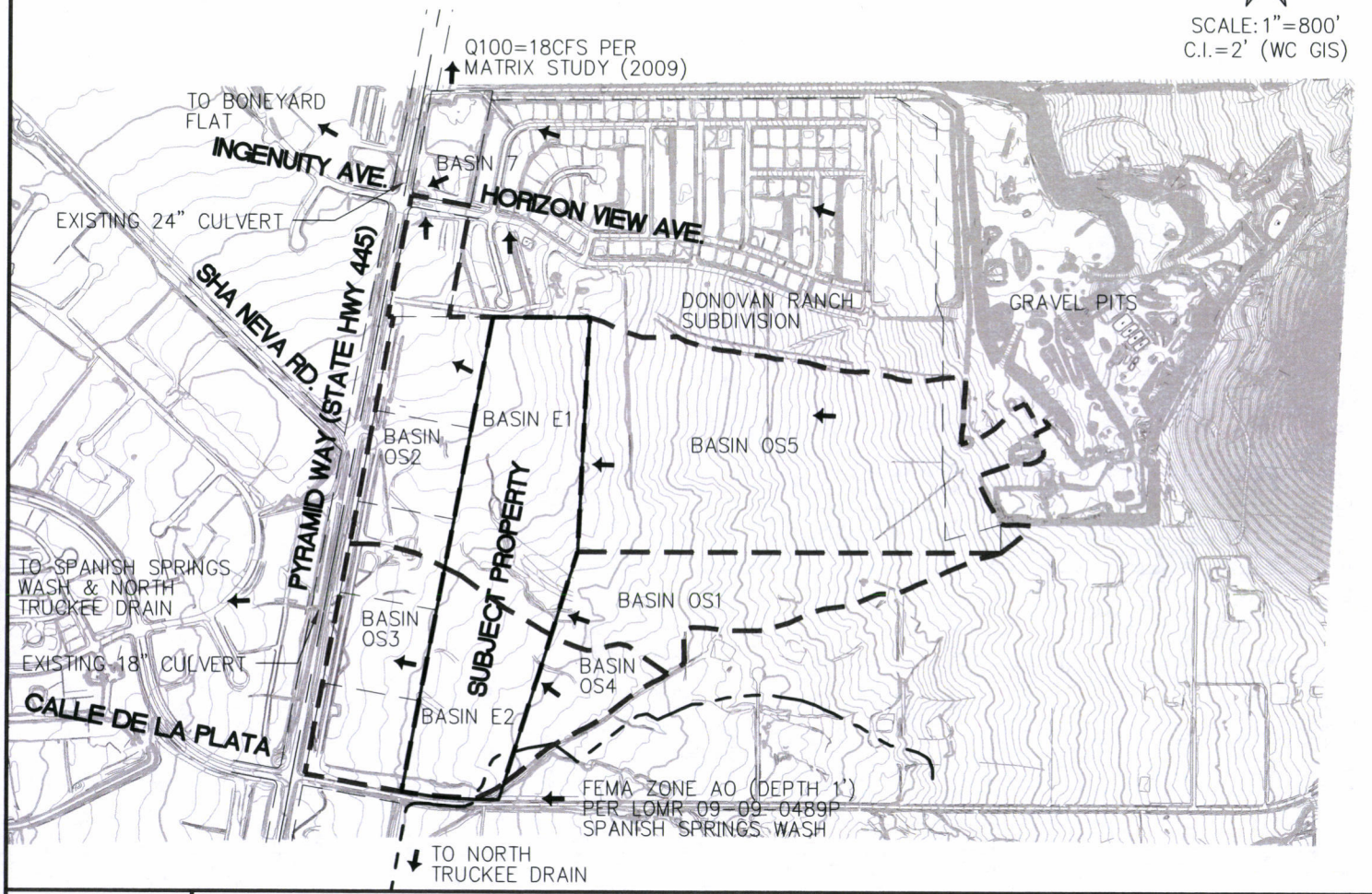
II. EXISTING AND PROPOSED HYDROLOGY

A. DRAINAGE BASINS

The existing drainage patterns and watershed areas are presented in Figure II of this report. Watershed boundaries were determined using recent aerial photography and 2' interval contours (2006 &2007) provided by Washoe County. The area upstream of the subject property is divided between the Donovan Ranch subdivision (and areas tributary to it), and a triangular basin located between Donovan Ranch and existing diversion berms located north of Calle de la Plata. Runoff generated upstream of Donovan Ranch is impounded and retained in existing gravel pits. Runoff generated within Donovan Ranch will be directed (in the future) into detention ponds and then released to the northwest and away from the subject property. Basins OS1, OS4 and OS5 drain a total of 131 acres into the subject property.

Onsite terrain divides runoff into two basins, E1 and E2. Basin E1 drains 37 acres to the northwest, exiting the property in a shallow, natural drainage leading into an adjoining parcel along Pyramid Way. Basin E2 drains 24 acres to the west, exiting the property in a sheet-flow manner into adjoining parcels along Pyramid Way.

Downstream of the project existing runoff drains toward two existing culverts which convey storm water under Pyramid Way. Basin OS2, consisting of 35 acres, drains to the northwest where runoff enters an existing 24" culvert under Pyramid Way. Basin OS3, consisting of 26 acres, drains to the west where runoff enters an existing 18" culvert under Pyramid Way.



BASIN DISCHARGES (cfs)					
ID#	D.A.	LEN	CN	TLAG	Q100
OS1	30.9	3078'	55	30	3.0
OS2	34.8	2539'	68	34	17
OS3	25.5	1691'	80	26	24
OS4	10.8	943'	55	21	1.3
OS5	89.2	3244'	55	28	8.9
E1	36.5	1868'	55	30	3.5
E2	23.7	854'	65	17	11
7	7.42	--	63	6	4.8

LEGEND

- FLOW DIRECTION
- WATERSHED BOUNDARY
- PROJECT BOUNDARY

STAR CONSULTING

FIGURE II: OFF-SITE BASIN MAP

MPA15-003 & RZA15-005 - EXHIBIT O-2

The developed conditions drainage patterns and watershed areas are presented on Figure III. The project site is divided into five watersheds, identified as D1 through D5, based on the street layout and the site topography. Runoff within each watershed will drain toward the paved streets, and then be conveyed within the curbs to low points. Runoff collecting at low points in the pavement will be directed into either curb inlets or catch basins and flow, either directly or through storm drain pipes, into downstream Detention Basins A and B. Post detention runoff will be released from the Detention Basins, which are located at the existing downstream concentration points E1 and E2, and thereby enter the downstream drainage system in a manner approximating existing conditions.

B. Storm Flow Calculations

All storm water discharge computations in this report are computed following the procedures outlined in the Truckee Meadows Regional Drainage Manual, referred to in this report as the Drainage Manual. This study utilizes the SCS Unit Hydrograph Method, and the analyses were completed employing a HEC-HMS computer model. Soil types for the study area were obtained from the NRCS Web Soil Survey and are presented in Appendix A. NOAA Atlas 5 precipitation data was obtained from the Precipitation Frequency Data Server, and is also presented in Appendix A. In accordance with Section 304.2, both Minor (5-year) and Major (100-year) design storm events were evaluated.

HMS input parameters for each of the watersheds were developed using the tables and charts of the Drainage Manual, as well as spreadsheet calculations for infiltration and lag time. Copies of all references are provided in Appendix D, and copies of all runoff computations are provided in Appendix A. The following Table I summarizes the input parameters and resulting HMS peak discharge estimates specific to each existing conditions watershed.

Table I: Existing Watershed Data

Watershed	D.A. (ac.)	Length (ft.)	Comp. CN	TLAG	Q_5 (cfs)	Q_{100} (cfs)
OS1	30.9	3078	55	30	**0.0**	**3.0**
OS2	34.8	2539	68	34	**0.6**	**17**
OS3	25.5	1691	80	26	**4.4**	**24**
OS4	10.8	943	55	21	**0.0**	**1.3**
OS5	89.2	3244	55	28	**0.1**	**8.9**
E1	36.5	1868	55	30	**0.1**	**3.5**
E2	23.7	854	65	17	**0.3**	**11**
7*	7.42*	--	63	6	**0.1**	**4.8**

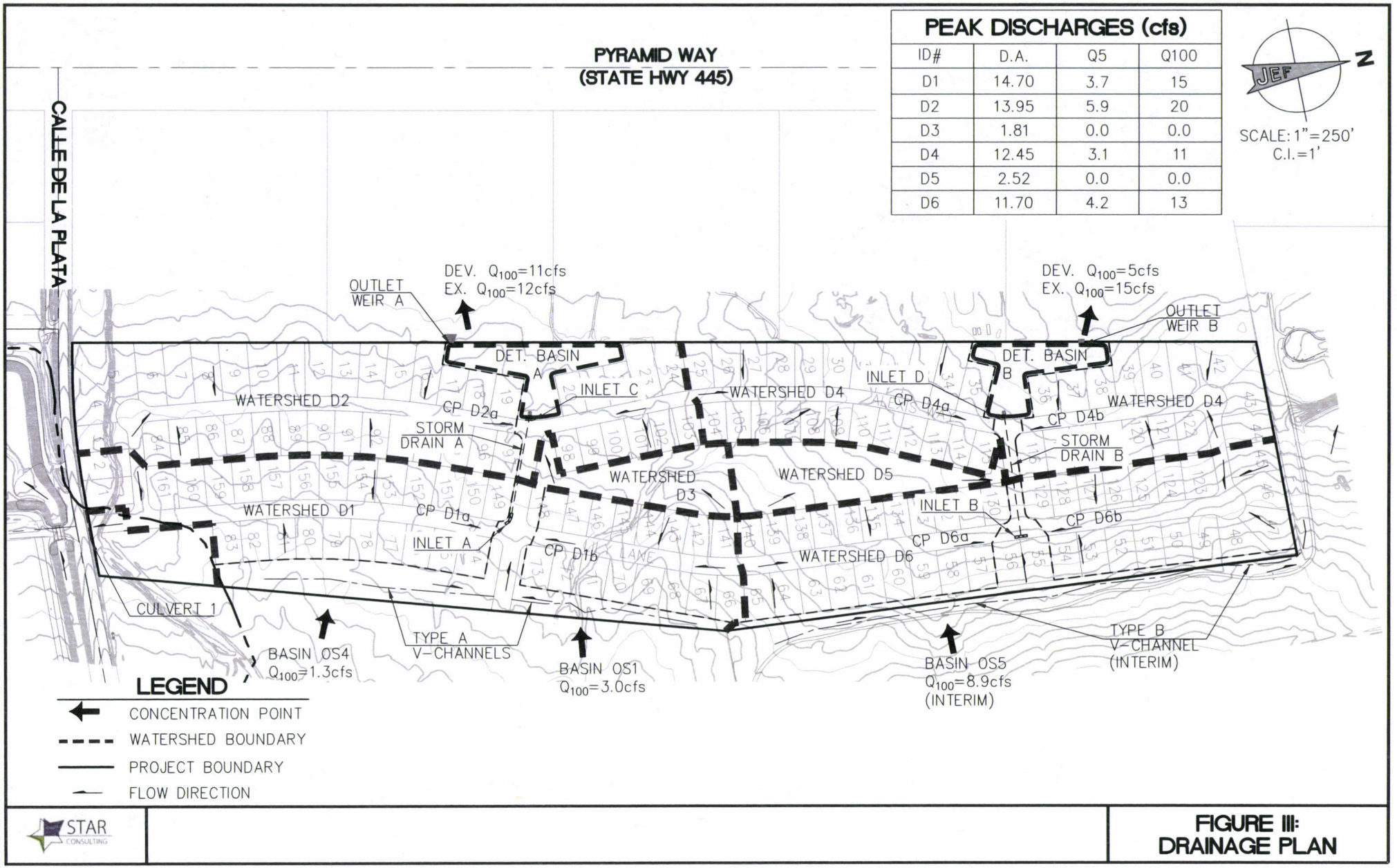
* Data from 2005 Master Drainage Study for Donovan Ranch, prepared by Matrix Engineering & Consulting, Inc.

The peak flows computed for each basin were routed downstream to the two culvert crossings at Pyramid Way, (located at Concentration Points OS2 and OS3). The routing of the upstream watersheds was computed as a lag in the hydrograph, with the lag time estimated using double the overland flow velocity determined for the travel reach. The resulting combined peak flows are indicated on Figure II at the two locations where runoff exits the subject property, (CPs E1 and E2), and the two locations where runoff is collected by culverts under Pyramid Way, (CPs OS2 and OS3). Based on the HMS results, under existing conditions the 18" culvert receives a 100-year peak discharge of 35 cfs, and the 24" culvert receives 25 cfs.

A separate HEC-HMS basin model was developed for the developed conditions watersheds presented on Figure III. Characteristics for each of the five developed conditions watersheds were developed following the same methodology described above, using Runoff Curve Numbers corresponding to residential development. Watershed areas consisting of residential lots and streets assumed a density of approximately 5 units per acre and impervious percentage of 45%, while open space areas were based on 50%-75% grass cover. The following Table II summarizes the input parameters and resulting HMS peak discharge estimates specific to each developed conditions watershed.

TABLE II: DEVELOPED WATERSHED DATA

Watershed	D.A. (ac.)	Length (ft.)	Comp. CN	TLAG	Q_5 (cfs)	Q_{100} (cfs)
D1	14.7	1303	69	18	**3.7**	**15**
D2	14.0	1400	74	17	**5.9**	**20**
D3	1.8	718	49	30	**0.0**	**0.0**
D4	12.5	869	63	22	**3.1**	**11**
D5	2.5	743	49	31	**0.0**	**0.0**
D6	11.7	927	63	18	**4.2**	**13**



PEAK DISCHARGES (cfs)			
ID#	D.A.	Q5	Q100
D1	14.70	3.7	15
D2	13.95	5.9	20
D3	1.81	0.0	0.0
D4	12.45	3.1	11
D5	2.52	0.0	0.0
D6	11.70	4.2	13

JEF

N

SCALE: 1"=250'
C.I.=1'

STAR CONSULTING

FIGURE III: DRAINAGE PLAN

MPA15-003 & RZA15-005 - EXHIBIT O-2

Offsite watersheds OS1 and OS 4 were combined within the Developed Condition HMS model with watershed D1 at Catch Basin Inlet A, and the combined runoff was routed downstream into Detention Basin A. The routing of runoff through the two storm drains is accomplished in the HMS model using the Lag Routing method, using the flow velocity and pipe length to estimate the travel time. At Detention Basin A upstream runoff from OS1, OS4 and D1 is combined with runoff from watersheds D2 and D3, prior to detention routing within the HMS model. Runoff from watershed D6 is intercepted at Catch Basin Inlet B, which is routed downstream to Detention Basin B. At Detention Basin B upstream runoff from D6 is combined with runoff from watersheds D4 and D5, prior to detention routing within the HMS model. Detention Basins A and B were designed to release runoff at the same peak discharge as under existing conditions. The resulting detention basin outflows are presented on Figure III.

C. Existing Drainage Problems

There are no identified drainage problems in the immediate vicinity of the proposed development. Upstream channelization has directed the majority of runoff associated with the Spanish Springs Wash to the south and away from the proposed development. The portion of the floodplain impacting the southeastern corner of the subject property indicates that during infrequent events floodwaters will exceed the capacity of the existing channel running along the south side of Calle de la Plata and overtop the roadway to the north. Such infrequent overflows will be addressed with the design of Detention Basin C, which will serve to capture and safely re-direct runoff into the existing drainage channel south of Calle de la Plata.

III. PROPOSED DRAINAGE FACILITIES

A. DRAINAGE ROUTING AND STRUCTURES

1. UPSTREAM RUNOFF

Offsite runoff enters the project from the east and must be intercepted and routed through the southern portion of the proposed development. To prevent inundation, the lots located along the east property line will be elevated above existing ground. Runoff will be intercepted behind these lots in small, triangular, or V-shaped, channels which will convey runoff toward storm drain inlets located in low areas within the project. In the southern half of the project, runoff from offsite watersheds OS 1 and OS4 will be directed toward Catch Basin A. The maximum 100-year discharge for the proposed channels in this area is 3.0 cfs. These proposed V-Channels, designated "Type A" on Figure III, will be grass-lined, and will have side slopes of 3h:1v, with a minimum longitudinal slope of 1% to ensure completed drainage. A hydraulic rating for the open channel flow, using Manning's Equation, was performed to determine the channel flow characteristics. The Type A channels will have a maximum flow depth of 0.64 feet and an average flow velocity of 2.5 fps (at 1% slope). Including freeboard, the minimum channel depth will be 0.8 feet, with a width of 5 feet and a minimum centerline radius of 11.4 feet.

Until full build-out of the Donovan Ranch Subdivision, existing runoff impacts the northern portion of the project from the east. During this Interim condition, runoff from watershed OS5 will be conveyed around the elevated lots in the northern portion of the project. The maximum 100-year discharge for the proposed channels in this area is 8.9 cfs. These proposed V-Channels, designated "Type B" on Figure III, will be riprap-lined, and will have side slopes of 3H:1V, with a minimum longitudinal slope of 1% to ensure completed drainage. A hydraulic rating for the open channel flow, using Manning's Equation, was performed to determine the channel flow characteristics. The Type B channels will have a maximum flow depth of 1.03 feet and an average flow velocity of 2.8 fps (at 1% slope). Including freeboard, the minimum channel depth will be 1.25 feet, with a width of 7.5 feet and a minimum centerline radius of 18.5 feet. The size of the riprap in the channel is specified in Figure 819 of the Drainage Manual, which has been copied in Appendix D for reference. The mean riprap diameter, d50, for the Type B channel is 9". The riprap will be loosely placed in a double layer, 18" thick minimum, over filter fabric. Channel calculation sheets are provided in Appendix B.

2. *STREET RUNOFF*

Runoff is conveyed through the project primarily on the surface within the paved streets. Hydraulic ratings for open channel flow, using Manning's Equation, were used to verify the capacity of the streets under both Minor (5-year) and Major (100-year) storm events. Specific locations were identified where the greatest amount of runoff will accumulate within the development. The locations of Concentration Points D1a, D1b, D2a, D4a, D4b, D6a and D6b are indicated on Figure III. For each concentration point a sub-watershed area was computed, and a peak discharge was calculated as a pro-rata fraction of the total discharge within that watershed. The following Table III summarizes the contributing areas and peak discharges computed for each sub-watershed.

TABLE III: SUB-WATERSHED FLOW ESTIMATES

Sub-Watershed	Contrib. Area (ac.)	Watershed Area Ratio	Pro-Rata Q_5 (cfs)	Pro-Rata Q_{100} (cfs)
D1a	7.28	0.495	**1.8**	**7.6**
D1b	4.07	0.277	**1.0**	**4.3**
D2a	9.65	0.692	**4.1***	**14.0***
D4a	6.13	0.492	**1.5**	**5.3**
D4b	4.98	0.400	**1.2**	**4.3**
D6a	5.18	0.443	**1.9**	**5.9**
D6b	5.02	0.429	**1.8**	**5.7**

Based on the above calculations, the maximum anticipated discharges for any interior street occur at Concentration Point D2a during both 5-year and 100-year events. Other than the entrance road within Watershed D1, the development will employ the standard 42 foot wide Local street section, per Table 110.436.25.2. This street section includes 32 feet of pavement, with a normal crown and 2% cross slopes. A hydraulic rating for the open channel street flow, using Manning's Equation, was performed to determine the street capacity in accordance with Section 304.4 of the Drainage Manual. This calculation indicates that at the minimum allowable longitudinal slope of 0.5%, the street section can convey a maximum of 3.5 cfs and maintain a 12 foot wide dry, centered street section. This capacity is adequate to convey the 5-year event everywhere except at C.P. D2a, where a steeper longitudinal slope will be needed. In the vicinity of D.P. D2a the street slope will need to be a minimum of 0.7% to provide the required dry pavement width.

During the 100-year event the peak runoff is required to be contained within the right of way. The open channel calculations for street flow indicate that the typical 42 foot wide street section will convey 43 cfs between the curbs at 0.5% slope. This demonstrates that the street flow capacity during the 100-year event is more than adequate in all locations. Street flow calculation sheets are provided in Appendix B.

3. *CULVERT*

A small roadside ditch conveys local runoff within the right-of-way along the north side of Calle de la Plata. An 18" CMP culvert will be installed under the proposed entrance drive to allow storm water flow in the ditch to pass under the new roadway and continue to drain to the north within the right-of-way. No additional runoff will be added to this ditch from the proposed development.

4. *CATCH BASINS*

Runoff within the eastern portion of the subdivision will be directed to low points located in two intersections. At each intersection, multiple Type 4R Catch Basins will be positioned in sump conditions to intercept the surface runoff. Inlet A will intercept runoff from offsite watersheds OS1 and OS4, in addition to onsite watershed D1. Inlet B will intercept runoff from onsite watershed D6.

The catch basin capacity must be evaluated for both Minor and Major flow conditions in accordance with Section 905 of the Drainage Manual. For the 5-year event the capacity of a single catch basin in a sag is determined using either equation 917 or 918. The applicability of the two equations is dependent on the depth of flow at the inlet. As the inlets are located along 6 inch reveal curbs, and inlet depth is further limited by dry pavement requirements, all inlet calculations have assumed weir flow governs. Therefore, using Equation 917 (weir flow), catch basin capacity is:

$$Q_i = C_w L_w d^{1.5}$$

The parameters and coefficients for use when applying this equation in sag conditions are provided in Table 905 of the Drainage Manual, with applicable Capacity Factors provided in Table 902, both of which are duplicated in Appendix D for reference. As the Neenah R-3067-L inlet grate is a combination curb opening and grate, Equation 917 is applied separately to each component, and adding the resulting discharges together to find the total inlet capacity. The dimensions for the R-3067-L used in the following computations are taken directly from the Neenah Catalog listing, which is provided in Appendix D for reference. The capacity calculations are applied differently for the 5-year and the 100-year events, as the allowable water depth differs for each condition.

5-Year Event:

For the curb opening component, the inlet length per the Neenah catalog, L, is 35 ¼", or 2.94 feet. The weir depth, d, is derived from the depth of water at the curb face reduced by half the inlet opening height. With the 32 foot wide pavement section fully super-elevated at the catch basin location, and leaving 12 feet of pavement dry, the allowable depth of water over the inlet is 0.40 feet plus the 2" gutter depression, or 0.57'. The Neenah inlet opening is 6" including the 2" gutter depression, resulting in a weir depth, d, of 0.32'. The resulting inlet discharge, Qi, for the curb opening in the 5-year storm is 1.6 cfs. Using the capacity factor of 0.7 from Table 902, the adjusted curb opening capacity is 1.1 cfs.

For the grate component, the inlet length for three sides of the grate is 3.90', per the Neenah Catalog, and the depth d is the allowable depth of water over the grate, 0.4'. The resulting inlet discharge, Qi, for the grate in the 5-year storm is 3.0 cfs. Using the capacity factor of 0.5 from Table 902, the adjusted curb opening capacity is 1.5 cfs. The total 5-year design capacity for the combination inlet is 2.6 cfs.

100-Year Event:

Using the same opening dimensions, the capacity calculations are repeated substituting the curb height for the allowable depth of water for both components. For the curb opening component, the water depth is 6" plus the 2" gutter depression, or 0.67', resulting in a weir depth, d, of 0.42'. The resulting inlet discharge, Qi, for the curb opening in the 100-year storm is 2.4 cfs. Using the capacity factor of 0.7 from Table 902, the adjusted curb opening capacity is 1.7 cfs.

For the grate component, the depth of water over the grate is 0.67'. The resulting inlet discharge, Qi, for the grate in the 100-year storm is 6.4 cfs. Using the capacity factor of 0.5 from Table 902, the adjusted curb opening capacity is 3.2 cfs. The total 100-year design capacity for the combination inlet is 4.9 cfs.

The catch basin capacity results are summarized in Table IV below:

TABLE IV: CATCH BASIN CAPACITY

Catch Basin I.D.	Concentration Point	5-Year Discharge	Min. # of 4R Inlets	100-Year Discharge	Min. # of 4R Inlets
A	D1	3.7	2	18.0	4
B	D6	4.2	2	13.3	3

Based on the results above, four Type 4R catch basins each are required at Inlet A, and three at Inlet B, to intercept the 100-year storm event.

5. STORM DRAINS

Runoff intercepted by the proposed catch basins at Inlet A and Inlet B will be carried in underground storm drains approximately 300 feet to downstream basins. Hydraulic Grade Line computations indicate that a 24" diameter RCP drain pipe will have adequate capacity in each condition. The pipe flow velocity in Storm Drain A is approximately 5.7 fps. The resulting pipe friction losses and outlet losses total approximately 2.3 feet. The pipe flow velocity in Storm Drain B is approximately 4.2 fps. The resulting pipe friction losses and outlet losses total approximately 1.5 feet. A Hydraulic Grade Line computation sheet is provided in Appendix B.

