

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This section describes the environmental consequences that would result from the Proposed Action and alternatives, and whether any of those consequences would be “significant” as defined by the NEPA regulations. The analysis presented in this section has been prepared in accordance with CEQ’s NEPA Regulations, Section 1502.16 and the BIA’s NEPA Handbook. The direct environmental effects of each alternative are provided under the resource headings used in **Section 3.0** and listed below. This section also provides analysis of growth-inducing, cumulative, indirect, and unavoidable adverse effects.

Section	Resource Area/Issue
4.2	Land Resources
4.3	Water Resources
4.4	Air Quality
4.5	Biological Resources
4.6	Cultural and Paleontological Resources
4.7	Socioeconomic Conditions and Environmental Justice
4.8	Resource Use Patterns
4.9	Public Services
4.10	Other Values
4.11	Cumulative
4.12	Indirect Effects
4.13	Growth-Inducing Effects

4.1.1 DETERMINATION OF SIGNIFICANCE

Specific significance criteria for each issue area are identified in Draft EIS Section 3.0. CEQ Regulations for Implementing NEPA (40 CFR 1508.27) define significance of effects in terms of context and intensity, as indicated below.

- (a) *Context.* This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected

interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) *Intensity*. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

- (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
- (2) The degree to which the proposed action affects public health or safety.
- (3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
- (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- (5) The degree to which the possible effects on the human environment is highly uncertain or involves unique or unknown risks.
- (6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- (7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- (8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- (9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- (10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Significance criteria are more precisely defined in standard practices, environmental compliance criteria, or the statutes or ordinances of the jurisdictional entities. Thus, the BIA's determination of significance of impacts is accomplished with the assistance of governmental entities that have jurisdiction or special expertise for each resource. While some other entities or consultants may also possess special expertise for assessing impacts to key resources, the BIA is particularly

interested in the unique aspects of special expertise offered by the governmental entities in the locality of the occurrence of impacts. For example, Caltrans has unique expertise regarding transportation that an outside consultant would not have without consultation directly with Caltrans, as the BIA has done for this Draft EIS. Further, the BIA uses the standard practices and criteria already established by those entities prior to the preparation of this Draft EIS.

4.1.2 JURISDICTION AND SPECIAL EXPERTISE

Consistent with 40 CFR 1508.27, above, the BIA identified several parties having jurisdiction and/or special expertise regarding the proposed Ione project. These entities have the role of assisting BIA in the determination of significant impacts for the alternatives for areas within their jurisdiction and/or area of special expertise. These agencies have either agreed to serve as NEPA cooperating agencies, to comment on the Administrative Draft EIS or to otherwise provide consultation in the analysis process. These agencies, which have assisted in developing appropriate measures of significance for potential impacts within their areas of jurisdiction or expertise, are identified in **Section 1.3** of this Draft EIS.

4.2 LAND RESOURCES

The section addresses the potential environmental impacts to land resources discussed in **Section 3.2** as a result of the implementation of each proposed project alternative, including each phase where applicable. An impact analysis using the methodology below is provided for each alternative. Indirect and/or cumulative impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to avoid, minimize, or mitigate potential adverse effects are discussed in **Section 5.2.2**.

4.2.1 METHODOLOGY

For land resources, each alternative, including each phase when applicable, is analyzed to determine if construction or operation would result in direct adverse impacts to the proposed site topography, soils, or mineral resources; or if geological hazards associated with the existing setting would pose limitations to the development of each alternative.

4.2.2 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

TOPOGRAPHY

Phase I

Phase I of Alternative A would entail clearing and grading to accommodate the construction of the casino complex on Parcels #3 through #11, including the development of access roads, parking lots, the fire station, water and wastewater treatment plants, and water and wastewater storage tanks as described in **Section 2.2.1** of the Draft EIS. The layouts of building foundations and roadways have been designed to take advantage of the existing topographical features discussed in **Section 3.2** and minimize effects to and from topographic features, where possible. A preliminary grading report has been developed for Alternative A and is included in **Appendix P** of the Draft EIS. As discussed within the grading report, construction of the casino complex and associated components during Phase I will require minimal grading as a result of project design. Phase I will include all grading necessary for full –build-out of Alternative A. On-site grading would result in the excavation of approximately 326,000 cubic yards, more than meeting fill requirement of approximately 248,000 cubic yards to level out building and roadway pads. This would result in the need to export a total of approximately 78,000 cubic yards. Earthmoving activities would result in the leveling of minor slopes on-site; however, steep slopes associated with the topographical character of the area would be maintained. The main topographic features, such as the moderately sloping hills in the southwest portion of the site and the steeper slopes of the southeast, would be slightly modified; however, the overall topographical character of the project site would be preserved. The northwestern portion of the site was selected for the footprint of the development, as this portion has little relief, slightly sloping down in elevation from the area planned for the WWTP to the area planned for the detention basin. Phase I would entail the majority of earthwork required for the full development of Alternative A.

Phase I would include the construction of a 37.4 acre-foot reservoir if wastewater disposal Option 1 were selected as described in **Section 2.2.1**. The reservoir will take advantage of a steep walled canyon associated with an intermittent stream for the body of the storage capacity. A 75-foot tall, 25-40 foot wide earthen dam will be built to span a distance of 50 feet across the canyon. The earthen dam will require approximately 48,000 cubic yards of the fill from the project site.

While some cut and fill slopes would be required to ensure development of safe building envelopes, project design ensures that the major topographic features (i.e., hills and slopes) would be preserved. Furthermore, project design has avoided placing building structures on or adjacent to steep slopes, preventing associated impacts. Development of Phase I of Alternative A, even with the inclusion of wastewater disposal Option 1 earthwork, would result in a less-than-significant effect associated with on-site topography.

Phase II

Phase II of Alternative A would consist of the construction of the hotel and event center, Atop the southern portion of the western half of the parking lot constructed during Phase I as depicted in **Figure 2-6**. No grading or import/export of fill would be required, as the topography would have already been modified for the construction of the parking lot during Phase I. Expansion of the eastern section of the parking lot to accommodate additional patrons would include extending the eastern half of the parking lot approximately 300 feet to the south. The area would have previously been graded during Phase I and would only require the clearing of re-established vegetation prior to construction. Phase II would result in minimal earth-moving activities, consisting solely of vegetation removal and minor leveling. Development of Phase II of Alternative A, and subsequently full build-out of Alternative A, would result in less-than-significant effects associated with on-site topography.

SOILS

Phase I

Construction

Construction during Phase I of Alternative A would consist of physically disturbing soils on the project site to construct the pads for corresponding components (casino complex, roadways, etc.). Soils would be excavated and stockpiled on-site for use as fill, with the remaining soil transported off-site. Mechanical disturbance of soils from construction activities can increase both the potential and rate of erosion from either wind or rain by reducing soil surface tension and compaction. Additionally, stockpiled soils would be subjected to natural elements, increasing the potential for erosion and loss of topsoil. Construction activities could result in a significant impact to soils.

Because earthmoving activities would involve the disturbance of greater than five acres of land surface, the Tribe must comply with the National Pollution Distribution Elimination System (NPDES) permitting process for construction activities. A component of the Federal Clean Water Act, the NPDES permitting process is a project requirement designed to reduce, eliminate, and/or prevent the potential for soil erosion during construction activities. In the State of California, the United States Environmental Protection Agency (USEPA) has jurisdiction of the NPDES permitting process over Tribal lands. Required through the NPDES permitting process, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared by the Tribe to address water quality impacts associated with construction of the project. The SWPPP would identify best management practices (BMPs) and the location of erosion control features recommended to direct and filter stormwater runoff during construction. A list of erosion control construction measures that would be provided as mitigation is provided in **Section 5.2.2**. The SWPPP will also specify stormwater pollution prevention measures, including construction details, compliance standards, procedural requirements, regulatory compliance requirements, and implementation timeframe requirements. With the implementation of the provisions outlined within the SWPPP that would be prepared for Alternative A, erosion would be minimized, resulting in a less-than-significant impact on soils.

Operation

The operation of Phase I of Alternative A could adversely impact soils if constructed impervious surfaces cause runoff to increase at such a rate that the potential for soil erosion increases over pre-existing conditions. These impacts were taken into account during project designs and would be reduced by landscape architecture and the implementation of the drainage plan. Landscaping of disturbed areas will mitigate long-term effects to erosion by covering and stabilizing the soil surface with plants and mulch, while the drainage plan incorporates features to reduce run-off flows to pre-existing rates. The drainage plan and mitigating factors are discussed in more detail in **Section 4.3**.

The SWPPP prepared for construction of Phase I would also identify the locations of permanent erosion control features that would be installed as a component of project design, such as the proposed sediment/grease trap and detention basin. The SWPPP would be implemented during the construction and operation of the project, to assure that, in conjunction with project design and the drainage plan, adverse effects resulting from the increase in impervious surfaces on the site would be reduced to a less-than-significant level.

Phase II

Construction

Impacts associated with construction of Phase II would be similar compared to those described under Phase I. However, no major grading would be necessary for the construction of the hotel/event center and expansion of the parking lot. The parking lot where the hotel is situated would be removed, exposing underlain soils to the natural elements and resulting in the potential for erosion and loss of topsoil. The extension of the parking lot, although graded during Phase I, would require clearing of vegetation that re-established between Phases I and II. Removal of vegetation from soils decreases soil stability and increases the potential for erosion from wind and water. According to NPDES permitting regulations, all components of a project must be covered under a single SWPPP, if those components are part of a larger development. Therefore, when the SWPPP is developed under Phase I, it will include provisions such as BMPs that will be implemented during the construction of Phase II. With the same requirements for Phase II as Phase I to reduce potential erosion issues in compliance with the NPDES permitting process, construction of Phase II of Alternative A would result in less-than-significant impacts to soils.

Operation

Operation of Phase II would introduce additional impervious surfaces through the expansion of the parking lot. As discussed in **Section 2.2.1**, the drainage plan would be implemented during Phase I and site improvements to reduce run off rates would include Phase II development. Therefore, when Phase II construction is completed, operation of the hotel/event center and extended parking lot would not result in increased off-site run off rates. Implementation of Phase II, and subsequently full build-out of Alternative A, would have a less-than-significant impact on soils.

SEISMICITY

Seismic hazards associated with the project site consist primarily of ground shaking as no known fault traces are mapped at the project site. The project site is not located within an Alquist-Priolo Zone. The project site could be subjected to mild ground shaking in the event of a major earthquake along the Bear Mountains Fault Zone or the Melones fault trace, as mentioned in **Section 3.2.4**.

Phase I

Buildings and structures constructed during Phase I of Alternative A could potentially experience mild ground shaking in accordance with anticipated seismic events in the region. As discussed in **Section 3.2**, the maximum anticipated intensity value for seismic activity in the region is rated VI to VII on the MMI scale. Occupants would feel seismic activity at this rating; however, damage would be negligible in buildings of good design (Bolt, 1988). As discussed in **Section 2.2.1**, all buildings constructed during Phase I will be designed and constructed to meet the Uniform Building Code (UBC), including Division IV, which covers earthquake design. The UBC

includes provisions to safeguard against major structural failures and loss of life. In this regard, the UBC design requirements include seismically induced characterization and near-source attenuation effects. Use of the UBC provides that ground shaking-related hazards be managed from a geologic, geotechnical, and structural standpoint such that risks to the health or safety of workers or members of the public are minimized. Implementation of Phase I of Alternative A would result in a less-than-significant impact related to seismic ground shaking associated with anticipated seismic events in the region.

Other hazards associated with seismic ground shaking include soil liquefaction and subsidence. The project site is in an area of very low liquefaction potential due to the dense nature of the underlying granitic rocks and low clay content of project soils (**Appendix E**). Typically, for a site to experience liquefaction, the site must contain high soil clay content in an area with a minimum MMI rating of VIII or higher. As discussed in **Section 3.2**, a mineshaft is located on the eastern border of the project site, which can be subject to subsidence during strong seismic shaking events. However, the mineshaft was filled with debris and capped to prevent physical hazards (**Appendix K**). This reduces the likelihood of land subsidence. The potential for liquefaction of the project site and subsidence of soils adjacent to the abandoned and filled mineshaft would be considered a less-than-significant impact for development of Phase I of Alternative A.

Wastewater Disposal Option 1

Phase I of Alternative A may include the construction of a 37.4-acre foot reclaimed water reservoir contained by a 75-foot tall earthen dam if wastewater disposal Option 1 is selected for development, as discussed in **Section 2.2.1**. The earthen dam would be subject to review under the BIA Safety of Dams Program to ensure that dam design is structurally sound. The BIA will review the final reservoir design plans in cooperation with the Bureau of Reclamation based on the Bureau of Reclamation standard design guidelines. The program also includes provisions for downstream hazard classification. An inspection of the area within five miles downstream of the proposed reservoir site on Dry Creek indicated that the area was primarily ranchland and open space, with no land uses that would expose structures or residents to flooding associated with dam failure. However, the town of Drytown is approximately 3.5 miles downstream from the proposed reservoir site. While most of the structures in town are elevated approximately 20 feet or more above the top of the channel bank, there are a few residences and a motel and café with a picnic area that are approximately 20 feet or less above the top of the channel bank. The BIA will classify these downstream land uses when final design plans are prepared. Based on the potential for public safety impacts, the dam could be classified as having a low, medium, or high hazard classification. If the dam has a high classification, an Operation and Maintenance Program would be required prior to operation to ensure the safety of people and property downstream.

A geotechnical and geological reconnaissance study was conducted of the proposed dam location (**Appendix E**). The study included six exploratory test pits within the foundation and abutment areas of the dam and laboratory testing of soil/rock samples. A preliminary seismic evaluation of the proposed reservoir site was also conducted. The study concluded that a dam could be designed and constructed to withstand the anticipated seismic conditions at the project site. Recommendations regarding the design and construction of the proposed dam identified within the geotechnical study have been included in **Appendix E**, and incorporated as a mitigation measure in **Section 5.2.2**. With the incorporation of these measures and review by the BIA and Bureau of Reclamation through the BIA's Safety of Dams Program, potential effects of dam failure during seismic events are expected to be less than significant.

Phase II

Phase II would consist of minor development within an area of the project site that would have been previously disturbed during construction of Phase I. Phase II consists of a multi-level structure sensitive to ground shaking during strong seismic events. As discussed above, the anticipated ground shaking intensity levels would result in negligible damage to well constructed buildings. As discussed in **Section 2.2.1**, the hotel/event center would be constructed in accordance with UBC provisions that include seismic fortification. Expansion of the parking lot would not result in additional impacts related to seismic ground shaking during strong seismic events. Therefore, the development of Phase II, resulting in full –build-out of Alternative A, would result in a less-than-significant impact associated with seismic ground shaking.

The potential for other seismic related potential adverse impacts, liquefaction and subsidence, would be the same as that discussed above for Phase I of Alternative A. The soils would have been previously graded and native soils used for fill. Therefore, the soil clay content would remain low on the project site after completion of Phase II and liquefaction potential would remain minimal. The potential for subsidence of the mineshaft would remain minimal after the completion of Phase II, as no development would occur on soils above the filled-in, capped mineshaft. Implementation of Phase II, and the subsequent full build-out of Alternative A, would result in a less-than-significant impact from liquefaction and subsidence.

MINERAL RESOURCES

Phase I

The proposed grading and landform alteration associated with the casino complex and associated structures of Phase I of Alternative A will not adversely affect known or recorded mineral resources, as described in **Section 3.2**. Alteration in the land use will not significantly diminish the potential for extraction of important ores or minerals. While an abandoned mine is located on the project site, it has not been in operation since the 1930s and no economically significant mineral resources are known to exist in the project area. Additionally, Phase I of Alternative A would result in the development of approximately 35-percent of the project site, leaving the

remainder of the area that includes the abandoned/capped mine as open space. Therefore, potential effects to mineral resources during Phase I of Alternative A are considered less than significant.

Phase II

Phase II would result in land disturbance located within an area previously disturbed during development of Phase I. Phase II would not result in the development of lands with known mineral resources. As with Phase I, Phase II would not alter the land use above and adjacent to the abandoned/capped mineshaft. Therefore potential effects to mineral resources during Phase II, and subsequent full build-out of Alternative A, are considered less than significant.

4.2.3 ALTERNATIVE B – REDUCED CASINO WITH HOTEL ALTERNATIVE

TOPOGRAPHY

Phase I

Phase I of Alternative B would entail clearing and grading on Parcels #3 through #11 to accommodate the construction of the reduced casino complex (compared to Alternative A) including the development of access roads, parking lots, the fire station, water and wastewater treatment plants, and water and wastewater storage tanks as described in **Section 2.2.2** of the Draft EIS. As with Alternative A, the layout of Phase I has been designed to take advantage of the existing topographical features to minimize potential effects to and from topographic features, where possible. The preliminary grading plan for Alternative B is included in **Appendix P**. As discussed within the grading report, construction of Phase I will require minimal grading as a result of project design and will include all grading necessary for full –build-out of Alternative B. Grading would consist primarily of leveling the land for the casino and hotel buildings, surface parking, detention basin, and constructing the reservoir dam. On-site grading would result in the excavation of approximately 296,000 cubic yards that would be used to meet the fill requirement of approximately 226,000 cubic yards. This would result in the need to export approximately 70,000 cubic yards. Project design features ensure that the major topographic features (i.e. hills and slopes) would be preserved. Phase I would entail the majority of earthwork required for the full development of Alternative B.

Phase I would include the construction of a 37.4 acre-foot reservoir if wastewater disposal Option 1 were selected. The reservoir will take advantage of a steep walled canyon associated with an intermittent stream for the body of the storage capacity. A 75-foot tall 25-40 foot wide earthen dam will be built to span a distance of 50 feet across the canyon. The earthen dam will require approximately 48,000 cubic yards of the fill from the project site.

While some cut and fill slopes would be required to ensure development safe building envelopes, project design ensures that the major topographic features (i.e., hills and slopes) would be

preserved. Furthermore, project design has avoided placing building structures on or adjacent to steep slopes, preventing associated impacts. Development of Phase I of Alternative B, even with the inclusion of wastewater disposal Option 1 earthwork, would result in a less-than-significant effect associated with on-site topography.

Phase II

Phase II of Alternative B would consist of the construction of the hotel and event center, along with the expansion of the parking lot constructed during Phase I. As depicted in **Figure 2-10**, Phase II consists of constructing the hotel/event center atop the southern portion of the western half of the parking lot constructed during Phase I. No grading or import/export of fill would be required, as the topography would have already been modified for the construction of the parking lot during Phase I. Expansion of the eastern section of the parking lot to accommodate additional patrons would include extending the eastern half of the parking lot approximately 250 feet east and 300 feet to the south. The area would have previously been graded during Phase I, and therefore would only require the clearing of re-established vegetation prior to construction. Phase II would result in minimal earth-moving activities, consisting solely of vegetation removal and minor leveling. Development of Phase II, and subsequently full build-out of Alternative B would result in less-than-significant effects associated with on-site topography.

SOILS

Phase I

Construction

Construction during Phase I of Alternative B would consist of physically disturbing soils on the project site, as discussed under Alternative A. Soils would be excavated and stockpiled on-site for use as fill, with the remaining soil transported off-site. Construction activities could result in a significant impact to soils due to the potential for increased soil erosion. As discussed under Alternative A, the Tribe must comply with the NPDES permitting process for construction activities. A SWPPP would be prepared by the Tribe to address water quality impacts associated with construction of the project, including soil erosion. A detailed list of erosion control construction measures that would be provided as mitigation is provided in **Section 5.2.2**. With the implementation of the provisions outlined within the SWPPP that would be prepared for Alternative B, erosion would be minimized resulting in a less-than-significant impact on soils.

Operation

The operation of Phase I of Alternative B could adversely impact soils due to the increase in impervious surfaces over existing conditions. These impacts were taken into account during project design and would be reduced by landscape architecture and the implementation of the drainage plan. Landscaping of disturbed areas will mitigate long-term effects to erosion by covering and stabilizing the soil surface with plants and mulch, while the drainage plan reduces run-off flows to pre-existing rates. The drainage plan and mitigating factors are discussed in

more detail in **Section 4.3**. The SWPPP would be implemented during the construction and operation of the project, to assure that, in conjunction with project design and the drainage plan, adverse effects resulting from the increase in impervious surfaces on the site are reduced to less-than-significant levels.

Phase II

Construction

Impacts associated with construction of Phase II would be similar compared to those described under Phase I. As with Alternative A, no major grading would be necessary for the construction of the hotel/event center and expansion of the parking lot as proposed under Alternative B. The hotel/event center would be constructed by removing a portion of the parking lot. To accommodate additional patrons, additional parking would be provided by extension of the eastern portion of the parking lot constructed during Phase I. Removal of vegetation from the area that was graded during Phase I for the extension of the parking lot during Phase II would decrease soil stability and increase the potential for erosion. However, Phase II would be covered under the SWPPP developed for construction activities during Phase I. With the same requirements as Phase I, construction of Phase II of Alternative A would result in less-than-significant impacts to soils.

Operation

Operation of Phase II would introduce additional impervious surfaces through the expansion of the parking lot. As discussed in **Section 2.2.2**, the drainage plan would be initiated during Phase I and include provisions to reduce flows from the development of the hotel/event center and extended parking lot. Therefore, when Phase II construction is complete, operation of the hotel/event center and extended parking lot would not result in increased off-site run off rates. Implementation of Phase II, and subsequently full build-out of Alternative B, would have a less-than-significant impact on soils.

SEISMICITY

Seismicity is a regional issue and potential impacts for Alternative B would be the same as those discussed under Alternative A. As stated above, seismic hazards associated with the project site consist primarily of minor ground shaking potentials.

Phase I

As discussed in **Section 2.2.2**, implementation of current design standards in the UBC would ensure that risks of building failure in the event of seismic ground shaking at levels estimated by the California Geological Survey are minimized (CGS, 2007).

Phase I of Alternative B may include the construction of the 31.6-acre foot reclaimed water reservoir contained by a 75-foot tall earthen dam if wastewater disposal Option 1 is selected for

development. Recommendations regarding the design and construction of the proposed dam identified within the geotechnical study have been included as mitigation measures in **Section 5.2.2**. With the incorporation of these measures and review by the BIA and Bureau of Reclamation, through the BIA's Safety of Dams Program, potential effects of dam failure would be less than significant.

As discussed above under Alternative A, the project site is not susceptible to experience liquefaction of the soils during seismic shaking events. Furthermore, the sole remaining mineshaft was filled and capped to prevent the potential for subsidence. Potential for liquefaction and subsidence for Alternative B is less than significant.

Phase II

Phase II would consist of the development of a multi-level hotel that would be more sensitive to ground shaking during strong seismic events. As discussed above, the anticipated ground shaking intensity levels would result in negligible damage to well constructed buildings. As discussed in **Section 2.2.2**, the hotel/event center would be constructed in accordance with UBC provisions including seismic fortifications. Expansion of the parking lot east and south would not result in additional impacts related to seismic ground shaking during strong seismic events. Therefore, the development of Phase II, resulting in full build-out of Alternative B, would result in a less-than-significant impact associated with seismic ground shaking.

The potential for other seismic related potential adverse impacts, liquefaction and subsidence, would be the same as that discussed above for Phase I of Alternative B. The soil clay content will remain low on the project site after completion of Phase II through the use of native soils as fill material. Accordingly, the liquefaction potential during a strong seismic shaking event on the project site would remain minimal. The potential for subsidence of the mineshaft would remain minimal, as discussed above under Alternative A. Implementation of Phase II, and the subsequent full build-out of Alternative B, would result in a less-than-significant impact from liquefaction and subsidence.

MINERAL RESOURCES

Phase I

Alteration in the land use will not significantly diminish the potential for extraction of important ores or minerals. While an abandoned mine is located on the project site, it has not been in operation since the 1930s and no economically significant mineral resources are known to exist in the project area. Additionally, Phase I of Alternative B would result in the development of approximately 30-percent of the project site, leaving the remainder of the area that includes the abandoned/capped mine as open space. Phase I of Alternative B will not adversely impact known or recorded mineral resources, as described in **Section 3.2**.

Phase II

Phase II would not result in the development of lands with known mineral resources, as development would occur within areas previously disturbed during Phase I. Phase II would not alter the land use above and adjacent to the abandoned/capped mineshaft. Therefore potential effects to mineral resources during Phase II, and subsequent full build-out of Alternative B, are considered less than significant.