6. CURB INLETS

Street runoff will be directed towards Detention Basins A and B, where it will leave the pavement through depressed curb inlets, identified as Inlets C and D on Figure III, positioned at low points in the roadway. At these two locations, Concentration Points D2 and D4, the street section will be super-elevated to fully drain the pavement, and the gutter line will be depressed by 2", providing a total inlet height of 8". The required length of each depressed curb opening is designed to, as in the case of the catch basin inlet grates, to provide a 12 foot wide dry pavement section in the 5year event and to contain the 100-year storm event between the curbs. The capacity of the depressed curb openings is governed by Equation 917 weir flow):

$$Q_i = C_w L_w d^{1.5}$$

The weir coefficient, Cw, is 2.3 for a depressed curb opening per Table 905 of the Drainage Manual, and the weir depth, d, will be 0.56 feet for the 5-year event and 0.67 feet for the 100-year event. Applying these values results in a design length per unit discharge of 1.01 feet/cfs for the 5-year event and 0.79 feet/cfs for the 100-year event. The curb inlet capacity results are summarized in Table V on the following page:

TABLE V: CURB INLET CAPACITY

Inlet I.D.	Concentration Point	5-Year Discharge	Min. Curb Inlet Length	100-Year Discharge	Min. Curb Inlet Length
C	D2	5.9	6	20.3	16
D	D4	3.1	4	10.8	9

Depressed curb will be installed at the roadway low point adjacent to the detention basins in the lengths specified in the right hand column in Table V above. Sidewalk will not be placed behind these depressed curb sections, but will instead be routed along the high side of the roadway. Post bollards with reflective markings will be placed behind the curb at 5 foot intervals across the drainage openings to prevent vehicles from leaving the roadway.

7. EROSION CONTROL

Runoff exiting drainage structures in a concentrated manner require erosion protection to prevent scour holes from developing. Riprap aprons will be installed at the upstream sides of the detention basins where runoff exits from storm drain pipes and from the pavement through depressed curb openings. In addition, riprap aprons will be installed across the downstream side of the detention basin outlet weirs, discussed in Section III.B.3. In all cases the riprap will be placed in a double layer over filter fabric to prevent loss of fine grained soils from beneath the aprons. The proposed riprap aprons will be sized for hydraulic conditions due to the 100-year event.

Storm Drain Outlets:

The hydraulic conditions at the outlets of Storm Drains A & B are similar, consist of 24" diameter pipes discharging runoff at the bottom level of a grass-lined detention basin. The riprap apron configuration for the culvert outlets will be pre-formed scour holes in Figure 830 of the Drainage Manual, which has been duplicated in Appendix D for reference. For a 2' diameter pipe outlet, the values for D_o and W_o on Figure 830 are also 2 feet, resulting in bottom dimensions of 4' wide x 6' long for the scour hole. For a design scour hole depth, y, of 1 foot, Equation 864 provides the required riprap diameter:

$$d_{50} = 0.01245Q^{4/3}/(TWD_o^{4/3})$$

For Storm Drain A, substituting a discharge, Q, of 18 cfs and a tailwater depth, TW, in the basin of 2 feet, the resulting required riprap size, d50, from Equation 864 is 0.11 feet, or approximately 1.4". For Storm Drain B, substituting a discharge, Q, of 13.3 cfs and a tailwater depth, TW, in the basin of 2 feet, the resulting required riprap size, d50, from Equation 864 is 0.08 feet, or approximately 1". Under the expected circumstances, which includes exposure to upstream runoff cascading down the sloping sides of the basin, it is recommended that the mean riprap diameter in the pre-formed scour holes be 4" to 6" diameter, and the thickness of the riprap layer be between 8" and 12".

Depressed Curb Openings:

The hydraulic conditions at the two depressed curb openings, Inlets C and D, are nearly identical. Both inlets release storm water from pavement as weir flow. During the 100-year event, the opening is rated such that the maximum water depth matches the top of curb height, 6". As weir flow exhibits a "nappe" profile as flow accelerates through the weir opening, it can be conservatively estimated that the minimum flow depth will be half the curb height, or 3", for determining the maximum flow velocity over the weir. At Inlet C, with a 100-year discharge of 20.3 cfs and a weir length of 16', the flow velocity, using the relation V=Q/A, is approximately **5.1 fps**. Following the same process the weir flow velocity through the depressed curb opening at Inlet D is **4.8 fps**. As the open space provided for the detention basin areas will consist of grass, this velocity is close to the allowable velocity of 5 cfs, per Table 803 of the Drainage Manual, which has been duplicated in Appendix B for reference.

Downstream of the depressed curb openings surface runoff entering the basins will sheet flow over the 3H:1V sloped basin sides. Using a Manning's n value of 0.040, (for grassed channels from Table 802), the down-slope flow velocity can be estimated using the Manning's formula for open channel flow:

$$V = (1.49/n)*(R_h)^{2/3}S^{1/2}$$

For wide, shallow sheet flow, where the hydraulic radius, Rh, is equivalent to flow depth, d, this relation can be re-written in the following form, **Equation A**:

$$V = (1.49/n)d^{2/3}S^{1/2}$$

The depth of flow can be determined using Manning's formula derived for discharge per unit width, q, as follows:

$$Q = VA = (1.49A/n)d^{2/3}S^{1/2}$$

$$q = Q/w = (1.49A/wn)d^{2/3}S^{1/2}$$

Substituting depth times width for area, A, provides the following relation, **Equation B**:

$$q = (1.49/n)d^{5/3}S^{1/2}$$

For runoff exiting through Inlets C and D, the discharge per unit width, q, is calculated as 1.04 cfs/ft. Solving Equation B for this value of q, results in a flow depth of 0.162 feet, or approximately 2". Substituting this flow depth into Equation A, the flow velocity on the grassed basin sides is **6.4 fps**, which slightly exceeds the maximum allowable velocity for grassed channels from Table 802. It is therefore recommended that the basin sides immediately downstream of the depressed curb openings be lined with riprap over filter fabric to prevent slope erosion. As the velocity is not excessive the riprap layer can be installed using the same rock size and thickness as the pre-formed scour hole in Section III.A.6 above. The riprap layer should extend from the back of depressed curb to the riprap-lined, pre-formed scour hole at the bottom of the basin side slope.

B. Detention Requirements

The proposed development includes two detention basins. Proposed Detention Basins A and B are Local Major Facilities which will primarily handle onsite flow, and are sized to offset increases in peak runoff due to development.

1. Detention Basin A:

Detention Basin A receives inflow from Storm Drain A and Inlet C, from onsite watersheds D1, D2 and D3. (Watershed D3 contributes no appreciable runoff.) The peak 100-year inflow to Basin A from the HEC-HMS model is 37 cfs, which must be reduced to the pre-development peak discharge at this location (C.P. E2), 12 cfs. In addition, the peak 5-year inflow of 10 cfs must be reduced to the pre-development peak discharge of 0.3 cfs.

Detention Basin A will consist of a grass-lined, below ground basin with 3H:1V side slopes, located within a 1.3 acre open space area. The basin low-flow outlet will be a 12" diameter corrugated metal pipe, with a 4" diameter orifice plate over the inlet end, located at the basin bottom, which will allow the basin to drain fully. The basin primary outlet will consist of a concrete weir with a 4 foot wide opening, located 1.5 feet above the basin floor. With this outlet configuration the maximum (100-year) ponding depth in Basin A is 2.68 feet. The 480 foot long west side of the basin will be constructed at a level 3 feet above the basin floor, and will comprise the emergency overflow, providing a total basin capacity of 3.0 acre-feet. The north, south and east sides of the basin will be constructed to at least 4 feet above the basin floor to provide freeboard, as well as to allow for passage of an emergency flood event. Table VI below summarizes the results of the HMS Detention Routing for Basin A:

TABLE VI: HMS DETENTION ROUTING RESULTS – BASIN A

	C.P. E2 Q_{ex} (cfs)	Basin Q_{in} (cfs)	Basin Q_{out} (cfs)	Max. Ponding Depth (ft)	Max. Storage Vol. (AF)	90% Drain Time (days)
5-Year Storm	0.3	9.6	0.6*	1.58	1.49	2.4
100-Year Storm	11.7	37.2	11.3	2.51	2.48	2.5

* The orifice plate on the low-flow outlet pipe was increased to 4" in order to reduce the 100-year, 90% Drain Time below 3 days. The resulting 5-year basin outflow exceeds the existing conditions discharge at this location, which cannot be avoided without a longer basin drain time.

With a flood stage at 1 foot above the emergency overflow, (corresponding to the top of the freeboard zone), using a weir length of 480 feet and a weir coefficient of 2.65, the emergency overflow weir will provide capacity for up to 1,270 cfs. The capacity of the basin under emergency overflow conditions was confirmed within the HMS basin routing routine with the introduction of a specified discharge element, which added 1,270 cfs to the 100-year event.

2. *DETENTION BASIN B:*

Detention Basin B receives inflow from Storm Drain B and Inlet D, from onsite watersheds D4, D5 and D6. (Watershed D5 contributes no appreciable runoff.) The peak 100-year inflow to Basin B from the HEC-HMS model is 24 cfs, which must be reduced to the pre-development peak discharge at this location (C.P. E1), 15 cfs. In addition, the peak 5-year inflow of 7 cfs must be reduced to the pre-development peak discharge of 0.2 cfs.

Detention Basin B will be identical in concept to Detention Basin A, with grass-lined, 3H:1V side slopes, located within a 1.1 acre open space area. The basin low-flow outlet will be a 12" diameter corrugated metal pipe, with a 4" diameter orifice plate over the inlet end, located at the basin bottom. The basin primary outlet will consist of a concrete weir with a 4 foot wide opening, located 1.75 feet above the basin floor. With this outlet configuration the maximum (100-year) ponding depth in Basin B is 2.32 feet. The 350 foot long west side of the basin will be constructed at a level 3 feet above the basin floor, and will comprise the emergency overflow, providing a total basin capacity of 2.55 acre-feet. The north, south and east sides of the basin will be constructed to at least 4 feet above the basin floor to provide freeboard, as well as to allow for passage of an emergency flood event. Table VII below summarizes the results of the HMS Detention Routing for Basin B under both the interim condition, and final condition, (after full development of Donovan Ranch):

TABLE VII: HMS DETENTION ROUTING RESULTS – BASIN B

	C.P. E1 Q_{ex} (cfs)	Basin Q_{in} (cfs)	Basin Q_{out} (cfs)	Max. Ponding Depth (ft)	Max. Storage Vol. (AF)	90% Drain Time (days)
5-Year Storm	0.2	7.2	0.3*	1.58	1.92	2.5
100-Year Storm	15.2	23.8	4.9	2.35	1.92	2.9

* The orifice plate on the low-flow outlet pipe was increased to 4" in order to reduce the 100-year, 90% Drain Time below 3 days. The resulting 5-year basin outflow exceeds the existing conditions discharge at this location, which cannot be avoided without a longer basin drain time.

With a flood stage at 1 foot above the emergency overflow, (corresponding to the top of the freeboard zone), using a weir length of 350 feet and a weir coefficient of 2.65, the emergency overflow weir will provide capacity for up to 930 cfs. The capacity of the basin under emergency overflow conditions was confirmed within the HMS basin routing routine with the introduction of a specified discharge element, which added 930 cfs to the 100-year event.

3. EROSION CONTROL AT BASIN OUTLETS:

The basin outlet weirs will release storm water from the ponded basins directly onto natural ground, which will have the potential for clear water scour in addition to erosion due to the flow velocity. During the 100-year event, the weirs are rated within the HMS model as a part of the basin routing routine, which provides the maximum ponding depth above the weir elevation. For Basin A the maximum ponded depth above Outlet Weir A is 1.01', and for Basin B the maximum depth above Outlet Weir B is 0.60'. As weir flow exhibits a "nappe" profile as flow accelerates through the weir opening, it can be conservatively estimated that the minimum flow depth will be half the depth above each weir, for determining the maximum flow velocity over the weir. For Weir A, with a 100-year weir discharge of 11.3 cfs and a weir length of 4', the flow velocity, using the relation V=Q/A, is approximately **5.6 fps**. For Weir B, with a 100-year weir discharge of 4.9 cfs and a weir length of 4', the flow velocity, using the relation V=Q/A, is approximately **4.1 fps**. Both of these values exceed the maximum allowable velocity for Sandy Loam from Table 802, 1.75 fps, therefore loose riprap will be installed on the downstream side of the outlet weirs. As the flow exiting the 4 foot wide weirs is hydraulically similar to channel flow, the riprap size, D50, can be estimated using Equation 843:

$$d_{50} = 0.010V^{2.44}$$

For the Weir A, this equation results in a mean riprap diameter of 0.67 feet, or 8". For the Weir B the result is 0.31 feet, or 4". As the discharge will also exhibit clear water scour, it is recommended that riprap outlet aprons be provided with a mean diameter, d50, of 9", in a layer 18" thick. The riprap aprons should widen from the weir outlet in the downstream direction, and be extended to sufficient length to reduce the flow velocity to the allowable velocity of 1.75 fps. Following the same approach as described in Section III.A.6 above, the Manning's Formula can be used to determine the flow velocity for a riprap lined channel:

$$Q = VA = (1.49w/n)d^{5/3}S^{1/2}$$

For the Weir A, using a Manning's n value of 0.033 for riprap and assuming a 4' wide rectangular channel using the existing natural ground slope of 1.61%, the flow depth downstream of the weir is 0.65' feet and the corresponding flow velocity is 4.3 fps, indicating the flow exiting the basin weir will begin decelerating upon encountering the riprap apron. From the Equation A form of the Manning's Formula in Section III.A.6, the flow depth corresponding to the required flow velocity of 1.75 fps is 0.17 feet. This depth corresponds to a flow width of 38 feet. Using the apron geometry from Figure 829 of the Drainage Manual, which is duplicated in Appendix D for reference, the required apron length is 33 feet. Following the same approach, using an existing natural ground slope of 0.97% the required apron length for Weir B is 12 feet.

C. Flood Plains

As discussed in Section I.D above, a FEMA Zone AO floodplain impacts a small portion of the southeast corner of the subject property. A copy of the revised floodplain limits from the approved LOMR is provided in Appendix D for reference. The northern floodplain limit line is provided on Figure III. The residential lots located in the vicinity of the Zone AO flood zone will be elevated in accordance with floodplain regulations. The minimum FFE will be established at one (1) foot above the BFE, which in this zone is defined as one (1) foot above the highest adjacent ground for a structure. Each residential lot adjacent to the Zone AO boundary will therefore have a minimum FFE established at two (2) feet above the highest existing ground elevation on that lot.

D. Outfall System

Post detention runoff will exit the project along the eastern project boundary line in a manner similar to existing conditions. Erosion protection will be provided to prevent downstream scour. Farther downstream the two culverts under Pyramid Way, (at CPs OS2 and OS3) will see changes due to the proposed development. Based on the developed conditions HMS results, both culvert crossings will see significant decreases in 100-year peak discharge, while seeing slight increases during the 5-year event. Table VIII on the following page summarizes downstream changes in peak discharges due to development:

TABLE VIII: DOWNSTREAM DISCHARGE CHANGES

Concentration Point	Existing Q_5 (cfs)	Developed Q_5 (cfs)	Existing Q_{100} (cfs)	Developed Q_{100} (cfs)
OS2	0.7	0.9	25	15
OS3	4.4	4.6	35	26

IV. CONCLUSIONS

A. POLICIES AND REQUIREMENTS

This drainage study has been prepared in accordance with the policies and standards of the Truckee Meadows Regional Drainage Manual.

B. MANUAL EXEMPTIONS

With this analysis it was determined that the required time to drain the proposed detention basins to 10% capacity requires increases to the low-flow outlet pipes. The resulting 5-year peak discharges are slightly greater than the existing conditions 5-year discharges. Adequate capacity exists in the downstream system, and the increased discharges will not create downstream erosion.

C. ALL WEATHER ACCESS

Vehicular access to the project is from Calle de la Plata, approximately one quarter mile east of Pyramid Way, (State Highway 445). Construction of drainage channels along the south side of Calle de la Plata has removed the roadway from the floodplain between the proposed driveway entrance and Pyramid Way.

D. FLOOD PLAIN REGULATIONS

The FEMA floodplain in the project vicinity crosses the southeast corner of the subject property before crossing to the south of Calle de la Plata. No fill is proposed in the area impacted by the Zone AO floodplain, which indicates potential flooding up to 1 foot deep. Lots in the vicinity of the floodplain will be elevated at least 2 feet above natural ground.

E. DOWNSTREAM EFFECTS

The project will significantly reduce peak discharges immediately downstream of the project in the 100-year storm event, due to detention effects. Small peak discharge increases are necessary during the 5-year event in order to allow the two proposed onsite detention basins to drain in the required time period.

V. CALCULATIONS APPENDIX

1. Runoff Calculations
2. Drainage Capacity Calculations
3. Detention Calculations
4. Reference Tables & Charts

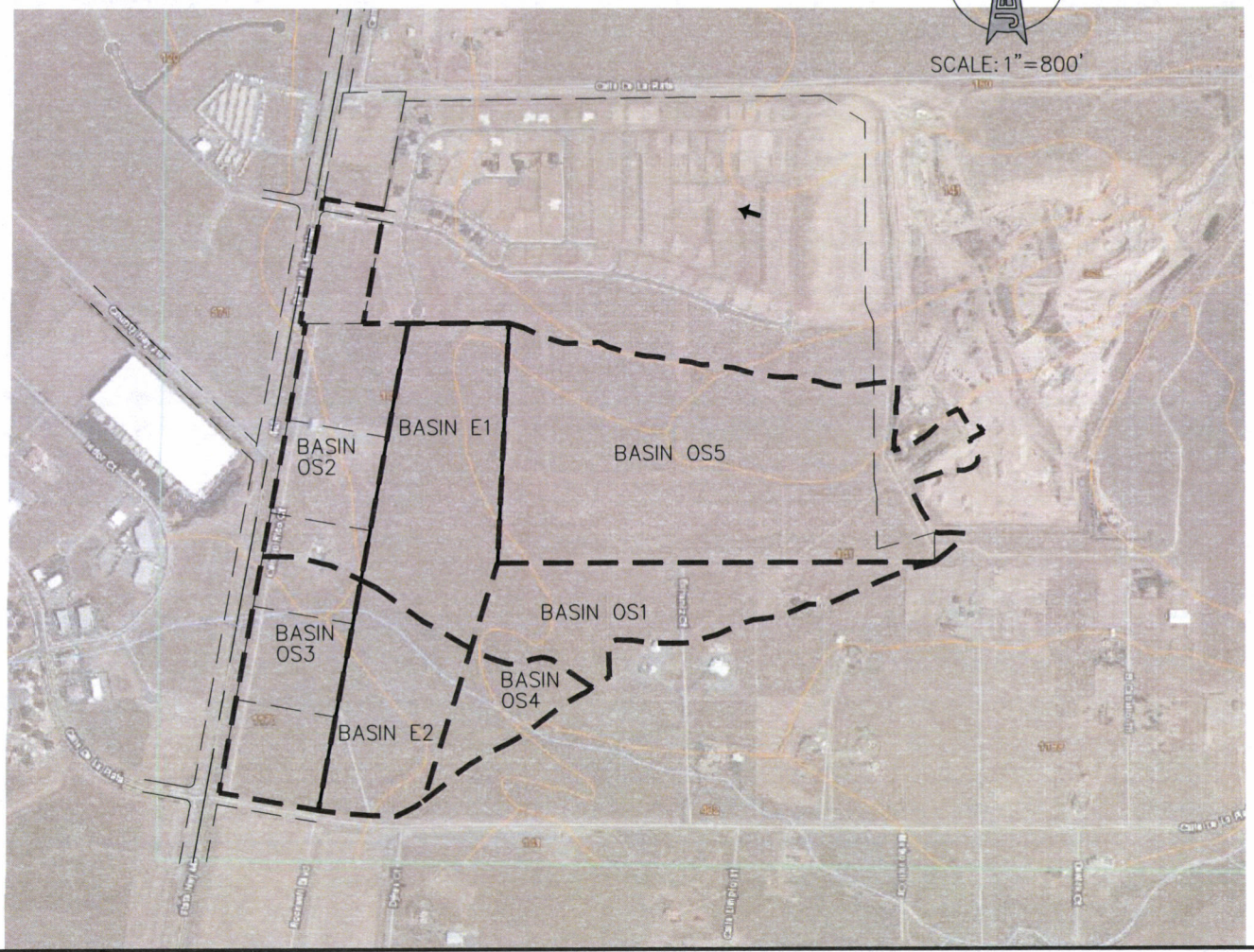
STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

Appendix A: Runoff Calculations

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com



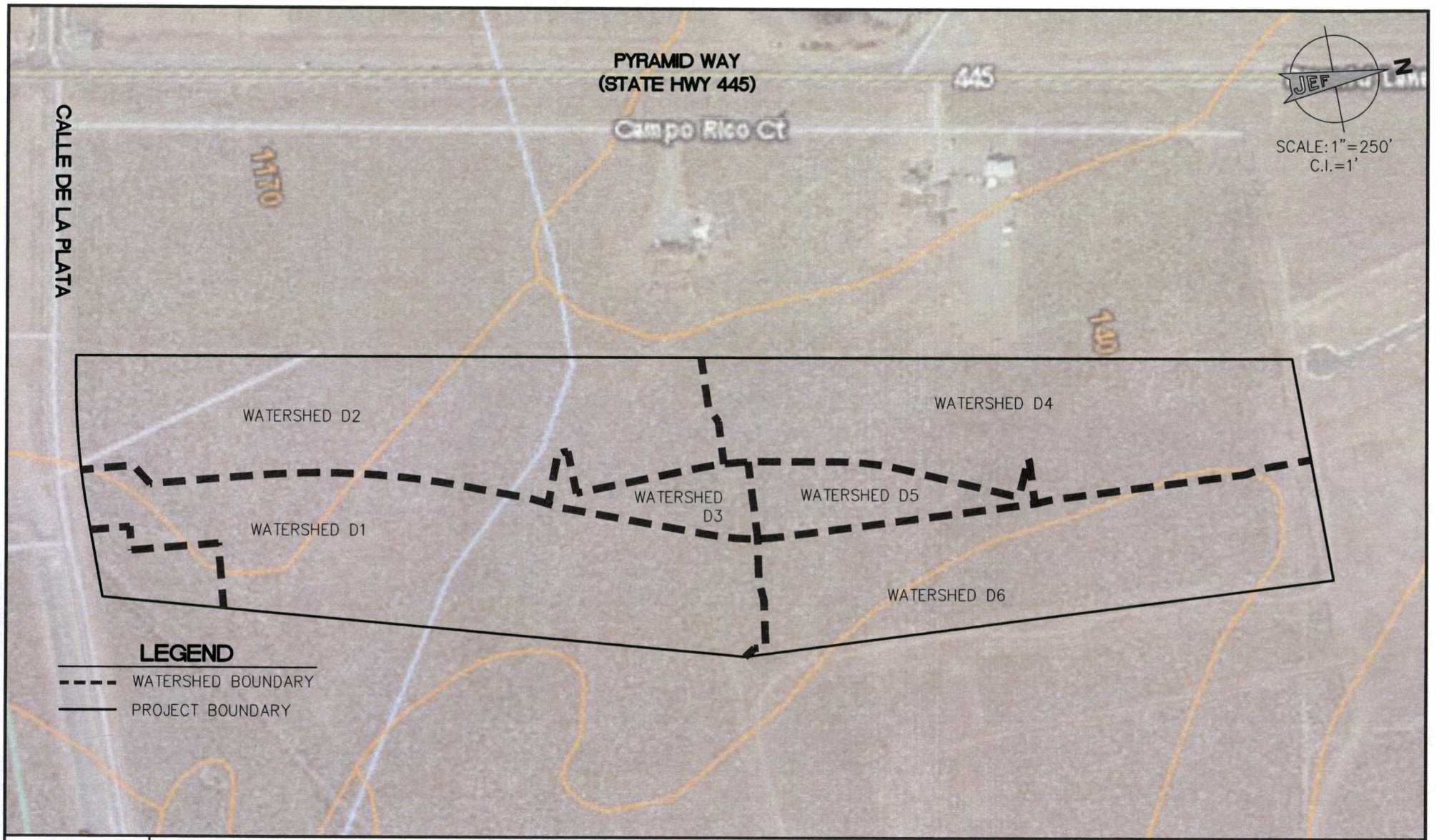
Washoe County, Nevada, South Part (NV628)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	Hydro. Soils Group
120	Doten silty clay, 0 to 2 percent slopes	0.6	0.0%	D
140	Haybourne loamy sand, 2 to 4 percent slopes	160.0	11.7%	A
141	Haybourne loamy sand, 4 to 8 percent slopes	389.1	28.5%	A
160	Incy sand, 4 to 8 percent slopes	132.8	9.7%	A
175	Indian Creek very cobbly loam, 4 to 8 percent slopes	12.3	0.9%	D
210	Luppino gravelly sandy loam, 4 to 8 percent slopes	61.0	4.5%	D
360	Pits	11.9	0.9%	None
482	Holbrook cobbly loamy sand, 2 to 8 percent slopes	79.5	5.8%	A
494	Graufels gravelly loamy coarse sand, 4 to 8 percent slopes	10.3	0.8%	A
591	Springmeyer stony loam, 2 to 4 percent slopes	23.5	1.7%	C
870	Xman-Rock outcrop complex, 4 to 15 percent slopes	10.0	0.7%	D
871	Xman very stony loam, 15 to 30 percent slopes	33.9	2.5%	D
872	Xman very stony sandy loam, 8 to 15 percent slopes	93.7	6.9%	D
931	Old Camp-Rock outcrop complex, 15 to 50 percent slopes	66.7	4.9%	D
971	Aladshi sandy loam, 2 to 4 percent slopes	86.1	6.3%	C
1170	Wedertz sandy loam, 2 to 4 percent slopes	66.7	4.9%	C
1171	Wedertz sandy loam, 4 to 8 percent slopes	26.4	1.9%	C
1193	Spasprey sandy loam, 4 to 8 percent slopes	100.2	7.3%	C

STAR CONSULTING

FIGURE IIA: OFF-SITE SOILS MAP

MPA15-003 & RZA15-005 - EXHIBIT O-2



STAR CONSULTING

FIGURE IIIa:
ONSITE SOILS MAP

MPA15-003 & RZA15-005 - EXHIBIT O-2

SCS Basin Soils Computation Sheet

JE Fuller Hydrology & Geomorphology, Inc.