4.2.4 ALTERNATIVE C – REDUCED CASINO ALTERNATIVE

TOPOGRAPHY

Alternative C would entail clearing and grading on Parcels #3 through #11 to accommodate the construction of the reduced casino complex (compared to Alternative A and Alternative B) including the development of access roads, parking lots, the fire station, water and wastewater treatment plants, and water and wastewater storage tanks as described in **Section 2.2.3** of the Draft EIS. The preliminary grading plan for Alternative C is included in **Appendix P**. Grading would consist primarily of leveling the land for the casino, surface parking, detention basin, and constructing the reservoir dam. On-site grading would result in the excavation of approximately 297,000 cubic yards and the fill of approximately 134,000 cubic yards. This would result in the need to export approximately 163,000 cubic yards. While some cut and fill slopes will be noticeable on the project site, project design ensures that the major topographic features (i.e. hills and slopes) would be preserved. Development of Alternative C would result in a less-than-significant effect on topography.

If wastewater disposal Option 1 were selected for development, Alternative C would include the construction of the 19.3 acre-foot reservoir described in **Section 2.2.1**. The earthen dam will require approximately 40,000 cubic yards of the fill from the project site. The excavated soil from development of the casino site will be used to provide the fill for the reservoir. Construction of the reservoir would have a less-than-significant impact on topography.

SOILS

Construction

Construction of Alternative C would consist of physically disturbing soils on the project site to a lesser degree than discussed under Alternative A. Soils would be excavated and stockpiled on-site for use as fill, with the remaining soil transported off-site. Construction activities could result in a significant impact to soils due to the potential for increased soil erosion. As discussed above, the Tribe must comply with the NPDES permitting process for construction activities. A SWPPP would be prepared by the Tribe to address water quality impacts associated with the construction of the project, including soil erosion. A detailed list of erosion control construction measures that would be provided as mitigation is provided in **Section 5.2.2**. With the implementation of the

provisions outlined within the SWPPP that would be prepared for Alternative C, erosion would be minimized, resulting in a less-than-significant impact on soils.

Operation

The operation of Alternative C could adversely impact soils due to the increase in impervious surfaces over existing conditions. These impacts were taken into account during project design and would be reduced by landscape architecture and the implementation of the drainage plan. The drainage plan and mitigating factors are discussed in more detail in **Section 4.3**. The SWPPP would be implemented during the construction and operation of the project, to assure that, in conjunction with project design and the drainage plan, adverse effects resulting from the increase in impervious surfaces on the site are reduced less-than-significant levels.

SEISMICITY

Seismicity is a regional issue and potential impacts for Alternative C would be the same as those discussed under Alternative A. As stated above, seismic hazards associated with the project site consist primarily of minor ground shaking potentials. As discussed in **Section 2.2.3**, implementation of current design standards in the UBC would ensure that risks of building failure in the event of seismic ground shaking at levels estimated by the California Geological Survey are minimized (CGS, 2007). Implementation of Alternative C would result in a less-than-significant impact associated with seismic ground shaking.

Alternative C includes the construction of a 19.3-acre foot reclaimed water reservoir contained by a 70-foot tall earthen dam. Recommendations regarding the design and construction of the proposed dam identified within the geotechnical study have been included as mitigation measures in **Section 5.2.2**. With the incorporation of these measures and review by the BIA and Bureau of Reclamation through the BIA's Safety of Dams Program, potential effects of dam failure would be less-than-significant.

As discussed above the potential for liquefaction and subsidence is minimal under development footprint of Alternative C. Soils are low in clay and the abandoned mineshaft has been filled and capped to prevent subsidence. With the potential for minor ground shaking and minimal potentials for liquefaction and subsidence, Alternative C would result in a less-than-significant impact regarding seismicity and seismic-related hazards.

MINERAL RESOURCES

Construction under Alternative C would not result in the significant loss of mineral resources. Alterations in the land use will not significantly diminish the extraction of important ores or minerals, as no economically significant mineral resources are known to exist in the project area.

4.2.5 ALTERNATIVE D-RETAIL DEVELOPMENT

TOPOGRAPHY

Alternative D would entail clearing and grading to accommodate the construction of the proposed commercial development including the parking lot, fire station, wastewater and water treatment plants, and water storage tank. The preliminary grading plan for Alternative D is included in **Appendix P**. Grading would consist primarily of leveling the land for the commercial development, surface parking, and detention basin. On-site grading would result in the excavation of approximately 125,000 cubic yards and the fill of approximately 200,000 cubic yards. This would result in the need to import approximately 76,000 cubic yards. While some cut and fill slopes will be noticeable on the project site, project design ensures that the major topographic features (i.e. hills and slopes) would be preserved. Development of Alternative D would result in a less-than-significant effect on topography.

SOILS

Construction

Construction of Alternative D would consist of physically disturbing soils on the project site, but to a lesser degree than discussed under Alternative A. Soils would be excavated and stockpiled on-site for use as fill, with the remaining soil transported off-site. As discussed above, the Tribe must comply with the NPDES permitting process for construction activities and prepare a SWPPP to address water quality impacts associated with construction of the project, including soil erosion. A detailed list of erosion control construction measures that would be provided as mitigation is provided in **Section 5.2.2**. With the implementation of the provisions outlined within the SWPPP that would be prepared for Alternative D, erosion would be minimized resulting in a less-than-significant impact on soils.

Operation

The operation of Alternative D could adversely impact soils due to the increase in impervious surfaces over existing conditions. These impacts were taken into account during project designs and would be reduced by landscape architecture and the implementation of the drainage plan. The drainage plan and mitigating factors are discussed in more detail in **Section 4.3**. The SWPPP would be implemented during the construction and operation of the project, to assure that, in conjunction with project design and the drainage plan, adverse effects resulting from the increase in impervious surfaces on the site are reduced to insignificant levels associated with erosion.

SEISMICITY

Seismicity is a regional issue and potential impacts for Alternative D would be the same as those discussed under Alternative A. As stated above, seismic hazards associated with the project site consist primarily of minor ground shaking potentials. As discussed in **Section 2.2.4**, implementation of current design standards in the UBC would ensure that risks of building failure

in the event of seismic ground shaking at levels estimated by the California Geological Survey are less than significant (CGS, 2007).

The potential for liquefaction and subsidence is minimal under the development footprint for Alternative D. Soils are low in clay and the abandoned mineshaft has been filled and capped to prevent subsidence. With the potential for minor ground shaking and minimal potentials for liquefaction and subsidence, Alternative D would result in a less-than-significant impact regarding seismicity and seismic-related hazards.

MINERAL RESOURCES

Construction under Alternative D would not result in the significant loss of mineral resources. Alterations in the land use will not significantly diminish the extraction of important ores or minerals, as no economically significant mineral resources are known to exist in the project area.

4.2.6 ALTERNATIVE E – NO ACTION

Although growth within the City of Plymouth is currently limited, it is anticipated that additional water supplies from the Plymouth Pipeline would lead to additional growth. If the No Action alternative were selected, the project site would remain undeveloped for the short-term; however, over the long-term growth pattern of the City including the City's sphere of influence, portions of the project site may be developed with residential, commercial, or a mixture of the two land uses. Although the Amador Water Agency pipeline will provide the water necessary to lift the moratorium, there is not enough information at this time to assess individual environmental impacts of potential non-tribal development on the site if the BIA were to decide to select the No Action alternative. However the discussion below provides a conditional analysis of the project site if the No Action alternative were to be selected by the BIA.

TOPOGRAPHY

Major grading may still be performed on the site and soil may require exporting. The hills would likely be altered slightly to accommodate residential or commercial development. The steep hill features leading up to the relatively flat plateau where the existing inn is located would still remain as the major topographical features of the site.

SOILS

Soils would be disturbed throughout the project site, potentially to the same degree, or higher than Alternative A, if the area becomes developed for residential land uses. Overall, there would be a similar disturbance of soils and need to export unused fill from excavations similar to Alternative A. Soil erosion potential would increase; however, development would require compliance with the State of California, Department of Water Resources, general stormwater permit for construction activities. The State permit would require similar protective provisions as

described for Alternative A. Runoff rates would increase, however development would have to comply with City requirements. Through compliance with regulatory requirements, impacts to soils from non-tribal development on the proposed site are anticipated to be less than significant.

SEISMICITY

Seismic related impacts would be similar to existing conditions. The gas station, inn, and residents would be subject to mild seismic ground shaking. Based on the age of the buildings, it does not appear that seismic ground shaking at the estimate intensity (MMI VII and below) would result in loss of structures. Liquefaction and subsidence would not be an issue, consistent with existing conditions described in **Section 3.2**. Future, non-tribal development would require compliance with the California Building Code, which includes the seismic fortification provisions of the UBC. Anticipated impacts from seismicity are less than significant.

MINERAL RESOURCES

Development of non-tribal projects would require compliance with the City of Plymouth General Plan, which includes policies to protect the City's remaining mineral resources from conflicting, compatible land uses. All mineral resources would remain accessible and available according to the existing claim system. Taking into account the location of the project site to regional mineral resources, the No Action alternative would not hinder the reclamation of mining lands or extraction of mineral resources in the region. No impact would occur.

4.3 WATER RESOURCES

This section addresses the potential impacts to water resources as a result of the proposed action and alternatives. Issues discussed in this section include potential impacts to existing, the potential for flooding on the project site, and impacts to surface and groundwater features and quality in the project area. Indirect and/or cumulative impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to avoid, minimize, or mitigate potential adverse effects are discussed in **Section 5.2.3**.

Other sections of this document also address impacts to water resources. **Section 4.5** Biological Resources provides a detailed discussion of impacts to streams and wetlands. **Section 4.9** Public Services describes the potential impact to water supply for the City of Plymouth and groundwater wells on and near the project site.

4.3.1 METHODOLOGY

For surface water resources, each proposed alternative is analyzed to determine if either construction or operation would result in direct adverse impacts to drainage patterns, floodplain management, and/or water quality. For groundwater resources, each proposed alternative is analyzed to determine if either construction or operation would result in direct adverse impacts to groundwater levels, groundwater recharge, and/or groundwater quality.

4.3.2 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

SURFACE WATER

Drainage

A watershed's runoff characteristics are altered when impervious surfaces replace natural vegetation. Runoff changes may increase stream volumes, increase stream velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. A drainage study was completed for the project site to assess project impacts from development of Alternative A (**Appendix G**). The Drainage study followed guidelines provided by the *Amador County Guidelines for Grading and Erosion Control*, as well as the *Erosion & Sediment Control Guidelines for Developing Areas of the Sierra Foothills and Mountains*, to meet new development drainage conditions. To prevent inundation of the existing drainage facilities, pre- and post-development unit hydrographs were developed to calculate the required storage volume to be detained. To account for the entire project and simplify construction efforts, the drainage plan for full build-out of Alternative A will be constructed during Phase I (**Figure 2-6 Drainage Plan A**).

Phase I

Phase I of Alternative A would convert approximately 60-acres of the vacant parcel into a casino complex, surface roads, and parking areas, and other related components as described in **Section 2.2.1**, which would result in an increase in stormwater runoff over pre-development rates during 100-year storm events (**Appendix G**). To reduce the project's potential to increase surface runoff, impervious surfaces would be minimized to the greatest extent feasible. All areas outside of buildings and roads would be kept as permeable surfaces; where feasible, using either vegetation or high infiltration ground cover such as mulch, gravel, or turf block. Pedestrian pathways would use a permeable surface, such as crushed aggregate or stone with sufficient permeable joints. Rooftops would drain to either embedded cisterns or surrounding vegetated areas to maximize infiltration prior to concentrating runoff.

To provide the necessary detention of runoff, a detention basin would be constructed in the northeast corner of the site, the lowest point on the project site. Storm water would be collected in storm drains located along both access roads and within both sections of the main parking lot. The storm drain for the eastern section of the main parking lot would be located along the southern end of the parking surface during Phase I, accommodating the runoff generated from the expanded parking lot constructed during Phase II. The basin capacity was calculated using a historical 100-year discharge of 5.31 inches of rainfall in 24-hours and a worst-case scenario for impermeable surfaces. The volume for the detention basin was calculated assuming that 90-percent of the surface area in the northern and western ends of the site would be converted to impermeable surfaces. Based on these values, the detention basin is designed to hold an inflow of 173 cubic feet per second (cfs), with an outflow of 62 cfs. See **Appendix G** for volume calculations, outflow quantities, and water surface elevations. The detention basin was designed to more than compensate for post-project runoff conditions. As the outflow exits the basin, it would enter a stormwater pipe and be conveyed to Little Indian Creek, which is the existing recipient of drainage from the site. A spillway is also provided in the detention basin design. The spillway is sized to handle the 100-year, 24-hour storm in the event that the outlet culvert becomes plugged with debris. The incorporation of the detention basin in the site plan assures that Alternative A would detain the added runoff due to the development of the project site. With the incorporation of the above-mentioned design components, implementation of Phase I of Alternative A would result in less-than-significant impacts to downstream drainage systems.

Wastewater Disposal Option 1

If wastewater disposal Option 1 were selected, the reservoir could also potentially retain winter stormwater runoff, thus reducing the effective capacity of the reservoir and also capturing surface flow that would otherwise supply downstream areas. To prevent this, a headwall would be constructed immediately upstream of the reservoir to provide for a bypass of upstream flows. A culvert would be extended from the headwall around the reservoir, and would discharge downstream of the dam. Additionally, a perimeter drain system would be constructed to intercept

sheet flows from the perimeter slopes of the reservoir to the bottom culvert drain. All of these drainage control features would be designed to convey the maximum anticipated flow, based on hydrologic modeling (**Appendix G**). Using these constructed drainage features, surface water flow within Dry Creek would not be significantly reduced, and therefore potential effects to the overall site drainage would be less than significant.

Phase II

As discussed in **Section 2.2.1**, the hotel/event center would be constructed by removing the southwestern section of the main parking lot. The removal of this section of parking lot and construction of the hotel/event center would result in reduced impervious surface coverage. The hotel/event center will include landscaping surrounding the buildings, which would provide pervious areas and established vegetation would provide energy dissipation of runoff generated from the hotel/event center building. With the provided drainage infrastructure developed during Phase I, development of the hotel/event center would have a less-than-significant impact on downstream drainages.

The drainage system constructed during Phase I would be developed to include the capacity to handle the increase in runoff from the expanded parking lot constructed during Phase II. Construction of the parking lot would result in an additional 4-acres of impervious surfaces. The runoff generated from the additional surface would be filtered and detained within the drainage scheme constructed during Phase I. After filtering through vegetative swales, storm water generated by the additional impervious surface would be detained in the detention basin, allowing for discharge rates from the site that would be approximately equivalent to pre-development runoff rates. Pre-development discharge rates were estimated at 63 cubic-feet per second (cfs), while post project rates were estimated at 62 cfs with the planned improvements. The reduction of one cfs of surface water discharge after construction of Phase II, corresponding to full build-out of Alternative A, would result in a less-than-significant impact on downstream surface water drainages.

Flooding

Federal Executive Order 11988 addresses floodplain management. The order requires the evaluation of federal actions taken in a floodplain. Specifically, the order states that agencies shall first determine whether a proposed action would occur in a floodplain. If an agency proposes to allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplain. If the only practicable alternative action requires siting in a floodplain, the agency shall minimize potential adverse impacts to the floodplain.

Phases I and II

As discussed in **Section 3.3**, the project area for both phases of development is not located in a floodplain as mapped by the Federal Emergency Management Agency (FEMA). Less than one acre of Parcel #3 is within Flood Zone A, an area within a one percent annual chance flooding for which no base flood elevations have been determined. Implementation of the Alternative A would not impede floodplain management of the area located on Parcel #3, and, therefore, no adverse impacts associated with flooding or floodplain management would occur.

Surface Water Quality

If the BIA has takes the land into Trust, jurisdiction over water quality on the project site would shift from the Central Valley Regional Water Quality Control Board (CVRWQCB) to the Tribe and the USEPA. However, the USEPA would ensure the project site would not inhibit the local RWQCB Basin Plan, which implements the provisions of the Clean Water Act. The greatest potential for surface water contamination, which could result in non-compliance with Basin Plan provisions, would occur during construction, discharge of storm water generated on-site, and disposal of treated wastewater during operation.

*Phase I***Construction**

Construction of Phase I of Alternative A would result in ground disturbance, which could lead to erosion. Erosion increases sediment discharge to surface waters during storm events, reducing water quality. Construction also has the potential to generate waste materials (e.g., concrete, drywall, metal, and wood from building rubble; and diesel, oil, and grease from heavy equipment and temporary on-site fuel storage) that can become entrained in surface flow and washed into nearby surface waters during storm events. A potential discharge of runoff entrained with pollutants to off-site surface waters from construction activities could adversely impact off-site drainages by increase contaminant concentrations above basin plan provisions (**Table 3.3-1**).

The potential contamination of water resources as described above would be reduced by compliance with the USEPA's National Pollutant Elimination Discharge System (NPDES), as discussed in **Section 4.2**. In accordance with the requirements of the NPDES Permit, the tribe would prepare a Stormwater Pollution Prevention Plan (SWPPP) to control discharge of pollutants in stormwater. The plan would incorporate appropriate best management practices (BMP's) to prevent degradation of surface water resources during construction of Phase I of Alternative A. These measures would include the use of silt fences, fiber rolls, vegetated swales, staging areas isolated from surface waters, temporary revegetation, and sediment traps. The SWPPP would incorporate these and other BMPs such as material storage and handling BMPs to prevent possible accidental releases of hazardous materials. **Section 5.2.3** contains a list of recommended measures. Through compliance with permit requirements including incorporation of BMPs outlined in **Section 5.2.3**, impacts to water quality during construction of Phase I of Alternative A would be less than significant.

Operation

Runoff during operation of Phase I could entrain contaminants, particularly during the “first flush” of the rain season, contaminating downstream surface water resources. Parking areas and roadways are a key area of concern because many pollutants (i.e. oil, metals) originate from vehicles. Fertilizers and pesticides that have been applied to landscaping may also enter surface runoff and reduce surface water quality. To control operational storm water pollution and protect surface water quality, the project would utilize a combination of site planning, structural treatment BMPs, and non-structural source control BMPs.

Site planning is discussed above and includes minimization of impermeable surfaces. In addition, the project has been designed to incorporate two main structural BMPs: the stormwater detention basin described above and a sediment/grease trap. Runoff would be filtered through the sediment/grease trap prior to any discharge to the drainage system. The purpose of the structural BMPs is to control and reduce, by approximately 80-percent, the Total Suspended Solids (TSS) and other potentially environmentally polluting mineral or materials such as oils and greases, nutrients and metals.

The Stormceptors are designed to comply with the federal stormwater treatment guideline of 80-percent reduction of TSS in post construction stormwater runoff as described in the EPA National Management Measures Guidance to Control Non-point Source Pollution from Urban Areas (EPA 842-B-02-003). This guidance document indicates that 80-percent reduction of TSS is assumed to control heavy metals, phosphorous, and other pollutants. Actual storm event monitoring data reported by the Stormceptor manufacturer provides specific removal efficiencies for various pollutants. The detention basin would provide additional removal efficiency. A summary of the pollutant Stormceptor and detention basin pollution reduction efficiencies is listed in **Table 4.3-1** below.

Numerical water quality objectives have been set for some of the expected pollutants by the CVRWQCB as discussed in **Section 3.3 (Table 3.3-1)**. For pollutants that do not have numerical limits set, water quality objectives are narrative and require protection of beneficial uses. For these pollutants, drinking water maximum contaminant levels (MCLs) were chosen as limits, which would be protective of beneficial uses. A comparison of the expected effluent levels to water quality objectives for the area demonstrates that anticipated water storm water quality would meet all applicable water quality objectives. This comparison is provided in **Table 4.3-2**.

Based on this analysis, project site runoff quality will not exceed applicable water quality objectives for the protection of beneficial uses. The combination of structural and non-structural BMPs would reduce pollutants in stormwater to the maximum extent practicable. Accordingly, surface runoff generated during Phase I of Alternative A would result in less-than-significant effects to surface water quality.

TABLE 4.3-1
ESTIMATED STORMWATER QUALITY – ALTERNATIVE A

Pollutant	Anticipated Level in Stormwater (mg/L) ^A	Stormceptor Reduction Efficiency ^B	Detention Basin Reduction Efficiency ^C	Estimated Minimum Reduction Efficiency	Anticipated Discharge Pollutant Level (mg/L)
Total Suspended Solids	80	80%	30-65%	80%	16
Total Petroleum Hydrocarbon	3.5	80%	N/A	80%	0.70
Total Phosphorus	0.3	11%	15-45%	15%	<0.3
Total Nitrogen	2	43%	15-45%	43%	<2
Zinc	0.14	39%	15-45%	39%	<0.1
Copper	0.01	28%	15-45%	28%	<0.01
Lead	0.018	51%	15-45%	51%	<0.01

SOURCE: ^A National Management Measures to Control Nonpoint Source Pollution from Urban Areas, EPA 842-B-02-003, July 2002.

^B Stormceptor supplied performance studies, 2003.

^C Preliminary Data Summary of Urban Storm Water Best Management Practices, EPA 821-R-99-02, August 1999.

TABLE 4.3-2
COMPARISON OF STORMWATER DISCHARGE AND DESIGN OBJECTIVES – ALTERNATIVE A

Pollutant	Anticipated Discharge Pollutant Level (mg/L)	Design Objective	Basis for Objective
Total Suspended Solids	80% reduction	80% reduction	Objective based on EPA recommended 80% reduction efficiency.
Total Petroleum Hydrocarbon	0.70	No visible film.	Sacramento-San Joaquin Basin Plan for oil and grease.
Total Phosphorus	<0.3	N/A	N/A
Total Nitrogen (NO ₃)	<2	5	Sacramento–San Joaquin Basin Plan
Zinc	<0.1	5.0	No numerical limit listed in the Basin Plan. Objective based on California Secondary Drinking Water Standard, which is expected to protect beneficial uses.
Copper	<0.01	1.0	No numerical limit listed in the Basin Plan. Objective based on California Secondary Drinking Water Standard, which is expected to protect beneficial uses.
Lead	<0.01	0.015	Lead Action Level. California Health and Safety Code

SOURCE: ^A National Management Measures to Control Nonpoint Source Pollution from Urban Areas, EPA 842-B-02-003, July 2002.

^B Stormceptor supplied performance studies, 2003.

^C Preliminary Data Summary of Urban Storm Water Best Management Practices, EPA 821-R-99-02, August 1999.

*Phase II***Construction**

Construction of the hotel/conference center and extension of the main parking lot would provide the potential for the introduction of construction-related contaminants into surface water features, as described above. The potential for contamination during Phase II would be to a far lesser extent, as the area disturbed and required equipment for construction of Phase II would be a smaller percentage compared to what was required for Phase I of Alternative A. As discussed, the SWPPP developed in accordance with the NPDES permit requirements would be developed before construction of Phase I, but would include provisions to protect water quality during construction of Phase II. With the implementation of the BMPs outlined within the SWPPP, summarized in **Section 5.2.3**, implementation of Phase II and the full build-out of Alternative A, would result in less-than-significant impacts to water quality from construction activities.

Operation

Phase II would introduce an additional 4-acres of impervious parking surfaces to the project site. However, with the water quality provisions designed into the drainage plan, operation of Phase II, constituting the full build-out of Alternative A, would not adversely impact water quality. As discussed in **Section 2.2.1**, the drainage system would be sized during Phase I to accommodate the increase in runoff for Phase II. Water quality features, such as the vegetative swales and sediment/grease traps, would be sized accordingly to account for increased flows from the parking lot.

*Wastewater Disposal***Phases I and II**

Treated effluent that cannot be beneficially reused would be disposed of through one of two options. These options are discussed in detail in **Section 2.2.1**. To summarize, Option 1 includes dry weather discharge through landscape irrigation, sprayfields, and subsurface disposal and rainy weather storage in an on-site reservoir. Option 2 includes similar dry weather discharge as Option 1, but includes surface water discharge in rainy weather to a tributary of Dry Creek. Storage and disposal of treated effluent could result in discharges to surface waters, which could potentially impact surface water quality in the area. On-site wastewater disposal would require oversight by the USEPA to determine if the Proposed Project would increase contaminants above Basin Plan provisions. Additionally, treated wastewater stored within the on-site reservoir or discharged during the winter into an on-site tributary of Dry Creek would require a NPDES permit from the USEPA, consistent with the water quality objectives set by the CVRWQCB within the Sacramento-San Joaquin Region Basin Plan.