Client:	STAR Consulting	Prepared by:	GWH
Project Name:	Spanish Springs	Date:	6/23/2015
Concentration Point:	All Basins	Job #:	P2501.01
	Sheet #: 1 of 1		

Basin ID:	Hydrologic Soil Groups*: Type A:	Type C:	Type D:	Curve Numbers**: Type A:	Type C:	Type D:	Composite CN:	Init. Abstr. IA***:	Computed R****:
Existing Conditions Basins							**HEC-HMS Input**		
OS1	100%			55			**55**	**1.64**	0.34
OS2	50%	50%		55	81		**68**	**0.94**	0.51
OS3	5%	95%		55	81		**80**	**0.51**	0.66
OS4	100%			55	81		**55**	**1.64**	0.34
OS5	100%			55	81		**55**	**1.64**	0.34
E1	100%			55	81		**55**	**1.64**	0.34
E2	60%	40%		55	81		**65**	**1.06**	0.47
7*	100%			63			**63**	**1.17**	0.44
Existing Conditions Basins							**HEC-HMS Input**		
D1	75%	25%		63	85		**69**	**0.92**	0.51
D2	50%	50%		63	85		**74**	**0.70**	0.59
D3	100%			49			**49**	**2.08**	0.26
D4	100%			63			**63**	**1.17**	0.44
D5	100%			49			**49**	**2.08**	0.26
D6	100%			63			**63**	**1.17**	0.44

* Soil classifications from NRCS Web Soil Survey.

** Runoff Curve Numbers from Table 702 of Drainage Manual.

*** Initial Abstraction from Equations 706 & 707 of Drainage Manual

**** Runoff coefficient computed using Equation 703 of Drainage Manual

SCS Basin Lag Time Computation Sheet

JE Fuller Hydrology & Geomorphology, Inc.

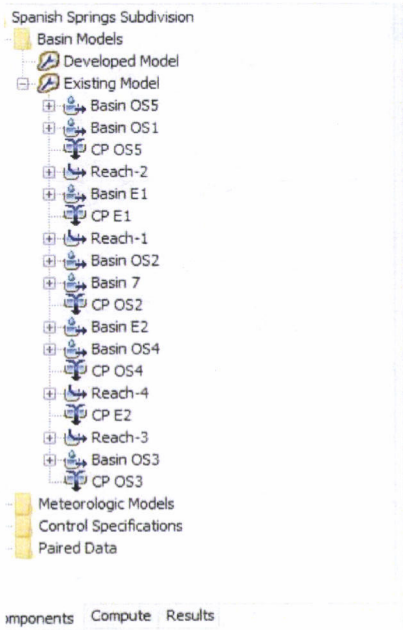
Client: STAR Consulting
Project Name: Spanish Springs
Concentration Point: All Basins
Sheet #: 1 of 1

Prepared by: GWH
Date: 6/23/2015
Job #: P2501.01

Basin ID:	R*:	Area:	Overland Time: Length:	Slope:	To** (min)	Travel Time: Length:	Slope:	V.*** (fps):	Tt (min)	Tc (min):	Urban Check: Ttl. Len.:	Tc:	Final Tc (min):	TLAG**** (min):
Existing Conditions Basins														
OS1	0.34	30.9	500	3.2%	20.9	2578	2.3%	1.5	28.6	49.5			49.5	30
OS2	0.51	34.8	500	0.8%	25.7	2039	1.1%	1.1	30.9	56.6			56.6	34
OS3	0.66	25.5	500	1.4%	15.8	1191	0.3%	0.7	28.4	44.1			44.1	26
OS4	0.34	10.8	500	1.4%	27.5	443	1.1%	1.1	6.7	34.2			34.2	21
OS5	0.34	89.2	500	3.4%	20.4	2744	3.2%	1.8	25.4	45.9			45.9	28
E1	0.34	36.5	500	1.1%	30.1	1368	1.1%	1.1	20.7	50.8			50.8	30
E2	0.47	23.7	500	1.2%	23.9	354	1.2%	1.2	4.9	28.8			28.8	17
7*	0.44	7.42					Computed in Matrix Study						10.0	6
Developed Conditions Basins														
D1	0.51	14.6	500	1.0%	23.6	803	1.0%	2.0	6.7	30.3			30.3	18
D2	0.59	13.6	500	1.0%	20.7	900	1.0%	2.0	7.5	28.2			28.2	17
D3	0.26	1.9	500	0.5%	42.8	218	0.5%	0.5	7.3	50.0			50.0	30
D4	0.44	13.2	500	0.5%	33.4	369	1.0%	2.0	3.1	36.5			36.5	22
D5	0.26	3.1	500	0.5%	42.8	243	0.5%	0.5	8.1	50.9			50.9	31
D6	0.44	11.1	500	1.0%	26.5	427	1.0%	2.0	3.6	30.1			30.1	18

* Runoff coefficient computed using Equation 703 of Drainage Manual. See SCS Basin Soils spreadsheet.
** Overland flow time computed using Equation 702 of Drainage Manual.
*** Velocity from Figure 701 of Drainage Manual.
**** Lag Time computed using Equation 709 of the Drainage Manual.

HMS OUTPUT - EXISTING CONDITIONS, 5-YEAR EVENT



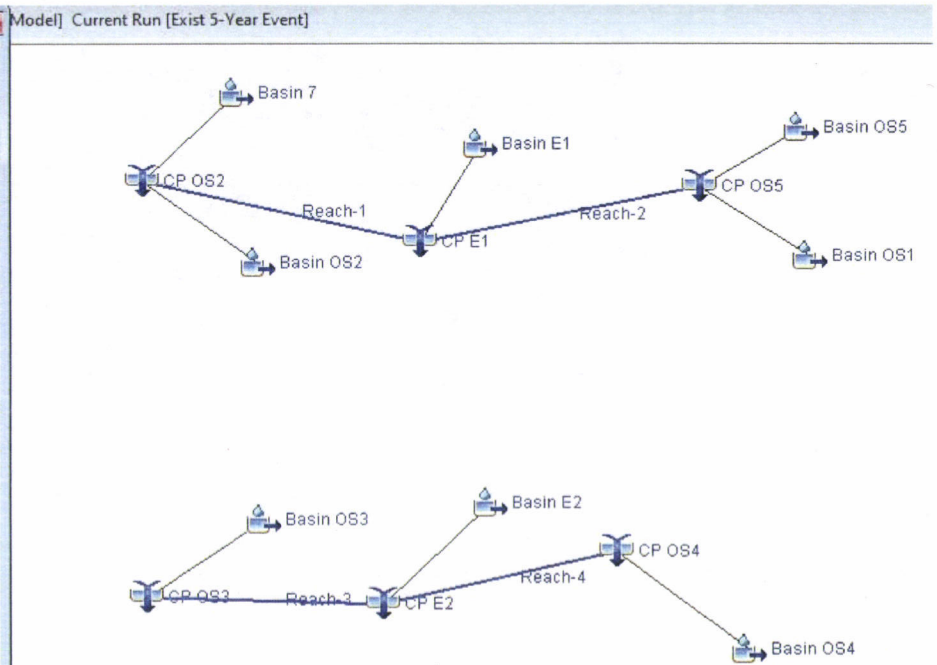
Global Summary Results for Run "Exist 5-Year Event"

Project: Spanish Springs Subdivision Simulation Run: Exist 5-Year Event

Start of Run: 01Jul2015, 00:00 Basin Model: Existing Model
End of Run: 02Jul2015, 12:00 Meteorologic Model: Met 5
Compute Time: 05Oct2015, 10:29:43 Control Specifications: 24 Hour Storm

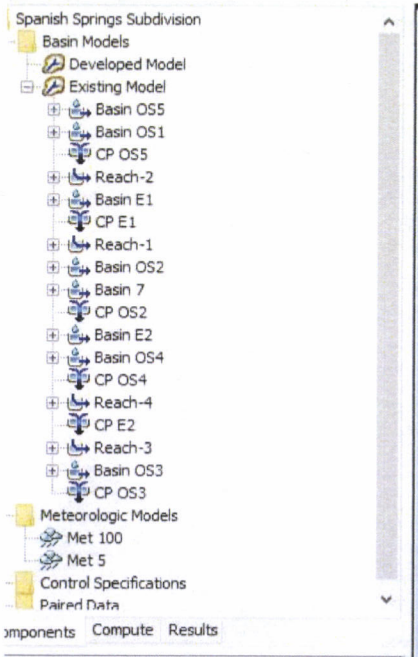
Show Elements: All Elements Volume Units: ○ IN ◉ AC-FT Sorting: Hydrologic

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Basin OS5	0.1394	0.1	02Jul2015, 00:00	0.1
Basin OS1	0.0483	0.0	02Jul2015, 00:00	0.0
CP OS5	0.1877	0.2	02Jul2015, 00:00	0.1
Reach-2	0.1877	0.2	02Jul2015, 00:10	0.1
Basin E1	0.0570	0.1	02Jul2015, 00:00	0.0
CP E1	0.2447	0.2	02Jul2015, 00:10	0.1
Reach-1	0.2447	0.2	02Jul2015, 00:25	0.1
Basin OS2	0.0544	0.6	01Jul2015, 14:50	0.5
Basin 7	0.0116	0.1	01Jul2015, 15:00	0.0
CP OS2	0.3107	0.7	01Jul2015, 15:00	0.6
Basin E2	0.0370	0.3	01Jul2015, 15:05	0.2
Basin OS4	0.0169	0.0	02Jul2015, 00:00	0.0
CP OS4	0.0169	0.0	02Jul2015, 00:00	0.0
Reach-4	0.0169	0.0	02Jul2015, 00:10	0.0
CP E2	0.0539	0.3	01Jul2015, 15:05	0.2
Reach-3	0.0539	0.3	01Jul2015, 15:15	0.2
Basin OS3	0.0398	4.4	01Jul2015, 12:30	1.0
CP OS3	0.0937	4.4	01Jul2015, 12:30	1.3



MPA15-003 & RZA15-005
EXHIBIT O-2

HMS OUTPUT - EXISTING CONDITIONS, 100-YEAR EVENT



Global Summary Results for Run "Exist 100-Year Event"

Project: Spanish Springs Subdivision Simulation Run: Exist 100-Year Event

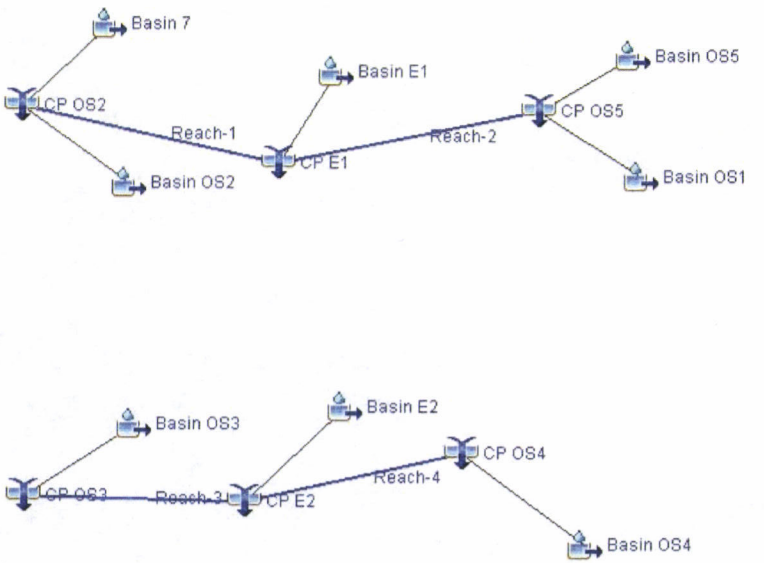
Start of Run: 01Jul2015, 00:00
End of Run: 02Jul2015, 12:00
Compute Time: DATA CHANGED, RECOMPUTE

Basin Model: Existing Model
Meteorologic Model: Met 100
Control Specifications: 24 Hour Storm

Show Elements: All Elements Volume ... IN AC Sorting: Hydrologic

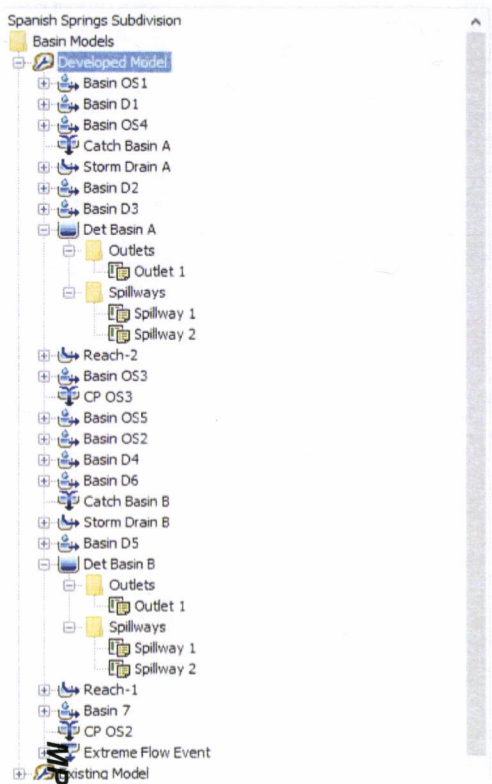
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Basin OS5	0.1394	8.9	01Jul2015, 12:40	2.9
Basin OS1	0.0483	3.0	01Jul2015, 12:45	1.0
CP OS5	0.1877	11.9	01Jul2015, 12:40	3.9
Reach-2	0.1877	11.9	01Jul2015, 12:50	3.9
Basin E1	0.0570	3.5	01Jul2015, 12:45	1.2
CP E1	0.2447	15.2	01Jul2015, 12:50	5.1
Reach-1	0.2447	15.2	01Jul2015, 13:05	5.1
Basin OS2	0.0544	14.0	01Jul2015, 12:40	2.8
Basin 7	0.0116	4.8	01Jul2015, 12:10	0.4
CP OS2	0.3107	24.9	01Jul2015, 12:55	8.4
Basin E2	0.0370	11.4	01Jul2015, 12:20	1.6
Basin OS4	0.0169	1.3	01Jul2015, 12:35	0.4
CP OS4	0.0169	1.3	01Jul2015, 12:35	0.4
Reach-4	0.0169	1.3	01Jul2015, 12:45	0.4
CP E2	0.0539	11.7	01Jul2015, 12:25	2.0
Reach-3	0.0539	11.6	01Jul2015, 12:35	2.0
Basin OS3	0.0398	23.9	01Jul2015, 12:30	3.7
CP OS3	0.0937	34.7	01Jul2015, 12:35	5.7

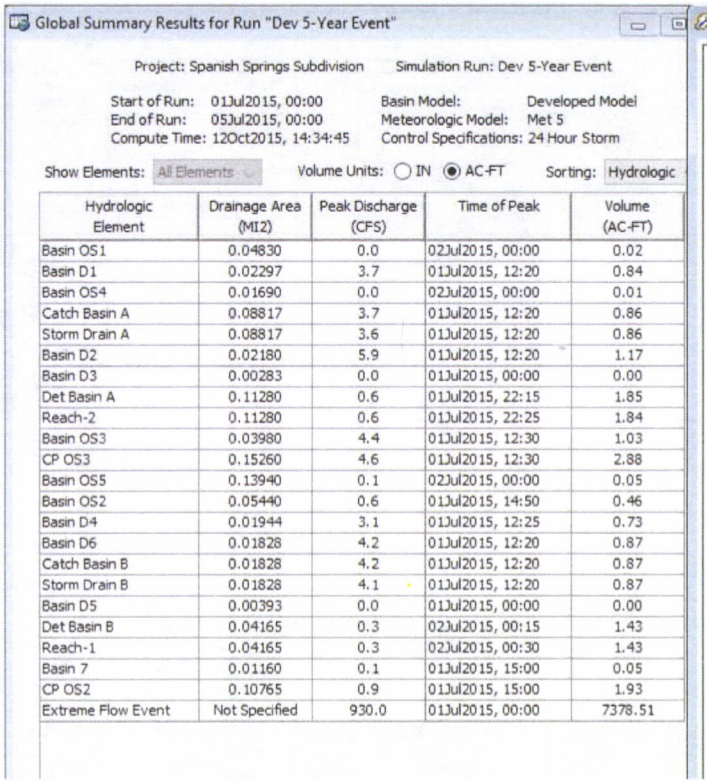
del [Existing Model] Current Run [Exist 5-Year Event]



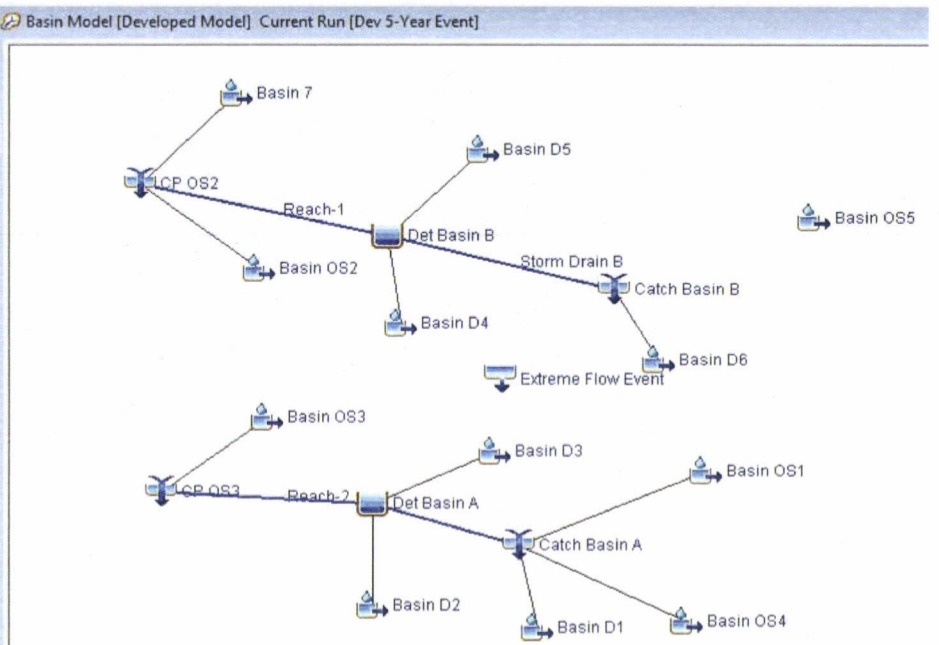
MPA15-003 & RZA15-005
EXHIBIT O-2

HMS OUTPUT - DEVELOPED CONDITIONS, 5-YEAR EVENT



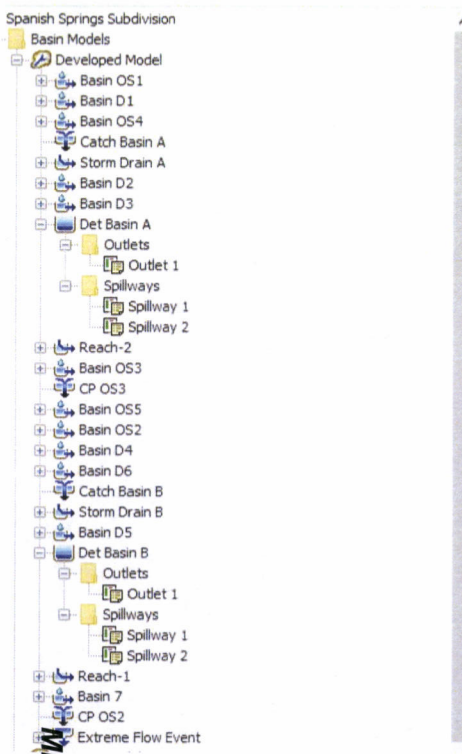


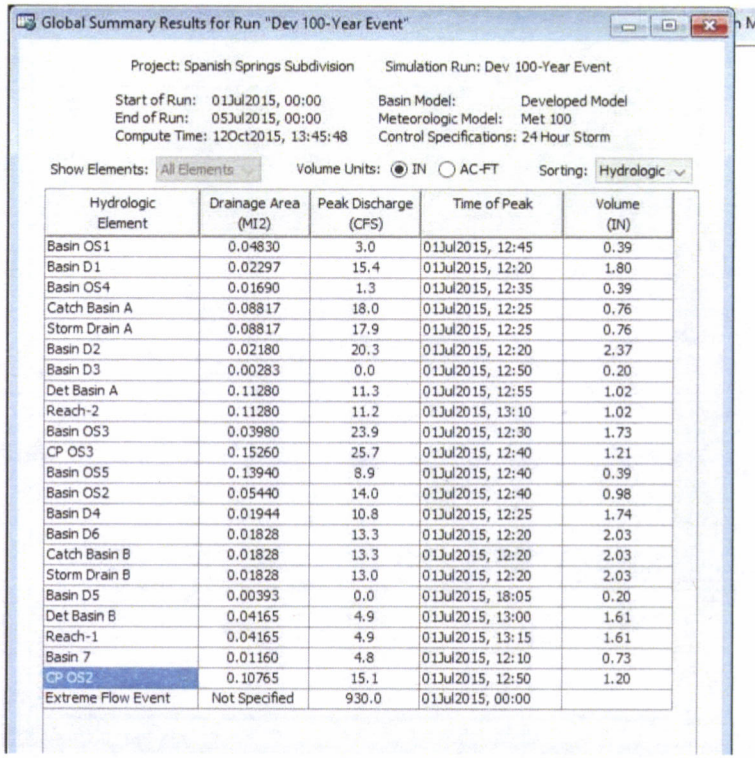
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Basin OS1	0.04830	0.0	02Jul2015, 00:00	0.02
Basin D1	0.02297	3.7	01Jul2015, 12:20	0.84
Basin OS4	0.01690	0.0	02Jul2015, 00:00	0.01
Catch Basin A	0.08817	3.7	01Jul2015, 12:20	0.86
Storm Drain A	0.08817	3.6	01Jul2015, 12:20	0.86
Basin D2	0.02180	5.9	01Jul2015, 12:20	1.17
Basin D3	0.00283	0.0	01Jul2015, 00:00	0.00
Det Basin A	0.11280	0.6	01Jul2015, 22:15	1.85
Reach-2	0.11280	0.6	01Jul2015, 22:25	1.84
Basin OS3	0.03980	4.4	01Jul2015, 12:30	1.03
CP OS3	0.15260	4.6	01Jul2015, 12:30	2.88
Basin OS5	0.13940	0.1	02Jul2015, 00:00	0.05
Basin OS2	0.05440	0.6	01Jul2015, 14:50	0.46
Basin D4	0.01944	3.1	01Jul2015, 12:25	0.73
Basin D6	0.01828	4.2	01Jul2015, 12:20	0.87
Catch Basin B	0.01828	4.2	01Jul2015, 12:20	0.87
Storm Drain B	0.01828	4.1	01Jul2015, 12:20	0.87
Basin D5	0.00393	0.0	01Jul2015, 00:00	0.00
Det Basin B	0.04165	0.3	02Jul2015, 00:15	1.43
Reach-1	0.04165	0.3	02Jul2015, 00:30	1.43
Basin 7	0.01160	0.1	01Jul2015, 15:00	0.05
CP OS2	0.10765	0.9	01Jul2015, 15:00	1.93
Extreme Flow Event	Not Specified	930.0	01Jul2015, 00:00	7378.51



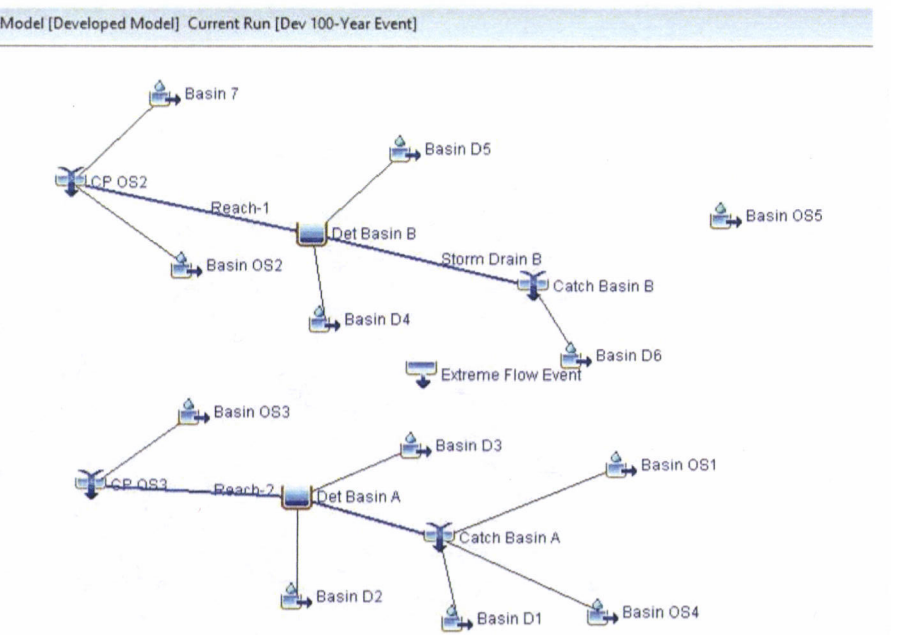
MPA15-003 & RZA15-005
EXHIBIT O-2

HMS OUTPUT - DEVELOPED CONDITIONS, 100-YEAR EVENT





Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Basin OS1	0.04830	3.0	01Jul2015, 12:45	0.39
Basin D1	0.02297	15.4	01Jul2015, 12:20	1.80
Basin OS4	0.01690	1.3	01Jul2015, 12:35	0.39
Catch Basin A	0.08817	18.0	01Jul2015, 12:25	0.76
Storm Drain A	0.08817	17.9	01Jul2015, 12:25	0.76
Basin D2	0.02180	20.3	01Jul2015, 12:20	2.37
Basin D3	0.00283	0.0	01Jul2015, 12:50	0.20
Det Basin A	0.11280	11.3	01Jul2015, 12:55	1.02
Reach-2	0.11280	11.2	01Jul2015, 13:10	1.02
Basin OS3	0.03980	23.9	01Jul2015, 12:30	1.73
CP OS3	0.15260	25.7	01Jul2015, 12:40	1.21
Basin OS5	0.13940	8.9	01Jul2015, 12:40	0.39
Basin OS2	0.05440	14.0	01Jul2015, 12:40	0.98
Basin D4	0.01944	10.8	01Jul2015, 12:25	1.74
Basin D6	0.01828	13.3	01Jul2015, 12:20	2.03
Catch Basin B	0.01828	13.3	01Jul2015, 12:20	2.03
Storm Drain B	0.01828	13.0	01Jul2015, 12:20	2.03
Basin D5	0.00393	0.0	01Jul2015, 18:05	0.20
Det Basin B	0.04165	4.9	01Jul2015, 13:00	1.61
Reach-1	0.04165	4.9	01Jul2015, 13:15	1.61
Basin 7	0.01160	4.8	01Jul2015, 12:10	0.73
CP OS2	0.10765	15.1	01Jul2015, 12:50	1.20
Extreme Flow Event	Not Specified	930.0	01Jul2015, 00:00	



MPA15-003 & RZA15-005
EXHIBIT O-2

Appendix B: Drainage Capacity Calculations

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

Calculation of Normal Depth for Uniform Open Channel Flow Using the Manning Equation

Type A V-Channel

Inputs

Bottom width, b = 0 ft

Manning roughness*, n = 0.027

Channel bottom slope, S = 0.0100 ft/ft

Side Slope, z = 3

(horiz:vert = z:1)

Volumetric Flow Rate, Q = 3 cfs

Calculations

$Q*n/(1.49*S^{1/2})$ = 0.544 ft^2

$A*R^{2/3} = (b*y_o + z*y_o^2)*\{(b*y_o + z*y_o^2)/[b + 2y_o(1 + z^2)]^{1/2}\}^{2/3}$

Iterative (trial & error) Solution:

y_o, ft	$A*R^{2/3}$
1	1.825
0.5	0.287
0.75	0.847
0.7	0.705
0.6	0.467
y_o = 0.64	0.544

* Manning's roughness value from Table 802 of Drainage Manual.

Design Parameters:

A=bY+(zY^2)	A=	1.2	sf
V=Q/A	V=	2.5	ft/s
Vh=V^2/2g	Vh=	0.10	ft
Fb=1/6*(Y+Vh)	Fb=	0.12	ft
Yt=Y+Fb	Yt=	0.76	ft
TW=b+2zY	TW=	3.8	ft
Fr=V/(32.2*Y)^0.5	Fr=	0.55 < 0.86	
Rmin=3*TW	Rmin=	11.4	ft

Calculation of Normal Depth for Uniform Open Channel Flow Using the Manning Equation

Type B V-Channel

Inputs

Bottom width, b =	0	ft
Manning roughness*, n =	0.033	
Channel bottom slope, S =	0.0100	ft/ft
Side Slope, z =	3	
(horiz:vert = z:1)		
Volumetric Flow Rate, Q =	8.9	cfs

Calculations

$Q*n/(1.49*S^{1/2})$ = 1.971 ft^2

$A*R^{2/3} = (b*y_o + z*y_o^2)*\{(b*y_o + z*y_o^2)/[b + 2y_o(1 + z^2)]\}^{1/2}\}^{2/3}$

Iterative (trial & error) Solution:

	y_o ,ft	$A*R^{2/3}$
	1	1.825
	2	11.586
	1.5	5.380
	1.25	3.308
	1.1	2.353
y_o =	**1.03**	1.971

* Manning's roughness value from Table 802 of Drainage Manual.

Design Parameters:

A=bY+(zY^2)	A=	3.2	sf
V=Q/A	V=	2.8	ft/s
Vh=V^2/2g	Vh=	0.12	ft
Fb=1/6*(Y+Vh)	Fb=	0.19	ft
Yt=Y+Fb	Yt=	1.22	ft
TW=b+2zY	TW=	6.2	ft
Fr=V/(32.2*Y)^0.5	Fr=	0.49 < 0.86	
Rmin=3*TW	Rmin=	18.5	ft

PROJ: Spanish Springs
DETAIL: **Manning's Rating for Irregular Section**

Section: Typical 42' ROW Street Section - 5-Yr Event Capacity

Solution is for Manning's Equation for each section segment as follows:

$$Q = VA = \frac{1.49\ Rh^{2/3}\ S^{1/2}}{n} A$$

Calculation of discharge is for an assumed water surface elevation (WSEL) and given slope (SLOPE):

Number of Points in Section = 7.00

ASSUMED WSEL= 0.20
SLOPE = 0.0050

POINT #	STATION (FT)	ELEV (FT)	"n" value	A (sq. ft)	WP (feet)	Rh (feet)	V (ft/sec)	D (feet)	T (feet)	Q (cfs)	DV^2 (cfs/s)
1	0	0.6									
2	5	0.5	0.013	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
3	5	0	0.013	0.00	0.20	0.00	0.00	0.00	0.0	0.0	0
4	21	0.32	0.013	1.00	10.00	0.10	1.74	0.20	10.0	1.7	1
5	37	0	0.013	1.00	10.00	0.10	1.74	0.20	10.0	1.7	1
6	37	0.5	0.013	0.00	0.20	0.00	0.00	0.00	0.0	0.0	0
7	42	0.6	0.013	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
TOTAL SECTION VALUES =			**0.013** (wtd)	**2.00**	**20.40**	**0.10**	**1.74** (avg)	**0.20** (max)	**20.0**	**3.5**	**1** (max)

Legend:

"n" =	Manning's roughness coefficient				
A =	flow area	Vh=V^2/2g	Vh=	0.05	ft
WP =	wetted perimeter	Fb=1/6*(Y+Vh)	Fb=	0.04	ft
Rh =	hydraulic radius	Yt=Y+Fb	Yt=	0.24	ft
V =	flow velocity				
D =	flow depth	Fr=V/(32.2*Y)^0.5	Fr=	0.69	< 0.86
T =	topwidth				
Q =	discharge				

NOTES: Segment Q shown is for segment between indicated point and previous point
"Total" Section value for V (velocity) is average for entire section

PROJ: Spanish Springs
DETAIL: Manning's Rating for Irregular Section

Section: Typical 42' R/W Street Section - 5-Yr Event Capacity

Solution is for Manning's Equation for each section segment as follows:

$$Q = VA = \frac{1.49\ Rh^{2/3}\ S^{1/2}}{n} A$$

Calculation of discharge is for an assumed water surface elevation (WSEL) and given slope (SLOPE):

Number of Points in Section = 7.00

ASSUMED WSEL= 0.20
SLOPE = 0.0070

POINT #	STATION (FT)	ELEV (FT)	"n" value	A (sq. ft)	WP (feet)	Rh (feet)	V (ft/sec)	D (feet)	T (feet)	Q (cfs)	DV^2 (cfs/s)
1	0	0.6									
2	5	0.5	0.013	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
3	5	0	0.013	0.00	0.20	0.00	0.00	0.00	0.0	0.0	0
4	21	0.32	0.013	1.00	10.00	0.10	2.06	0.20	10.0	2.1	1
5	37	0	0.013	1.00	10.00	0.10	2.06	0.20	10.0	2.1	1
6	37	0.5	0.013	0.00	0.20	0.00	0.00	0.00	0.0	0.0	0
7	42	0.6	0.013	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
TOTAL SECTION VALUES =			**0.013** (wtd)	**2.00**	**20.40**	**0.10**	**2.06** (avg)	**0.20** (max)	**20.0**	**4.1**	**1** (max)

Legend:

"n" =	Manning's roughness coefficient				
A =	flow area	Vh=V^2/2g	Vh=	0.07	ft
WP =	wetted perimeter	Fb=1/6*(Y+Vh)	Fb=	0.04	ft
Rh =	hydraulic radius	Yt=Y+Fb	Yt=	0.24	ft
V =	flow velocity				
D =	flow depth	Fr=V/(32.2*Y)^0.5	Fr=	0.81	< 0.86
T =	topwidth				
Q =	discharge				

NOTES: Segment Q shown is for segment between indicated point and previous point
"Total" Section value for V (velocity) is average for entire section

PROJ: Spanish Springs
DETAIL: **Manning's Rating for Irregular Section**

Section: Typical 42' R/W Street Section - 100-Yr Event Capacity

Solution is for Manning's Equation for each section segment as follows:

$$Q = VA = \frac{1.49\ Rh^{2/3}\ S^{1/2}}{n} A$$

Calculation of discharge is for an assumed water surface elevation (WSEL) and given slope (SLOPE):

Number of Points in Section = 7.00

ASSUMED WSEL= 0.50
SLOPE = 0.0050

POINT #	STATION (FT)	ELEV (FT)	"n" value	A (sq. ft)	WP (feet)	Rh (feet)	V (ft/sec)	D (feet)	T (feet)	Q (cfs)	DV^2 (cfs/s)
1	0	0.6									
2	5	0.5	0.013	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
3	5	0	0.013	0.00	0.50	0.00	0.00	0.00	0.0	0.0	0
4	21	0.32	0.013	5.44	16.00	0.34	3.94	0.50	16.0	21.4	8
5	37	0	0.013	5.44	16.00	0.34	3.94	0.50	16.0	21.4	8
6	37	0.5	0.013	0.00	0.50	0.00	0.00	0.00	0.0	0.0	0
7	42	0.6	0.013	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
				0.00	0.00	0.00	0.00	0.00	0.0	0.0	0
TOTAL SECTION VALUES =			**0.013** (wtd)	**10.88**	**33.01**	**0.33**	**3.94** (avg)	**0.50** (max)	**32.0**	**43**	**8** (max)

Legend:

"n" =	Manning's roughness coefficient				
A =	flow area	Vh=V^2/2g	Vh=	0.24	ft
WP =	wetted perimeter	Fb=1/6*(Y+Vh)	Fb=	0.12	ft
Rh =	hydraulic radius	Yt=Y+Fb	Yt=	0.62	ft
V =	flow velocity				
D =	flow depth	Fr=V/(32.2*Y)^0.5	Fr=	0.98	< 0.86
T =	topwidth				
Q =	discharge				

NOTES: Segment Q shown is for segment between indicated point and previous point
"Total" Section value for V (velocity) is average for entire section

PROJ: **Spanish Springs**
DETAIL: **Hydraulic Grade Line Calculation Sheet**

Date: 10/12/2015
Preparer: GWH

Line: **Storm Drain A**
24" RCP

STA	DESC	ELEV. INV.	ELEV. SOFFIT	HGL - Soffit (ft)	B (ft)	D (ft)	SECTION TYPE	ELEV HGL	ELEV GROUND	n value	A (sq ft)	Rh (ft)	Qtotal (cfs)	# cells	Q/cell (cfs)	V (ft/s)	Hv (ft)	Sf (ft/ft)	Sf AVG (ft/ft)	L (ft)
0	Basin A	61.00	63.00	-1.00	0.00	2.00	2	62.00	62.50	0.013	3.14	0.50	18.00	1	18.00	5.73	0.51	0.00632		
290		62.45	64.45	-0.11	0.00	2.00	2	64.34	66.50	0.013	3.14	0.50	18.00	1	18.00	5.73	0.51	0.00632	0.00632	290.00
290	Inlet A	62.45	64.45	-0.11	0.00	2.00	2	64.34	66.50	0.013	3.14	0.50	18.00	1	18.00	5.73	0.51	0.00632	0.00632	0.00

Line: **Storm Drain B**
24" RCP

STA	DESC	ELEV. INV.	ELEV. SOFFIT	HGL - Soffit (ft)	B (ft)	D (ft)	SECTION TYPE	ELEV HGL	ELEV GROUND	n value	A (sq ft)	Rh (ft)	Qtotal (cfs)	# cells	Q/cell (cfs)	V (ft/s)	Hv (ft)	Sf (ft/ft)	Sf AVG (ft/ft)	L (ft)
0	Basin B	47.50	49.50	1.00	0.00	2.00	2	50.50	51.00	0.013	3.14	0.50	13.30	1	13.30	4.23	0.28	0.00345		
355		49.28	51.28	0.73	0.00	2.00	2	52.00	53.50	0.013	3.14	0.50	13.30	1	13.30	4.23	0.28	0.00345	0.00345	355.00
355	Inlet B	49.28	51.28	0.73	0.00	2.00	2	52.00	53.50	0.013	3.14	0.50	13.30	1	13.30	4.23	0.28	0.00345	0.00345	0.00

MPA15-003 & RZA15-005
EXHIBIT O-2

PROJ: Spanish Springs
DETAIL: Head Loss Calculation Sheet

Date: 10/12/2015
Preparer: GWH

Line: Storm Drain A
24" RCP

STA	DESC	hf (ft)	hb (ft)	hj (ft)	ht (ft)	hmh (ft)	h other (ft)	ELEV EGL	Minor loss indicator columns hb (Kb90)	hb (angle)	hj (A3)	hj (angle)	ht (1=yes)	hmh (1=yes)	h other (K)
0	Basin A							62.51							
290		1.83					0.51	64.85							1
290	Inlet A							64.85							

Line: Storm Drain B
24" RCP

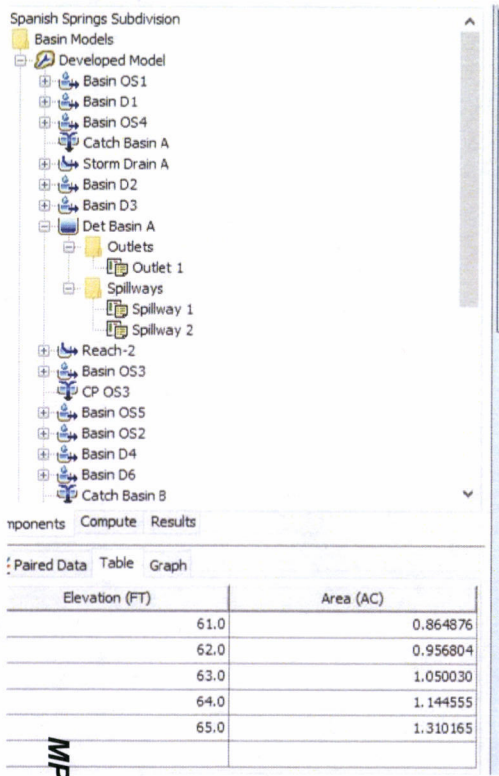
STA	DESC	hf (ft)	hb (ft)	hj (ft)	ht (ft)	hmh (ft)	h other (ft)	ELEV EGL	Minor loss indicator columns hb (Kb90)	hb (angle)	hj (A3)	hj (angle)	ht (1=yes)	hmh (1=yes)	h other (K)
0	Basin B							50.78							
355		1.23					0.28	52.28							1
355	Inlet B							52.28							

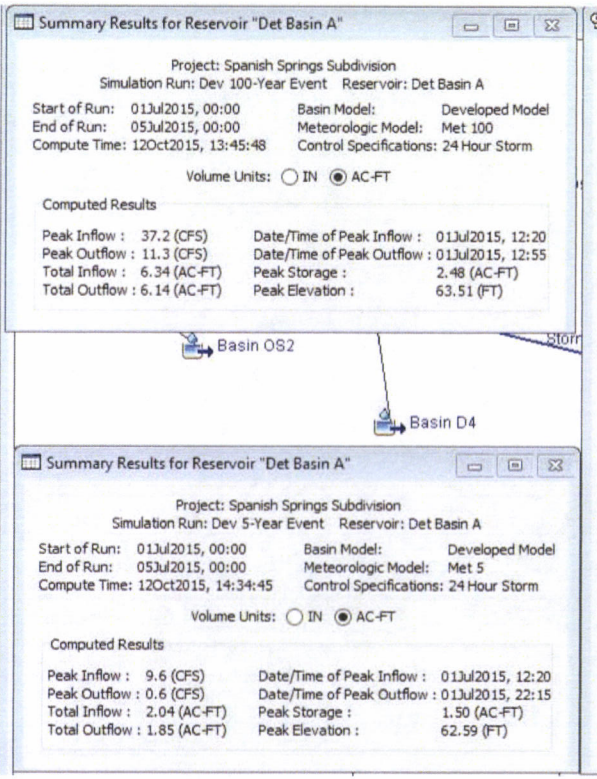
Appendix C: Detention Calculations

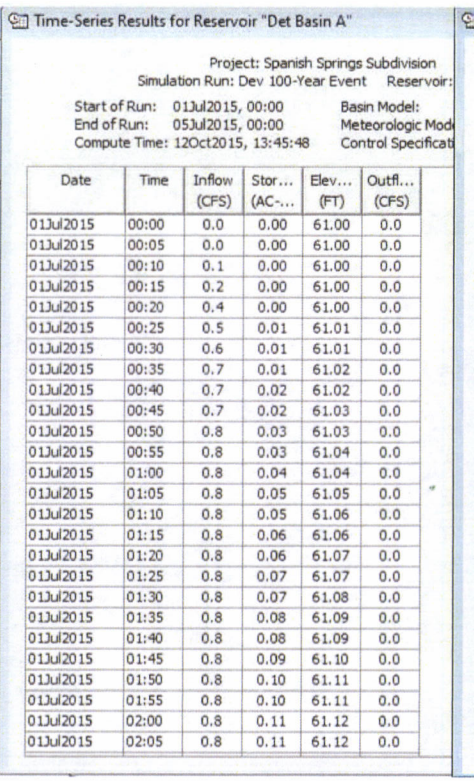
STAR Consulting

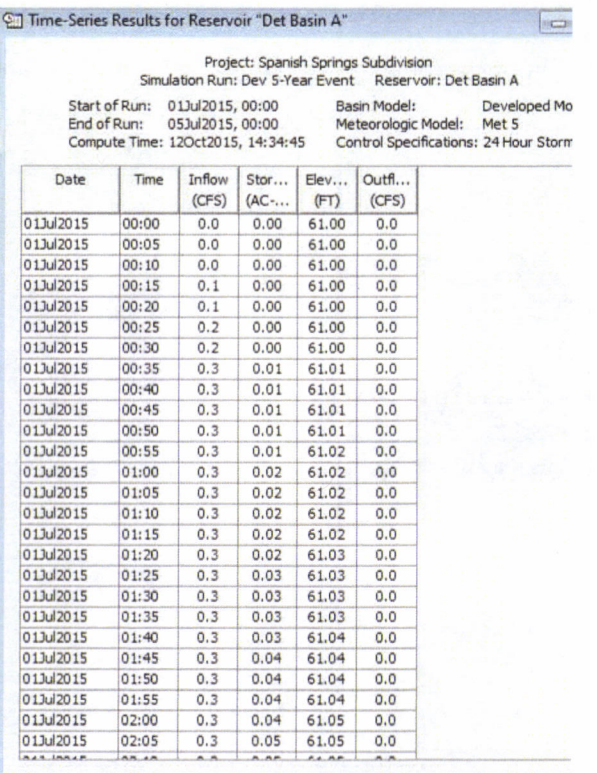
439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

HMS OUTPUT - DETENTION ROUTING RESULTS FOR BASIN A



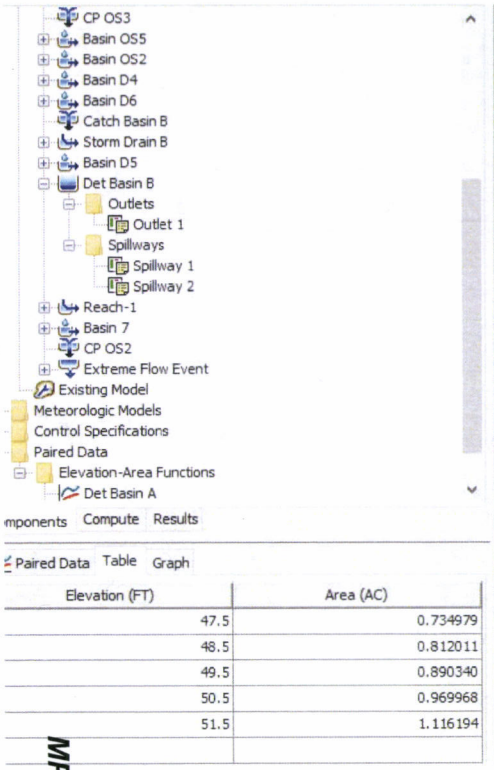




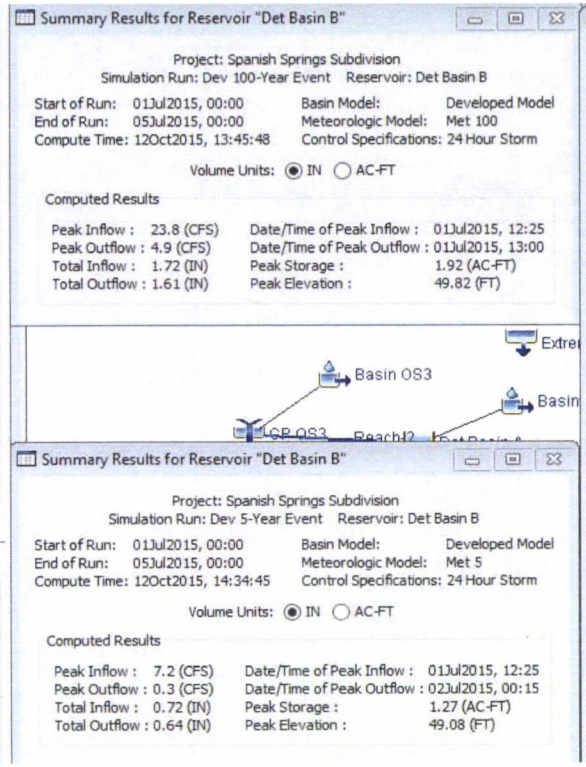


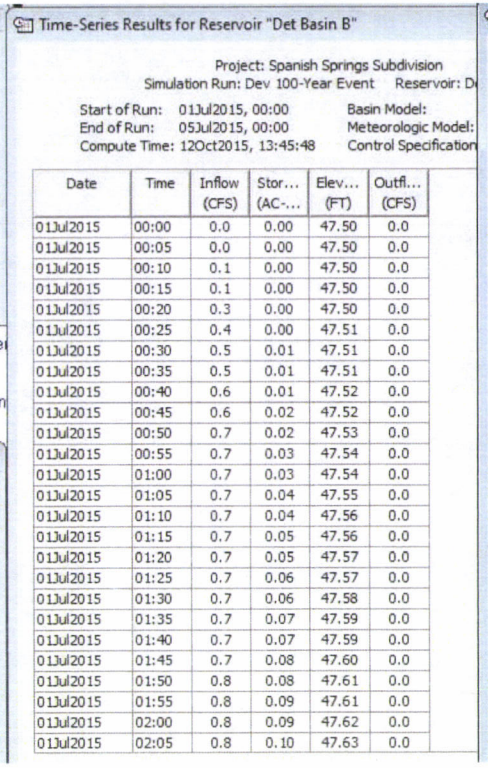
MPA15-003 & RZA15-005
EXHIBIT O-2

HMS OUTPUT - DETENTION ROUTING RESULTS FOR BASIN B

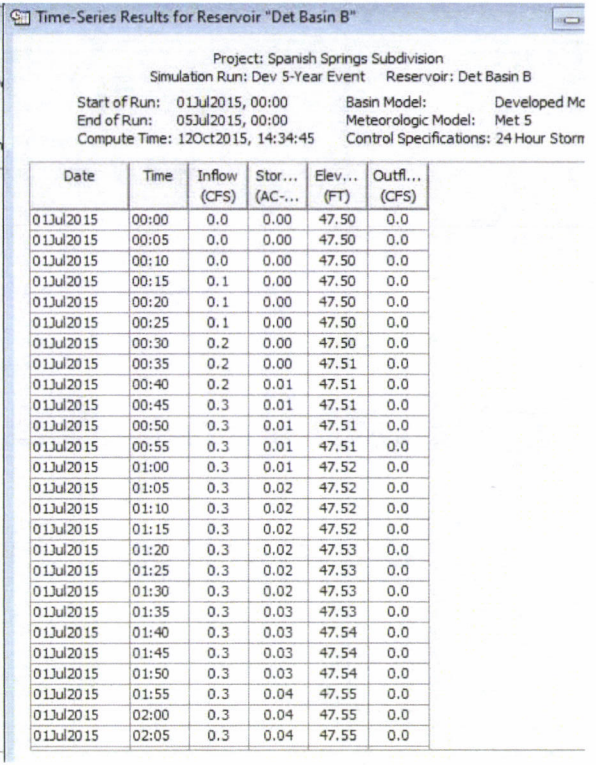


Elevation (FT)	Area (AC)
47.5	0.734979
48.5	0.812011
49.5	0.890340
50.5	0.969968
51.5	1.116194