Wastewater from the project's facilities would be treated to a tertiary-level at the on-site WTP to California Title 22 standards to produce the highest quality of recycled water. In addition to meeting Title 22 requirements, discharge into surface water and storage within a seasonal storage

reservoir would require a NPDES permit. A NPDES permit would include additional discharge limitations that would ensure that the treated effluent meets established water quality objectives and is of sufficient quality to support beneficial uses of the receiving water (see **Section 3.9.2**). Treated effluent would meet all discharge limitations for all constituents. This conclusion is supported by the quality of effluent typically achieved by membrane bioreactor (MBR) wastewater treatment facilities and the treatment of the water supply to lower TDS, iron and manganese present in the well water (see **Section 4.9** for additional details). The NPDES permit would also require monitoring of the treated effluent prior to discharge to ensure that the treated effluent meets all standards. Due to permitting requirements, included as mitigation in **Section 5.2.3**, no significant adverse effects to water quality from land disposal or surface water disposal would occur.

In addition to surface water quality concerns, the project would address potential erosion concerns. A pipe would carry treated effluent from the wastewater treatment plant to the surface water discharge site. It would be fitted with a velocity dissipation structure. This structure would minimize erosion and suspension of sediment directly under and around the outlet by slowing the rate of water movement. Discharge of treated effluent into the tributary of Dry Creek would not cause significant erosion to the creek bed because discharge velocities would be slow and the creek bed already carries much greater amounts of water during high flood periods than the wastewater treatment plant's maximum output. With rates of water discharge and the features installed at the discharge point, no significant erosion would occur.

GROUNDWATER

This section discusses the availability of ground water to serve the project and potential impacts to groundwater supply in the region. Because operation of Phase II would not increase groundwater extraction and wastewater disposal rates are limited by NPDES permit discharge requirements, the impact analysis of Alternative A on groundwater is combined for both phases. Potential effects to the local water supply distribution facilities are discussed in **Section 4.9**.

Water Supply Option 2

Phases I and II

If Option 2 were selected for development to meet water demands, two on-site wells and one off-site well would provide groundwater to serve the project site. A dedicated pipeline and easement are in place to serve the project site with water from the off-site well. An investigation has been conducted to determine the safe yield capacity of the three source wells that would be supplying water to the project site. Results of this investigation are provided as **Appendix C**. Based on pumping tests, the safe yield of the wells was estimated to be approximately 81 gpm, which translates is equivalent to 119,520 gpd. During operation of the casino, it is expected that 119,520 gpd of the water supply would be provided by groundwater. The three wells located on

and adjacent to the project site would be pumped in rotation to allow groundwater to recharge between pumping periods.

Groundwater at the project site primarily occurs under confined conditions at depth in the fractured bedrock zones. The upper portions of the bedrock appear to have low hydraulic conductivity, presumably due to the lack of fracturing; therefore, represent a confining layer for the underlying confined unit. Due to the low conductivity and storability typically associated with unfractured shale and slate, the groundwater yield of the confined unit is likely attributed to the ability of interconnected fractures to store and transmit groundwater. No hydraulic communication could be found between the off-site well and the two on-site wells.

Increased pumping by the City of Plymouth has led to an overdraft of groundwater in the local basin, despite having average rainfall for the years analyzed. Tribal pumping could increase the basin deficit. However, as discussed above, the Tribe has performed sustainable pump tests and identified the necessary water sources to maintain groundwater use within the safe yield of the wells.

Mitigation measures are identified in **Section 5.2.3** to ensure potential effects from development of an on-site groundwater supply system are less-than-significant and minimize the project's water demand. Also, the Tribe may facilitate the use of recycled water through the option of constructing dual plumbing within the proposed facility. Due to the incorporation of these measures, the project would not contribute significantly to the overdraft of groundwater resources in the area; therefore, result in a less than significant effect.

Groundwater Quality

Phases I and II

Both proposed wastewater disposal options provide opportunities for treated effluent to enter groundwater. Treated effluent (including disposal and reuse as recycled water) disposed of through land application (e.g. spray fields, subsurface disposal and land application) could percolate down through the soil and eventually enter the water table. The recommended metered application rate identified in the water and wastewater feasibility study (**Appendix B**) would reduce the amount of effluent reaching the groundwater table, by maximizing the amount of water that evaporates or is taken up by vegetation (transpiration). Water that percolates and enters the groundwater would be of a quality meeting California Title 22 requirements. Additionally, the water that is disposed of would be treated to comply with NPDES surface water discharge permit limitations. Permit limitations would ensure that the water meets applicable water quality objectives, which are protective of beneficial uses. The Tribe would monitor effluent water quality prior to disposal. Operation of the proposed facility would not result in significant adverse effects to groundwater quality. Mitigation measures have been included in **Section 5.2.3** to assure that effects are minimized.

Wastewater Disposal Option 1

Figure 2-1 shows the proposed location of the reservoir on the project site. Ideally, the reservoir for rainy weather storage would be fitted with a reservoir liner to prevent treated effluent from seeping into springs or other surface water outlets. However, the planned reservoir has steep slopes, making construction of a compacted clay liner or a geosynthetic liner very difficult (**Appendix E**). Furthermore, the reservoir liner would likely go through wet/dry cycles, possibly causing UV and drying damage to the liner. Should lining the reservoir prove infeasible, storage of water within the reservoir would result in some infiltration into the ground eventually reaching the groundwater table. However, as with land application, the water would meet Title 22 standards and, if applicable, NPDES discharge requirements. Therefore, no significant adverse effects to groundwater quality from the storage reservoir would occur.

4.3.3 ALTERNATIVE B – REDUCED CASINO WITH HOTEL ALTERNATIVE

SURFACE WATER

Drainage

To assess the potential drainage effects of Alternative B, a drainage study was completed for the project site that included pre and post development unit hydrographs. The drainage plan is presented in **Figure 2-11**. Under Alternative B, the analysis is similar to that of Alternative A, except a total of approximately 56-acres rather than 60-acres would become impermeable surfaces.

Phase I

Phase I of Alternative B would result in the conversion of approximately 52-acres of vacant land into impermeable surfaces of the casino complex including surface roads, parking areas, and other related components as described in **Section 2.2.2**. Similar to Alternative A, impervious surfaces would be minimized to reduce the project's potential to increase surface runoff. Where feasible, all areas outside of buildings and roads, including pedestrian pathways, would be kept as permeable surfaces. Rooftops would drain to either embedded cisterns or vegetated drip lines to maximize infiltration prior to concentrating runoff.

To provide the necessary detention of runoff, a detention basin would be constructed at the lowest point on the property in the northwest corner. The proposed basin is identical to that proposed for Alternative A, as the difference in 4-acres of impermeable surfaces between Alternative A and Alternative B would not result in a noticeable decrease in runoff rates. Please refer to **Section 4.3.2** for more details. The outflow from the detention would enter Little Indian Creek, the existing drainage collector. The incorporation of the detention into the site plan assures that Alternative B would detain the additional runoff due to the development of the project site. With the incorporation of the above-mentioned design components, implementation of Phase I of Alternative B would result in less-than-significant impacts to downstream drainage systems.

Wastewater Disposal Option 1

The reservoir to retain treated wastewater for wastewater disposal Option 1 may retain stormwater runoff in the tributary of Dry Creek where the dam would be built. Details on drainage control features for this reservoir are provided in **Section 4.3.2** and entail diverting flows around the reservoir. Using the above-mentioned design features would ensure surface water flow within Dry Creek would not be significantly reduced, and therefore potential effects to downstream drainages would be less than significant.

Phase II

As discussed in **Section 2.2.2**, the hotel/event center would be constructed by removing the southwest section of the main parking lot. The removal of this section of parking lot and construction of the hotel/event center would result in reduced impervious surface coverage. The hotel/event center will include landscaping surrounding the buildings, which would provide pervious areas and established vegetation would provide energy dissipation of runoff generated from the hotel/event center building. With the provided drainage infrastructure developed during Phase I, development of the hotel/event center would have a less-than-significant impact on downstream drainages.

The drainage system constructed during Phase I would be developed to include the capacity to handle the increase in runoff from the expanded parking lot constructed during Phase II. Construction of the parking lot would result in an additional 4-acres of impervious surfaces. The runoff generated from the additional surface would be filtered and detained within the drainage scheme constructed during Phase I. As discussed above, after filtering through vegetative swales, storm water generated by the additional impervious surface would be detained in the detention basin, allowing for discharge rates from the site that would be approximately equivalent to pre-development runoff rates. Pre-development discharge rates were estimated at 63 cfs, while post project rates were estimated at 62 cfs with the planned improvements. The reduction of one cfs of surface water discharge after construction of Phase II, corresponding to full build-out of Alternative B, would result in a less-than-significant impact on downstream surface water drainages.

Flooding*Phases I and II*

As discussed above, the majority of the project area is not located in a floodplain mapped by the FEMA. No development is proposed for the portion of Parcel #3, which is located within the floodplain. Implementation of Alternative B would not impede floodplain management of the area located on Parcel #3 and, therefore, no adverse impacts associated with flooding or floodplain management would occur.

Surface Water Quality

As with Alternative A, after the BIA has taken the land into trust, jurisdiction over water quality would transfer to the USEPA. The USEPA would ensure construction and operation of Alternative B would be consistent with the provisions of the Clean Water Act and the Basin Plan objectives of the CVRWQCB.

Phase I

Construction

Construction of Phase I of Alternative B would result in ground disturbance, which could lead to erosion. Erosion increases sediment discharge to surface waters during storm events, reducing water quality. Construction also has the potential to generate waste materials (e.g., concrete, drywall, metal, and wood from building rubble; and diesel, oil, and grease from heavy equipment and temporary on-site fuel storage) that can become entrained in surface flow and washed into nearby surface waters during storm events. A potential discharge of runoff entrained with pollutants to off-site surface waters from construction activities could adversely impact off-site drainages by increase contaminant concentrations above basin plan provisions (**Table 3.3-1**).

The potential contamination of water resources as described above would be reduced by compliance with the USEPA's NPDES, as discussed in **Section 4.2**. In accordance with the requirements of the NPDES Permit, the tribe would prepare SWPPP to control discharge of pollutants in stormwater. The plan would incorporate appropriate BMPs to prevent degradation of surface water resources during construction of Phase I of Alternative A. These measures would include the use of silt fences, fiber rolls, vegetated swales, isolated staging areas, temporary revegetation, and sediment traps. The SWPPP would incorporate these and other BMPs such as material storage and handling BMPs to prevent possible accidental releases of hazardous materials. **Section 5.2.3** contains a list of recommended measures. Through compliance with permit requirements including incorporation of BMPs, impacts to water quality during construction of Phase I of Alternative B would be less than significant.

Operation

Runoff during operation of Phase I of Alternative B may result in adverse impacts to water quality from parking areas and roadway surfaces. Other potential sources of water quality contamination include fertilizers and pesticides utilized for landscaping. To control operational storm water pollution and protect surface water quality, the project would utilize a combination of site planning, structural treatment BMPs, and non-structural source control BMPs, similar to Alternative A.

Site planning is discussed above and includes minimization of impermeable surfaces. In addition, a stormwater detention basin and a sediment/grease trap, as described above, would be included in the project design for Alternative B. Runoff would be filtered through the sediment/grease trap prior to any discharge to the drainage system to control and reduce TSS and other potentially

environmentally polluting mineral or materials such as oils and greases, nutrients and metals. A summary of the pollutant Stormceptor and detention basin pollution reduction efficiencies is listed in **Table 4.3-1**. A comparison of the expected effluent levels to water quality objectives for the area shows that anticipated water storm water quality would meet all applicable water quality objectives. This comparison is provided in **Table 4.3-2**. The combination of structural and non-structural BMPs would reduce pollutants in stormwater to the maximum extent practicable. Accordingly, surface runoff generated during Phase I of Alternative B would result in less-than-significant effects to surface water quality.

Phase II

Construction

The potential for contamination during construction of Phase II would be to a far lesser extent than Phase I, as the area disturbed and required equipment for construction of Phase II would be a smaller percentage compared to what was required for Phase I of Alternative B. As discussed in above, the SWPPP developed in accordance with the NPDES permit requirements would be developed before construction of Phase I, but would include provisions to protect water quality during construction of Phase II. With the implementation of the BMPs outlined within the SWPPP, summarized in **Section 5.2.3**, implementation of Phase II and the full build-out of Alternative A would result in less-than-significant impacts to water quality from construction activities.

Operation

Phase II would introduce an additional 4 acres of impervious parking surfaces to the project site. However, with the water quality provisions designed into the drainage plan, operation of Phase II, constituting full build-out of Alternative B, would not adversely impact water quality. As discussed in **Section 2.2.2**, the drainage system would be sized during Phase I to accommodate the increase in runoff for Phase II. Water quality features, such as the vegetative swales and sediment/grease traps, would be sized accordingly to ensure increase in flows from the parking lot would not overwhelm the water quality improvement features during full build-out of Alternative B.

Wastewater Disposal

Phases I and II

Treated effluent that cannot be beneficially reused would be disposed of through one of the two options described above under Alternative A. Storage and disposal of treated effluent would be performed with oversight, including NPDES permitting, from USEPA to determine if operation of Alternative B would increase contaminants above the water quality objectives set by the CVRWQCB within the Sacramento-San Joaquin Region Basin Plan. The NPDES permit would also require monitoring of the treated effluent prior to discharge to ensure that the treated effluent meets all standards. Due to permitting requirements to ensure the quality of the discharge, no

significant adverse effects to water quality from land disposal or surface water disposal would occur.

In addition to surface water quality concerns, the project would address potential erosion concerns. A pipe would carry treated effluent from the wastewater treatment plant to the surface water discharge site, similar in design to Alternative A. It would be fitted with a velocity dissipation structure. With rates of water discharge and the features installed at the discharge point, no significant erosion would occur.

GROUNDWATER

This section discusses the availability of ground water to serve the project and potential impacts to groundwater supply in the region. Because operation of Phase II would not increase groundwater extraction and wastewater disposal rates are limited by NPDES permit discharge requirements, the impact analysis of Alternative B on groundwater is combined for both phases. Potential effects to the local water supply distribution facilities are discussed in **Section 4.9**.

Water Supply Option 2

Phases I and II

If Option 2 were selected for development to meet water demands, two on-site wells and one off-site well would provide groundwater to serve the project site. Two on-site wells and one off-site well would provide groundwater to serve the project site with the same system as described under Alternative A. Results of the safe yield investigation are provided as **Appendix C**. As discussed in **Section 4.3.2**, pumping from the two on-site and one off-site wells would not likely affect neighboring wells, although the potential for this impact does exist. Mitigation measures included in **Section 5.2.3** would reduce this impact to less than significant. Due to the incorporation of these measures, the project would not contribute significantly to the overdraft of groundwater resources in the area. A less-than-significant effect would occur.

Groundwater Quality

Phases I and II

Both proposed wastewater disposal options provide opportunities for treated effluent to enter groundwater. As discussed under Alternative A, potential impacts to groundwater quality would be reduced through the quality of wastewater treatment and recommended metered application rate identified in the water and wastewater feasibility study (**Appendix B**). The Tribe would monitor effluent water quality prior to disposal. Operation of the proposed facility would not result in significant adverse effects to groundwater quality. Mitigation measures have been included in **Section 5.2.3** to assure that effects are minimized.

Wastewater Disposal Option 1

Figure 2-3 shows the proposed location of the reservoir on the project site. Storage of water within the reservoir, including treated wastewater and storm water, would result in some infiltration into the ground eventually reaching the groundwater table. However, as with land application, the water would meet Title 22 standards and NPDES discharge requirements. Therefore, no significant adverse effects to groundwater quality from the storage reservoir would occur.

4.3.4 ALTERNATIVE C – REDUCED CASINO

SURFACE WATER

Drainage

To assess the potential drainage effects of Alternative C, a drainage study was completed for the project site that included pre and post development unit hydrographs. The drainage plan is presented in **Figure 2-11**. Alternative C would result in the conversion of approximately 44-acres of vacant land into impermeable surfaces of the casino complex including surface roads, parking areas, and other related components as described in **Section 2.2.3**. Similar to Alternative A, impervious surfaces would be minimized to reduce the project's potential to increase surface runoff. Where feasible, all areas outside of buildings and roads, including pedestrian pathways, would be kept as permeable surfaces. Rooftops would drain to either embedded cisterns or vegetated drip lines to maximize infiltration prior to concentrating runoff.

To provide the necessary detention of runoff, a detention basin has been located at the lowest point on the property in the northwest corner and is identical in design to the detention basin proposed for Alternative A. The outflow from the detention would enter Little Indian Creek, the existing drainage collector. The incorporation of the detention into the site plan assures that Alternative C would detain the additional runoff due to the development of the project site. With the incorporation of the above-mentioned design components, implementation of Alternative C would result in less-than-significant impacts to downstream drainage systems.

Wastewater Disposal Option 1

The reservoir to retain treated wastewater for wastewater disposal Option 1 may retain stormwater runoff. Details on drainage control features for this reservoir are provided in **Section 4.3.2** and entail diverting flows around the reservoir. Using the above-mentioned design features would ensure surface water flow within Dry Creek would not be significantly reduced, and therefore potential effects to downstream drainages would be less than significant.

Flooding

The majority of the project area is not located in a floodplain mapped by the FEMA. Less than one acre of Parcel #3 is within Flood Zone A, an area with a 1 percent annual chance of flooding, for which no base flood elevations have been determined. Implementation of the Alternative C

would not impede floodplain management of the area located on Parcel #3 and, therefore, no adverse impacts associated with flooding or floodplain management would occur.

Surface Water Quality

Construction

Construction activities on Indian reservations are subject to USEPA's NPDES storm water program. In accordance with the requirements of the General Permit, the tribe would prepare a SWPPP that identifies measures to control discharge of pollutants in stormwater. Details of the SWPPP are identical to those described under Alternative A in **Section 4.3.2**, except that the area to be developed is smaller. Please see **Section 5.2.3** for a list of recommended measures to reduce significant impacts associated with construction of Alternative C. Due to incorporation of these measures, construction activities would not result in significant adverse effects to water quality.

Operation

To control operational stormwater pollution and protect surface water quality, Alternative C would utilize a combination of site planning, structural treatment BMPs, and non-structural source control BMPs. Site planning is discussed above and includes minimization of impermeable surfaces. In addition, Alternative C has been designed with a detention basin and sediment/grease traps to assure that the runoff from the paved surfaces is filtered prior to release to the surface runoff drainage system (see **Section 4.3.2** for more details). These BMPs would control and reduce the Total Suspended Solids (TSS) and other potentially environmentally polluting mineral or materials, such as oils and greases, nutrients and metals. Since the detention basin design for Alternative C is similar to that of Alternative A, the estimated stormwater quality and comparison of stormwater discharge and design objectives would be similar to those listed above in **Table 4.3-1** and **Table 4.3-2**, respectively. Alternative C would result in less-than-significant effects to surface water quality from site runoff.

Wastewater Disposal

Wastewater from the project's facilities would be tertiary-treated at the on-site wastewater treatment plant similar in design to Alternative A, with a smaller treatment capacity. Discharge of treated wastewater into surface water and storage within a seasonal storage reservoir would require a NPDES permit. Options for discharge of treated effluent are the same as those described for Alternative A. Due to permitting requirements to ensure the quality of the discharge, no significant adverse effects to water quality from land disposal or surface water disposal would occur.

Figure 2-16 shows the proposed location of the reservoir on the project site. Specifics on the reservoir design are described in **Section 2.2.1**. Treated effluent would meet NPDES standards

and leaks from the reservoir to surface water or groundwater would be minor. Therefore, no significant impacts to surface water quality from the storage reservoir would occur.

GROUNDWATER

This section discusses the availability of ground water to serve the project, and potential impacts to groundwater supply in the region. Potential impacts to the local water supply distribution facilities are discussed in **Section 4.9**.

Water Supply Option 2

If Option 2 were selected for development to meet water demands, two on-site wells and one off-site well would provide groundwater to serve the project site. As indicated above under Alternative A, two on-site wells and one off-site well would provide groundwater to serve the project site. An investigation has been conducted to determine the safe yield for the three wells that would be supplying water to the project site. Results of this investigation are provided in **Appendix C**. Based on pumping tests, the safe yield of the wells was estimated to be 119,520 gpd, although water demand would be 105,100 gpd (64,900 gpd if recycled water is utilized). During operation of the casino, it is expected that the groundwater could provide water for the entire project. The three wells located on and adjacent to the project site would be pumped in rotation to allow the groundwater basins to recharge between pumping periods. As discussed in **Section 4.3.2**, pumping from the two on-site and one off-site wells would not likely affect neighboring wells, although the potential for this impact does exist. Mitigation measures included in **Section 5.2.3** would reduce this impact to less than significant.

Groundwater Quality

Wastewater would be treated to tertiary-recycled water standards at the on-site wastewater treatment plant. Each of the disposal options provides opportunity for treated effluent to enter groundwater. Effluent and recycled water reused and disposed of through land application (e.g. spray fields, subsurface disposal and land application) could percolate through the soil and eventually enter the water table. The recommended metered application rate identified in the water and wastewater feasibility study (**Appendix B**) would reduce the amount of effluent reaching the groundwater table by maximizing the amount of water that evaporates or is taken up by vegetation (transpiration). As discussed in **Section 4.3.1**, discharges of treated effluent to surface water and storage within the reservoir could also result in movement of effluent into groundwater.

Water that percolates and enters the groundwater system would meet the California Title 22 requirements for water quality. These effluent limitations would ensure that the water meets applicable water quality objectives, which are protective of beneficial uses. Therefore, no adverse effects of groundwater contamination would occur from effluent storage and disposal options.

The Tribe also proposes to monitor effluent water quality prior to subsurface disposal. Operation of the proposed facility would not result in significant adverse effects to groundwater quality. Mitigation measures have been included in **Section 5.2.3** to assure that effects are minimized.

4.3.5 ALTERNATIVE D – RETAIL DEVELOPMENT

SURFACE WATER

Drainage

The drainage study for Alternative D utilizes the same design features as described above in detail under Alternative A in **Section 4.3.2**. Under Alternative D, the design parameters are similar, except that approximately 23-acres would become impermeable surfaces, rather than 60-acres. Where feasible, all areas outside of buildings and roads, including pedestrian walkways, would be kept as permeable surfaces, either as vegetation or high infiltration cover such as mulch, gravel, or turf block. Rooftops would drain to either embedded cisterns or vegetated drip lines to maximize infiltration prior to concentrating runoff. Infiltration techniques would also remove pollutants from the water and allow for degradation of organic contaminants through soil processes. To provide the necessary detention of runoff, a detention basin would be constructed with the same design as Alternative A. Please refer to **Section 4.3.2** for more details. As with Alternative A, the outflow from the detention would enter Little Indian Creek, the existing drainage collector. The incorporation of the detention basin into the site plan assures that Alternative D would detain the additional runoff due to the development of the project site.

Flooding

The majority of the project area is not located in a floodplain mapped by the FEMA. Less than one acre of Parcel #3 is within Flood Zone A, an area with a 1 percent annual chance of flooding, for which no base flood elevations have been determined. Implementation of Alternative D would not impede floodplain management of the area located on Parcel #3 and, therefore, no adverse impacts associated with flooding or floodplain management would occur.

Surface Water Quality

Construction

Construction activities on Indian reservations are subject to USEPA's NPDES storm water program. In accordance with the requirements of the General Permit, the tribe would prepare a SWPPP that identifies measures to control discharge of pollutants in stormwater. Details of the SWPPP are similar to those described under Alternative A in **Section 4.3.2**, except that the area to be developed is smaller. Please see **Section 5.2.3** for a list of recommended measures to reduce significant impacts associated with construction of Alternative D. Due to incorporation of these measures, construction activities would not result in significant adverse effects to water quality.

Operation

To control operational stormwater pollution and protect surface water quality, Alternative C would utilize a combination of site planning, structural treatment BMPs, and non-structural source control BMPs. Site planning is discussed above and includes minimization of impermeable surfaces. In addition, Alternative D has been designed with a detention basin and sediment/grease traps to assure that the runoff from the paved surfaces is filtered prior to release to the surface runoff drainage system (see **Section 4.3.2** for more details). These BMPs would control and reduce the Total Suspended Solids (TSS) and other potentially environmentally polluting mineral or materials, such as oils and greases, nutrients and metals. Since the detention basin design for Alternative D is similar to that of Alternative A, the estimated stormwater quality and comparison of stormwater discharge and design objectives would be similar to those listed above in **Table 4.3-1** and **Table 4.3-2**, respectively. Alternative D would result in less-than-significant effects to surface water quality from site runoff.