Date	Time	Inflow (CFS)	Stor... (AC-...	Elev... (FT)	Outfl... (CFS)
01Jul2015	00:00	0.0	0.00	47.50	0.0
01Jul2015	00:05	0.0	0.00	47.50	0.0
01Jul2015	00:10	0.1	0.00	47.50	0.0
01Jul2015	00:15	0.1	0.00	47.50	0.0
01Jul2015	00:20	0.3	0.00	47.50	0.0
01Jul2015	00:25	0.4	0.00	47.51	0.0
01Jul2015	00:30	0.5	0.01	47.51	0.0
01Jul2015	00:35	0.5	0.01	47.51	0.0
01Jul2015	00:40	0.6	0.01	47.52	0.0
01Jul2015	00:45	0.6	0.02	47.52	0.0
01Jul2015	00:50	0.7	0.02	47.53	0.0
01Jul2015	00:55	0.7	0.03	47.54	0.0
01Jul2015	01:00	0.7	0.03	47.54	0.0
01Jul2015	01:05	0.7	0.04	47.55	0.0
01Jul2015	01:10	0.7	0.04	47.56	0.0
01Jul2015	01:15	0.7	0.05	47.56	0.0
01Jul2015	01:20	0.7	0.05	47.57	0.0
01Jul2015	01:25	0.7	0.06	47.57	0.0
01Jul2015	01:30	0.7	0.06	47.58	0.0
01Jul2015	01:35	0.7	0.07	47.59	0.0
01Jul2015	01:40	0.7	0.07	47.59	0.0
01Jul2015	01:45	0.7	0.08	47.60	0.0
01Jul2015	01:50	0.8	0.08	47.61	0.0
01Jul2015	01:55	0.8	0.09	47.61	0.0
01Jul2015	02:00	0.8	0.09	47.62	0.0
01Jul2015	02:05	0.8	0.10	47.63	0.0



Date	Time	Inflow (CFS)	Stor... (AC-...	Elev... (FT)	Outfl... (CFS)
01Jul2015	00:00	0.0	0.00	47.50	0.0
01Jul2015	00:05	0.0	0.00	47.50	0.0
01Jul2015	00:10	0.0	0.00	47.50	0.0
01Jul2015	00:15	0.1	0.00	47.50	0.0
01Jul2015	00:20	0.1	0.00	47.50	0.0
01Jul2015	00:25	0.1	0.00	47.50	0.0
01Jul2015	00:30	0.2	0.00	47.50	0.0
01Jul2015	00:35	0.2	0.00	47.51	0.0
01Jul2015	00:40	0.2	0.01	47.51	0.0
01Jul2015	00:45	0.3	0.01	47.51	0.0
01Jul2015	00:50	0.3	0.01	47.51	0.0
01Jul2015	00:55	0.3	0.01	47.51	0.0
01Jul2015	01:00	0.3	0.01	47.52	0.0
01Jul2015	01:05	0.3	0.02	47.52	0.0
01Jul2015	01:10	0.3	0.02	47.52	0.0
01Jul2015	01:15	0.3	0.02	47.52	0.0
01Jul2015	01:20	0.3	0.02	47.53	0.0
01Jul2015	01:25	0.3	0.02	47.53	0.0
01Jul2015	01:30	0.3	0.02	47.53	0.0
01Jul2015	01:35	0.3	0.03	47.53	0.0
01Jul2015	01:40	0.3	0.03	47.54	0.0
01Jul2015	01:45	0.3	0.03	47.54	0.0
01Jul2015	01:50	0.3	0.03	47.54	0.0
01Jul2015	01:55	0.3	0.04	47.55	0.0
01Jul2015	02:00	0.3	0.04	47.55	0.0
01Jul2015	02:05	0.3	0.04	47.55	0.0

MPA15-003 & RZA15-005
EXHIBIT O-2

Appendix D: Reference Tables & Charts

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

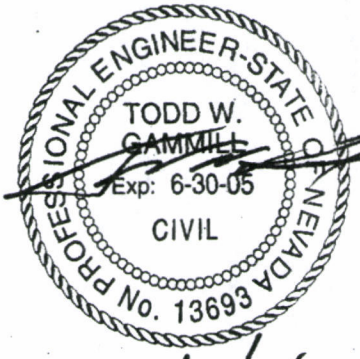
MASTER DRAINAGE STUDY FOR DONOVAN RANCH

OWNER:

Barker-Coleman Communities
4741 Caughlin Parkway, Suite 4
Reno, NV 89509
(775) 828-5111

PREPARED FOR:

Barker-Coleman Communities
4741 Caughlin Parkway, Suite 4
Reno, NV 89509
(775) 828-5111

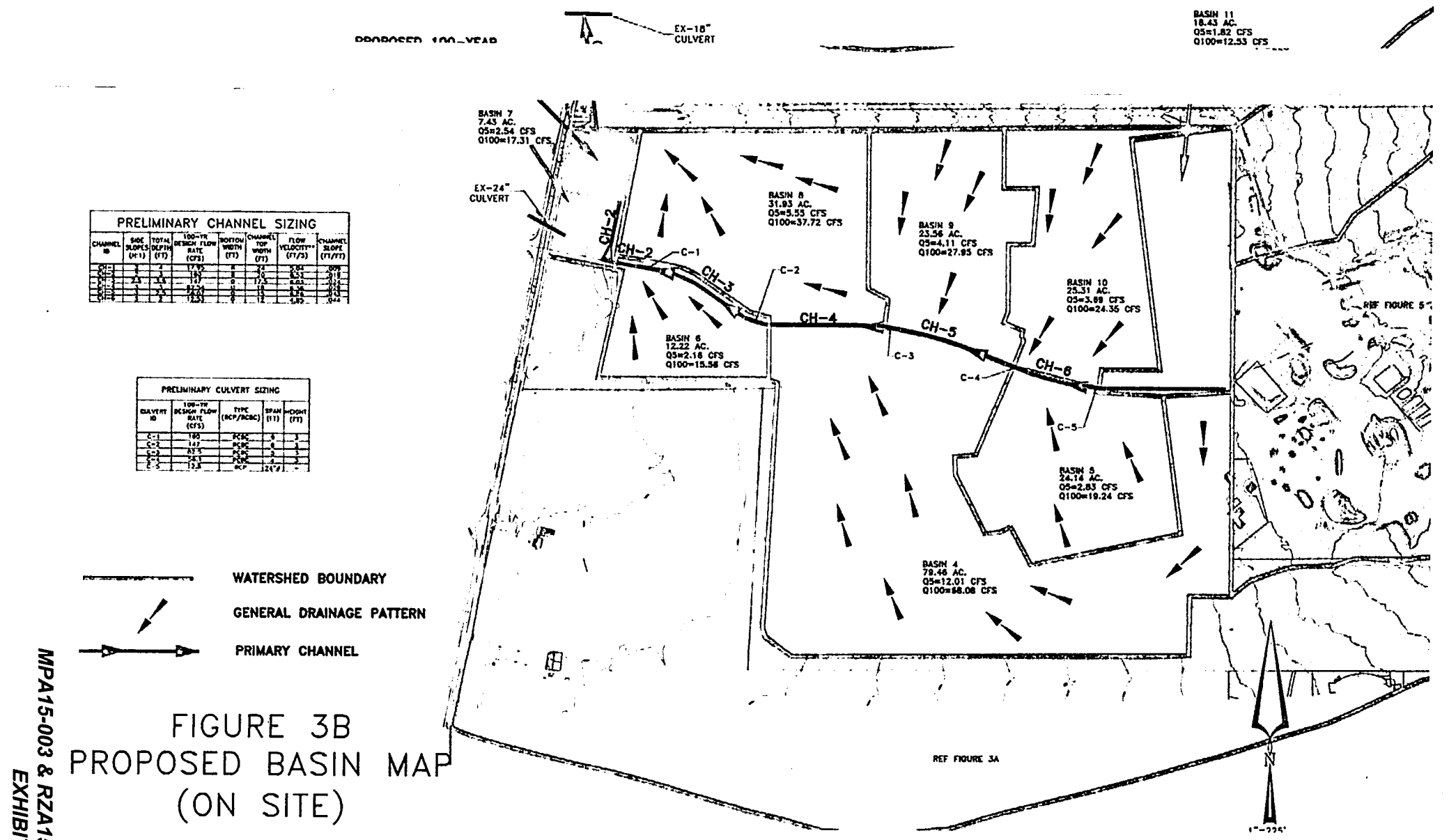


9/15/04

PREPARED BY:

Matrix Engineering & Consulting, Inc.
4741 Caughlin Parkway, Suite 1b
Reno, NV 89509
(775) 825-4441

June 2004
(Revised September 2004)



PRELIMINARY CHANNEL SIZING

CHANNEL ID	SIDE SLOPES (H:1)	TOTAL DEPTH (FT)	100-YR DESIGN FLOW RATE (CFS)	BOTTOM WIDTH (FT)	CHANNEL TOP WIDTH (FT)	FLOW VELOCITY** (FT/S)	CHANNEL SLOPE (FT/FT)
CH-1	3	4	17.95	4	28	5.06	.009
CH-2	3	4	17.95	4	28	5.06	.009
CH-3	2.5	3.5	131	6	23	8.51	.016
CH-4	2.5	3.5	131	6	23	8.51	.016
CH-5	3	4	82.24	6	30	5.36	.016
CH-6	3	4	82.24	6	30	5.36	.016

PRELIMINARY CULVERT SIZING

CULVERT ID	100-YR DESIGN FLOW RATE (CFS)	TYPE (RCP/RCBC)	SPAN (FT)	HEIGHT (FT)
C-1	180	RCBC	6	3
C-2	147	RCBC	6	3
C-3	82.5	RCBC	3	3
C-4	24.1	RCBC	3	3
C-5	13.8	RCP	24"Ø	-

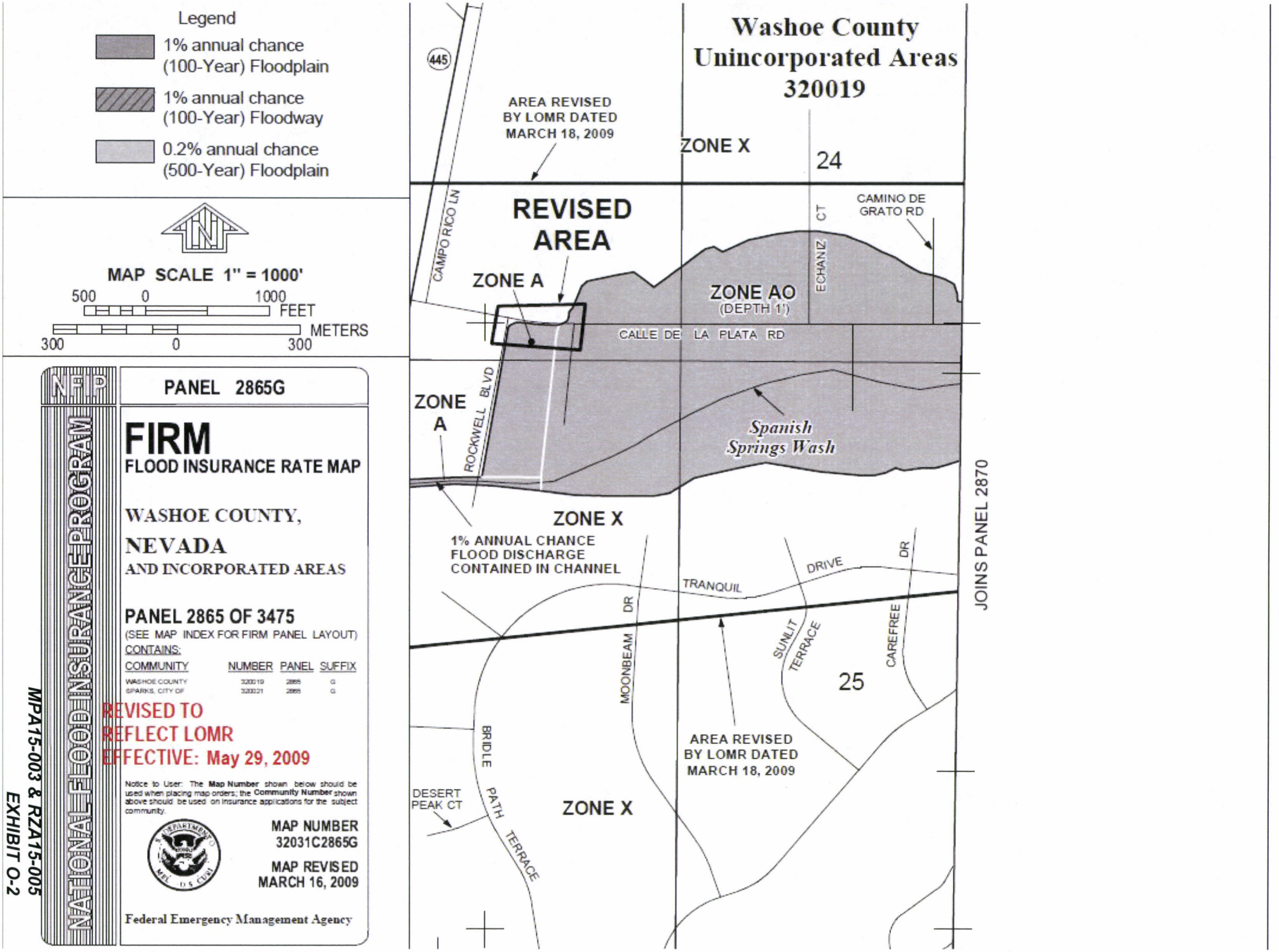
WATERSHED BOUNDARY

GENERAL DRAINAGE PATTERN

PRIMARY CHANNEL

FIGURE 3B
PROPOSED BASIN MAP
(ON SITE)

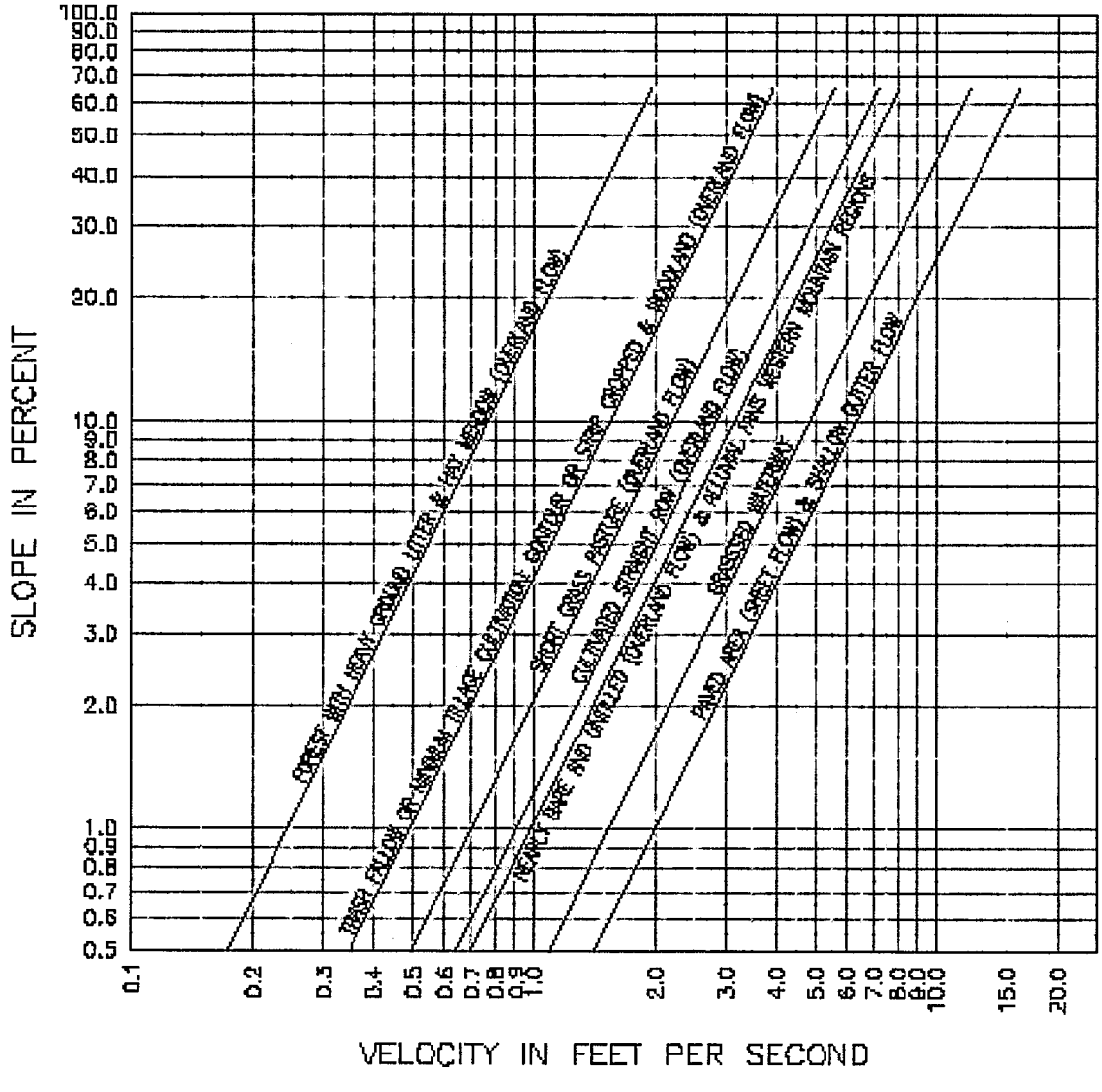
MPA15-003 & RZA15-005
EXHIBIT O-2



MPA15-003 & RZA15-005
EXHIBIT O-2

TRUCKEE MEADOWS REGIONAL DRAINAGE MANUAL

TRAVEL TIME VELOCITY



Version: April 30, 2009 PLACES–CSI	REFERENCE: Soil Conservation Service, 1985 (Modified)	FIGURE 701

RUNOFF CURVE NUMBERS FOR URBAN AREAS[1]

Cover Type and Hydrologic Condition	Aver. % Impervious Area[2]	Runoff Curve Numbers Soil Comp A	Soil Comp B	Soil Comp C	Soil Comp D
Fully developed urban area (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.)[3]					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50 to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious only, no vegetation)[5]		77	86	91	94
Idle lands (CNs are determined using cover types similar to those Table 702 - 3 of 4)					

[1]Average runoff condition, and $I_a = 0.2S$

[2]The average percent impervious area shown was used to develop the composite CNs. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CNs for other combinations of conditions may be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986).

[3]CNs shown are equivalent to those of pasture. Composite CNs may be computed for other combinations of open space cover type.

[4]Composite CNs for natural desert landscaping should be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986) based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CNs are assumed equivalent to desert shrub in poor hydrologic condition.

[5]Composite CNs to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986) based on the degree of development (impervious area percentage) and the CNs for the newly graded pervious areas.

RUNOFF CURVE NUMBERS FOR CULTIVATED AGRICULTURAL LANDS[1]

Cover type	Treatment[2]	Hydrologic condition[3]	Runoff Curve Numbers Soil Comp A	Soil Comp B	Soil Comp C	Soil Comp D
Fallow	Bare soil	-	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
	C&T + CR	Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T + CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

[1]Average runoff condition, and $I_a = 0.2S$

[2]*Crop residue cover* applies only if residue is on at least 5% of the surface throughout the year.

[3]Hydrologic condition is based on combination of factors that affect infiltration and runoff, including: (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes in rotations, (d) percent of residue cover on the land surface (good ≥ 20%), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.
Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

RUNOFF CURVE NUMBERS FOR OTHER AGRICULTURAL LANDS[1]

Cover Type	Hydrologic Condition	Runoff Curve Numbers: Soil Comp A	Soil Comp B	Soil Comp C	Soil Comp D
Pasture, grassland, or range – continuous forage for grazing[2]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow – continuous grass, protected from grazing and generally mowed for hay	-	30	58	71	78
Brush – brush-weed-grass mixture with brush the major element[3]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30[4]	48	65	73
Woods – grass combination (orchard or tree farm)[5]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods[6]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30[4]	55	70	77
Farmsteads – buildings, lanes, driveways, and surrounding lots	-	59	74	82	86

[1]Average runoff condition, and $I_a = 0.2S$

[2]*Poor*: < 50% ground cover or heavily grazed with no mulch
Fair: 50 to 75% ground cover and not heavily grazed
Good: > 75% ground cover and lightly or only occasionally grazed

[3]*Poor*: < 50% ground cover
Fair: 50 to 75% ground cover
Good: >75% ground cover

[4]Actual curve number is less than 30; use CN = 30 for runoff computations.

[5]CNs shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CNs for woods and pasture.

[6]*Poor*: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

RUNOFF CURVE NUMBERS FOR ARID AND SEMIARID RANGELANDS[1]

Cover Description	Hydrologic Condition[2]	Runoff Curve Numbers Soil Comp A[3]	Soil Comp B	Soil Comp C	Soil Comp D
Herbaceous – mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen – mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper – pinyon, juniper, or both; grass understory	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub – major plants include saltbrush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

[1]Average runoff condition, and $I_a = 0.2S$. For range in humid regions, use Table 702 - 3 of 4.

[2]*Poor*: < 30% ground cover (litter, grass, and brush overstory)
Fair: 30 to 70% ground cover
Good: > 70% ground cover

[3]Curve numbers for group A have been developed only for desert shrub.

TYPICAL ROUGHNESS COEFFICIENTS FOR OPEN CHANNELS

TYPE OF CHANNEL AND DESCRIPTION	MINIMUM	NORMAL	MAXIMUM
EXCAVATED OR DREDGED			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0.025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. Earth bottom and rubble sides	0.028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same as above, but highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
NATURAL STREAMS			
Minor Streams (top width at flood stage < 100 ft)			
a. Streams on plain			
1. Clean, straight, full stage, no rifts or deep pools	0.025	0.030	0.033
2. Same as above, but more stones and weeds	0.030	0.035	0.040
3. Clean, winding, some pools and shoals	0.033	0.040	0.045
4. Same as above, but some weeds and stones	0.035	0.045	0.050
5. Same as above, but lower stages, and more ineffective slopes and sections	0.040	0.048	0.055

VERSION: April 30, 2009	REFERENCE: Chow, V.T., 1959, Open-Channel Hydraulics	TABLE 802 1 of 3
WRC ENGINEERING, INC.		

TYPICAL ROUGHNESS COEFFICIENTS FOR OPEN CHANNELS

TYPE OF CHANNEL AND DESCRIPTION	MINIMUM	NORMAL	MAXIMUM
6. Same as 4, but more stones	0.045	0.050	0.060
7. Sluggish reaches, weedy, deep pools	0.050	0.070	0.080
8. Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.100	0.150
b. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stages			
1. Bottom: gravel, cobbles, and few boulders	0.030	0.040	0.050
2. Bottom: cobbles with large boulders	0.040	0.050	0.070
Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.105	0.200
2. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.1200
5. Same as above, but with flood stage reaching branches	0.100	0.120	0.160
Major Streams (top width at flood stage > 100 ft). The ***n*** value is less than that for minor streams of similar description, because banks offer less effective resistance			
a. Regular section with no boulders or brush	0.025	---	0.060
b. Irregular and rough section	0.035	---	0.100

VERSION: April 30, 2009	REFERENCE: Chow, V.T., 1959, Open-Channel Hydraulics	TABLE 802 2 of 3
WRC ENGINEERING, INC.		

TYPICAL ROUGHNESS COEFFICIENTS FOR OPEN CHANNELS

TYPE OF CHANNEL AND DESCRIPTION	MINIMUM	NORMAL	MAXIMUM
LINED OR BUILT-UP CHANNELS			
a. Corrugated Metal	0.021	0.025	0.030
b. Concrete			
1. Trowel finish	0.011	0.013	0.015
2. Float finish	0.013	0.015	0.016
3. Finished, with gravel on bottom	0.015	0.017	0.020
4. Unfinished	0.014	0.017	0.020
5. Gunite, good section	0.016	0.019	0.023
6. Gunite, wavy section	0.018	0.022	0.025
7. On good excavated rock	0.017	0.020	---
8. On irregular excavated rock	0.022	0.027	---
c. Concrete bottom float finished with sides of:			
1. Dressed stone in mortar	0.015	0.017	0.020
2. Random stone in mortar	0.017	0.020	0.024
3. Cement rubble masonry, plastered	0.016	0.020	0.024
4. Cement rubble masonry	0.020	0.025	0.030
5. Dry rubble or riprap	0.020	0.030	0.035
d. Gravel bottom with sides of :			
1. Formed concrete	0.017	0.020	0.025
2. Random stone in mortar	0.020	0..023	0.026
3. Dry rubble or riprap	0.023	0.033	0.036
e. Asphalt			
1. Smooth	0.013	0.013	---
2. Rough	0.016	0.016	---
f. Grassed	0.030	0.040	0.050

VERSION: April 30, 2009	REFERENCE: Chow, V.T., 1959, Open-Channel Hydraulics	TABLE 802 3 of 3
WRC ENGINEERING, INC.		

MAXIMUM PERMISSIBLE MEAN CHANNEL VELOCITIES

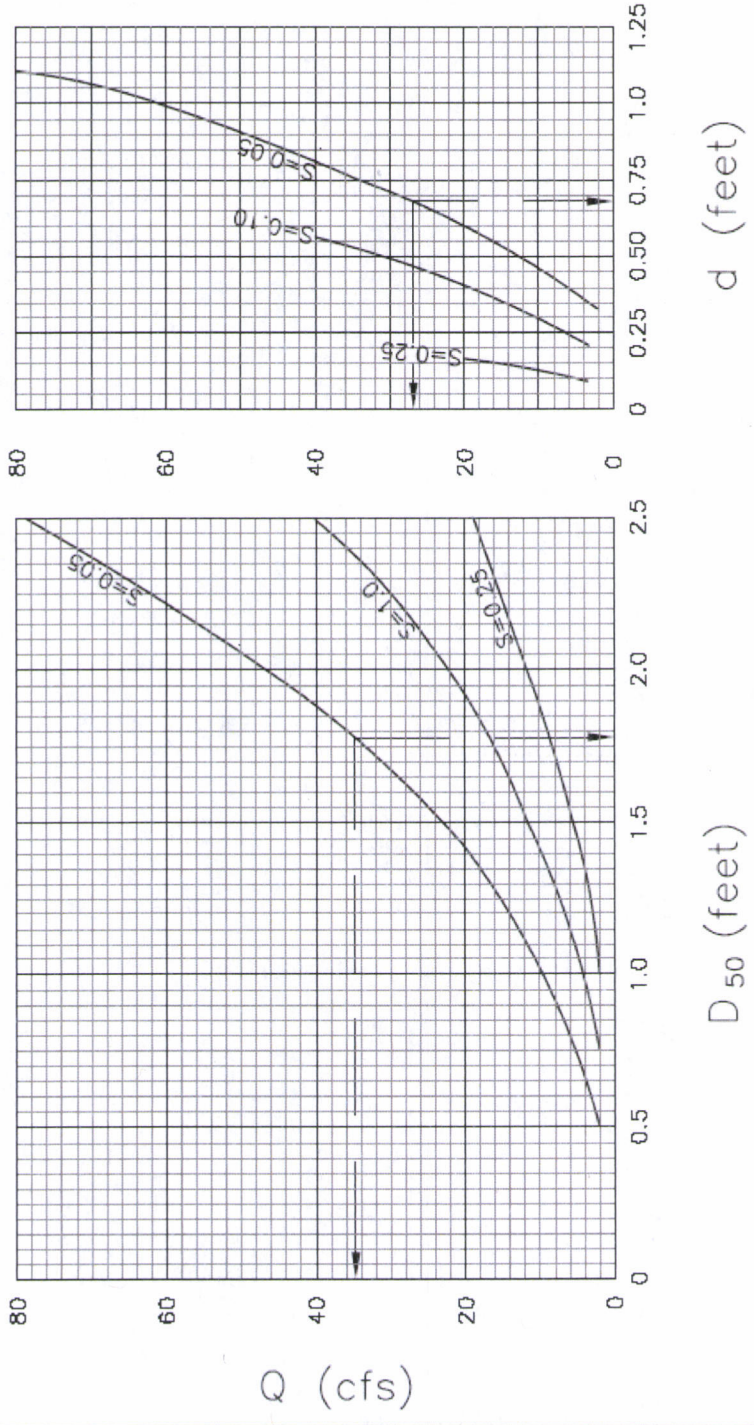
MATERIAL/LINING	MAXIMUM PERMISSIBLE MEAN VELOCITY (ft/sec)
NATURAL AND IMPROVED UNLINED CHANNELS	
Fine sand, colloidal	1.50
Sandy Loam, noncolloidal	1.75
Silt Loam, noncolloidal	2.00
Alluvial Silts, noncolloidal	2.00
Ordinary Firm Loam	2.50
Volcanic Ash	2.50
Stiff Clay, very colloidal	3.75
Alluvial Silts, colloidal	3.75
Shales and Hardpans	6.00
Fine Gravel	2.50
Graded Loam to Cobbles when noncolloidal	3.75
Graded Silts to Cobbles when colloidal	4.00
Coarse Gravel, noncolloidal	4.00
Cobbles and Shingles	5.00
Sandy Silt	2.0
Silty Clay	2.5
Poor Sedimentary Rock	10
Sound Rock (Igneous or Hard Metamorphic)	20
FULLY LINED CHANNELS	
Unreinforced vegetation	5
Loose riprap	15
Grouted riprap	15
Gabions	15
Soil-Cement	15
Concrete	35

NOTES:

1. For composite-lined channels, use the lowest of the maximum mean velocities for the materials used in the composite lining.
2. Deviation from the above values is only allowed with appropriate engineering analysis and/or suitable agreements for maintenance responsibilities.
3. Maximum permissible velocities based upon non-clear water conditions.

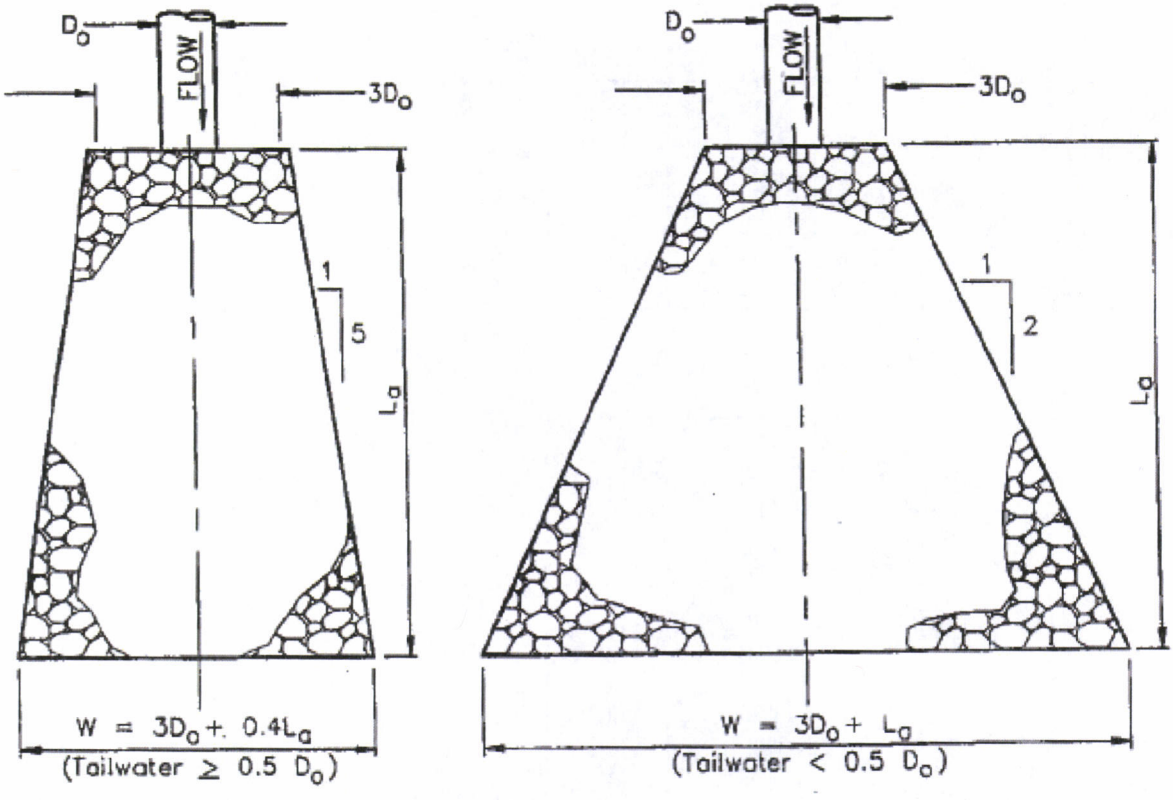
VERSION: April 30, 2009	REFERENCE:	TABLE
WRC ENGINEERING, INC.	Natural – Fortier and Scobey, 1926 Fully Lined – Various Sources	803

STEEP SLOPE RIPRAP DESIGN,
TRIANGULAR CHANNELS, 2:1 SIDESLOPES



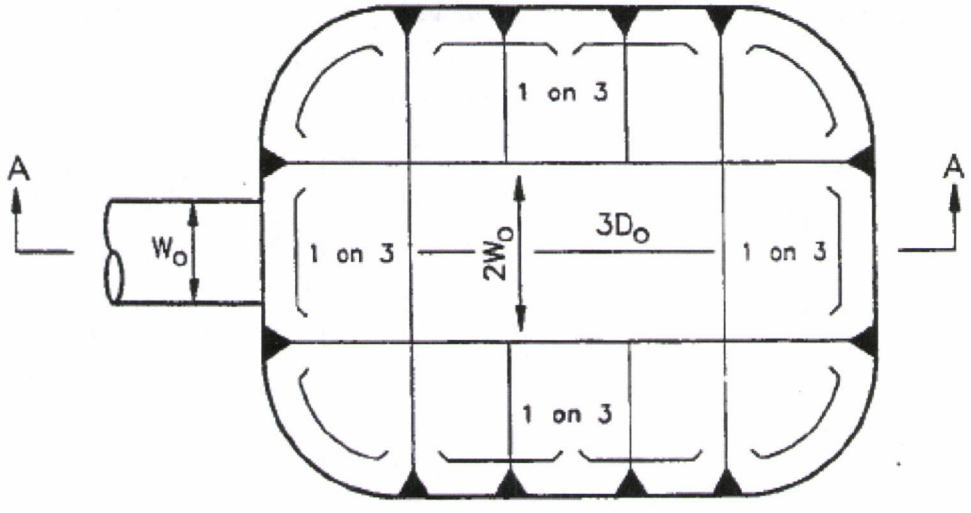
VERSION: April 30, 2009	REFERENCE: Simons, Li and Associates, 1989	FIGURE 819
WRC ENGINEERING, INC.		

CONFIGURATION OF CULVERT OUTLET PROTECTION

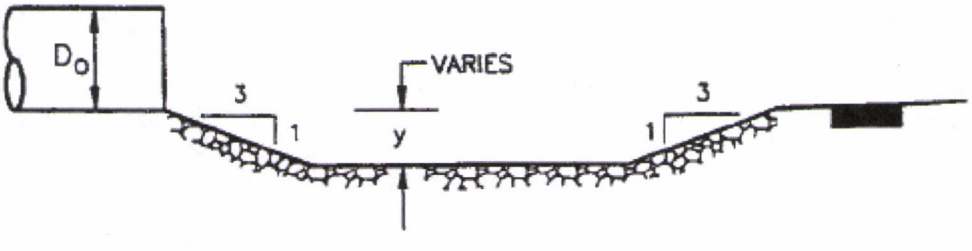


VERSION: April 30, 2009 WRC ENGINEERING, INC.	REFERENCE: U.S. EPA, 1976	FIGURE 829

PRE-FORMED SCOUR HOLE



PLAN VIEW



SECTION VIEW

VERSION: April 30, 2009 WRC ENGINEERING, INC.	REFERENCE: American Society of Civil Engineers, 1975	FIGURE 830

ALLOWABLE STORM INLET TYPES AND CAPACITY FACTORS

INLET TYPE	STANDARD DRAWING NUMBERS	PERMITTED USE	PERMITTED LOCATION CONDITION	CAPACITY REDUCTION FACTOR
CATCH BASIN TYPE 1 (CURB OPENING)	2-8/W10.1	ALL STREETS* WITH CURB AND GUTTER	SUMP	0.7
CATCH BASIN TYPE 2 (CURB OPENING)	2-9	ALL STREETS* WITH CURB AND GUTTER	C.G. SUMP	0.8 0.7
CATCH BASIN 3-R (GRATE) OR DROP INLET TYPE 1A (COMBINATION)	R-205 W10.2	LOT DRAINAGE SWALE	SUMP	0.5
CATCH BASIN 4-R (COMBINATION)	R-206A W-12	ALL STREETS WITH CURB AND GUTTER	C.G. SUMP	0.7 FOR GRATE/0.8 FOR CURB OPENING 0.5 FOR GRATE/0.7 FOR CURB OPENING
SLOTTED DRAIN	2-22	ALL STREETS WITH CURB AND GUTTER	C.G. SUMP	0.7 0.5

NOTES:

1. C.G. = CONTINUOUS GRADE
2. STANDARD DRAWING NUMBER REFERS TO THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION" AS ADOPTED BY THE JURISDICTIONAL ENTITIES, INCLUDING FUTURE AMENDMENTS.
3. CAPACITY FACTOR IS APPLIED TO THE THEORETICAL INLET CAPACITY TO OBTAIN THE ALLOWABLE INLET CAPACITY TO ACCOUNT FOR FACTORS WHICH REDUCE ACTUAL INLET CAPACITY.

* NOT PERMITTED IN ROADWAY SECTION IN UNINCORPORATED WASHOE COUNTY

VERSION: April 30, 2009	REFERENCE:	TABLE 902
WRC ENGINEERING, INC.		

SAG INLET PARAMETERS AND COEFFICIENTS

Inlet Type	C_w	L_w [1]	Weir Equation Valid for	Term Definition
Grate	3.00	L+2W	$d < 1.79 (A_0/L_w)$	L = length of grate W = width of grate d = depth of water over grate A_0 = clear opening area[2]
Curb Opening	3.00	L	$d < h$	L = length of curb opening h = height of curb opening $d = d_i - (h/2)$ d_i = depth of water at curb opening
Depressed Curb Opening [3]	2.30	L+1.8W	$d < (h+a)$	W = lateral width of depression h = height of curb opening a = depth of curb depression
Slotted Inlet	2.48	L	$d < 0.2$ ft	L = length of slot d = depth at curb

1 The weir length should be reduced where clogging is expected.
2 The ratio of clear opening area to total area is 0.8 for P-1-7/8-4 and reticuline grates, 0.9 for P-1-7/8 and 0.6 for P-1-1/8 grates. Curved vane and tilt bar grates are not recommended at sag locations.
3 If L> 12 ft, use the expressions for curb opening inlets without depression.

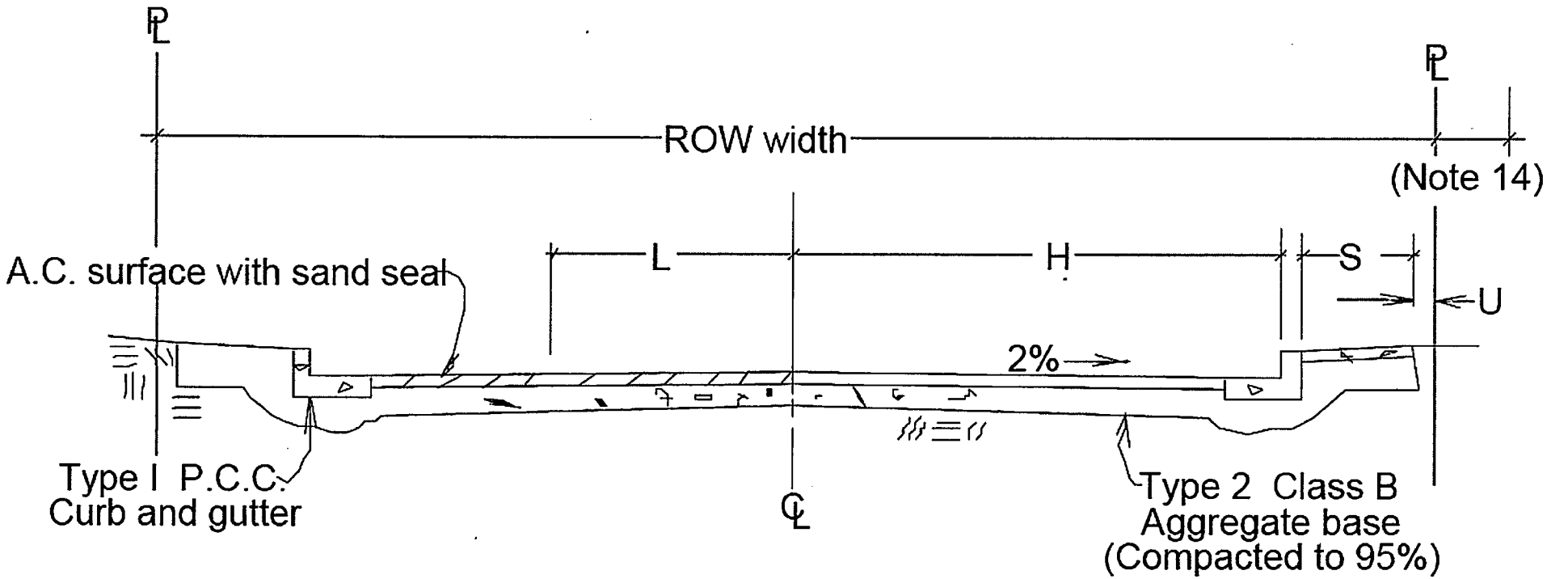
Inlet Type	C_o	A_o [4]	Orifice Equation Valid for	Term Definition
Grate	0.67	Clear opening area [5]	$d > 1.79 (A_0/L_w)$	d = depth of water over grate
Curb Opening (depressed or undepressed horizontal orifice throat)	0.67	(h) (L)	$d_i > 1.4$ h	h = height of curb opening $d = d_i - (h/2)$ characteristic depth d_i = depth of water at curb opening
Slotted Inlet	0.80	(L)(W)	$d > 0.40$ ft	L = length of slot W = width of slot d = depth at curb

4 The orifice area should be reduced where clogging is expected.
5 Ratio of clear opening area to total area is 0.8 for P-1-7/8-4 and reticuline grates, 0.9 for P-1-7/8 and 0.6 for P-1-1/8 grates. Curved vane and tilt bar grates are not recommended at sag locations.

VERSION: April 30, 2009	REFERENCE: Adapted from Akan and Houghtalen, 2003	TABLE 905
WRC ENGINEERING, INC.		

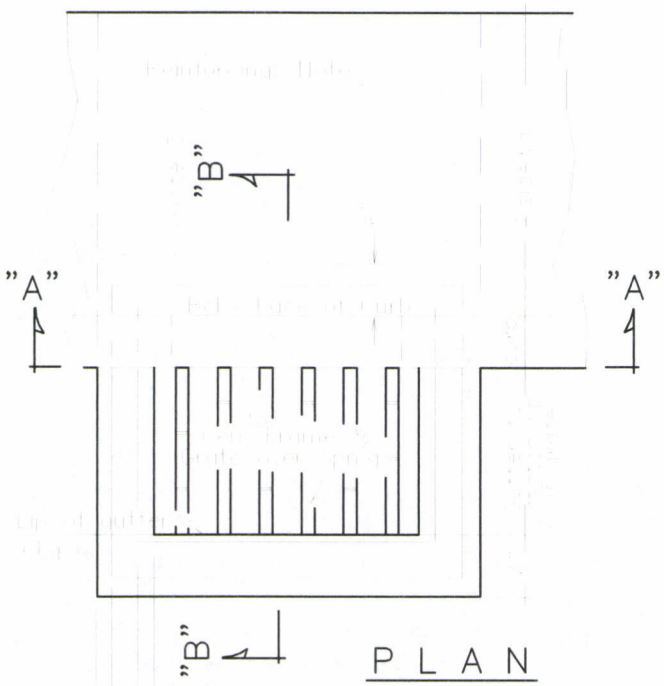
Table 110.436.25.2

ROADWAY SECTIONS - B
GENERAL APPLICATIONS: STREETS SERVING LOT SIZES LESS THAN 0.5 ACRES

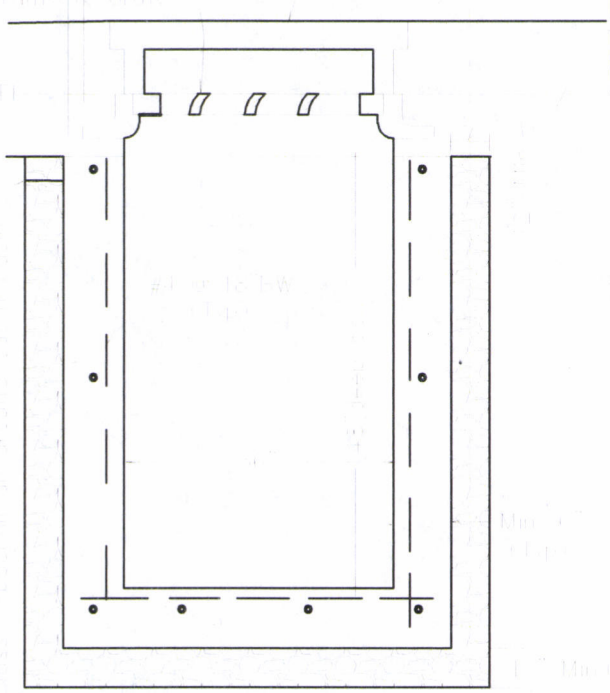


ROW	H	S	U	L	B	PL	ADT Maximum per 2 Travel Lanes	Remarks
52	20	5	0.5	12	4	0	9,600	Collector
42	16	4	0.5	11	0	2	1,000	Local

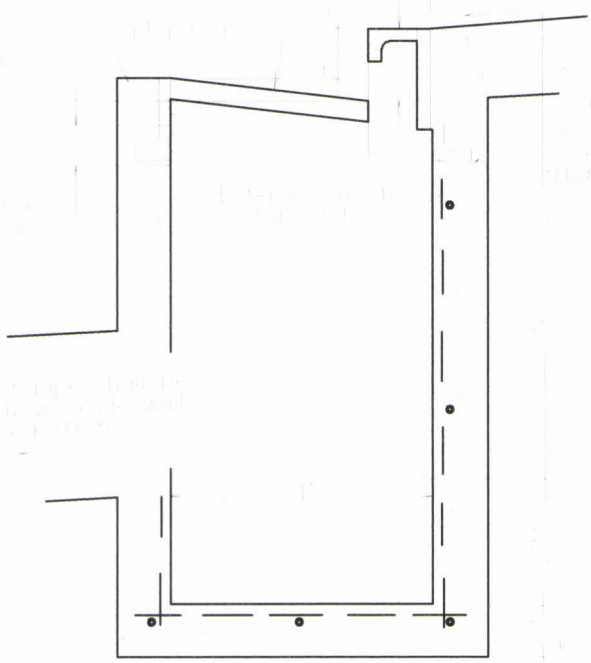
MPA15-003 & RZA15-005 - EXHIBIT O-2



PLAN



SEC. "A–A"

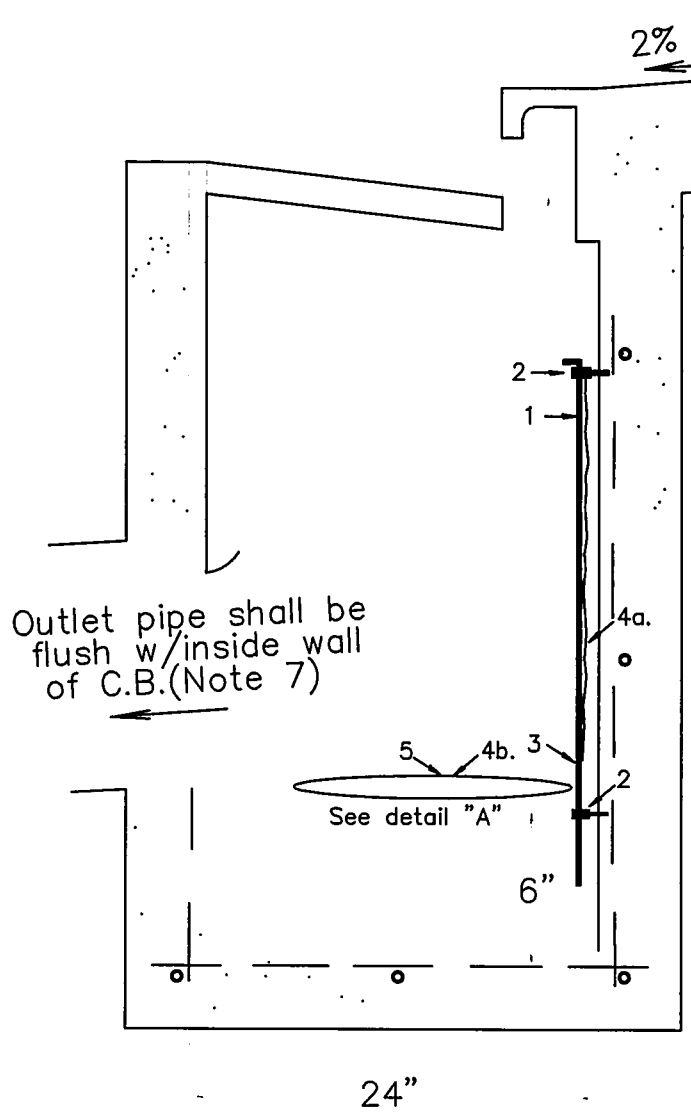


SEC. "B–B"

SEE DETAIL ON SHEET 25.1

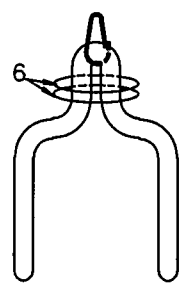
NO	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION		WASHOE
			CATCH BASIN TYPE 4–R	DRAWING NO.	W–12
				DATE	PAGE 25

DETAIL



1. $\frac{3}{8}$" diameter smooth steel rod with 90° 2" bend
2. $\frac{5}{16}$" diameter X 4" Lag Eye Bolt epoxied into catch basin wall opposite of the pipe outlet
3. 2–$\frac{3}{4}$" X $\frac{5}{16}$" Aluminum Snap Ring attached to $\frac{3}{8}$" rod.