Wastewater Disposal

Wastewater from the project's facilities would be tertiary-treated at the on-site WTP similar in design to Alternative A, with a smaller treatment capacity. Discharge of treated wastewater into surface water would require a NPDES permit. Options for discharge of treated effluent are the same as those described for Alternative A. Due to permitting requirements to ensure the quality of the discharge, no significant adverse effects to water quality from land disposal or surface water disposal would occur.

GROUNDWATER

This section discusses the availability of ground water to serve the project and potential impacts to groundwater supply in the region. Potential impacts to the local water supply distribution facilities are discussed in **Section 4.9**.

Water Supply Option 2

If Option 2 were selected for development to meet water demands, two on-site wells and one off-site well would provide groundwater to serve the project site. As indicated above under Alternative A, two on-site wells and one off-site well would provide groundwater to serve the project site. An investigation has been conducted to determine the safe yield for the three wells that would be supplying water to the project site. Results of this investigation are provided in **Appendix C**. Based on pumping tests, the safe yield of the wells was estimated to be approximately 81 gallons per minute (gpm), which is equal to 119,520 gpd, although water demand would be 34,000 gpd. The three wells located on and adjacent to the project site would be pumped in rotation to allow the groundwater basins to recharge between pumping periods. As discussed in **Section 4.3.2**, pumping from the three wells would not likely affect neighboring wells, although the potential for this impact does exist. Mitigation measures included in **Section 5.2.3** would reduce this impact to less than significant.

Groundwater Quality

Wastewater would be treated to tertiary-recycled water standards at the on-site wastewater treatment plant. Each of the disposal options provides opportunity for treated effluent to enter groundwater. Effluent and recycled water reused and disposed of through land application (e.g. spray fields, subsurface disposal and land application) could percolate through the soil and eventually enter the water table. The recommended metered application rate identified in the water and wastewater feasibility study (**Appendix B**) would reduce the amount of effluent reaching the groundwater table by maximizing the amount of water that evaporates or is taken up by vegetation (transpiration).

Water that percolates and enters the groundwater system would meet the California Title 22 requirements for water quality. These effluent limitations would ensure that the water meets applicable water quality objectives, which are protective of beneficial uses. Therefore, no adverse effects of groundwater contamination would occur from effluent storage and disposal options.

The Tribe also proposes to monitor effluent water quality prior to subsurface disposal. Operation of the proposed facility would not result in significant adverse effects to groundwater quality. Mitigation measures have been included in **Section 5.2.3** to assure that effects are minimized.

4.3.6 ALTERNATIVE E – NO ACTION

SURFACE WATER

As discussed in Section 2.2.5, under the No Action alternative, no tribal development would occur and the site would remain under current conditions for the short-term. For the long-term, it is assumed that the building moratorium is lifted, and development would occur consistent with the City of Plymouth's and the County of Amador's General Plans.

Drainage

Impacts to drainages would be similar as those described for Alternative A, and potentially to the same degree, or higher if residential areas are developed. Non-tribal development would be required to follow State, City, and County policies regarding erosion control and storm water control/quality. Compliance with these provisions would ensure impacts to the existing drainage system and downstream drainages are less-than-significant.

Flooding

Non-tribal development would be required to comply with State and local flood policies, which include the prevention of any development within or the alteration of floodplains. Therefore, it can be assumed that if no Federal action is taken on behalf of the Tribe, then non-tribal development would result in no impact associated with flooding and floodplain management.

Water Quality

Under the No Action alternative, the CVRWQCB would maintain jurisdiction over the water quality on-site if future development occurs. Development would be required to comply with CVRWQCB water quality objectives as well as City/County General Plan policies. Impacts associated with anticipated commercial and/or residential development would be less-than-significant with the assumption that a drainage plan would be required, which would include provisions to ensure water quality would not be adversely impacted.

GROUNDWATER

Groundwater Supply

Non-tribal development would not occur until the building moratorium of the City is lifted once the Plymouth Pipeline project is completed. It is anticipated that development would be guided by water availability from the pipeline project and that new development would be required to connect to the City's water supply system. Therefore, it is anticipated that non-tribal commercial and or residential development would result in no impact to groundwater resources.

Groundwater Quality

As with water supply, it is anticipated that non-tribal development would be required to connect to the City's WWTP. Impacts to the City's WWTP are addressed in **Section 4.9**. Since non-tribal development would connect to the City's system, and storm water would be required to meet water quality requirements, impacts would be less than significant.

4.4 AIR QUALITY

This section identifies the direct effects to air quality that would result from the development of each alternative described in **Section 2.0**. Effects are measured against the environmental baseline presented in **Section 3.4**. An impact analysis using the methodology below is provided for each alternative. Cumulative and/or indirect impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.4**.

4.4.1 REGULATORY SETTING

GENERAL CONFORMITY

The Environmental Protection Agency (EPA) promulgated the General Conformity Rule on November 30, 1993, to implement the conformity provision of Title I, Section 176 (c)(1) of the Federal Clean Air Act (CAA), which requires that the federal government not engage, support, or provide financial assistance for licensing, permitting, or approving any activity not conforming to an approved State Implementation Plan (SIP). General Conformity is an issue addressed during the National Environmental Policy Act (NEPA) process.

General Conformity Process

The conformity process involves two Phases. The first Phase is the conformity review process, which evaluates whether the conformity regulations would apply to the federal action (i.e. whether a determination is warranted). The second Phase is the conformity determination process, which demonstrates how a federal action conforms to the applicable SIP.

Conformity Review

The purpose of a conformity review is to evaluate whether the conformity determination requirements would apply to a federal action under 40 CFR 93.153. There are four steps in the review process, of which the first three can be performed in any order. The four steps are shown below:

1. Determine whether the proposed action causes emissions of criteria air pollutants (CAP).
2. Determine whether the emissions of a criteria pollutant or its precursor (i.e. nitrogen oxides [NO_x] and reactive organic gases [ROG] for ozone [O₃]) would occur in a non-attainment or maintenance area for that CAP.
3. Determine whether the federal action is exempt from the conformity requirement as per 40 CFR 93.153 (c)(2)-(e).

4. Estimate the total emissions of the pollutants of concern from the proposed action and compare the estimates to the *de minimis* threshold of 40 CFR 93.153 (b)(1) and (2) and to the non-attainment or maintenance area's emissions inventory for each CAP.

If the proposed project and alternatives do not emit pollutants or are exempt under 40 CFR 93.153 (c)(2)-(e), or if the affected air basin is in attainment for all criteria pollutants, no further action is necessary. Otherwise, the proposed project's estimated emissions must be compared to the *de minimis* thresholds set forth in 40 CFR 93.153 (b)(1) and (2). If the emissions are greater than or equal to the *de minimis* threshold, a conformity determination must be performed.

Conformity Determination

The purpose of the conformity determination, if needed, is to show if a proposed project conforms to the applicable SIP. Any one of the following three options can be used to establish conformity.

- The applicable SIP specifically includes an allowance for emissions of the proposed project.
- The proposed project purchases offset emission credits for the total direct and indirect emissions, which fully offset emissions within the same non-attainment or maintenance area so that there is no net increase in emissions.
- The SIP is changed to include the emissions budget of the proposed project.

4.4.2 METHODOLOGY

Adverse effects to ambient air quality could result if either construction or operation would result in violations of Federal Clean Air Act (CAA) provisions, or if emissions would impede a state's ability to comply with the CAA and meet National Ambient Air Quality Standards (NAAQS).

Emissions resulting from the alternatives are analyzed in two steps, construction and operational. Construction emissions are temporary and do not overlap with the operational phase of the alternatives. Pollutants of concern during construction are oxides of nitrogen (NO_x) and reactive organic gasses (ROGs), which are precursors for the creation of ground-level ozone (O₃). NO_x and ROG are produced during combustion of diesel fuel in heavy equipment and emitted by employee vehicles and construction equipment. Operational emissions consist of area and vehicle emissions (which include NO_x and ROGs).

General conformity thresholds would apply to all alternatives because they are located in Amador County, which has been designated by the EPA as nonattainment for O₃.

CONSTRUCTION

Urban Emissions (URBEMIS) Software is a California-specific computer spreadsheet based program used to estimate construction, area source, and operational emissions of Criteria Air Pollutants (CAPs) from potential land uses. Both the California Air Resources Board (CARB) and the EPA approve the use of the URBEMIS air model. URBEMIS 2002, which is the most recent version of the software at the time of this Draft EIS, uses the most relevant CARB emission factors and/or district-specific emission factors, and estimates emissions reductions.

URBEMIS 2002 was used to estimate emissions from all construction-related sources of the project alternatives. URBEMIS modeling was performed with the assumption that construction would begin in June 2009 and continue at an average of 22 days per month for 12 months. Emissions results from URBEMIS are presented under each alternative below; URBEMIS output files are shown in **Appendix Q**.

The air quality effects of Phase I were analyzed with a near-term 2008 background condition and Phase II with a mid-term 2009 background condition. The air quality construction-related effects of the two Phases were analyzed separately.

OPERATION

URBEMIS was also used to estimate ozone precursor emissions associated with near-term and long-term operation of the project alternatives, the latter discussed in **Section 4.11** under cumulative analysis. Input values for the URBEMIS model included data from the Traffic Impact Study (**Appendix M**). URBEMIS has been designed to include defaults that are specific to the various air districts and are based on survey data provided by the districts. Defaults are preferred except where site-specific data is available. For this analysis, several changes from the default URBEMIS assumptions were made, including:

- The trip generation rates used in the URBEMIS model have been adjusted to reflect primary trips estimated by the traffic study for the project alternatives.
- Operational Phases of all alternatives allocated 98-percent of trips to primary and 3-percent to pass-by.
- Average customer trip lengths were significantly increased from default settings in all alternatives.
- An average trip length of 28 miles was assumed for purposes of this analysis.

PHASING (ALTERNATIVES A AND B)

Construction impacts are short-term and construction of Phase I would not overlap with Phase I operational emissions; therefore, Phase I construction and operational impacts are determined

separately. Operations of Phase I overlap with Phase II construction; therefore, these impacts are determined together. Operations of Phase I and Phase II impacts were determined together to constitute emissions under full build-out conditions. Emissions associated with construction, construction and operation, and operation Phases, are compared to the general conformity *de minimis* levels to evaluate the effects of these activities on air quality.

CARBON MONOXIDE (CO) HOT SPOT ANALYSIS

As discussed in **Section 3.4** no intersection in the project region has a level of service (LOS) that would require CO hot spot analysis; therefore, this issue will not be further addressed within the alternative analysis.

ASBESTOS

Demolition Activities

The demolition, renovation, or removal of asbestos-containing materials is subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations (40 CFR Part 61, Subpart M), requiring notification and inspection. The appropriate regulatory agency must be notified before any demolition takes place, even if asbestos has yet to be confirmed at the site. The appropriate regulatory agency for the project site is the Amador County Air Pollution Control District (ACAPCD). Also, all demolitions and renovations are “subject” to the Asbestos NESHAP insofar as owners and operators must determine if and how much asbestos is present at the site.

Asbestos NESHAP regulations must be followed for demolitions of facilities with at least 15 square meters (160 square feet) of regulated asbestos-containing materials on facility components, or at least one cubic meter (35 cubic feet) of facility components where the amount of Regulated Asbestos Containing Material (RACM) previously removed from pipes and other facility components could not be measured before stripping. The NESHAP regulations cover demolition and renovation projects and require that the owner/operator thoroughly inspect the facility for asbestos prior to the start of demolition or renovation and require that all regulated asbestos-containing material be properly removed prior to the start of demolition or renovation. All individuals who inspect for asbestos develop management plans, and conduct abatement work must be certified per the Asbestos Hazard Emergency Response Act (AHERA).

Naturally Occurring Asbestos (NOA)

As discussed in **Section 3.4** the project area does not contain naturally occurring asbestos (NOA); therefore, this issue will not be addressed within the alternatives analysis.

GREEN HOUSE GASES (GHGS)

CO₂ is the main source of GHG emissions during combustion of fuels. Mobile project emissions of CO₂ were estimated using MOBILE6.2, which is the USEPA-approved computer program that

estimates emissions factors in grams per mile for the summer period (**Appendix Q**). Total miles traveled for Alternative A was estimated using URBEMIS 2002, a CARB approved air quality computer model (**Appendix Q**). Although stationary emissions are considered small in comparison with mobile emissions (3.6-percent) these emissions were estimated using emission factors from the California Climate Action Registry (CCAR, 2007). Mobile sources of methane (CH₄) and nitrous oxide (N₂O) were estimated using CCAR emission factors. Estimated emission factors are 552.08 grams per mile for CO₂ and 0.05 grams per mile for NO₂ and CH₄.

CH₄ and N₂O emissions were estimated and then converted to CO₂ equivalent (CO₂e). CO₂e is a method by which GHG emissions are converted to CO₂ emission equivalents based on a heat-capturing ratio, where CO₂ is used as the base with an assigned value of one. For example, CH₄ has the ability to capture 21 times more heat than CO₂; therefore, CH₄ is given a CO₂e value of 21. Emissions are multiplied by the CO₂e value to achieve one GHG emission value. Some CO₂e values are shown in **Table 4.4-1**.

TABLE 4.4-1
GREENHOUSE GAS CO₂ EQUIVALENT

Gas	CO ₂ e Value
CO ₂	1
CH ₄	21
N ₂ O	310
HFCs/PFCs	6,500
SF ₆	23,900

Source: BAAQMD, 2006

GHG impacts occur not only from emissions of direct mobile and stationary sources, but also from vegetation removal and indirect sources. Photosynthetic plants use CO₂ for energy and elemental carbon. The project alternatives will result in the grading of the proposed site, impacting existing on-site vegetation.

Development under each alternative would decrease the existing vegetation within the development footprint due to grading and paving, which reduce GHG uptake absent revegetation. At present, there is no scientifically agreed-upon method to calculate GHG uptake in native and landscape vegetation, due to the varying types of plants and their respective respiration rates on a given site, various types of vegetation in a given landscape layout, differing soil types, seasonal precipitation, wind speed and direction, and diffusion of CO₂ from the soil (Buildcarbonneutral, 2007). Thus, no reliable net change in GHG uptake can be calculated at this time; however, many more trees would be planted in the developed area than currently in place and trees typically have a higher capacity for GHG uptake than seasonal grasslands (the predominant vegetation type within the alternative development areas), since trees grow rear-round (unlike seasonal grassland). Thus, it is assumed that the proposed landscape vegetation, with an associated

increase in trees and decrease in seasonal grassland would uptake GHG at a greater than or equal rate as the existing vegetation and there would be no increase of atmospheric GHG due to decreased native vegetation.

Energy usage for any project would have an indirect effect on global climate change. Dependent upon the specific method for energy production, GHG emissions may increase from the combustion of coal, natural gas or other fossil fuels, while electricity production from solar, hydroelectric, wind does not increase GHG emissions. The amount of indirect GHG emissions that a given project produces is dependent upon the mix of energy sources used by a project. Alternative A would receive electrical power from Pacific Gas and Electric (PG&E) (see **Section 2.0**). From **Table 4.4-2**, 46-percent of PG&E's energy production was generated through processes that emitted GHGs.

TABLE 4.4-2
PG&E ENERGY MIX

Energy Sources	Percentage of Total
Non-GHG Producing Energy	
California Renewable	8
Nuclear	24
Hydroelectric	22
Total	54
GHG Producing Energy	
Natural Gas	40
Coal	1
California Renewable	4
Other	1
Total	46

Source: PG&E, 2006.

Mobile, stationary, and indirect electrical source emissions were estimated and are shown in **Appendix Q**. The estimated emission of CO₂e for Alternative A is 0.000008-percent of the total global GHG emissions. Alternative A would have a less-than-significant impact to global climate change, due to the small contribution of GHG emissions that the project would make; however, extensive mitigation measures are included in **Section 5.2.4** that would further reduce this impact.

4.4.2 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

CONSTRUCTION – PHASE I

Implementation of Phase I of Alternative A would result in short-term, construction-related effects and long-term effects related to the operation of the project. Phase I construction activities would result in the generation of ROG and NO_x emissions. **Table 4.4-3** presents an estimate of

these construction-related emissions of ozone precursors for Phase I of Alternatives A. URBEMIS outputs including estimated emission for all criteria air pollutants are shown in **Appendix Q**.

TABLE 4.4-3
ALTERNATIVE A – CONSTRUCTION EMISSIONS
PHASE I

Construction Phases	Pollutants of Concern	
	ROG	NO _x
tons per year		
Phase I		
2008 Demolition and Site Grading	1.47	9.98
2009 Building	3.45	7.66
Maximum Emissions Phase I	3.45	9.88
Conformity Thresholds	100	100
<i>Exceeds Conformity</i>	<i>No</i>	<i>No</i>

SOURCE: Appendix Q

Conformity Analysis

Tables 4.4-3 shows that the estimated emissions from Phase I construction activities of Alternative A would be less than the conformity thresholds for ozone precursors (NO_x and Volatile Organic Compounds VOC); thus, there would be no adverse effect to air quality. Because the project area is classified as attainment for all other CAPs, no conformity review is necessary. Mitigation measures are recommended in **Section 5.2.4** to reduce any potential effects from CAP emissions.

Asbestos Construction-Related Impacts

Construction of Alternative A would entail the demolition of existing buildings at the project site. On-site buildings have the potential to contain asbestos (**Section 3.4**). Airborne asbestos fibers pose a serious health threat if adequate control techniques are not used when the material is disturbed. As noted in **Section 3.4**, demolition activities associated with Alternative A would be subject to the NESHAP for asbestos as promulgated under the authority of the CARB, Amador County Air Pollution Control District. Furthermore, strict compliance with NESHAP is expected to result in less-than-significant levels of construction-related asbestos emissions.

OPERATION PHASE I - CONSTRUCTION PHASE II

Trip Generation Rate and Trip Distribution

Standard trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation, 6th Edition, are often used for common types of land uses. There are no published trip generation rates for casinos by ITE. The generation rates used was developed by AES from a

survey of eight existing casinos in the region. **Table 4.4-4** shows the trip generation rate for operation of Alternative A Phase I. Trip distribution was determined by T.Y. Lin International CCS, 2005.

TABLE 4.4-4
TRIP GENERATION RATES ALTERNATIVE A PHASE I

Land Use	Scenario	Size	Rate (trips/kssf)	In/Out (%)	Trip Generation			Pass-by Reduction (%)
					In	Out	Total	
Casino	Weekday PM Peak Hour	120 ksf	4.54	52/48	262	262	545	3
	Saturday PM Peak Hour	120 ksf	6.25	50/50	375	375	750	3
	Daily Weekday	120 ksf	68.24				8,189	3

Kssf = 1,000 square feet
Source: Appendix M

Emissions Estimate

Phase I of Alternative A would be in operation prior to the construction of Phase II. In order to determine potential impacts, emissions were estimated for the operation of Phase I. Construction of Phase II would occur during operation of Phase I and in order to determine impacts, Phase I operation emissions were combined with construction emissions from Phase II. **Table 4.4-5** presents estimates of these emissions and URBEMIS outputs are shown in **Appendix Q**.

Conformity Analysis

Operation of Phase I, and Phase I operation combined with construction of Phase II of Alternative A would result in emissions of ozone precursors. The Proposed Project is therefore not exempt from conformity being located within a nonattainment area for ozone; therefore, the estimated emissions must be compared to the *de minimis* thresholds pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]). **Table 4.4-5** compares Phase I operation and Phase I operation plus Phase II construction emissions to the applicable conformity thresholds. Ozone precursors, NO_x and ROG_s do not exceed conformity thresholds; therefore, there would be a minimal adverse effect to air quality from the operation of Phase I operation and Phase I operation plus Phase II construct of Alternative A. Mitigation measures are recommended in **Section 5.2.4** to further reduce potential effects of ozone precursor emissions.

OPERATION PHASES I AND II (FULL BUILD-OUT)

Trip Generation Rate and Trip Distribution

For the hotel center, the trip generation rate from the ITE manual was used. The generation rate calculated above was used for the casino. **Table 4.4-6** shows the trip generation rates for the operation of both Phases I and II of Alternative A. The same trip distribution as **Table 4.4-4** was utilized for full build-out.

TABLE 4.4-5
PHASE I OPERATIONAL AND PHASE II CONSTRUCTION EMISSIONS

Sources	Pollutants of Concern	
	ROG	NO _x
tons per year		
Phase I Operation		
Area	0.25	0.21
Mobile	29.61	75.80
Total	29.86	76.01
Phase II Construction		
2009 Construction	1.03	6.78
2010 Construction	2.99	4.77
Maximum Construction Emissions	2.99	4.77
Phase I Operation and Phase II Construction		
Total	32.85	80.78
Conformity thresholds	100	100
<i>Exceeds Conformity</i>		
<i>Phase I Operation</i>	<i>NO</i>	<i>NO</i>
<i>Phase II Construction</i>	<i>NO</i>	<i>NO</i>
<i>Phase I Op and Phase II Const</i>	<i>NO</i>	<i>NO</i>

SOURCE: Appendix Q

TABLE 4.4-6
TRIP GENERATION ALTERNATIVE A PHASES I AND II

Land Use	Trip Generation						
	Weekday	Weekday PM Peak Hour			Saturday PM Peak Hour		
	Daily	In	Out	Total	In	Out	Total
Casino	8,189	283	262	545	375	375	750
Hotel	745	29	26	55	36	29	65
TOTAL (Hotel + Casino)	8,934	312	288	600	411	404	815
Pass-by Reduction	-246	-8	-8	-16	-11	-11	-22
New Trips (Hotel + Casino)	8,688	304	280	584	400	393	793

Source: Appendix M

Emissions Estimate

Phase I and Phase II operations combined would result in the generation of ozone precursors.

Table 4.4-7 presents estimates of these emissions and URBEMIS outputs are shown in Appendix Q.

Conformity Analysis

Operations of Phase I and II of Alternative A have emissions of ozone precursors, are not exempt from conformity, and are located within a nonattainment area for ozone; therefore, the estimated emissions must be compared to the *de minimis* thresholds pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]). **Table 4.4-7** compares Phase I and II operational emissions to the applicable conformity thresholds. Ozone precursors, NO_x and ROG do not exceed conformity thresholds and would have a minimal adverse effect to air quality from the operation of Phase I and II of Alternative A. Mitigation measures are recommended in **Section 5.2.4** to further reduce potential effects of ozone precursor emissions.

TABLE 4.4-7
OPERATIONAL EMISSIONS (FULL BUILD-OUT)

Sources	Pollutants of Concern	
	ROG	NO _x
tons per year		
Phase I and II		
Area	0.76	0.99
Mobile	38.62	97.53
Total	39.38	98.52
Conformity thresholds	100	100
<i>Exceeds Conformity</i>	<i>NO</i>	<i>NO</i>

SOURCE: Appendix Q

WASTEWATER TREATMENT PLANT (WWTP)

Alternative A would include a WWTP. As noted in **Section 2.2**, the facility would be designed to satisfy several criteria that would comply with standards established by the EPA and the RWQCB. These criteria include “odor free” operation of the facility. Odors from the plant headworks would be controlled using an odor scrubber as described in the Water and Wastewater Feasibility Study (**Appendix B**). The treatment facility would use an MBR system as the wastewater treatment process. MBR systems are currently used at similar facilities around the state. Based on standard design and operating procedures of an MBR facility, on-site wastewater treatment will have no adverse effect on air quality.

Operation of the wastewater treatment facility would result in the generation of a minor amount of emissions. The facility would primarily emit nitrogen gas, which is not a criteria pollutant and is a relatively inert gas that makes up approximately 75-percent of normal ambient air. As a result, this effect is considered to have no adverse effect.

CLIMATE CHANGE

Mobile and stationary source emissions were estimated and are shown in **Appendix Q**. The estimated emission of CO₂e for Alternative A is 0.000008-percent of the total global GHG emissions. Alternative A would have a less-than-significant impact to global climate change, due to the small contribution of GHG emissions that the project would make; however, extensive mitigation measures are included in **Section 5.2.4** that are designed to reduce this impact.

4.4.3 ALTERNATIVE B –REDUCED CASINO WITH HOTEL

CONSTRUCTION – PHASES I

Implementation of Phase I of Alternative A would result in short-term, construction-related effects and long-term effects related to operations of the project. Phases I construction activities would result in the generation of ROG and NO_x emissions. **Table 4.4-8** presents an estimate of these construction-related emissions of ozone precursors for Alternatives B. URBEMIS outputs including estimated emissions for all criteria air pollutants are shown in **Appendix Q**.

TABLE 4.4-8
ALTERNATIVE B – CONSTRUCTION EMISSIONS

Construction Phases	Pollutants of Concern	
	ROG	NO _x
tons per year		
Phase I		
2009 Demolition and Site Grading	1.47	9.98
2010 Building	3.09	7.66
Maximum Emissions Phase I	3.09	9.88
Conformity Thresholds	100	100
<i>Exceeds Conformity</i>	<i>No</i>	<i>No</i>

SOURCE: Appendix Q

Conformity Analysis

Tables 4.4-8 shows that the estimated emissions from the construction of Alternative B would be less than the conformity thresholds for ozone precursors (NO_x and VOC); thus, there would be no adverse effect to air quality. Because the project area is classified as attainment for all other CAPs, no conformity review is necessary. Mitigation measures are recommended in **Section 5.2.4** to reduce any potential effects from CAPs emissions.

Asbestos Construction-Related Impacts

Construction-related asbestos would be the same as in Alternative A. As noted in **Section 3.4**, demolition activities associated with Alternative B would be subject to the NESHAP for asbestos as promulgated under the authority of the California Air Resources Board, Bay Area Air Quality

Management District. Furthermore, strict compliance with NESHAP, is expected to result in less than significant levels of construction-related asbestos emissions.

OPERATION PHASE I - CONSTRUCTION PHASE II

Trip Generation Rate and Distribution

Standard trip generation rates from ITE Trip Generation, 6th Edition, are often used for common types of land uses. There are no published trip generation rates for casinos by ITE. Therefore the generation rates used were developed by AES through the survey of eight existing casinos in the region. **Table 4.4-9** shows the trip generation rates for Alternative B Phase I. Trip distribution for Alternative B is the same as Alternative A.

TABLE 4.4-9
TRIP GENERATION RATES ALTERNATIVE B PHASE I

Land Use	Scenario	Size	Rate (trips/ksf)	In/Out (%)	Trip Generation			Pass-by Reduction (%)
					In	Out	Total	
Casino	Weekday PM Peak Hour	100.75 ksf	4.54	52/48	238	219	457	3
	Saturday PM Peak Hour	100.75 ksf	6.25	50/50	315	315	630	3
	Daily Weekday	100.75 ksf	68.24				6,875	3

Ksf = 1,000 square feet

Source: Appendix M

Emissions Estimates

Phase I of Alternative B would be in operation prior to the construction of Phase II. In order to determine potential impacts, operation of Phase I emissions were estimated. Construction of Phase II would occur during operation of Phase I. In order to determine any impacts, Phase I operation emissions were combined with construction of Phase II emissions. **Table 4.4-10** presents estimates of these emissions, and URBEMIS outputs are shown in **Appendix Q**.

CONFORMITY ANALYSIS

Conformity Analysis

Operation of Phase I, and Phase I operation combined with construction of Phase II of Alternative B have emissions of ozone precursors, are not exempt from conformity, and is located within a nonattainment area for ozone; therefore, the estimated emissions must be compared to the *de minimis* thresholds pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]). **Table 4.4-10** compares Phase I operation and Phase I operation combined with Phase II construction emissions to the applicable conformity thresholds. Ozone precursors, NO_x and ROG_s do not exceed conformity thresholds; therefore, there would be a minimal adverse effect to air quality from the operation of Phase I operation and Phase I operation plus Phase II construct

of Alternative A. Mitigation measures are recommended in **Section 5.2.4** to further reduce potential effects of ozone precursor emissions.

TABLE 4.4-10
OPERATIONAL AND CONSTRUCTION EMISSIONS

Sources	Pollutants of Concern	
	ROG	NO _x
tons per year		
Phase I		
Area	0.21	0.18
Mobile	24.86	63.64
Total	25.07	63.82
Phase I and Phase II Const.		
2009 Construction	0.16	5.73
2010 Construction	1.10	4.42
Maximum Construction Emissions	1.10	5.73
Phase I Operation and Phase II Construction		
Total	26.17	69.55
Conformity thresholds	100	100
<i>Exceeds Conformity</i>		
<i>Phase I Operation</i>	<i>NO</i>	<i>NO</i>
<i>Phase II Construction</i>	<i>NO</i>	<i>NO</i>
<i>Phase I Op and Phase II Const</i>	<i>NO</i>	<i>NO</i>
SOURCE: Appendix M		

OPERATION PHASES I AND II (FULL BUILD-OUT)

Trip Generation Rate and Trip Distribution

For the hotel center, the trip generation rate from the ITE manual was used. The generation rate calculated above was used for the casino. **Table 4.4-11** shows the trip generation rates for the operation of Phases I and II of Alternative B. The same trip distribution as **Table 4.4-9** was utilized for full build-out.

Emission estimates

Operation of Phase I and, II would result in the generation of ozone precursors, ROG and NO_x emissions. **Table 4.4-12** presents estimates of these emissions and URBEMIS outputs are shown in **Appendix Q**.

TABLE 4.4-11
TRIP GENERATION ALTERNATIVE B PHASES I AND II

Land Use	Trip Generation						
	Weekday	Weekday PM Peak Hour			Saturday PM Peak Hour		
	Daily	In	Out	Total	In	Out	Total
Casino	6,875	238	219	457	315	315	630
Hotel	745	29	26	55	36	29	65
TOTAL (Hotel + Casino)	7,620	267	245	512	351	344	695
Pass-by Reduction	-206	-7	-7	-14	-9	-9	-18
New Trips (Hotel + Casino)	7,414	260	238	498	342	335	677

Source: Appendix M

TABLE 4.4-12
OPERATIONAL EMISSIONS
FULL BUILD-OUT

Sources	Pollutants of Concern	
	ROG	NO _x
	tons per year	
Phase I and II		
Area	0.76	0.96
Mobile	34.30	86.48
Total	35.06	87.44
Conformity thresholds	100	100
<i>Exceeds Conformity</i>		
	<i>Phase I</i>	<i>NO</i>
	<i>Phase I and Phase II const.</i>	<i>NO</i>
	<i>Phase II</i>	<i>NO</i>

SOURCE: Appendix Q

Conformity Analysis

Operation of Phases I and II of Alternative B have emissions of ozone precursors, are not exempt from conformity, and are located within a nonattainment area for ozone; therefore, the estimated emissions must be compared to the *de minimis* thresholds pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]). **Table 4.4-12** compares Phase I and II operational emissions to the applicable conformity thresholds. Ozone precursors, NO_x and ROG_s do not exceed conformity thresholds and would have a minimal adverse effect to air quality from the operation of Phase I and II of Alternative B. Mitigation measures are recommended in **Section 5.2.4** to further reduce potential effects of ozone precursor emissions.

Wastewater Treatment Plant (WWTP)

Alternative B would include a wastewater treatment facility. As noted in **Section 2.2**, the facility would be designed to satisfy several criteria that would comply with standards established by the EPA and the RWQCB. These criteria include “odor free” operation of the facility. Odors from the plant headworks would be controlled using an odor scrubber as described in the Water and Wastewater Feasibility Study (**Appendix B**). The treatment facility would use an MBR system as the wastewater treatment process. MBR systems are currently used at similar facilities around the state. Based on standard design and operating procedures of an MBR facility, on-site wastewater treatment will have no adverse effect.

Operation of the wastewater treatment facility would result in the generation of a minor amount of emissions. The facility would primarily emit nitrogen gas, which is not a criteria pollutant and is a relatively inert gas that makes up approximately 75-percent of normal ambient air. As a result, this effect is considered to have no adverse effect.

CLIMATE CHANGE

Mobile and stationary source emissions were estimated and are shown in **Appendix Q**. The estimated emission of CO₂e for Alternative B is 0.000008-percent of the total global GHG emissions. Alternative B would have a less-than-significant impact to global climate change, due to the small contribution of GHG emissions that the project would make; however, extensive mitigation measures are included in **Section 5.2.4** that would further reduce this impact.

4.4.4 ALTERNATIVE C – REDUCED CASINO

This section of the Draft EIS presents a description of effects related to Alternative C. The methodology used to assess the air quality effects is described under Alternative A. Implementation of Alternative C would result in short-term construction-related effects and long-term effects related to operation of the project. The following is a description of these effects.

CONSTRUCTION

Implementation of Alternative C would result in short-term construction-related effects. Construction of Alternative C would result in the generation of ROG, NO_x emissions. **Table 4.4-13** presents an estimate of these construction-related emissions of ozone precursors for Alternatives C. URBEMIS outputs including estimated emission for all criteria air pollutants are shown in **Appendix Q**.

Conformity Analysis

Tables 4.4-13 shows that the estimated emissions from the construction of Alternative C would be less than the conformity thresholds for ozone precursors (NO_x and VOC); thus, there would be no adverse effect to air quality. Because the project area is classified as attainment for the other

CAPs, no conformity review is necessary. Mitigation measures are recommended in **Section 5.2.4** to reduce any potential effects from CAPs emissions.

Construction-Related Asbestos

Construction-related asbestos would be the same as in Alternative A.

OPERATION

Trip Generation Rate and Distribution

Standard trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation, 6th Edition, are often used for common types of land uses. There are no published trip generation rates for casinos by ITE. Therefore the generation rates used were developed by AES through the survey of eight existing casinos in the region. **Table 4.4-14** show the trip generation rates for Alternative C. Trip distribution for Alternative C is the same as Alternative A.

TABLE 4.4-13
ALTERNATIVE C – CONSTRUCTION EMISSIONS

Construction Phases	Pollutants of Concern	
	ROG	NO _x
tons per year		
Alternative C		
2008 Demolition an Site Grading	0.99	6.54
2009 Building	1.81	2.06
Maximum Emissions Phase	1.81	6.54
Conformity Thresholds	100	100
<i>Exceeds Conformity</i>	<i>No</i>	<i>No</i>

SOURCE: Appendix Q

TABLE 4.4-14
TRIP GENERATION RATE AND TRIP DISTRIBUTION ALTERNATIVE C

Land Use	Scenario	Size	Rate (trips/ksf)		Trip Generation			Pass-by Reduction (%)
					In	Out	Total	
Casino	Weekday PM Peak Hour	79.25 ksf	4.54	52/48	187	173	360	3
	Saturday PM Peak Hour	79.25 ksf	6.25	50/50	248	248	496	3
	Daily Weekday	79.25 ksf	68.24				5,408	3

Ksf = 1,000 square feet

Source: Appendix M

Emissions Estimates

Operation of Alternative C would result in the generation of ROG and NO_x emissions. **Table 4.4-15** presents estimates of these emissions. URBEMIS outputs are shown in **Appendix Q**.

Conformity Analysis

Tables 4.4-15 shows that estimated emissions from the operation of Alternative C would be less than the conformity thresholds for ozone precursors, NO_x and VOC; thus, there would be a minimal adverse effect to air quality. Because the project area is classified as attainment for all other CAPs, no conformity determination is necessary. Mitigation measures are recommended in **Section 5.2.4** to reduce any potential effects from CAPs emissions.

TABLE 4.4-15
ALTERNATIVE C OPERATIONAL EMISSIONS

Sources	Pollutants of Concern	
	ROG	NO _x
tons per year		
Alternative C		
Area	0.17	0.14
Mobile	21.41	54.74
Total	21.58	54.88
Conformity thresholds	100	100
<i>Exceeds Conformity</i>	<i>No</i>	<i>No</i>

SOURCE: Appendix Q

WASTEWATER TREATMENT PLANT (WWTP)

Alternative C would include a wastewater treatment facility. As noted in **Section 2.2**, the facility would be designed to satisfy several criteria that would comply with standards established by the EPA and the RWQCB. These criteria include “odor free” operation of the facility. Odors from the plant headworks would be controlled using an odor scrubber as described in the Water and Wastewater Feasibility Study (**Appendix B**). The treatment facility would use an MBR system as the wastewater treatment process. MBR systems are currently used at similar facilities around the state. Based on standard design and operating procedures of an MBR facility, on-site wastewater treatment will have no adverse effect.

Operation of the wastewater treatment facility would result in the generation of a minor amount of emissions. The facility would primarily emit nitrogen gas, which is not a criteria pollutant and is a relatively inert gas that makes up approximately 75-percent of normal ambient air. As a result, this effect is considered to have no adverse effect.

CLIMATE CHANGE

GHG was analyzed the same as in Alternate A. The estimated emission of CO₂e for Alternative C is 0.000004-percent of the total global GHG emissions. Alternative C would have a less-than-significant impact to global climate change, due to the small contribution of GHG emissions that the project would make; however, mitigation measures are included in **Section 5.2.4** that are designed to reduce this impact.

4.4.5 ALTERNATIVE D – RETAIL DEVELOPMENT

CONSTRUCTION

Implementation of Alternative D would result in short-term construction-related effects. Construction of Alternative D would result in the generation of ROG and NO_x emissions. **Table 4.4-16** presents an estimate of these construction-related emissions of pollutants of concern for Alternatives D. URBEMIS outputs including estimated emission for all criteria air pollutants are shown in **Appendix Q**.

TABLE 4.4-16
ALTERNATIVE D – CONSTRUCTION EMISSIONS

Construction Phase	Pollutants of Concern	
	ROG	NO _x
tons per year		
Alternative D		
2008 Demolition an Site Grading	0.61	4.28
2009 Building	2.62	2.07
Maximum Emissions Phase	2.62	4.28
Conformity Thresholds	100	100
<i>Exceeds Conformity</i>	<i>No</i>	<i>No</i>

SOURCE: Appendix Q

Conformity Analysis

Tables 4.4-16 shows that the estimated emissions from the construction of Alternative D would be less than the conformity thresholds for ozone precursors (NO_x and VOC); thus, there would be no adverse effect to air quality. Because the project area is classified as attainment for the other CAPs, no conformity review is necessary. Mitigation measures are recommended in **Section 5.2.4** to reduce any potential effects from CAPs emissions.

Construction-Related Asbestos

Construction-related asbestos would be the same as in Alternative A.

OPERATION***Trip Generation Rate and Distribution***

Standard trip generation rates from the ITE Trip Generation, 6th Edition, are often used for common types of land uses. There are no published trip generation rates for casinos by ITE. Therefore the generation rates used were developed by AES through the survey of eight existing casinos in the region. **Table 4.4-17** show the trip generation rates for Alternative D. Trip distribution for Alternative D is the same as Alternative A.

TABLE 4.4-17
TRIP GENERATION RATES ALTERNATIVE D PHASE I

Land Use	Scenario	Size	Rate (trips/kSF)	Trip Generation			
				In	Out	Total	
Shopping Center	Weekday PM Peak Hour	123.25 ksf	3.75	52/48	222	240	462
	Saturday PM Peak Hour	123.25 ksf	4.97	52/48	319	294	613
	Daily Weekday	123.25 ksf	42.94				5,292

Ksf = 1,000 square feet

Source: Appendix M

Emissions Estimates

Operation of Alternative D would result in the generation of ROG and NO_x emissions. **Table 4.4-18** presents estimates of these emissions, while the URBEMIS outputs are included in **Appendix Q**.

TABLE 4.4-18
ALTERNATIVE D OPERATIONAL EMISSIONS

Sources	Pollutants of Concern	
	ROG	NO _x
tons per year		
Alternative C		
Area	0.26	0.22
Mobile	16.26	35.76
Total	16.52	35.98
Conformity thresholds	100	100
<i>Exceeds Conformity</i>	<i>No</i>	<i>No</i>

SOURCE: Appendix Q

Conformity Analysis

Tables 4.4-18 shows that the estimated emissions from construction of Alternative D would be less than the conformity thresholds for ozone precursors (NO_x and VOC); thus, there would be no

adverse effect to air quality. Because the project area is classified as attainment for the other CAPs, no conformity review is necessary. Mitigation measures are recommended in **Section 5.2.4** to reduce any potential effects from CAPs emissions.

Wastewater Treatment Plant (WWTP)

Alternative D would include a wastewater treatment facility. As noted in **Section 2.2**, the facility would be designed to satisfy several criteria that would comply with standards established by the EPA and the RWQCB. These criteria include “odor free” operation of the facility. Odors from the plant headworks would be controlled using an odor scrubber as described in the Water and Wastewater Feasibility Study (**Appendix B**). The treatment facility would use an MBR system as the wastewater treatment process. MBR systems are currently used at similar facilities around the state. Based on standard design and operating procedures of an MBR facility, on-site wastewater treatment will have no adverse effect.

Operation of the wastewater treatment facility would result in the generation of a minor amount of emissions. The facility would primarily emit nitrogen gas, which is not a criteria pollutant and is a relatively inert gas that makes up approximately 75-percent of normal ambient air. As a result, this effect is considered to have no adverse effect on air quality.

GREENHOUSE GASES

GHG was analyzed the same as in Alternate A. The estimated emission of CO₂e for Alternative D is 0.000003-percent of the total global GHG emissions. Alternative D would have a less-than-significant impact to global climate change, due to the small contribution of GHG emissions that the project would make; however, extensive mitigation measures are included in **Section 5.2.4** are designed to reduce this impact.

4.4.6 ALTERNATIVE E – NO ACTION

If the No Action alternative were selected, the project site would remain undeveloped for the short-term however over the long-term growth pattern of the City, including the City’s sphere of influence, portions of the project site may be developed with residential, commercial, or a mixture of land uses. There is not enough information at this time to assess individual environmental impacts of potential non-tribal development on the site if the BIA were to decide to select the No Action alternative. However, the discussion below provides a conditional analysis of the project site if the No Action alternative were to be selected by the BIA.

Construction-Related Emissions

In the short-term, the No Action Alternative would have no CAPs emissions. However, the project site may be developed in the future, at which time construction of the future project would

likely emit ozone precursors ROG and NO_x, as well as, other CAPs . Without project-specific information, quantification of these emissions is not possible.

Operational-Related Emissions

In the short-term, the No Action Alternative would have no CAPs emissions. However, the project site may be developed and operated in the future, at which time the operation of any future project would likely result in the emission of ozone precursors ROG and NO_x, as well as, other CAPs and TACs. Without project-specific information, quantification of these emissions is not possible.

Conformity

The No Action Alternative would most likely not result in an action by a federal agency. Therefore, a conformity determination would not be required.

4.5 BIOLOGICAL RESOURCES

The following discussion addresses the potential effects that the construction and operation of project alternatives would have on biological resources within the project area. An impact analysis using the methodology below is provided for each alternative. Cumulative and/or indirect impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.5**.

4.5.1 METHODOLOGY

Adverse effects to biological resources would occur if either construction or operation would result in the destruction of critical habitat, the filling of waters of the U.S., including wetlands, or the take of special-status species. Because both Phases I and II of Alternative A and Alternative B are located in the same general area, impacts to biological resources were assessed based on the cumulative project design of Phase I and II for each alternative.

4.5.2 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

HABITATS

Phases I and II

There are no known USFWS designated critical habitat within the project area for Phases I and II of Alternative A. During both phases of Alternative A, wastewater disposal Option 1 would disturb a total of 79.94-acres and wastewater disposal Option 2 would disturb a total of 75.59-acres. **Table 4.5-1** provides a summary of the acreage of each habitat type that would be affected under Alternative A. As shown in this table, full build-out of Alternative A would approximately affect about one-third of the available habitat within the project site. The majority of the habitat disturbance would occur in annual grassland habitat. These areas present limited resources for wildlife and are currently subject to disturbance from existing forms of land use, specifically cattle grazing.

Potential impacts to annual grassland and chaparral are considered negligible due to the relatively common and abundant nature of these habitat types in the region compared to the relatively small area of anticipated disturbance. These habitat types are disturbed, dominated by non-native species, and, in the case of chaparral, common to the region.

On-site Oak savannah, oak woodland, and riparian woodland provide habitat for several migratory bird species. **Table 4.5-1** identifies approximately 21± acres of oak savannah, 8± acres of oak woodland, and 3± acres of riparian woodland that would be affected by construction of the proposed project. Measures to mitigate for adverse effects to trees within these habitat types are provided in **Section 5.2.5**.

TABLE 4.5-1
EFFECTS TO HABITAT TYPES –ALTERNATIVE A

Habitat Type	Total Acres	Acreage Affected	Percentage of Habitat Affected	Percentage of Total Site Affected
Wastewater Disposal Option 1				
Annual grassland	81.78	30.86	38	14
Chaparral	37.46	9.80	26	4
Oak savannah	37.86	21.38	56	9
Oak woodland	33.00	8.24	25	4
Riparian woodland	21.50	2.90	13	1
Urbanized	13.56	6.39 ¹	47	3
Intermittent drainages	0.79	0.14	18	<1
Ponds, ditches, and potential vernal pools	2.09	0.23	11	<1
Total	228.04	79.94	N/A	35
Wastewater Disposal Option 2²				
Annual grassland	81.78	30.86	38	14
Chaparral	37.46	9.76	26	4
Oak savannah	37.86	21.38	56	9
Oak woodland	33.00	7.46	23	3
Riparian woodland	21.50	0.31	1	<1
Urbanized	13.56	5.59 ¹	41	2
Intermittent drainages	0.79	0.00	0	0
Ponds, ditches, and potential vernal pools	2.09	0.23	11	<1
Total	228.04	75.59	N/A	32

NOTES: ¹4.05 acres of development will occur on lands currently occupied by residential and commercial land uses.

²Option 2 does not include a reservoir

SOURCE: Appendix H

WATERS OF THE U. S.

Phases I and II

Analytical Environmental Services (AES) biologists conducted a formal delineation of the project footprint for the full build-out of Alternative A (Phases I and II) (**Appendix I**). This study identified 2.88-acres of jurisdictional wetlands and several intermittent drainages (all waters of the U. S.) occurring within the site. Project components for both phases would impact approximately 0.37-acres of potentially jurisdictional features (**Table 4.5-2**). Measures identified in **Section 5.2.5** would minimize potential impacts to wetlands and waters of the U.S. Best management practices (BMP's) related to land resources are presented in **Section 5.2.2** and would further reduce impacts to wetlands and waters of the U.S. associated with sedimentation and pollutants.

TABLE 4.5-2
DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE A

Project Component	Waters of the U. S. Type	Activity Description	Effected Acreage
Parking Lots and Roads	Ponds, potential vernal pools, and ditches	Bridge Abutments or Culverts	0.23
Reclaimed Water Storage Reservoir and Dam	Intermittent Streams	Dam, grout, sediment	0.14¹
		TOTAL	0.37

NOTES: ¹ only applies to Alternative A, Option 1

SOURCE: Appendix H

STATE-LISTED SPECIAL-STATUS SPECIES

Phases I and II

Potential impacts from the development of the footprint for Phases I and II of Alternative A would be limited to four plant species: Bandedge's clarkia (*Clarkia biloba* ssp. *brandegeae*), Tuolumne button-celery (*Eryngium pinnatisectum*), Parry's horkelia (*Horkelia parryi*), and prairie wedge grass (*Sphenopholis obtusata*); one reptile species: northwestern pond turtle (*Actinemys marmorata marmorata*); and one bird species: tricolored blackbird (*Agelaius tricolor*). These species and their habitats were assessed for their potential to occur within the project site.

No impacts to state-listed plant species are anticipated to occur on-site, as they were not observed on focused plant surveys performed during the corresponding bloom season. State-listed plant species do not occur within the project site.

Impacts to wetland features associated with both phases of Alternative A may impact northwestern pond turtles if they occur within the disturbed area. Measures to mitigate for wetlands and waters of the U.S. (**Section 5.2.5**) would minimize potential impacts to this species.

Light and noise associated with the development of Alternative A may have moderate adverse effects on tricolored blackbirds if they nest in the immediate vicinity of the project site. Recommended mitigation in **Section 5.2.5** would minimize potential effects to tricolored blackbird nests.

FEDERALLY-LISTED SPECIAL-STATUS SPECIES

Phases I and II

As discussed in **Section 3.5.5**, five federally-listed species have the potential to occur within the

project site: vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool tadpole shrimp (*Lepidurus packardii*), California red-legged frog (*Rana aurora draytonii*), and the California tiger salamander, central population (*Ambystoma californiense*).