4a. $\frac{1}{4}$" Nylon Rope attached to top Log Eye Bolt and Snap Ring.
4b Attach Oil Sock to Snap Ring.
5. Oil Sock (Sorbent Model #L90898 or approved equivalent)
6. Nylon ties



Detail "A"

$\frac{5}{16}$" Aluminum Snap Ring detail

$\frac{5}{16}$" StainlessLag Eye Bolt Detail

4"

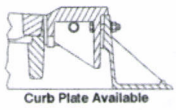
NO. REVISED DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION: WASHOE
	CATCH BASIN TYPE 4–R	DRAWING NO: W–12.1
		DATE: PAGE: 25.1

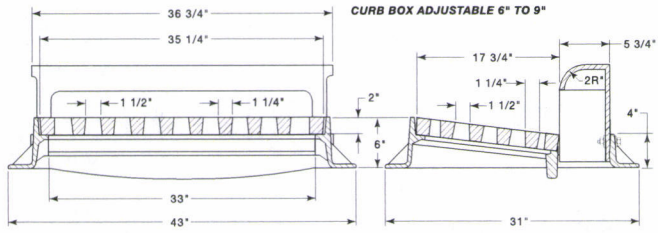
MPA15-003 & RZA15-005
EXHIBIT O-2

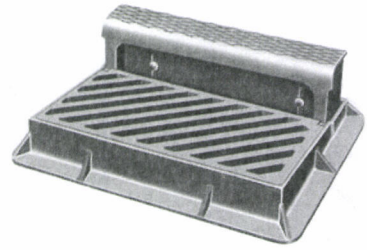
■ Note: When specifying/ordering grates, refer to "Choosing the Proper Inlet Grate" on pages 125-126.
For a complete listing of FREE OPEN AREAS and WEIR PERIMETERS of all NEENAH grates, refer to pages 327-332.

R-3067
Combination Inlet Frame, Grate, Curb Box

Heavy Duty

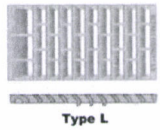


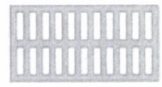




CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-3067	R	2.0	5.8
R-3067	C	1.6	5.8
R-3067	L	2.1	5.8

Standard Grate (shown): Type R-diagonal
Alternate Grate(s):

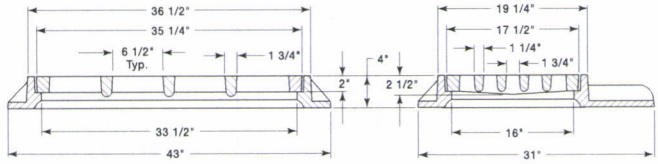


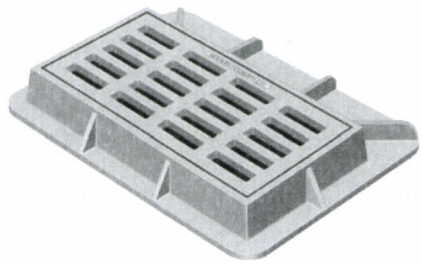


Available Curb Boxes: 2"Radius Open, 3"Radius Open, 6"Radius Open, 10"Radius Open, Mountable/Barred Enviro-Curb Boxes available, see p. 129.
For Double and Triple units, refer to **R-3295-2** and **R-3295-3**.

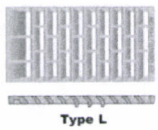
R-3067-C
Combination Inlet Frame, Grate

Heavy Duty





Standard Grate (shown): Type C
Alternate Grate(s):

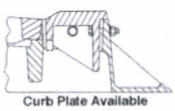


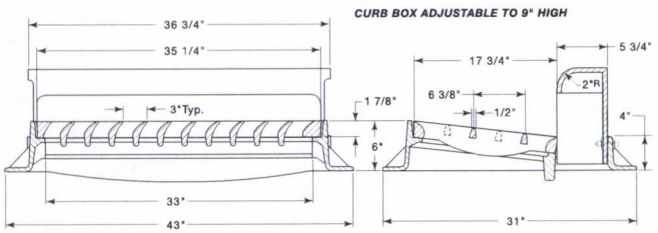
CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-3067-C	C	2.1	8.8
R-3067-C	L	2.1	8.8

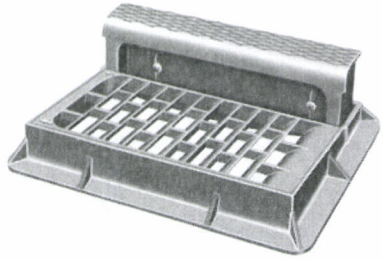
Furnished without curb box for use at driveway locations.

R-3067-L
Combination Inlet Frame, Grate, Curb Box

Heavy Duty







CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-3067-L	L	2.1	5.8

Available Curb Boxes: 2"Radius Open, 3"Radius Open.
Enviro-Curb Boxes available, see p. 129.

Exhibit P

FESIBILITY STUDY UPDATE

FOR

BLACKSTONE ESTATES (LOTS 1-161)

Single Family Residential Development located in the Spanish Springs Planned Area situated in Section 23, Township 21 North, Range 20 East, Washoe County Nevada

APN #534-571-01
350 Calle de la Plata

Prepared for:

Blackstone Development Group
333 N. Wilmot Road, Suite 340
Tucson, AZ 85711
(520) 618-5378

Prepared by:

STAR Consulting
439 W. Plumb Lane
Reno, NV 89509

SUBMITTED:
November 6, 2015

EXECUTIVE SUMMARY

This study evaluates the feasibility of the proposed development with regard to water service, sanitary sewer service and storm water. In August of 2009, Wood Rogers prepared a comprehensive Infrastructure Feasibility Study titled "Village at the Peak". This update is being prepared as part of the Master Plan Amendment and Regulatory Zone Amendment application for Blackstone Estates.

Per section SS 17.2, in order for the Washoe County Planning Commission to recommend approval of any amendment involving a change of land use, the following findings must be made: A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

INTRODUCTION

STAR Consulting has reviewed the Infrastructure Feasibility Study prepared by Wood Rodgers for the project known as "Village at the Peak" previously proposed for the subject property and have found that the study is applicable to the currently proposed single family residential project. The proposed residential project will consist of 161 single family residential homes rather than the mix of industrial, commercial and residential uses originally planned for.

The following items should be updated to reflect the single family residential project:

SANITARY SEWER

Using the Washoe County Department of Water Resources design criteria the revised peak daily flow is as follows:

Land Use:	Acreage:	Unit Count:	Flow per Unit:	Average Daily Flow:
Residential (MDS)	58.6 ac	161	270 gpd	43,470 gpd
Peaking Factor:	3			
Peak Daily Flow:	**130,410 gpd**			

Per the Wood Rogers report, the previously planned uses would generate approximately 139,899 gpd average daily sewerage flow. The single family residential project will generate approximately 130,410 gpd. A gravity system is proposed on-site to drain to an existing sewer line in Donovan Ranch. For an 8" line, the maximum discharge for an 8" line flowing at 0.75 depth is estimated at 684,000 gpd.

RATIO OF FLOW DEPTH

Q(ff)= [0.463 d^(8/3) s^(1/2)] / n
= 1.060 cfs
= 475 gpm

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

Peak Dry Daily Flow	=	43,470 gpd 30 gpm	
Discharge Ratio =		**30/475 =**	**0.06**

The combined discharge for the proposed development combined with the existing approximately 390 lots of Donovan Ranch is approximately 446,310 gpm, below the capacity of an 8" sewer line.

TMWA Water Rights

Project Site: 58.6 +/- acres

Proposed Use: Medium Density Suburban (~2.75 dwelling units per acre)

Calculation:

161 lots at 10,663 SF lot average size
11 acres of common open space
Landscape (estimated) = 2.0 AFY
Per TMWA Rule 7:
Total Residential Water Rights =

1 ÷ (1.1 + (10,000 / Lot Size))
1 ÷ (1.1 + (10,000 / 10,663)) = 0.4907 per unit
0.4907 * 161 lots = 79.00 AFY

79.00 AFY + 2.0 AFY =
81.00 AFY

Total Water Rights if Surface Rights are used:

81.00 AFY * 1.11
89.10 AFY

A 6" water line exists in the southern cul-de-sac of Donovan Ranch north of the subject property. A second water line exists in the Calle de la Plata right-of-way south of the subject property. Connection to both water lines is recommended by TMWA in the Discovery documents.

Storm Water

A Conceptual Drainage Report was prepared for this project, by STAR Consulting, dated 10/14/15 in accordance with the policies and standards of the Truckee Meadows Regional Drainage Manual.

With this analysis it was determined that the required time to drain the proposed detention basins to 10% capacity requires increases to the low-flow outlet pipes. The resulting 5-year peak discharges are slightly greater than the existing conditions 5-year discharges. Adequate capacity exists in the downstream system, and the increased discharges will not create downstream erosion.

STAR Consulting

439 W. Plumb Lane Reno, NV 89509
Phone: (775) 352-4200 Email: erin@starconsultingnv.com

Vehicular access to the project is from Calle de la Plata, approximately one quarter mile east of Pyramid Way, (State Highway 445). Construction of drainage channels along the south side of Calle de la Plata has removed the roadway from the floodplain between the proposed driveway entrance and Pyramid Way.

The FEMA floodplain in the project vicinity crosses the southeast corner of the subject property before crossing to the south of Calle de la Plata. No fill is proposed in the area impacted by the Zone AO floodplain, which indicates potential flooding up to 1 foot deep. Lots in the vicinity of the floodplain will be elevated at least 2 feet above natural ground.

The project will significantly reduce peak discharges immediately downstream of the project in the 100-year storm event, due to detention effects. Small peak discharge increases are necessary during the 5-year event in order to allow the two proposed onsite detention basins to drain in the required time period.

AX15-005 - EXHIBIT E

WASHOE COUNTY COMMISSION

1001 E. 9th Street
P.O. Box 11130
Reno, Nevada 89520
(775) 328-2005

RESOLUTION
ADOPTING AN AMENDMENT TO THE SPANISH SPRINGS REGULATORY ZONE MAP (RZA15-005)

WHEREAS, SP58, LLC and Jacie, LLC applied to the Washoe County Planning Commission to amend the regulatory zone of one parcel (APN: 534-571-01) from a mix of Low Density Suburban (LDS), Open Space (OS), Industrial (I) and Neighborhood Commercial (NC) to Medium Density Suburban (MDS) in the Spanish Springs planning area;

WHEREAS, On December 1, 2015, the Washoe County Planning Commission denied Regulatory Zone Amendment Case No. RZA15-005;

WHEREAS, On December 4, 2015, the applicant appealed the denial to the Board of County Commissioners as Appeal Case No. AX15-005;

WHEREAS, On January 26, 2016, the Board of County Commissioners held a duly noticed public hearing, determined that it had given reasoned consideration in its review of the written materials and oral testimony at the public hearing regarding Appeal Case No. AX15-005 and the proposed Regulatory Zone Amendment Case No. RZA15-005, approved the original request for adoption; and, in connection therewith, made the following findings:

Washoe County Development Code Section 110.821.15

1. Consistency with Master Plan. The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.
2. Compatible Land Uses. The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. Response to Change Conditions; more desirable use. The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.
4. Availability of Facilities. There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed amendment.
5. No Adverse Effects. The proposed amendment will not adversely effect the implementation of the policies and action programs of the Washoe County Master Plan.
6. Desired Pattern of Growth. The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

AND

Spanish Springs Area Plan Findings - Policy SS.17.2 (a part of the Master Plan)

a. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

c. **(NOT APPLICABLE)** ~~For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.~~

d. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.

e. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

g. Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.

h. If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

WHEREAS, This action will become effective after the adoption of Master Plan Amendment Case No. MPA15-003 by the Board of County Commissioners and a subsequent favorable conformance review with the Truckee Meadows Regional Plan;

NOW THEREFORE BE IT RESOLVED,

That this Board of County Commissioners reverses the denial of the Planning Commission and hereby ADOPTS the amendment to the Spanish Springs Regulatory Zone Map (Case No. RZA15-005), as set forth in Exhibit E-1 attached hereto.

ADOPTED this 26th day of January 2016, to be effective only as stated above.

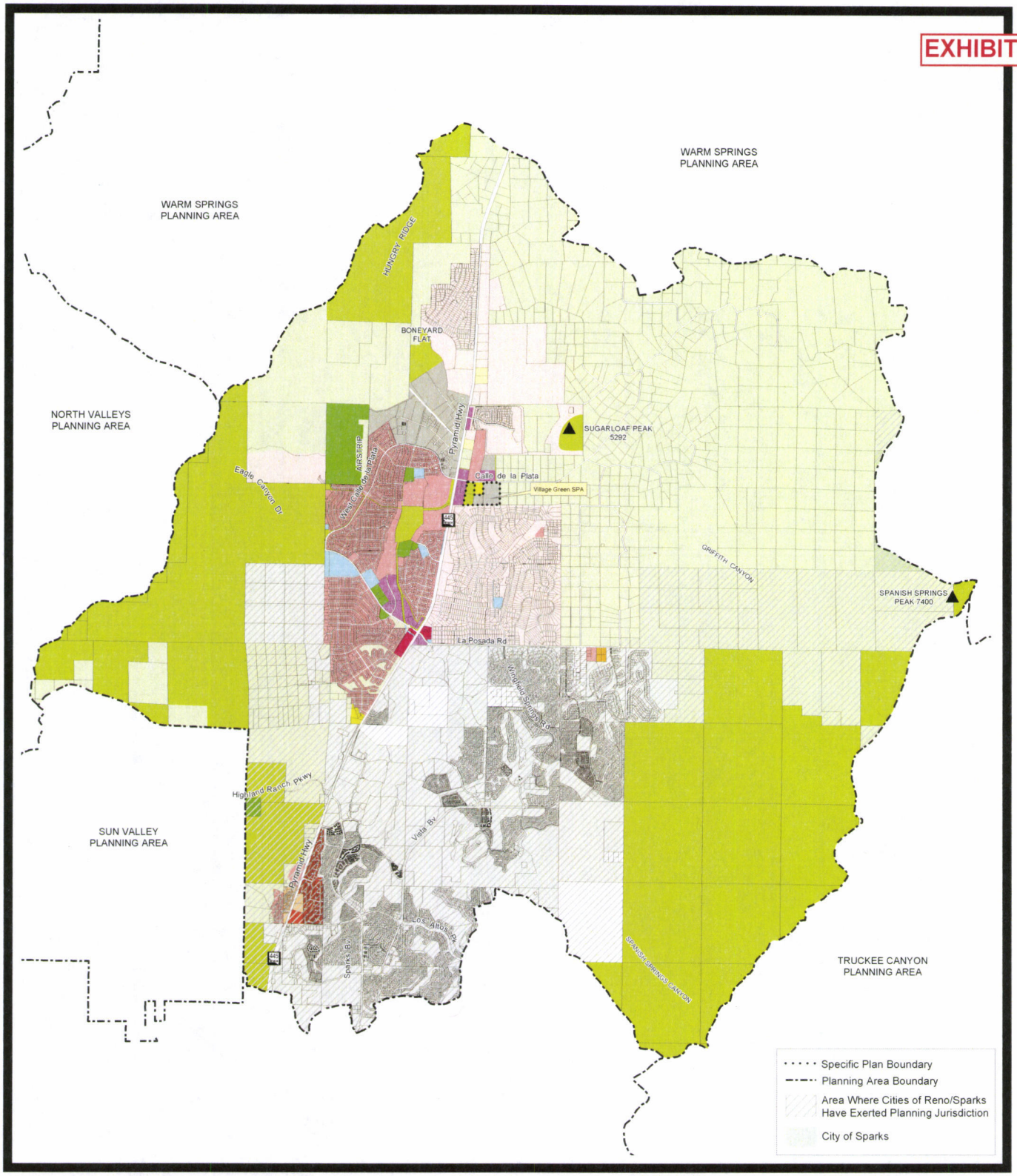
WASHOE COUNTY COMMISSION

_____
Chair

ATTEST:

_____
Nancy Parent, County Clerk

EXHIBIT E-1



SPANISH SPRINGS

REGULATORY ZONE MAP

- LOW DENSITY RURAL
- MEDIUM DENSITY RURAL
- HIGH DENSITY RURAL
- LOW DENSITY SUBURBAN
- LOW DENSITY SUBURBAN 2
- MEDIUM DENSITY SUBURBAN
- MEDIUM DENSITY SUBURBAN 4
- HIGH DENSITY SUBURBAN
- LOW DENSITY URBAN
- MEDIUM DENSITY URBAN
- HIGH DENSITY URBAN
- GENERAL COMMERCIAL
- NEIGHBORHOOD COMMERCIAL/ OFFICE
- TOURIST COMMERCIAL
- INDUSTRIAL
- PUBLIC AND SEMI-PUBLIC FACILITIES
- PARKS AND RECREATION
- OPEN SPACE
- GENERAL RURAL
- GENERAL RURAL AGRICULTURAL
- DRY LAKE/ WATER BODY

Source: Planning and Development Division

PC Date: December 1, 2015
BCC Date: January 26, 2016

NOTE: THE SCALE AND CONFIGURATION OF ALL INFORMATION SHOWN HEREON ARE APPROXIMATE ONLY AND ARE NOT INTENDED AS A GUIDE FOR DESIGN OR SURVEY WORK. REPRODUCTION IS NOT PERMITTED WITHOUT PRIOR WRITTEN PERMISSION FROM THE WASHOE COUNTY PLANNING AND DEVELOPMENT DIVISION

G:\arcdata\planareas\ssRegzone_finalhist\RZA15-007.mxd

0 1,500 3,000 6,000 Feet

CERTIFICATION:
THIS DOCUMENT HAS BEEN REVIEWED AND APPROVED AS AN ACCURATE REPRESENTATION OF THE ADOPTED ZONING MAPS OF WASHOE COUNTY, NEVADA, BY THE WASHOE COUNTY PLANNING AND DEVELOPMENT DIVISION.

DATE_____ DIRECTOR_____

Community Services Department

WASHOE COUNTY
NEVADA

Post Office Box 11130
Reno, Nevada 89520

(775) 328-3600

Appeal Case No. AX15-005

for

Master Plan Amendment MPA15-003 &
Regulatory Zone Amendment RZA15-005

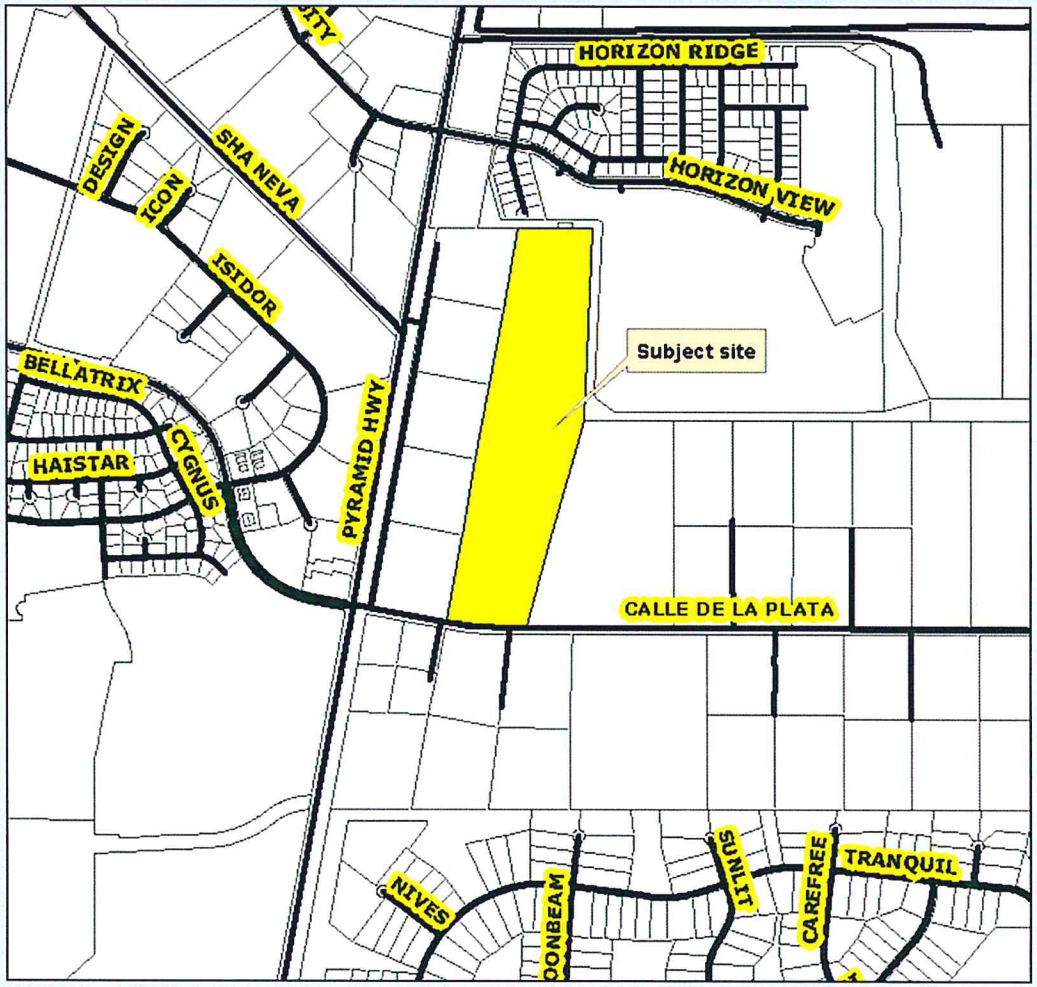
BLACKSTONE ESTATES

Vicinity Map

North side of Calle de la Plata

650 feet east of Pyramid Hwy

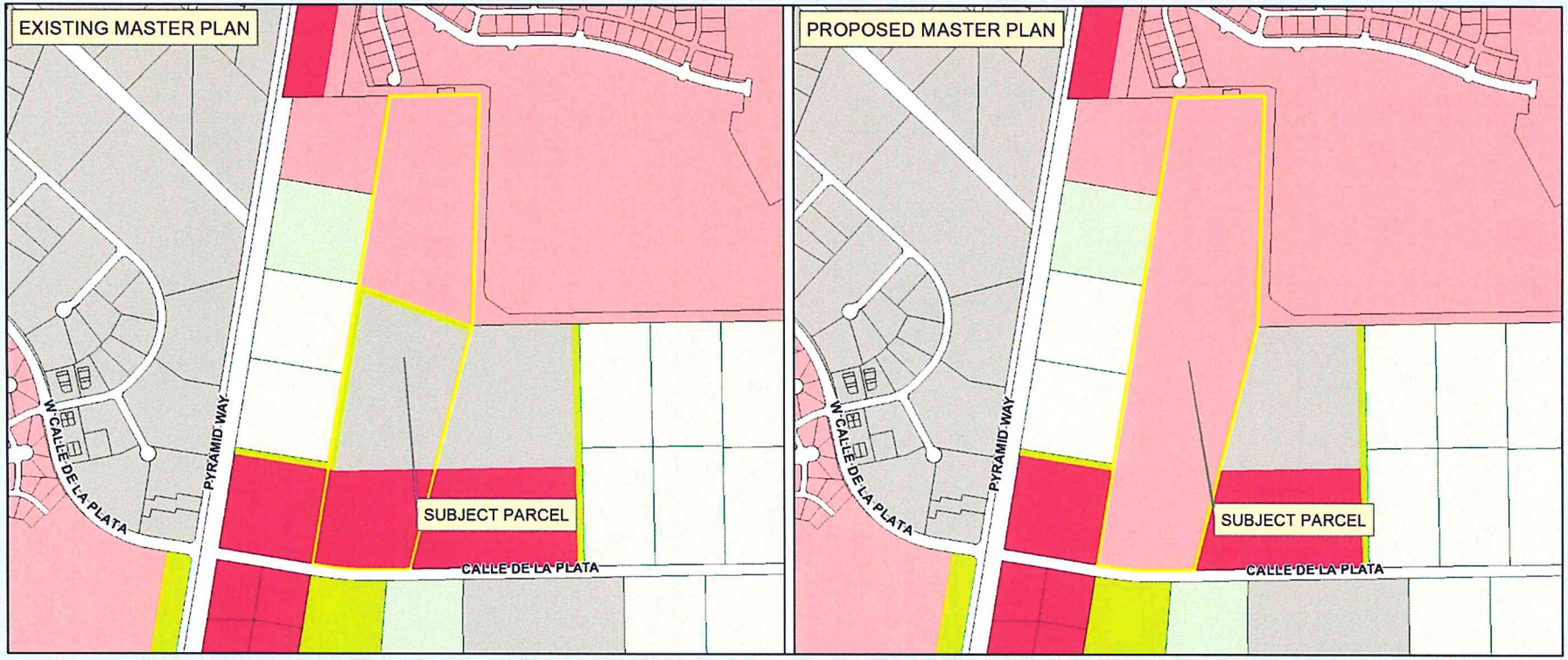
APN: 534-571-01



Master Plan Amendment Request

- **Change 58.49-acre parcel from mix of:**
  - Suburban Residential
  - Industrial
  - Commercial
- **To:**
  - Suburban Residential