Branchiopod surveys were conducted during the 2004-2005 and the 2007 wet seasons. No listed branchiopod species were observed during these protocol level surveys. Vernal pool fairy shrimp and vernal pool tadpole shrimp do not occur within the project site; therefore, they will not be affected by the development of either phase of Alternative A.

Two of the four elderberry shrubs identified within the project site are not within the areas planned for development and will therefore not be affected by the project. The other two elderberry shrubs are located under the footprint of the proposed wastewater reservoir and would be affected by wastewater disposal Option 1; however, all four elderberry shrubs located on the project site are isolated and do not have exit holes on their branches. Valley elderberry longhorn beetles (VELB) do not occur within the project site and will therefore not be affected by the development of either phase of Alternative A.

Protocol level surveys for California red-legged frog (CRLF) were conducted during the 2007 breeding and non-breeding seasons. There were no observations of CRLFs or their tadpoles and eggs. CRLF do not occur within the project site or vicinity; therefore, they will not be affected by either phase of Alternative A.

Potential habitat for the California tiger salamander (CTS) occurs within the project site. While unlikely, based upon observations made during CRLF and brachiopod surveys conducted in CTS habitat, the CTS may have to potential to occur within the project site. Submittal of a Site Assessment to USFWS is pending. Measures provided in **Section 5.2.5** would minimize any potential affects to the CTS.

MIGRATORY BIRDS

Phases I and II

Some migratory birds, such as Canadian geese (*Branta Canadensis*), mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), western kingbird (*Tyrannus verticalis*), and Nuttall's woodpecker (*Picoides nuttallii*), have the potential to nest in trees and vegetation within the project site, specifically in the oak savannah, oak woodland, and riparian woodland habitats. If associated construction activities of Alternative A, which may include the removal of trees and vegetation and earth grading, occur during nesting seasons, then either of the phases have the potential to adversely affect the nesting activity of the migratory species listed above.

Development of Alternative A may have moderate adverse effects on nesting migratory; however, mitigation measures listed in **Section 5.2.5** would minimize such effects.

4.5.2 ALTERNATIVE B – REDUCED CASINO AND HOTEL

HABITATS

Phases I and II

Alternative B would impact 76.43-acres under wastewater disposal Option 1 and 72.08-acres under wastewater disposal Option 2 for Phases I and II of Alternative B. **Table 4.5-3** provides a summary of the acreage of each habitat type that would be affected under full build-out of Alternative B. The potentially affected habitats within the project area are similar, but slightly reduced when compared with Alternative A. As discussed under Alternative A, there are no known USFWS designated critical habitats within the project site. Impacts to annual grassland and chaparral are minimal due to the disturbed nature and relative abundance of the habitat types in the area. Measures to mitigate for adverse effects to trees with the oak savannah, oak woodland, and riparian woodland habitats on-site are provided in **Section 5.2.5**.

TABLE 4.5-3
ANTICIPATED EFFECTS TO HABITAT TYPES –ALTERNATIVE B

Habitat Type	Total Acres	Acreage Affected	Percentage of Habitat Affected	Percentage of Total Site Affected
Wastewater Disposal Option 1				
Annual grassland	81.78	29.22	36	13
Chaparral	37.46	9.79	26	4
Oak savannah	37.86	19.56	52	9
Oak woodland	33.00	8.21	25	4
Riparian woodland	21.50	2.87	13	1
Urbanized	13.56	6.43 ¹	47	3
Intermittent drainages	0.79	0.14	18	<1
Ponds, ditches, and potential vernal pools	2.09	0.21	10	<1
Total	228.04	76.43	N/A	34
Wastewater Disposal Option 2²				
Annual grassland	81.78	29.22	36	13
Chaparral	37.46	9.75	26	4
Oak savannah	37.86	19.56	52	9
Oak woodland	33.00	7.43	23	3
Riparian woodland	21.50	0.28	1	<1
Urbanized	13.56	5.63 ¹	42	2
Intermittent drainages	0.79	0.00	N/A	0
Ponds, ditches, and potential vernal pools	2.09	0.21	10	<1
Total	228.04	72.08	N/A	31

NOTES: ¹4.02 acres of development will occur on lands currently occupied by residential and commercial land uses.

²Option 2 does not include a reservoir

SOURCE: Appendix H

WATERS OF THE U.S.***Phases I and II***

When compared to Alternative A, Alternative B would have similar, but slightly reduced, effects on wetlands and waters of the U.S. Project activities would impact approximately 0.35-acres of potentially jurisdictional water features (**Table 4.5-4**). Measures identified in **Section 5.2.5** would minimize potential impacts to wetlands and waters of the U.S. BMPs related to land resources are presented in **Section 5.2.2** and would further reduce impacts to wetlands and waters of the U.S. associated with sedimentation and pollutants.

TABLE 4.5-4
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE B

Project Component	Waters of the U. S. Type	Activity Description	Effectuated Acreage
Parking Lots and Roads	Ponds, potential vernal pools, and ditches	Bridge Abutments or Culverts	0.21
Reclaimed Water Storage Reservoir and Dam	Intermittent Streams	Dam, grout, sediment	0.14
		TOTAL	0.35

NOTES: ¹ only applies to Alternative B, Option 1

SOURCE: Appendix H

FEDERAL AND STATE-LISTED SPECIAL-STATUS SPECIES***Phases I and II***

Impacts to federal and state-listed species associated with Alternative B are similar, but slightly reduced, when compared to those associated with Alternative A. Although no VELB occur on-site, mitigation measures provided in **Section 5.2.5** would minimize impacts to VELB habitat. While unlikely, development of Alternative B may also adversely affect the CTS. Mitigation measures provided in **Section 5.2.5** would minimize potential effects to the CTS.

MIGRATORY BIRDS***Phases I and II***

Potential impacts of Alternative B to migratory bird species are similar to potential impacts generated by Alternative A. If associated construction activities of Alternative B, which may include the removal of trees and vegetation and earth grading, occur during nesting seasons, then either of the phases have the potential to adversely affect the nesting activity of the migratory species listed above. Development of Alternative B may have moderate adverse effects on

nesting birds. Recommended mitigation measures in **Section 5.2.5** would minimize any potential adverse effects to migratory birds.

4.5.3 ALTERNATIVE C –REDUCED CASINO

HABITATS

Alternative C would impact 61.30-acres under wastewater disposal Option 1 and 57.40-acres under wastewater disposal Option 2. **Table 4.5-5** provides a summary of the acreage of each habitat type that would be affected under Alternative C. The effects to habitats within the project site are similar, but reduced when compared with Alternative A. As discussed under Alternative A, there are no known USFWSs designated critical habitats within the site. Impacts to annual grassland and chaparral are minimal due to the disturbed nature and relative abundance of the habitat types in the area. Measures to mitigate for adverse effects to trees with the oak savannah, oak woodland, and riparian woodland habitats on-site are provided in **Section 5.2.5**.

TABLE 4.5-5
ANTICIPATED EFFECTS TO HABITAT TYPES –ALTERNATIVE C

Habitat Type	Total Acres	Acreage Affected	Percentage of Habitat Affected	Percentage of Total Site Affected
Wastewater Disposal Option 1				
Annual grassland	81.78	20.96	26	9
Chaparral	37.46	8.00	21	4
Oak savannah	37.86	14.87	39	7
Oak woodland	33.00	8.16	25	4
Riparian woodland	21.50	2.60	12	1
Urbanized	13.56	6.38 ¹	47	3
Intermittent drainages	0.79	0.12	15	<1
Ponds, ditches, and potential vernal pools	2.09	0.21	10	<1
Total	228.04	61.30	N/A	27
Wastewater Disposal Option 2²				
Annual grassland	81.78	20.96	26	9
Chaparral	37.46	8.00	21	4
Oak savannah	37.86	14.87	39	7
Oak woodland	33.00	7.43	23	3
Riparian woodland	21.50	0.31	1	<1
Urbanized	13.56	5.62 ¹	41	3
Intermittent drainages	0.79	0.00	0	0
Ponds, ditches, and potential vernal pools	2.09	0.21	10	<1
Total	228.04	57.40	N/A	26

NOTES: ¹ 4.02 acres of development will occur on lands currently occupied by residential and commercial land uses.

² Option 2 does not include a reservoir.

SOURCE: Appendix H

WATERS OF THE U.S.

When compared to Alternative A, Alternative C would have similar, but slightly reduced effects on wetlands and waters of the U.S. Project activities would impact approximately 0.33-acres of potentially jurisdictional features (**Table 4.5-6**). Measures identified in **Section 5.2.5** would minimize potential impacts to wetlands and waters of the U.S. BMPs related to land resources are presented in **Section 5.2.2** and would further reduce impacts to wetlands and waters of the U.S. associated with sedimentation and pollutants.

TABLE 4.5-6
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE C

Project Component	Waters of the U. S. Type	Activity Description	Effect Acreage
Parking Lots and Roads	Ponds, potential vernal pools, and ditches	Bridge Abutments or Culverts	0.21
Reclaimed Water Storage Reservoir and Dam	Intermittent Streams	Dam, grout, sediment	0.12
		TOTAL	0.33

NOTES: ¹ only applies to Alternative C, Option 1
SOURCE: Appendix H

FEDERAL AND STATE-LISTED SPECIAL-STATUS SPECIES

Impacts to federal and state-listed species associated with Alternative C are similar, but reduced, when compared to those associated with Alternative A. Although no VELB occur on-site, mitigation measures provided in **Section 5.2.5** would minimize any potential impacts to the VELB habitat. While unlikely, development of Alternative C may adversely affect CTS. Measures provided in **Section 5.2.5** would minimize potential affects to CTS.

MIGRATORY BIRDS

Potential impacts of Alternative C to migratory bird species are similar to potential impacts generated by Alternative A. If associated construction activities of Alternative C, which may include the removal of trees and vegetation and earth grading, occur during nesting seasons, then either of the phases have the potential to adversely affect the nesting activity of the migratory species listed above. Development of Alternative C may have moderate adverse effects on nesting birds. Recommended mitigation measures in **Section 5.2.5** would minimize any adverse effects to migratory birds.

4.5.4 ALTERNATIVE D – RETAIL DEVELOPMENT

HABITATS

Alternative D would impact 34.60-acres. **Table 4.5-7** provides a summary of the acreage of each habitat type that would be affected under Alternative D. The effects to habitats within the project site are similar, but reduced when compared with Alternative A. As discussed under Alternative A, there are no known USFWS designated critical habitat within the site. Impacts to annual grassland and chaparral are minimal due to the disturbed nature and relative abundance of the habitat types in the area. Measures to mitigate for adverse effects to trees with the oak savannah, oak woodland, and riparian woodland habitats on-site are provided in **Section 5.2.5**.

TABLE 4.5-7
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE D

Habitat Type	Total Acres	Acreage Affected	Percentage Affected
Annual grassland	81.78	8.37	4
Chaparral	37.46	8.68	4
Oak savannah	37.86	6.01	3
Oak woodland	33.00	6.53	3
Riparian woodland	21.50	0.20	<1
Urbanized	13.56	4.77 ¹	2
Intermittent drainages	0.79	0.00	0
Ponds, ditches, and potential vernal pools	2.09	0.04	<1
Total	228.04	34.60	15

NOTES: ¹4.40 acres of development will occur on lands currently occupied by residential and commercial land uses.

SOURCE: Appendix H

WATERS OF THE U.S.

When compared to Alternative A, Alternative D would have similar, but slightly reduced effects on wetlands and waters of the U.S. Project activities would impact approximately 0.04-acres of potentially jurisdictional features (**Table 4.5-8**). Measures identified in **Section 5.2.5** would minimize potential impacts to wetlands and waters of the U.S. BBMPs related to landresources are presented in **Section 5.2.2** and would further reduce impacts to wetlands and waters of the U.S. associated with sedimentation and pollutants.

FEDERAL AND STATE-LISTED SPECIAL-STATUS SPECIES

Impacts to federal and state-listed species associated with Alternative D are similar, but reduced, when compared to those associated with Alternative A. Although no VELB occur on-site, mitigation measures provided in **Section 5.2.5** would minimize any impacts to the VELB habitat. The development of Alternative D may also adversely affect the CTS; however, the mitigation measures provided in **Section 5.2.5** would also minimize potential effects to the CTS.

TABLE 4.5-8
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE D

Project Component	Waters of the U. S. Type	Activity Description	Effectuated Acreage
Parking Lots and Roads	Ponds, potential vernal pools, and ditches	Bridge Abutments or Culverts	0.04
		TOTAL	0.04

SOURCE: Appendix H

MIGRATORY BIRDS

Potential impacts of Alternative D to migratory bird species are similar to potential impacts generated by Alternative A. If associated construction activities of Alternative D, which may include the removal of trees and vegetation and earth grading, occur during nesting seasons, then either of the phases have the potential to adversely affect the nesting activity of the migratory species listed above. Development of Alternative D may have moderate adverse effects on nesting birds. Recommended mitigation in **Section 5.2.5** would minimize any potential adverse effects to migratory birds.

4.5.5 ALTERNATIVE E – NO ACTION

Under the No Action Alternative a change in the current land use of the project site is not reasonably foreseeable for the short-term. However, long-term land use changes could result in residential and/or commercial development on the project site. The habitat impacts would be similar as described above under Alternative A. Non-tribal development would be required to comply with general plan provisions on resource conservation and with the California Department of Fish and Game provisions. With regulatory requirements restricting impacts to biological resources, non-tribal development would most likely result in less-than-significant impacts to biological resources.

4.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section identifies the direct impacts to cultural and paleontological resources that would result from the development of each alternative described in **Section 2.0**. Effects are measured against the cultural and paleontological baseline established in **Section 3.6**. An impact analysis using the methodology below is provided for each alternative. Cumulative and/or indirect impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.6**.

4.6.1 METHODOLOGY

In accordance with Section 106 of the National Historic Preservation Act (NHPA), a significant adverse impact would result if implementation of one of the alternatives resulted in one of the following effects to existing cultural resources discussed in **Section 3.6**:

- Physical destruction of or damage to all or part of the resource; alteration of a resource;
- Removal of the resource from its historic location; change of the character of the resource's use or of physical features within the resource's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the resource's significant historic features; or
- Neglect of a resource that causes its deterioration.

A Cultural Resources Inventory and Evaluation of the project site was prepared in June 2004 (amended July 2005; **Appendix K**). A literature and records search of the California Historical Resources Information System (North Central Information Center, California State University-Sacramento) was completed August 13, 2003 and an archaeological survey was conducted between August 14, 2003 and June 14, 2004 for the proposed project (**Appendix K**).

4.6.2 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

CULTURAL RESOURCES

Phases I and II

As discussed in **Section 3.6**, a total of nine historic archaeological sites, one standing historic building, and one historic district were identified during field reconnaissance of the project parcels (**Table 3.6-1**). Refer to **Appendix K** for a full description and evaluation of the sites. Six of the historic archaeological sites, the historic building, and the historic district had previously been evaluated for inclusion on the California Register of Historical Resources and were found to be ineligible (Windmiller and Osanna, 2001). Re-evaluation of these resources found that they were also ineligible for inclusion to the National Register of Historic Places (NRHP) (ECORP 2005; **Appendix K**).

The criteria for listing on the NRHP were also applied to the three newly identified resources, which resulted in the recommendation that they are also ineligible. Alternative A would, therefore, result in a less-than-significant effect to cultural resources, as defined by the NHPA, Section 301[5]. **Section 5.2.6** of this Draft EIS discusses mitigation measures that are applicable if previously unknown archaeological sites or human remains are encountered during project construction.

PALEONTOLOGICAL RESOURCES

Phases I and II

Geologic formations that underlie the project site have a low-to-moderate probability of containing paleontological resources. No known paleontological localities have been reported within or in the immediate vicinity of the project site. Therefore, no adverse effects are expected.

4.6.3 ALTERNATIVE B – REDUCED CASINO WITH HOTEL

CULTURAL RESOURCES

Phases I and II

Development of Alternative B would be similar to that of Alternative A and would therefore result in a less-than-significant impact to cultural resources. **Section 5.2.6** of this Draft EIS discusses mitigation measures that are applicable if previously unknown archaeological sites or human remains are encountered during project construction.

PALEONTOLOGICAL RESOURCES

Phases I and II

Geologic formations that underlie the project site have a low-to-moderate probability of containing paleontological resources. No known paleontological localities have been reported within or in the immediate vicinity of the project site. Therefore, no adverse effects are expected.

4.6.4 ALTERNATIVE C – REDUCED CASINO

CULTURAL RESOURCES

Alternative C is similar to Alternatives A and B, but on a smaller scale. Therefore, development of Alternative C would also result in a less-than-significant impact to cultural resources. **Section 5.2.6** of this Draft EIS discusses mitigation measures that are applicable if previously unknown archaeological sites or human remains are encountered during project construction.

PALEONTOLOGICAL RESOURCES

Geologic formations that underlie the project site have a low-to-moderate probability of containing paleontological resources. No known paleontological localities have been reported within or in the immediate vicinity of the project site. Therefore, no adverse effects are expected.

4.6.5 ALTERNATIVE D – RETAIL DEVELOPMENT

CULTURAL RESOURCES

Development of Alternative D would also result in a less-than-significant impact to cultural resources. **Section 5.2.6** of this Draft EIS discusses mitigation measures, which are applicable if previously unknown archaeological sites or human remains are encountered during project construction.

PALEONTOLOGICAL RESOURCES

Geologic formations that underlie the project site have a low-to-moderate probability of containing paleontological resources. No known paleontological localities have been reported within or in the immediate vicinity of the project site. Therefore, no adverse effects are expected.

4.6.6 ALTERNATIVE E – NO ACTION

If the No Action alternative were selected, the project site would remain undeveloped for the short-term; however, over the long-term growth pattern of the City, including the City's sphere of influence, portions of the project site may be developed with residential, commercial, or a mixture of the two land uses. Future development activities would need to comply with NEPA, CEQA and local regulations. There is not enough information at this time to assess potential impacts to cultural and paleontological resources resulting from non-tribal development on the site if the BIA were to decide to select the No Action alternative. However, it can be anticipated that non-tribal developments would be required to comply with state and local regulations regarding cultural and Paleontological resources, resulting in less than significant impacts.

4.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

This section analyses the potential socioeconomic impacts that could occur project site region as discussed in **Section 3.7** as a result of the implementation of each proposed project alternative. An impact analysis using the methodology below is provided for each alternative on the Tribe, regional economy, housing and community infrastructure, as well as the existing fiscal and social setting. An impact analysis using the methodology below is provided for each alternative. Cumulative and/or indirect impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to avoid, minimize, or mitigate potential adverse effects are discussed in **Section 5.2.7**.

4.7.1 METHODOLOGY

Since any potential socioeconomic effects would be most pronounced in the proximity of each proposed alternative, the scope of analysis focuses on such effects within Amador County. Each development phase of each alternative is analyzed to determine if construction or operation would result in direct adverse impacts to populations or the economy within Amador County. This analysis is based in part on an Economic Impact Analysis prepared by GVA Marquette Advisors (**Appendix R**).

The quantities presented below for each alternative are representative of the “net impact,” meaning the quantities account for the substitution effect. The substitution effect identifies quantities that are diverted from elsewhere in the region. Therefore, the quantities presented below show only new economic activity stimulated by an action. The substitution effect used for this analysis assumes that 10-percent of economic activity would be substituted rather than newly generated for casino alternatives and 75-percent for the shopping center alternative (**Appendix R**).

4.7.2 ALTERNATIVE A – PREFERRED CASINO AND HOTEL

ECONOMIC IMPACT

Phase I

Construction

Construction of Phase I of Alternative A includes the casino and is estimated to cost \$47.0 million one-time. Approximately \$35.2 million (75-percent) would be attributed to materials and \$11.8 million (25-percent) would be attributed to labor. Phase I of Alternative A is expected to result in the employment of 392 construction workers one-time and is considered a beneficial impact.

*Operation***Employment**

Operation of Phase I of Alternative A is estimated to generate 1,271 full-time equivalent jobs annually. Full-time equivalent jobs is equivalent to the amount of labor one full-time employee can complete in a calendar year. For example, two part-time employees working for a year each would constitute one full-time job. **Table 4.7-1** shows that the largest portion of jobs, 618 positions or 49-percent, would be attributed to gaming for the operation of Phase I. The remaining positions would consist of food and beverage, gift shop, entertainment, administrative, marketing, maintenance, and security opportunities.

TABLE 4.7-1
NET NEW EMPLOYMENT AND EARNINGS – ALTERNATIVE A (\$ MILLIONS ANNUALLY)

Classification	Jobs		Wages		Tips	
	Phase I	Phase I & II	Phases I	Phase I & II	Phases I	Phases I & II
Gaming	618	649	\$15.3	\$16.2	\$1.2	\$1.2
Hotel	-	40	-	\$0.8	-	-
Food and Beverage	199	212	\$3.7	\$3.9	\$0.9	\$1.0
Gift Shop	9	9	\$0.2	\$0.2	-	-
Entertainment	3	3	\$0.1	\$0.1	-	-
Administrative/General	173	177	\$4.5	\$4.7	-	-
Marketing	80	84	\$1.9	\$2.0	-	-
Maintenance	103	105	\$2.5	\$2.6	-	-
Security	86	86	\$2.0	\$2.0	-	-
Total	1,271	1,365	\$30.3	\$32.5	\$2.1	\$2.2

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Full-time equivalent jobs.

New employee wages from Phase I are expected to total approximately \$30.3 million annually (**Table 4.7-1**). This equates to an average of approximately \$23,837 per full-time position annually. Employees who earn tips are estimated to earn an additional \$2.1 million in tips annually or an additional \$2,538 annually per tip earning employee.¹ The proposed casino would also provide benefits for workers, including health insurance, workers compensation and other benefits.

Based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent or 763 of those employed would be residents of Amador County. The remaining employees are expected to reside in neighboring counties, primarily Calaveras, Sacramento, San Joaquin, and El Dorado Counties. While the close proximity of the

¹ Employees who could earn tips include gaming and food and beverage positions, which under Phase I would include 817 positions.

project site to the City of Plymouth would make the proposed casino and hotel a convenient place of work, due to the limited size of the labor force residing in Plymouth, it is estimated that only five-percent or 64 of those employed would be residents of Plymouth². This is considered a beneficial impact.

Expenditures on Goods and Services

Phase I of Alternative A would also result in new in-state expenditures on goods and services totaling approximately \$27.5 million annually. It is expected that these purchases would be made primarily from existing vendors located in Amador County and surrounding counties, due to location and market advantages. **Table 4.7-2** shows that the largest portions of expenditures would be attributed to administrative and general services at \$6.9 million (25-percent) and marketing at \$6.7 million (24-percent). The remaining expenditures would be attributed to gaming supplies, food and beverage, gift shop, maintenance supplies and contracts, security, and utilities. This is considered a beneficial impact.

TABLE 4.7-2
NEW EXPENDITURES ON GOODS AND SERVICES –
ALTERNATIVE A (\$ MILLIONS ANNUALLY)

Classification	Phase I	Phases I & II
Gaming	\$3.5	\$6.7
Hotel	-	\$0.5
Food and Beverage	\$5.0	\$5.2
Gift Shop	\$1.0	\$1.1
Administrative & General	\$6.9	\$3.6
Marketing	\$6.7	\$2.6
Maintenance Supplies & Contracts	\$1.9	\$2.1
Security	\$0.3	\$0.3
Utilities	\$2.3	\$7.5
Total	\$27.5	\$29.6

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Expenditures expected to be purchased directly by the project in the State of California.

Phase II

Construction

Construction of Phase II of Alternative A would include the addition of a hotel and convention center and is estimated to cost an additional \$22.0 million one-time. Approximately \$16.5 million (75-percent) would be attributed to materials and \$5.5 million (25-percent) of the

² The employees expected to reside in Amador County include those expected to reside in Plymouth.

construction cost would be attributed to labor. Phase II is expected to result in the employment of 182 construction workers over the course of a year and is considered a beneficial impact.

Operation

Employment

Operation of Alternative A with the addition of Phase II is estimated to generate 1,365 full-time equivalent jobs annually. **Table 4.7-1** shows that the largest portion of jobs, 649 positions or 48-percent, would be attributed to gaming. The remaining positions would consist of the same type of opportunities as generated from Phase I.

New employee wages from Phase I and II are expected to total approximately \$32.5 million annually (**Table 4.7-1**). This equates to an average of approximately \$23,774 per full-time position annually. Employees who earn tips are estimated to earn an additional \$2.2 million in tips annually or an additional \$2,540 annually per tip earning employee³. Phase II would provide workers with the same benefits as Phase I.

Based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent or 819 of those employed would be residents of Amador County. The remaining employees are expected to reside in neighboring counties, primarily Calaveras, Sacramento, San Joaquin, and El Dorado Counties. While the close proximity of the project site to the City of Plymouth would make the proposed casino and hotel a convenient place of work, due to the limited size of the labor force residing in Plymouth, it is estimated that only five-percent or 68 of those employed would be residents of Plymouth. This is considered a beneficial impact.

Expenditures on Goods and Services

Phase I and II of Alternative A would also result in new in-state expenditures on goods and services of approximately \$29.6 million annually. **Table 4.7-2** shows that the largest portions of expenditures would be attributed to utilities at \$7.5 million (25-percent) and gaming supplies at \$6.7 million (23-percent). The remaining expenditures would be in the same sectors as from Phase I and is considered a beneficial impact.

HOUSING IMPACT

Phase I

The development of Phase I of Alternative A would result in the creation of approximately 1,271 new jobs annually within Amador County. As discussed above, 763 of the new workers are

³ Employees who could earn tips include gaming and food and beverage positions, which under Phase I would include 861 positions.

expected to reside in Amador County including 64 residing from the City of Plymouth. The remaining 508 new workers are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties.

In the short-term, it is expected that most employees would reside within their existing communities and would not need to relocate. However, some employees that rent housing would likely choose to rent housing closer to their place of employment, increasing demand for units. In the long-term, most employees would likely continue to reside within their existing communities. However, some employees would choose to buy their first home or relocate within the City of Plymouth and the surrounding communities of Amador County, increasing demand for units. Additionally, the increased demand for rental housing in the area would likely result in the construction of new housing units. As discussed in **Section 3.7**, approximately 36 vacant units are available in Plymouth and approximately 650 additional units are available elsewhere in Amador County.

The construction of new housing that may result from the development of Alternative A is expected to be limited by the number of employees able to finance a new home, the availability of residential zoned land, and local land use regulations. New construction is expected to occur in Plymouth and adjacent communities in Amador County, as well as in adjacent areas of surrounding counties. Due to the existing labor base in surrounding communities, the number of available vacant units, the limited amount of new construction expected, and that new housing is expected to be located over a wide geographic area, the potential effects to housing are expected to be less than significant.

Phase II

With the addition of Phase II of Alternative A, approximately 1,365 new jobs would be created annually within Amador County. As discussed above, 819 of the new workers are expected to reside in Amador County including 68 residing in Plymouth. The remaining 546 new workers are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties. The short- and long-term effects of Alternative A with the addition of Phase II would be similar to Phase I and is considered to be a less-than-significant impact.

COMMUNITY INFRASTRUCTURE

Phase I

Schools

Alternative A could result in an impact to the local education system from an increased number of students demanding services. To determine the number of students that may result from project employment, the number of children and young adults enrolled in preschool-12th grade in relation to the number of individuals in the labor force in Amador County was obtained (**Section 3.7**).

Based upon Census 2000 figures for these two categories there is one student for every two persons employed or seeking employment. Therefore, based on the 763 new employees annually expected to reside in Amador County from the development of Phase I, approximately 382 students would require education from County's schools. Since it is expected that most employees would reside in their existing communities, most of the students are not expected to be new students, but rather students already served by local schools. However, as noted in the housing discussion above, it is expected that some employees would relocate to Plymouth and the surrounding communities; therefore, potentially increasing the number of students in local schools. This potential increase in students could result in local impacts if the District schools lack the capacity and/or staff to provide services to new students.

Five-year projections for classroom capacity illustrated that the majority of Amador County Public Schools will have an excess of classrooms (**Section 3.7**). However, three schools were projected to be beyond classroom capacity by the year 2008 and may be unable to meet future enrollment demands. Ione Elementary and Sutter Creek Elementary schools are both projected to have a shortfall of 3 classrooms each, and Argonaut High School is projected to have a shortfall of 5 classrooms. Additional students that would be expected to attend these schools would further stretch the ability of the Amador County School District (District) to provide services to existing and new students.

Development impact fees and property tax revenues typically compensate impacts to school districts. However, because Alternative A would not be subject to either impact fees or local taxes after being transferred into trust status, these mitigating payments would not be made. Pursuant to Government Code Section 65995 et. seq., and Education Code Section 17620 et. seq., school districts are authorized to levy fees on new commercial-industrial development to fund the "construction or reconstruction of school facilities" necessary to accommodate the students from new development. Currently, the District's developer fees for commercial-industrial development is \$0.34 per square foot of building. Based on the development of a 120,000 square foot casino in Phase I of Alternative A, the calculated school impact fees from this development would be \$40,800. The loss of property taxes from Alternative A would also impact school funding since property tax revenues are the primary finances for public schools in Amador County. As discussed in **Section 3.7**, approximately \$18,818 of the current property tax rate (\$35,820) would be distributed to the school district, ERAF, and the County Office of Education. Payment of school impact fees to the District totaling \$107,610, as indicated in **Section 5.2.7**, would provide Amador County Public Schools with the resources to mitigate effects that may occur as a result of Alternative A. This would reduce impacts to a less-than-significant level.

Libraries and Parks

Effects to area libraries and parks could occur if the employees or patrons of Alternative A significantly increase the demand of these resources. As noted in **Section 3.7**, the City of Plymouth has one public library and a variety of parks and playgrounds. Due to the limited number of employees that are expected to reside or relocate in the City of Plymouth from Phase I of Alternative A, or from the addition of Phase II, it is expected that these effects would be limited. Due to the entertainment nature of Alternative A, it is not expected that patrons would frequent local libraries or parks. With the incorporation of mitigation this is considered a less-than-significant impact.

Phase II

Schools

Alternative A with the addition of Phase II would result in similar impacts to schools as Phase I. Phases I and II would result in 819 new employees annually expected to reside in Amador County, resulting in approximately 410 students would require education from county schools, which is an additional 28 students from the incorporation of Phase II. Based on the development of a 166,500 square foot hotel and 30,000 square foot event and convention center in Phase II of Alternative A, the calculated school impact fees from this development would be \$66,810. Similar to Phase I, payment of school impact fees to the District would reduce impacts to a less-than-significant level similar.

Libraries and Parks

Effects to area libraries and parks would be similar under Phase II of Alternative A as Phase I.

FISCAL EFFECTS

Phases I & II

Phases I and II of Alternative A would result in a variety of fiscal impacts. Potential adverse fiscal effects would result from an increased demand for public services and loss of property taxes. Potential fiscal benefits would result from increased revenues generated from sales taxes. These effects would occur within both the City of Plymouth and Amador County jurisdictions.

Public services that could be affected include law enforcement and fire protection and emergency medical services. These impacts are discussed in **Section 4.9**. The Tribe would provide compensation to local law enforcement and fire protection service providers, as discussed in **Section 5.2.9**, to reduce impacts to agencies providing public services to a less-than-significant level.

The fee-to-trust transfer of the 12 project parcels would remove them from the County's assessed property rolls. The annual property taxes from these parcels for the 2005-2006-tax year are approximately \$35,820.20. This loss of property tax revenue would remove revenues from the County, as well as the County schools. The Tribe would provide compensation to Amador County to mitigate impacts of lost tax revenues, as discussed in **Section 5.2.7**. The loss of tax revenues would also be offset by an increase in sales tax revenues that would be generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area resulting from the indirect and induced effects of the casino and hotel. The increase in sales tax is estimated to be \$11.8 million statewide from Phase I and \$12.7 million statewide with the addition of Phase II (**Appendix G**). Payroll and related taxes will also increase as a result of employment opportunities and earnings supported by the casino and hotel operation and its indirect and induced effects. The net effect of fiscal impacts is considered less than significant.

SOCIAL IMPACTS

Phases I & II

Pathological and Problem Gambling

Gambling, in one form or another, is now legal in every state except Hawaii and Utah. According to an National Gambling Impact Study Commission (NGISC) study, approximately 86-percent of Americans report having gambled at least once during their lifetimes and 63-percent of Americans report having gambled at least once during the previous year (NGISC, 1999). This estimate is based on participation in all forms of gambling including lotteries, poker, Internet gambling, betting, and casino gambling.

As described in **Table 4.7-3** there are behaviors of casino customers that can be broken down into five categories. Gaming customers are motivated to visit a casino for a variety of reasons, and some of those reasons may be viewed as criteria that define one as a problem gambler.

The American Psychiatric Association (APA) describes pathological gambling as an impulse control disorder characterized by "persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits. The gambling pattern may be regular or episodic, and the course of the disorder is typically chronic" (NGISC, 1999). The APA has established ten criteria for diagnosis of a pathological and problem gambler, which include preoccupation, tolerance, withdrawal, escape, chasing, lying, loss of control, illegal acts, risked significant relationship, and financial bailout. At-risk gaming behaviors typically meet one or two of these criteria; problem gamblers typically meet three to four of these criteria; and pathological gamblers typically meet at least five of these criteria. Collectively, both pathological and problem gambling are referred to as "problem gambling."

An NGISC study reported on three studies, two completed in 1997 and one completed in 1998 that estimate the percentage of American adults classified as pathological gamblers ranged from 1.2 to 1.6-percent (NGISC, 1999). The NGISC noted that pathological gambling often occurs in conjunction with other behavioral problems, including substance abuse, mood disorders, and personality disorders. Even if it were possible to isolate the effects of problem gambling on people who suffer from co-morbidity, it is difficult to then isolate the effects of casino gambling from other forms of gambling. As discussed, casino gambling is only one form of gaming. In fact, the most prevalent forms of gambling are those found in most neighborhoods: scratch lottery cards, lotto, and video lottery terminals.

TABLE 4.7-3
FIVE BEHAVIORS OF CASINO CUSTOMERS

Behavior Type	Characteristics
Recognition Seekers	Small share of total players. Have high expectation of recognition from the property they patronize. The reward to the casino is an intensely loyal and frequent visitor.
Escapists	Seek a getaway that does not resemble their everyday routine. Prefer to remain anonymous. Require minimal maintenance in the form of personal attention and complimentary services from the casino.
Reward Seekers	Driven by casino's play rewards program or promotions that compensate them for their play. Gamer will play at the casino with the best deal.
Socializers	Visit a casino to be around others. Once they identify with a particular property they become very loyal with high levels of visitation.
Professionals	Pay very close attention to the types of games a casino offers. Generate large coin handle and accumulate voluminous amounts of slot club points. Loyalty goes to the casino where they can make the most money.

Source: Gaming Market Advisors, 2006.

Residents of Amador County and surrounding areas have been exposed to many forms of gambling, including destination casinos, for many years. An additional casino in Amador County under Alternative A is not expected to substantially increase the prevalence of problem gamblers. Nonetheless, the Tribe has agreed to make an annual contribution of \$10,000 to an organization or organizations to address problem gambling issues, as discussed in **Section 5.2.7**. This is considered a less-than-significant impact.

Crime

There is a general belief that the introduction of legalized gambling into a community increases crime. An alternative argument is that legalized gaming reduces crime by reducing illegal gambling, decreasing unemployment, and stimulating the local economy. Both of these arguments are based more on anecdotal evidence than empirical evidence. Destination casinos, by their nature, increase the volume of people entering a given community. Whenever large volumes of people are introduced into a community, the volume of crime is also expected to

increase. This holds true for the introduction of any large-scale development. Taken as a whole, the literature on the relationship between casino gambling and crime rates suggests that communities with casinos are as safe as communities without casinos.

Development of Alternative A would be a large-scale development that would introduce a large number of patrons and employees into the community on a daily basis. As a result, the criminal incidents would be expected to increase as with any other development of this size. Increased tax revenues resulting from Alternative A would fund expansion of law enforcement services required to accommodate planned growth. Thus, the minimal adverse impacts as a result of crime would be considered less than significant.

EFFECTS ON THE IONE BAND OF MIWOK INDIANS

Phases I & II

The casino would benefit the Tribe in at least two ways. First, it would generate new income to be managed by the Tribal Government. Second, Tribal members will have access to new jobs created by the casino and hotel. Employment generated by the project would reduce government assistance payments to tribal members. Therefore, the creation of employment opportunities on the reservation is expected to benefit Tribal members, as well as taxpayers in general.

The casino is projected to generate millions of dollars annually for the Tribe. According to IGRA, “net revenues from any tribal gaming are not to be used for purposes other than (i) to fund tribal government operations or programs; (ii) to provide for the general welfare of the Indian tribe and its members; (iii) to promote tribal economic development; (iv) to donate to charitable organizations; or (v) to help fund operations of local government agencies” 25 U.S.C. §2710(2). The Tribe is required to develop a Revenue Allocation Plan for using these funds for per capita payments before making distributions to individual tribal members.

Tribal Attitudes, Expectations, Lifestyle and Culture

Operation of the proposed hotel and casino development is anticipated to have a beneficial effect on Tribal attitudes, expectations, lifestyle, and cultural values by providing funds for tribal programs including education, health care, and cultural events. These programs will provide Tribal members with opportunities to participate in the health and welfare of the Tribe. Alternative A would also fulfill stated Tribal goals for economic development and self-sufficiency.

ENVIRONMENTAL JUSTICE**Phases I & II**

Section 3.7.2 surveys local populations that could be affected by development of Alternative A at the project site to determine if any minority or low-income populations exist. One minority community was identified in census tract 3.01. Census tract 3.01 is located west of the project site and the City of Plymouth and is characterized by open spaces with scattered residential and commercial developments. Primary traffic impacts would occur on area highways and intersections/interchanges. Localized impacts on the project site, such as various impacts to land and water resources, would not affect these census tracts. Regional impacts, such as air quality impacts, would be distributed throughout the region. Alternative A would benefit all communities within proximity of the project site by creating employment opportunities that would be primarily filled by the local labor market. These communities would not be disproportionately adversely impacted. A less-than-significant effect would result.

4.7.3 ALTERNATIVE B – REDUCED CASINO WITH HOTEL ALTERNATIVE**ECONOMIC IMPACT****Phase I***Construction*

Construction of Phase I of Alternative B would include a casino reduced in size when compared to Alternative A, and is estimated to cost \$40.0 million one-time. Approximately \$30.0 million (75-percent) would be attributed to materials and \$10.0 million (25-percent) would be attributed to labor. Phase I is expected to result in the employment of 332 construction workers one-time. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

*Operation***Employment**

Operation of Phase I of Alternative B is estimated to generate 1,101 full-time equivalent jobs annually. **Table 4.7-4** shows that the largest portion of jobs, 540 positions or 49-percent, would be attributed to gaming. The remaining positions would consist of food and beverage, gift shop, entertainment, administrative, marketing, maintenance, and security opportunities.

New employee wages from Phase I are expected to total approximately \$26.4 million annually (**Table 4.7-4**). This equates to an average of approximately \$24,036 per full-time position annually. Employees who earn tips are estimated to earn an additional \$1.7 million in tips

annually or an additional \$2,467 annually per tip earning employee.⁴ Similar to Alternative A, Alternative B would also provide benefits for workers, including health insurance, workers compensation and other benefits.

TABLE 4.7-4
NET NEW EMPLOYMENT AND EARNINGS – ALTERNATIVE B (\$ MILLIONS ANNUALLY)

Classification	Jobs		Wages		Tips	
	Phase I	Phase I & II	Phases I	Phase I & II	Phases I	Phases I & II
Gaming	540	570	\$13.4	\$14.2	\$1.0	\$1.1
Hotel	-	40	-	\$0.8	-	-
Food and Beverage	149	160	\$2.8	\$2.9	\$0.7	\$0.7
Gift Shop	8	8	\$0.2	\$0.2	-	-
Entertainment	3	3	\$0.1	\$0.1	-	-
Administrative/General	153	157	\$4.1	\$4.2	-	-
Marketing	68	72	\$1.7	\$1.7	-	-
Maintenance	100	102	\$2.5	\$2.5	-	-
Security	80	80	\$1.8	\$1.8	-	-
Total	1,101	1,192	\$26.4	\$28.5	\$1.7	\$1.8

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Full-time equivalent jobs.

Based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent or 661 of those employed would be residents of Amador County. The remaining employees would be distributed throughout the region the same as Alternative A. Similar to Alternative A, it is estimated that only five-percent or 55 of those employed would be residents of Plymouth. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

Expenditures on Goods and Services

Phase I of Alternative B would also result in new in-state expenditures on goods and services totaling approximately \$23.2 million annually. It is expected that these purchases would be made primarily from existing vendors located in Amador County and surrounding counties, due to location and market advantages. **Table 4.7-5** shows that the largest portions of expenditures would be attributed to administrative and general services at \$6.0 million (26-percent) and marketing at \$5.8 million (25-percent). The remaining expenditures would be attributed to gaming supplies, food and beverage, gift shop, maintenance supplies and contracts, security, and utilities. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

⁴ Employees who could earn tips include gaming and food and beverage positions, which under Phase I would include 689 positions.

TABLE 4.7-5
NEW EXPENDITURES ON GOODS AND SERVICES –
ALTERNATIVE B (\$ MILLIONS ANNUALLY)

Classification	Phase I	Phases I & II
Gaming	\$3.0	\$5.9
Hotel	-	\$0.5
Food and Beverage	\$3.7	\$3.9
Gift Shop	\$0.9	\$0.9
Administrative & General	\$6.0	\$3.2
Marketing	\$5.8	\$2.3
Maintenance Supplies & Contracts	\$1.4	\$1.6
Security	\$0.2	\$0.2
Utilities	\$2.0	\$6.7
Total	\$23.2	\$25.2

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Expenditures expected to be purchased directly by the project in the State of California.

Phase II

Construction

Construction of Phase II of Alternative B would consist of a hotel and convention center and is estimated to cost an additional \$22.0 million one-time, the same as Alternative A. As under Alternative A, approximately \$16.5 million (75-percent) would be attributed to materials, \$5.5 million (25-percent) would be attributed to labor, and employment of 182 construction workers would be required over the course of a year. This effect would be the same as Alternative A, and is considered a beneficial impact.

Operation

Employment

Operation of Alternative B when Phase II is added is estimated to generate 1,192 full-time equivalent jobs annually. **Table 4.7-4** shows that the largest portion of jobs, 570 positions or 48-percent, would be attributed to gaming. The remaining positions would consist of the same type of opportunities as generated from Phase I.

Annual new employee wages from Phase I and II are expected to total approximately \$28.5 million annually (**Table 4.7-4**). This equates to an average of approximately \$23,927 per full-time position annually. Employees who earn tips are estimated to earn an additional \$1.8 million in tips annually or an additional \$2,467 annually per tip earning employee.⁵ Phase II would provide workers with the same benefits as Phase I.

⁵ Employees who could earn tips include gaming and food and beverage positions, which under Phase II would include 730 positions.

Based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent or 715 of those employed would be residents of Amador County. The remaining employees would be distributed throughout the region the same as Alternative A. Similar to Alternative A, it is estimated that only five-percent or 60 of those employed would be residents of Plymouth. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

Expenditures on Goods and Services

Phase I and II of Alternative B would also result in new in-state expenditures on goods and services of approximately \$25.2 million annually. **Table 4.7-5** shows that the largest portions of expenditures would be attributed to utilities at \$6.7 million (27-percent) and gaming supplies at \$5.9 million (23-percent). The remaining expenditures would be in the same sectors as from Phase I. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

HOUSING IMPACT

Phase I

The development of Phase I of Alternative B would result in the creation of approximately 1,101 new jobs annually within Amador County. As discussed above, 661 of the new workers are expected to reside in Amador County including 55 residing in the City of Plymouth. The remaining 440 new workers are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties.

In the short-term, it is expected that most employees would reside within their existing communities and would not need to relocate. As with Alternative A, in Alternative B some employees would relocate increasing demand for units. In the long-term, most employees would likely continue to reside within their existing communities. As with Alternative A, in Alternative B some employees would choose to buy their first home or relocate within the City and the surrounding communities of Amador County, increasing demand for units. Additionally, the increased demand for rental housing in the area would likely result in the construction of new housing units. As with Alternative A, approximately 36 vacant units are available in the City and approximately 650 additional units are available elsewhere in Amador County.

The construction of new housing that may result from the development of Alternative B is expected to be limited by the number of employees able to finance a new home, the availability of residentially-zoned land, and local land use regulations. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

Phase II

Alternative B with the addition of Phase II would result in approximately 1,192 new jobs annually within Amador County. As discussed above, 715 of the new workers are expected to reside in Amador County including 60 residing in Plymouth. The remaining 477 new workers are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties. The short and long-term effects of Alternative A with the addition of Phase II would be similar to Phase I. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

COMMUNITY INFRASTRUCTURE

Phase I

Schools

Phase I of Alternative B could result in an impact to the local education system from an increased number of students demanding services, similar to Alternative A. Based on the 661 new employees annually expected to reside in Amador County from the development of Phase I, approximately 331 students would require education from county schools. As with Alternative A, in Alternative B most of the students are expected to be served by local schools. However, since some employees would relocate to Plymouth and the surrounding communities the number of students would increase. This potential increase in students could result in local impacts if the District's schools lack the capacity and staff to provide services to new students.

The capacity of District schools would be the same as discussed under Phase I of Alternative A. Alternative B would not be subject to either fees or local taxes after being transferred into trust status. Based on the development of a 100,750 square foot casino in Phase I of Alternative B, the calculated school impact fees from this development would be \$34,255. The loss of property taxes from Alternative B would also impact school funding, the same as in Alternative A. Payment of school impact fees to the District totaling \$101,565, as indicated in **Section 5.2.7**, would provide Amador County Public Schools with the resources to mitigate effects that may occur as a result of Alternative B. This effect would be comparable but to a lesser extent than Alternative A, and with the incorporation of mitigation would be a less-than-significant impact.

Libraries and Parks

Impacts to area libraries and parks from Alternative B would be comparable, but to a lesser extent, than Alternative A, since Alternative B is reduced in size and scope.

Phase II

Schools

Alternative B with the addition of Phase II would result in similar impacts to schools as Phase I. Phases I and II would result in 715 new employees annually expected to reside in Amador County, resulting in approximately 358 students would require education from county schools. Based on the development of a 166,500 square foot hotel and 30,000 square foot event and convention center in Phase II of Alternative B, the calculated school impact fees from this development would be \$66,810. Similar to Phase I, payment of school impact fees to the District would reduce impacts to a less-than-significant level similar. This effect would be the same as Alternative A.

Libraries and Parks

Effects to area libraries and parks would be similar under Phase II of Alternative B as Phase I.

FISCAL EFFECTS

Phases I & II

Phases I and II of Alternative B would result in a variety of fiscal impacts. Potential fiscal effects from Alternative B would be the same as Alternative A. Impacts to law enforcement and fire protection and emergency medical services would be mitigated by payments from the Tribe, as discussed in **Section 5.2.9**. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

Under Alternative B the fee-to-trust transfer of the 12 project parcels would remove them from the County's assessed property rolls, the same as Alternative A. The Tribe would provide compensation to Amador County to mitigate impacts of lost tax revenues, as discussed in **Section 5.2.7**. The loss of tax revenues would also be offset by an increase in sales tax revenues that would be generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area resulting from the indirect and induced effects of the casino and hotel. The increase in sales tax is estimated to be \$10.0 million statewide from Phase I and \$10.8 million statewide with the addition of Phase II. Payroll and related taxes will also increase as a result of employment opportunities and earnings supported by the casino and hotel operation and its indirect and induced effects. The net effect of fiscal impacts would be comparable but to a lesser extent than Alternative A, and is considered a less than significant.

SOCIAL IMPACTS

Phases I & II

Social impacts including pathological and problem gambling and crime from Alternative B would be comparable but to a lesser extent than Alternative A, since Alternative B is reduced in size and scope.

EFFECTS ON THE IONE BAND OF MIWOK INDIANS

Phases I & II

Impacts to the Ione Band of Miwok Indians from Alternative B would be comparable but to a lesser extent than Alternative A, since Alternative B is reduced in size and scope.