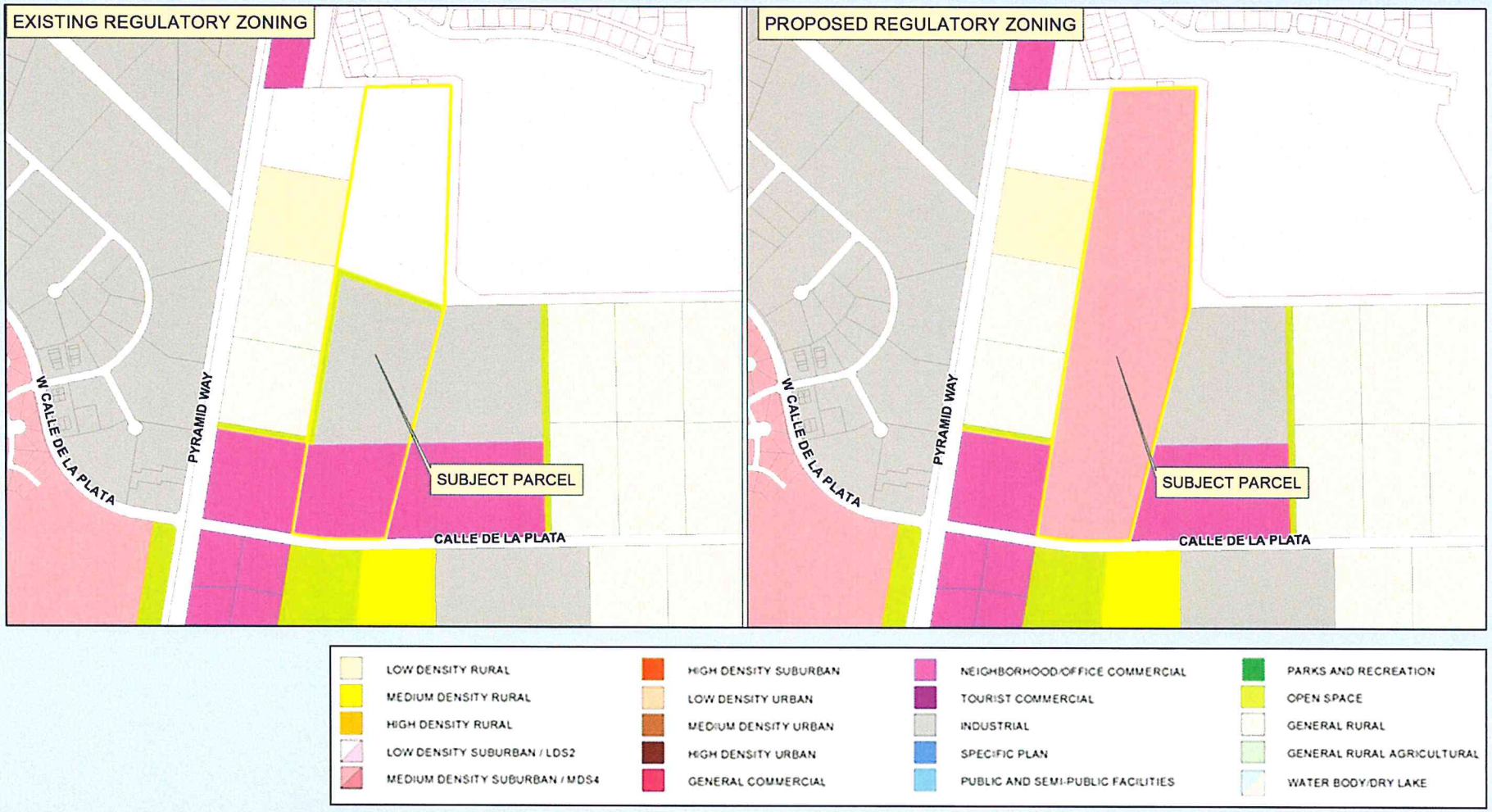
Existing/Proposed Master Plan



Regulatory Zone Amendment

- **Change from mix of:**
  - Low Density Suburban (24.9 ac.)
  - Industrial (19.5 ac.)
  - Neighborhood Commercial (11.7 ac.)
  - Open Space (buffer strip only)
- **To:**
  - Medium Density Suburban (58.49 ac.)

Existing/Proposed Regulatory Zones



Summary of Request

- Approval of request would allow up to three dwelling units per acre
- ± 58.49-acres
- Potential for up to 175 dwelling units

Planning Commission Hearing

- **Public testimony & discussion**
- **Questions/concerns:**
  - Traffic
  - Water/sewer services
  - School capacity
  - Character Statement
  - Rights of livestock owners
  - Fire service availability
- **Full details in minutes (Exhibit C)**

Planning Commission Action

- **Motion to approve failed (2 for; 5 opposed)**
- **Unable to make findings for:**
  - Health, safety, welfare
  - Preserving/enhancing Spanish Springs Vision & Character Statement

County Commission Options

1. **Confirm denial of either or both cases**
2. **Reverse denial of both cases**
   - Remand MPA back for report
   - Send RZA back with instructions
3. **Reverse denial of both cases**
   - Remand MPA back for report
   - Approve RZA, subject to MPA approval

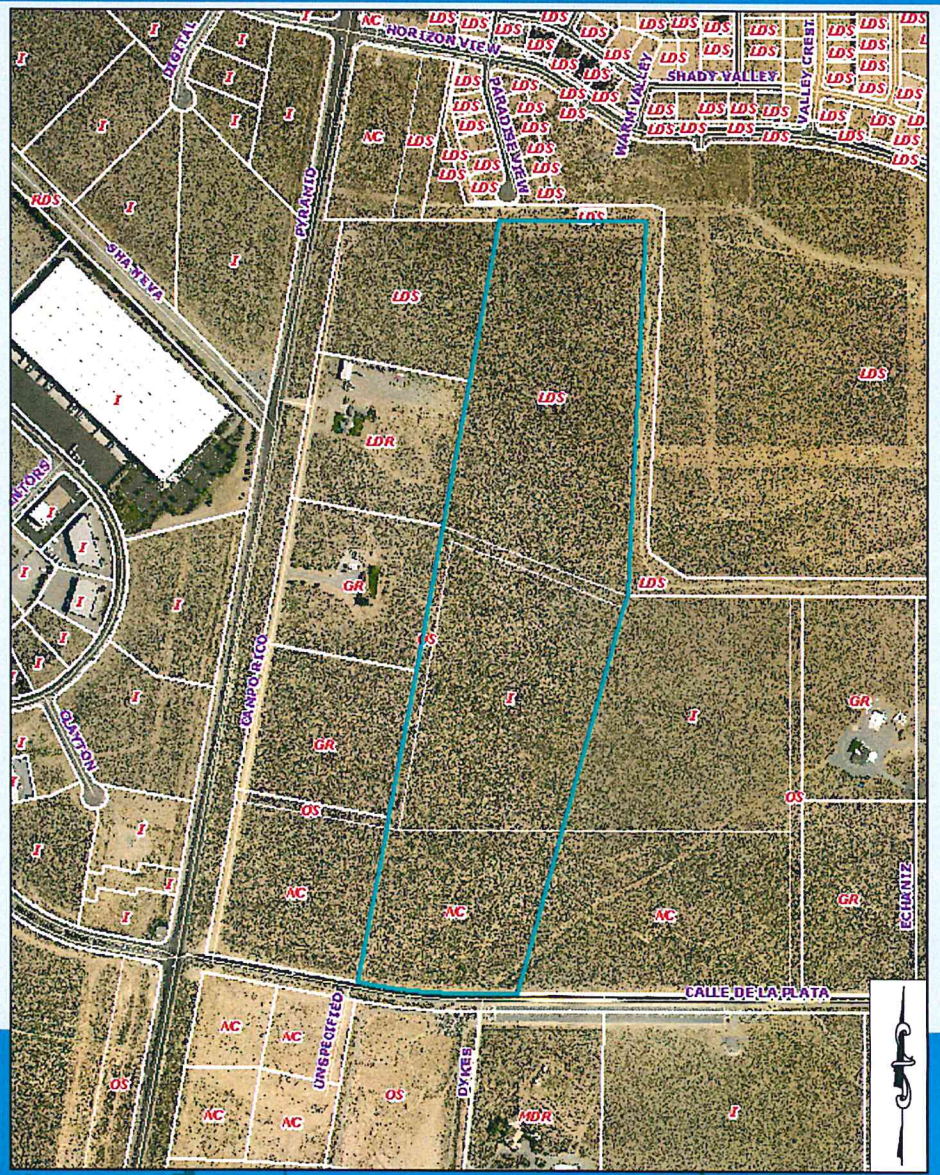
MPA = Master Plan Amendment
RZA = Regulatory Zone Amendment

ADDITIONAL DETAILS …

Compatibility

North/northeast: Donovan Ranch Subdivision – Density of one per acre, but dwellings on approx. 1/3 acre lots

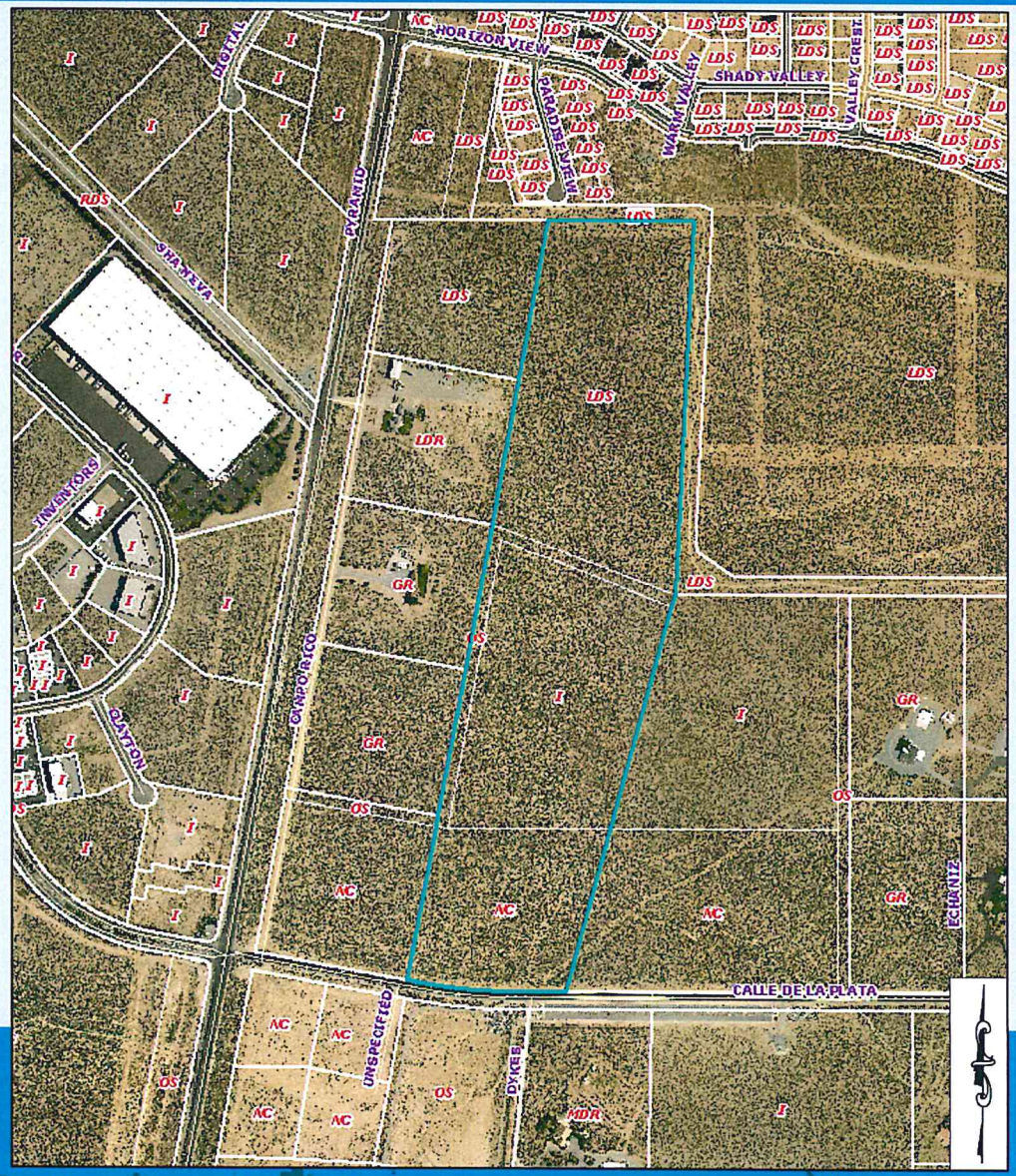
West: Mainly undeveloped 10 acre properties – Low Density Suburban, Low Density Rural, General Rural and Neighborhood Commercial



Compatibility

East: Similar request on today's agenda

South: Calle de la Plata



Change of Conditions

- Development of Common Open Space subdivision to the north and northeast
- Demand for single-family dwellings increasing after economic down-turn
- Growth anticipated within Spanish Springs Suburban Character Management Area

Desired Pattern of Growth

- Growth is anticipated within the Spanish Springs Suburban Character Management Area (SCMA)
- SCMA is designated growth area
- Subject site is within SCMA

Character Statement

"A distinct suburban core is, and will continue to be, concentrated along Pyramid Highway. This suburban core includes a broad mix of non-residential uses together with residential densities of up to three dwelling units per acre. These suburban land uses are located predominately, but not exclusively, on the west side of Pyramid Highway. Outside the suburban core, a transition to a more rural character occurs. This transition occurs most rapidly in the west as elevation increases along the western slopes of the Spanish Springs Valley. To the north and east, the transition to rural stretches out into the valley and includes lower density, suburban residential opportunities (one- to five-acre parcels). The area outside the suburban core and transition area is predominately of a rural character with rural residential densities (five plus acre parcels) and agricultural land uses. Aggregate mining is a significant component of the local landscape and is found in both the suburban and rural areas. To the south is the heavily suburbanized northern portion of the City of Sparks.

"The suburban core, together with the transition zone, will be known as the Suburban Character Management Area (SCMA). This area will contain all commercial land use designations and residential densities greater than one unit per ten acres. The Suburban Character Management Area will be the designated growth area in the Spanish Springs Valley."

Character Statement

- Doesn't prohibit densities of three dwellings per acre on east side of Pyramid
- Accounts for densities of up to three dwellings per acre in Suburban Character Management Area

Services and Facilities – Water/Sewer

- Any future development to be served by community water (TMWA) & sewer (Washoe County)
- Improvements to connect to existing systems responsibility of the developer
- Applicant must purchase appropriate water rights
- Adequate sewer capacity available to be served by Truckee Meadows Water Reclamation Facility (TMWRF)

Services and Facilities – Schools/Traffic

- Area schools: full or nearly full; students from new development may be bussed to nearest school with capacity
- Traffic projected for proposed residential zoning less than traffic projected for existing zoning
- Improvements to Calle de la Plata/Pyramid required at time of development

Master Plan Consistency

- Proposed changes evaluated against the Goals and Policies of the Master Plan
- Pages 16-18 of Planning Commission staff report
- Staff considered proposal consistent with Master Plan

Spanish Springs Area Plan Consistency

- Proposed changes evaluated against Spanish Springs Area Plan Policies
- Pages 18-20 & 25-30 of Planning Commission staff report
- Staff considered proposal consistent with all applicable policies of the Area Plan, including Land Use, Transportation and Plan Maintenance

Development Suitability

- A small portion of the southeast corner of property may be within flood zone
- Development of the site will be required to mitigate that hazard
- Property otherwise considered not constrained

Neighborhood Meeting

- Proposal discussed at October 14, 2015 neighborhood meeting
- Proper notice was provided
- 16 residents attended

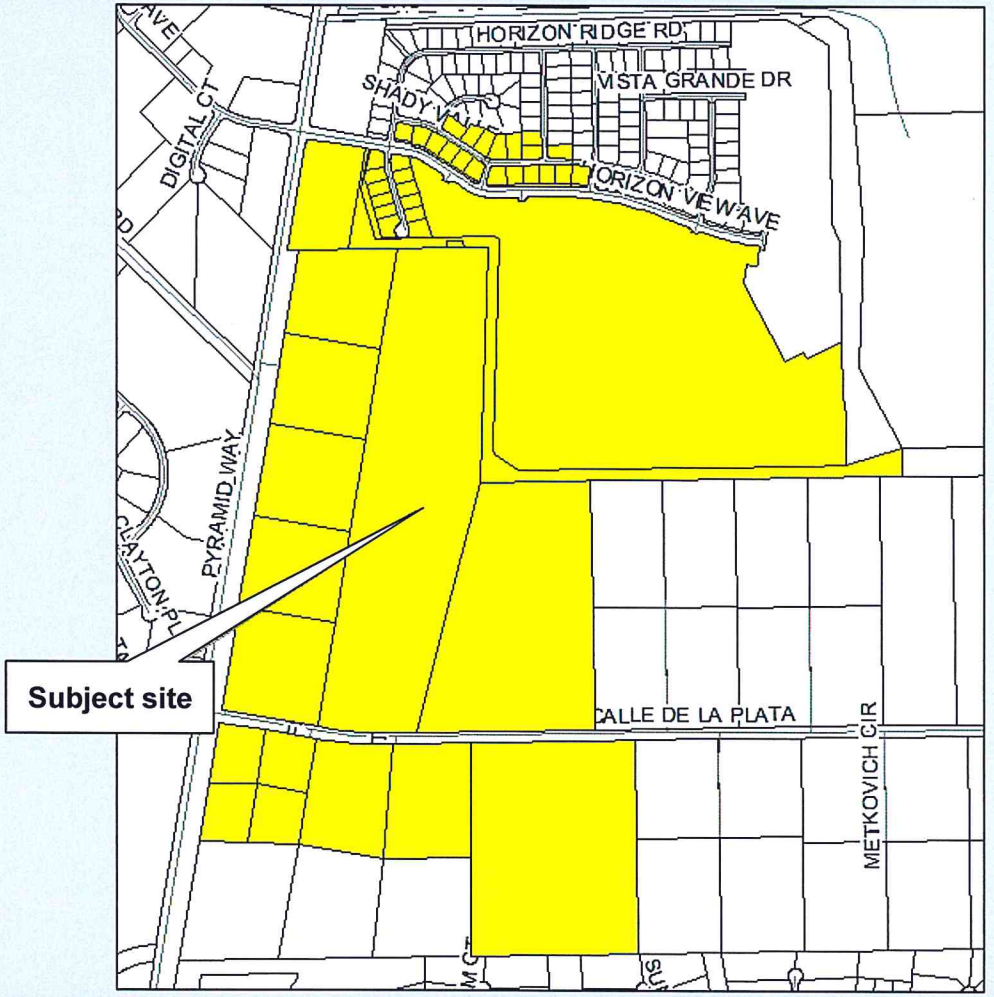
Neighborhood Meeting

- **Concerns expressed by those in attendance included:**
  - Traffic impacts
  - Well impacts
  - Spanish Springs Area Plan Character Statement
  - Compatibility with adjacent uses
- **Other comments from public summarized on p. 21 of Planning Commission staff report**

Public Notice

40 property owners of 55 parcels within 750 feet of property received notice

Legal notice also in RG-J Nov. 20 and Jan. 15 editions



Reviewing Agencies

- **Nevada Department of Transportation**
- **Regional Transportation Commission**
- **Washoe County School District**
- **Truckee Meadows Fire Protection District**
- **Washoe-Storey Conservation District**
- **Nevada Division of Water Resources**
- **Washoe County**
  - Engineering and Capital Projects
  - Parks & Open Space
  - Health District

- **No recommendations for denial**

Master Plan Amendment Findings

1. **Consistency with Master Plan.** The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan.
2. **Compatible Land Uses.** The proposed amendment will not result in land uses which are incompatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. **Response to Change Conditions.** The proposed amendment identifies and responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.

Master Plan Amendment Findings

4. **Availability of Facilities.** There are or are planned to be adequate transportation, recreation, utility and other facilities to accommodate the uses and densities permitted by the proposed amendment.

5. **Desired Pattern of Growth.** The proposed amendment promotes the desired pattern for the orderly physical growth of the County and guides the development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Master Plan Amendment Findings

Spanish Springs Area Plan Findings

Policy SS.17.1 In order for the Washoe County Planning Commission to recommend the approval of ANY amendment to the Spanish Springs Area Plan the following findings must be made:

a. The amendment will further implement and preserve the Vision and Character Statement.

b. The amendment conforms to all applicable policies of the Spanish Springs Area Plan and the Washoe County Master Plan.

c. The amendment will not conflict with the public's health, safety or welfare.

Regulatory Zone Amendment Findings

1. **Consistency with Master Plan.** The proposed amendment is in substantial compliance with the policies and action programs of the Master Plan and the Regulatory Zone Map.
2. **Compatible Land Uses.** The proposed amendment will provide for land uses compatible with (existing or planned) adjacent land uses, and will not adversely impact the public health, safety or welfare.
3. **Response to Change Conditions; More Desirable Use.** The proposed amendment responds to changed conditions or further studies that have occurred since the plan was adopted by the Board of County Commissioners, and the requested amendment represents a more desirable utilization of land.

Regulatory Zone Amendment Findings

4. **Availability of Facilities.** There are or are planned to be adequate transportation, recreation, utility, and other facilities to accommodate the uses and densities permitted by the proposed amendment.
5. **No Adverse Effects.** The proposed amendment will not adversely affect the implementation of the policies and action programs of the Washoe County Master Plan.
6. **Desired Pattern of Growth.** The proposed amendment will promote the desired pattern for the orderly physical growth of the County and guides development of the County based on the projected population growth with the least amount of natural resource impairment and the efficient expenditure of funds for public services.

Regulatory Zone Amendment Findings

Spanish Springs Area Plan Findings

Policy SS.17.2 In order for the Washoe County Planning Commission to recommend approval of any amendment involving a change of land use, the following findings must be made:

a. A feasibility study has been conducted, commissioned and paid for by the applicant, relative to municipal water, sewer and storm water that clearly identifies the improvements likely to be required to support the intensification, and those improvements have been determined to be in substantial compliance with all applicable existing facilities and resource plans for Spanish Springs by the Department of Water Resources. The Department of Water Resources will establish and maintain the standards and methodologies for these feasibility studies.

Regulatory Zone Amendment Findings

Spanish Springs Area Plan Findings (continued)

b. A traffic analysis has been conducted that clearly identifies the impact to the adopted level of service within the [unincorporated] Spanish Springs Hydrographic Basin and the improvements likely to be required to maintain/achieve the adopted level of service. This finding may be waived by the Department of Public Works for projects that are determined to have minimal impacts. The Department of Public Works may request any information it deems necessary to make this determination.

c. For commercial and industrial land use intensifications, the overall percentage of commercial and industrial regulatory zone acreage will not exceed 9.86 percent of the Suburban Character Management Area.

Regulatory Zone Amendment Findings

Spanish Springs Area Plan Findings (continued)

d. For residential land use intensifications, the potential increase in residential units will not exceed Washoe County's policy growth level for the Spanish Springs Area Plan, as established in Policy SS.1.2.

e. If the proposed intensification will result in a drop below the established policy level of service for transportation (as established by the Regional Transportation Commission and Washoe County) within the Spanish Springs Hydrographic Basin, the necessary improvements required to maintain the established level of service are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification. For impacts to regional roads, this finding may be waived by the Washoe County Planning Commission upon written request from the Regional Transportation Commission.

Regulatory Zone Amendment Findings

Spanish Springs Area Plan Findings (continued)

f. If roadways impacted by the proposed intensification are currently operating below adopted levels of service, the intensification will not require infrastructure improvements beyond those articulated in Washoe County and Regional transportation plans AND the necessary improvements are scheduled in either the Washoe County Capital Improvements Program or Regional Transportation Improvement Program within three years of approval of the intensification.

g. Washoe County will work to ensure that the long range plans of facilities providers for transportation, water resources, schools and parks reflect the policy growth level established in Policy SS.1.2.

Regulatory Zone Amendment Findings

Spanish Springs Area Plan Findings (continued)

h. If the proposed intensification results in existing facilities exceeding design capacity and compromises the Washoe County School District's ability to implement the neighborhood school philosophy for elementary facilities, then there must be a current capital improvement plan or rezoning plan in place that would enable the District to absorb the additional enrollment. This finding may be waived by the Washoe County Planning Commission upon request of the Washoe County Board of Trustees.

i. Any existing development in the Spanish Springs planning area, the Sun Valley planning area, the Warm Springs planning area, or the City of Sparks, which is subject to the conditions of a special use permit will not experience undue hardship in the ability to continue to comply with the conditions of the special use permit or otherwise to continue operation of its permitted activities.

Planning Commission Action

- **Motion to approve failed (2 for; 5 opposed)**
- **Unable to make findings for:**
  - Health, safety, welfare
  - Preserving/enhancing Spanish Springs Vision & Character Statement

County Commission Options

1. **Confirm denial of either or both cases**
2. **Reverse denial of both cases**
   - Remand MPA back for report
   - Send RZA back with instructions
3. **Reverse denial of both cases**
   - Remand MPA back for report
   - Approve RZA, subject to MPA approval

MPA = Master Plan Amendment
RZA = Regulatory Zone Amendment

Questions?