ENVIRONMENTAL JUSTICE

Phases I & II

Alternative B could affect census tract 3.01 that was identified as a minority community in Alternative A. Similar to Alternative A, Alternative B would not result in disproportionately adverse impacts to surrounding communities and be considered as a less-than-significant impact.

4.7.4 ALTERNATIVE C – REDUCED CASINO

ECONOMIC IMPACT

Construction

Construction of Alternative C would include a casino reduced in size when compared to Alternative A. Alternative C does not include a hotel or convention center and would be developed in a single phase. Construction of Alternative C is estimated to cost \$26.0 million one-time, of which approximately \$19.5 million (75-percent) would be attributed to materials and \$6.5 million (25-percent) would be attributed to labor. Alternative C is expected to result in the employment of 215 construction workers one-time. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

Operation

Employment

Operation of Alternative C is estimated to generate 762 full-time equivalent jobs annually. **Table 4.7-6** shows that the largest portion of jobs, 395 positions or 52-percent, would be attributed to gaming. The remaining positions would consist of food and beverage, gift shop, entertainment, administrative, marketing, maintenance, and security opportunities.

TABLE 4.7-6
NET NEW EMPLOYMENT AND EARNINGS –
ALTERNATIVE C (\$ MILLIONS ANNUALLY)

Classification	Jobs	Wages	Tips
Gaming	395	\$9.9	\$0.7
Food and Beverage	98	\$1.8	\$0.5
Gift Shop	7	\$0.1	-
Entertainment	2	\$0.1	-
Administrative/General	103	\$2.8	-
Marketing	32	\$0.8	-
Maintenance	74	\$1.8	-
Security	51	\$1.1	-
Total	762	\$18.4	\$1.2

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Full-time equivalent jobs.

New employee wages from Alternative C are expected to total approximately \$18.4 million annually (**Table 4.7-6**). This equates to an average of approximately \$24,159 per full-time position annually. Employees who earn tips are estimated to earn an additional \$1.2 million in tips annually or an additional \$2,443 annually per tip earning employee.⁶ Similar to Alternative A, Alternative C would also provide benefits for workers, including health insurance, workers compensation and other benefits.

Based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent or 457 of those employed would be residents of Amador County. The remaining employees would be distributed throughout the region the same as Alternative A. Similar to Alternative A, it is estimated that only five-percent or 38 of those employed would be residents of Plymouth. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

Expenditures on Goods and Services

Alternative B would also result in new in-state expenditures on goods and services totaling approximately \$16.9 million annually. It is expected that these purchases would be made primarily from existing vendors located in Amador County and surrounding counties, due to location and market advantages. **Table 4.7-7** shows that the largest portions of expenditures would be attributed to administrative and general services at \$4.5 million (27-percent) and marketing at \$4.4 million (26-percent). The remaining expenditures would be attributed to gaming supplies, food and beverage, gift shop, maintenance supplies and contracts, security, and

⁶ Employees who could earn tips include gaming and food and beverage positions, which under Phase I would include 493 positions.

utilities. This effect would be comparable, but to a lesser extent, than Alternative A, and is considered a beneficial impact.

HOUSING IMPACT

The development of Alternative C would result in the creation of approximately 762 new jobs annually within Amador County. As discussed above, 457 of the new workers are expected to reside in Amador County including 38 residing in Plymouth. The remaining 305 new workers are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties.

In the short-term, it is expected that most employees would reside within their existing communities and would not need to relocate. As with Alternative A, it is expected with Alternative C that some employees would relocate and potentially increase demand for units. In the long-term, most employees would likely continue to reside within their existing communities. As with Alternative A, it is expected with Alternative C that some employees would choose to buy their first home or relocate within the City of Plymouth or the surrounding communities of Amador County; potentially increase the demand for units. Additionally, the

TABLE 4.7-7
NEW EXPENDITURES ON GOODS AND SERVICES –
ALTERNATIVE C (\$ MILLIONS ANNUALLY)

Classification	Net Expenditures
Gaming	\$2.3
Hotel	-
Food and Beverage	\$2.5
Gift Shop	\$0.7
Administrative & General	\$4.5
Marketing	\$4.4
Maintenance Supplies & Contracts	\$1.0
Security	\$0.1
Utilities	\$1.5
Total	\$16.9

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Expenditures expected to be purchased directly by the project in the State of California.

increased demand for rental housing in the area would likely result in the construction of new housing units. As in Alternative A, approximately 36 vacant units are available in Plymouth and approximately 650 additional units are available elsewhere in Amador County.

The construction of new housing that may result from the development of Alternative C is expected to be limited by the number of employees able to finance a new home, the availability of

residentially-zoned land, and local land use regulations. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

COMMUNITY INFRASTRUCTURE

Phase I

Schools

Alternative C could result in an impact to the local education system from an increased number of students demanding services, similar to Alternative A. Based on the 457 new employees annually expected to reside in Amador County, approximately 229 students would require education from county schools. As in Alternative A, in Alternative C most of the students are expected to be served by local schools. However, since some employees would relocate to Plymouth and the surrounding communities the number of students would increase. The increase in students could result in effects if the local schools lack capacity and staff to provide services to new students.

The capacity of District schools would be the same as discussed under Phase I of Alternative A. Alternative C would not be subject to either fees or local taxes after being transferred into trust status. Based on the development of a 79,250 square foot casino, the calculated school impact fees from this development would be \$26,945. The loss of property taxes from Alternative C would also impact school funding, the same as in Alternative A. Payment of school impact fees to the District totaling \$26,945, as indicated in **Section 5.2.7**, would provide Amador County Public Schools with the resources to mitigate effects that may occur as a result of Alternative C. This effect would be comparable but to a lesser extent than Alternative A, and with the incorporation of mitigation would be a less-than-significant impact.

Libraries and Parks

Impacts to area libraries and parks from Alternative C would be comparable but to a lesser extent than Alternative A, since Alternative C is reduced in size and scope.

FISCAL EFFECTS

Alternative C would result in a variety of fiscal impacts. Potential fiscal effects from Alternative C would be the same as Alternative A. Impacts to law enforcement and fire protection and emergency medical services would be mitigated by payments from the Tribe, as discussed in **Section 5.2.9**. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

Under Alternative C the fee-to-trust transfer of the 12 project parcels would remove them from the County's assessed property rolls, the same as Alternative A. The Tribe would provide compensation to Amador County to mitigate impacts of lost tax revenues, as discussed in **Section**

5.2.7. The loss of tax revenues would also be offset by an increase in sales tax revenues that would be generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area resulting from the indirect and induced effects of the casino and hotel. The increase in sales tax is estimated to be \$7.3 million statewide. Payroll and related taxes will also increase as a result of employment opportunities and earnings supported by the casino and hotel operation with indirect and induced effects. The net effect of fiscal impacts would be comparable but to a lesser extent than Alternative A, and is considered a less than significant.

SOCIAL IMPACTS

Social impacts including pathological and problem gambling and crime from Alternative C would be comparable but to a lesser extent than Alternative A, since Alternative C is reduced in size and scope.

EFFECTS ON THE IONE BAND OF MIWOK INDIANS

Impacts to the Ione Band of Miwok Indians from Alternative C would be comparable but to a lesser extent than Alternative A, since Alternative C is reduced in size and scope.

ENVIRONMENTAL JUSTICE

Alternative C could affect census tract 3.01 that was identified as a minority community in Alternative A. Similar to Alternative A, Alternative C would not result in disproportionately adverse impacts to surrounding communities. A less-than-significant effect would result.

4.7.5 ALTERNATIVE D – RETAIL DEVELOPMENT

ECONOMIC IMPACT

Construction

Construction of Alternative D would include a community shopping center. Alternative D does not include a casino, hotel or convention center and would be developed in a single phase. Construction of Alternative D is estimated to cost \$10.0 million one-time, of which approximately \$7.5 million (75-percent) would be attributed to materials and \$2.5 million (25-percent) would be attributed to labor. Alternative D is expected to result in the employment of 80 construction workers one-time. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

Operation

Employment

Operation of Alternative D is estimated to generate 180 full-time equivalent jobs annually. New employee wages from Alternative D are expected to total approximately \$2.45 million annually.

This equates to an average of approximately \$13,611 per full-time position annually. Similar to Alternative A, Alternative D would also provide benefits for workers, including health insurance, workers compensation and other benefits.

Based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent or 108 of those employed would be residents of Amador County. The remaining employees would be distributed throughout the region the same as Alternative A. Similar to Alternative A, it is estimated that only five-percent or 9 of those employed would be residents of Plymouth. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

Expenditures on Goods and Services

Alternative D would also result in new in-state expenditures on goods and services. However, it is not possible to quantify this impact because the amount will vary greatly depending on the types of stores located in the shopping center. With an estimated annual sales of \$6.3 million annually, net expenditures would be smaller than Alternative C. This effect would be comparable but to a lesser extent than Alternative A, and is considered a beneficial impact.

HOUSING IMPACT

The development of Alternative D would result in the creation of approximately 180 new jobs annually within Amador County. As discussed above, 108 of the new workers are expected to reside in Amador County including 9 residing in Plymouth. The remaining 72 new workers are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties.

In the short-term, it is expected that most employees would reside within their existing communities and would not need to relocate. As in Alternative A, in Alternative D some employees would relocate increasing demand for units. In the long-term, most employees would likely continue to reside within their existing communities. As in Alternative A, in Alternative D some employees would choose to buy their first home or relocate within Plymouth and the surrounding communities in Amador County, increasing demand for units. Additionally, the increased demand for rental housing in the area would likely result in the construction of new housing units. As in Alternative A, approximately 36 vacant units are available in Plymouth and approximately 650 additional units are available elsewhere in Amador County.

The construction of new housing that may result from the development of Alternative D is expected to be limited by the number of employees able to finance a new home, the availability of residential zoned land, and local land use regulations. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

COMMUNITY INFRASTRUCTURE

Phase I

Schools

Alternative D could result in an impact to the local education system from an increased number of students demanding services, similar to Alternative A. Based on the 108 new employees annually expected to reside in Amador County, approximately 54 students would require education from county schools. As in Alternative A, in Alternative D most of the students are expected to be served by local schools. However, since some employees would relocate to Plymouth and the surrounding communities the number of students would increase. The increase in students could result in effects if the local schools lack capacity and staff to provide services to new students. The capacity of District schools would be the same as discussed under Phase I of Alternative A. Alternative D would not be subject to either fees or local taxes after being transferred into trust status. Based on the development of a 123,250 square foot shopping center, the calculated school impact fees from this development would be \$41,905. The loss of property taxes from Alternative D would also impact school funding, the same as in Alternative A. Payment of school impact fees to the District totaling \$41,905, as indicated in **Section 5.2.7**, would provide Amador County Public Schools with the resources to mitigate effects that may occur as a result of Alternative D. This effect would be comparable but to a lesser extent than Alternative A, and with the incorporation of mitigation would be a less-than-significant impact.

Libraries and Parks

Impacts to area libraries and parks from Alternative D would be comparable but to a lesser extent than Alternative A, since Alternative C is reduced in size and scope.

FISCAL EFFECTS

Alternative D would result in a variety of fiscal impacts. Potential fiscal effects from Alternative D would be the same as Alternative A. Impacts to law enforcement and fire protection and emergency medical services would be mitigated by payments from the Tribe, as discussed in **Section 5.2.9**. This effect would be comparable but to a lesser extent than Alternative A, and is considered a less-than-significant impact.

Under Alternative D the fee-to-trust transfer of the 12 project parcels would remove them from the County's assessed property rolls, the same as Alternative A. The Tribe would provide compensation to Amador County to mitigate impacts of lost tax revenues, as discussed in **Section 5.2.7**. The loss of tax revenues would also be offset by an increase in sales tax revenues that would be generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area resulting from the indirect and induced effects of the shopping center. The increase in sales tax is estimated to be \$0.6 million statewide.

Payroll and related taxes will also increase as a result of employment opportunities and earnings supported by the casino and hotel operation and its indirect and induced effects. The net effect of fiscal impacts would be comparable but to a lesser extent than Alternative A, and is considered a less than significant.

SOCIAL IMPACTS

No Pathological or problem gambling impacts would result from Alternative D since a casino component is not included. Impacts to crime would be comparable but to a lesser extent than Alternative A.

EFFECTS ON THE IONE BAND OF MIWOK INDIANS

Impacts to the Ione Band of Miwok Indians from Alternative D would be comparable but to a lesser extent than Alternative A, since Alternative D is reduced in size and scope.

ENVIRONMENTAL JUSTICE

Alternative D could affect census tract 3.01 that was identified as a minority community in Alternative A. Similar to Alternative A, Alternative D would not result in disproportionately adverse impacts to surrounding communities. This is considered a less-than-significant impact.

4.7.6 ALTERNATIVE E – NO ACTION ALTERNATIVE

Although growth within the City of Plymouth is currently limited, it is anticipated that additional water supplies from the Plymouth Pipeline would lead to additional growth. If the No Action alternative were selected, the project site would remain undeveloped for the short-term, however over the long-term growth pattern of the City including the City's sphere of influence, portions of the project site may be developed with residential, commercial, or a mixture of the two land uses.

Although the Amador Water Agency pipeline will provide the water necessary to lift the moratorium, there is not enough information at this time to assess individual environmental impacts of potential non-tribal development on the site if the BIA were to decide to select the No Action alternative. The scope of socioeconomic impacts that would result depends on the land use development. Residential development would result in substantial housing impacts, whereas commercial development would generate expenditures and employment similar to Alternative D, discussed above. It is reasonable to conclude that beneficial socioeconomic impacts of the magnitude discussed above would not result from any commercial development, but are limited to casino developments.

4.8 RESOURCE USE PATTERNS

The section analyses the potential environmental impacts that could occur to resource use patterns discussed in **Section 3.8** as a result of the implementation of each project alternative. Issues discussed in this section include potential impacts to the transportation/circulation network and land use, including agriculture, in the project area. An impact analysis using methodology below is provided for each alternative within and surrounding the project site. Indirect and/or cumulative impacts are discussed in **Sections 4.11** and **4.12**, respectively. Mitigation or mitigating factors included in the project description are discussed in **Section 5.2.8**.

METHODOLOGY

Transportation/Circulation

Adverse impacts to the existing transportation network would occur if traffic generated by a project alternative would result in a decrease in the level of service of the existing roadway network, or result in inadequate access to adjacent roadways. The methodology for the transportation/circulation analysis is provided below.

A detailed traffic analysis was developed for the proposed alternatives. This analysis and its associated appendices are presented in its entirety within **Appendix M** of this Draft EIS. Below is a summary of the analysis and results of the traffic impact study including potential impacts to the existing roadway network associated with each project alternative.

To determine the potential impacts of the project alternatives to the existing roadway network, the number of vehicle trips generated by each alternative and the distribution of trips on the network were estimated using industry standard methods. These estimates were then added to projected no-project conditions using the existing conditions established in **Section 3.8** to determine the impact of the project alternatives on the Level of Service (LOS) ratings for the study roadway intersections. If a project alternative would result in reducing access to public or private roads or reducing the LOS for any study roadway intersection or segment below minimum standards of significance discussed in **Section 3.8** then the project alternative would have a significant impact on transportation or circulation. The discussion of projects and growth rate assumed for Cumulative Condition is provided in **Section 4.11**.

Trip Generation

The number of vehicle trips generated as a result of a proposed project is known as the project trip generation. Trip generation relates land uses to the number of new vehicle trips (inbound and outbound) a proposed project can be expected to generate. Trip generation is typically expressed in peak hour trips, as peak hour accounts for the worst-case traffic scenario for impact analysis. Trip generation is calculated from trip generation rates. Trip generation rates are typically expressed as unit factors per 1000 square feet (ksf), per seat, or per hotel room of development. Trip generation

rates for many types of developments have been standardized in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (6th Edition) for various land uses. For complex developments, such as the project alternatives, multiple trip generation rates are often used to calculate the overall trip generation. Trip generation rates for each alternative are discussed in more detail under each alternative analysis.

Trip Distribution

To evaluate the traffic-related effects of the project, trips that would be generated by the project were distributed on the roadway network. Trip distribution patterns to and from the project site were obtained using zip code based origin and destination study for similar casinos in northern California. Trip distribution patterns are shown in **Figure 4.8-1**. Trips derived for each alternative were independently assigned to the roadway network and study intersections from the project driveways based upon the trip distribution patterns described above after considering the origin and destination of vehicles.

Trip Projections

Due to the time lapse between existing conditions as described in **Section 3.8** and proposed operation of the project alternatives, the existing no project environmental conditions were projected to the anticipated year of operation of the proposed alternatives. Amador, Sacramento, and San Joaquin Counties were contacted to obtain an approved projects list to determine potential increases in roadway use in the region. Few approved projects were obtained from all three counties; therefore, to be conservative, a 2.2-percent annual growth rate based on Caltrans historical data was applied to the existing traffic counts summarized in **Section 3.8** for the study roadway segments and study roadway intersections. These counts represent the existing, no project environment conditions on the study roadway segments and intersections at the time of proposed operation of Phase I of Alternatives A and B and general operation of Alternatives C and D. The forecasted existing environmental conditions also assumed the roadway improvement of the Amador 49 Bypass.

The existing environment for operation of Phase II (full build-out) for Alternatives A and B consist of adding the trips generated by Phase I to the projected no-project trips, then extrapolating as discussed above.

Land Use

Adverse impacts would occur if development of a proposed alternative would be incompatible with adjacent designated land uses, including agriculture, thereby impeding effective local and regional planning efforts.

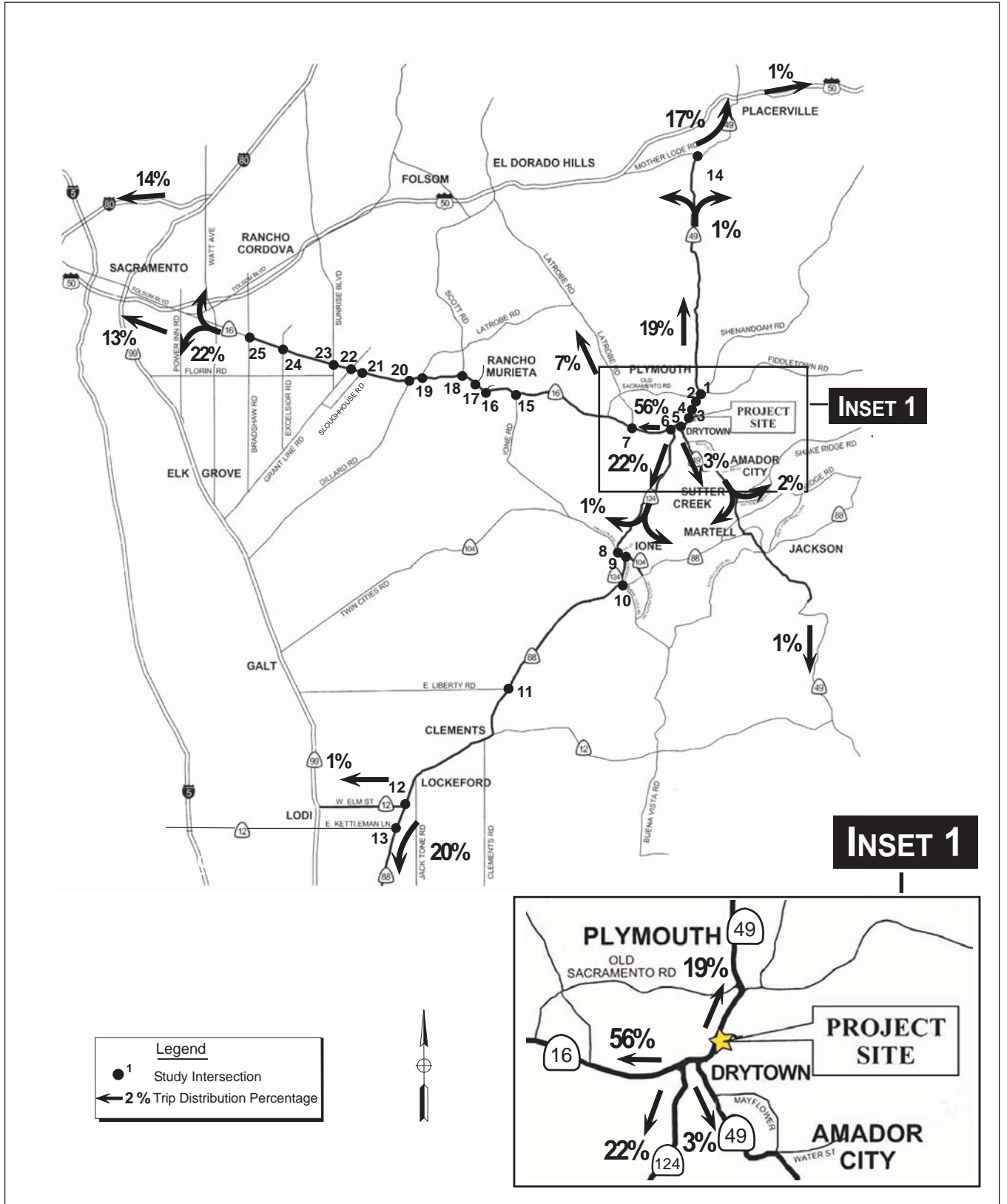


Figure 4.8-1
Project Trip Distribution

4.8.1 ALTERNATIVE A – PROPOSED CASINO WITH HOTEL

SITE ACCESS

Phase I

Village Drive is an existing loop road that runs from north side of the Village Mart/Shell gas station to the Shenandoah Inn and around to the south side of the gas station, connecting both ends of the roadway with SR 49. The existing inn will be removed, leaving the gas station and Village Drive. Village Drive would not be utilized by the proposed casino and will not provide connections to the porte cochere or casino parking area. Public use of Village Drive and the existing access to the gas station would remain consistent with existing condition after the development of Phase I of Alternative A. Development of Phase I of Alternative A would have no impact to the access to Village Drive.

Two access driveways off SR 49 will be constructed during Phase I of Alternative A. The main access to the project site will be constructed approximately 150 feet north of the northern run of Village Drive (**Figure 2-1**). The main driveway will consist of four lanes, two in each direction, divided by a landscaped median, and will provide access to the casino's porte cochere and parking area. A service entrance will be constructed approximately 750 feet south of the southern run of Village Drive (**Figure 2-1**). The service entrance will provide access to the loading dock of the casino and the planned fire station. The service entrance will also serve as a secondary access route for bus parking.

A private driveway is located directly across SR 49 from the site of the proposed main access driveway for Alternative A. The addition of construction and operation traffic could result in congestion and access restrictions to the existing residence, resulting in a significant impact. Mitigation has been identified in **Section 5.2.8** to address this effect. Mitigation would consist of limiting access on the northern intersection of Village Drive to right-in/right-out movements, reducing potential impacts to the private residence to a less-than-significant level.

Phase II

During Phase II of Alternative A, construction would result in additional vehicles entering and exiting the site. Construction traffic will use the service entrance to gain access to the site, reducing impacts to site access during operation of the Casino constructed during Phase I. Construction staging of the hotel/event center and expanded parking lot would occur in the vacant area north of the proposed wastewater treatment plant, reducing impacts on bus service and access to and from the proposed fire station. Operation of Phase II would result in trips generated to reach the newly added hotel and event center. Patrons of the hotel would utilize the existing main access driveway. During planned special events at the hotel/event center during peak hours, both the main access driveway and service entrance would be utilized to ensure smooth access to the site. To ensure patron access to the site does not

interfere with access to and from the fire station at the service entrance, mitigation has been included in **Section 5.2.8** that requires a Tribal security personnel, educated in traffic control procedures, to ensure that when fire/emergency vehicles need to leave the site, traffic control is provided at the exit to the service entrance to allow smooth movement of emergency vehicles.

CONSTRUCTION

Phase I

Construction activities during Phase I of Alternative A would result in traffic-related impacts associated with additional trips generated during employee travel to the site, heavy equipment deliveries, and construction material importation/exportation. Employee trips are based on the number of employees estimated to be on-site during different points throughout the project. Each employee is assumed to drive to and from the site alone each day and it is assumed that 20-percent of the workers will leave and return to the site for various purposes during the day. Heavy equipment delivery is based on the number of large construction vehicles expected during the project duration. Construction import is based on the number of trucks required to deliver construction materials to the site, including building materials such as wood, steel, and masonry as well as fill from a nearby borrow pit. Adverse impacts resulting from the construction of Phase I of Alternative A would be temporary in nature and reduced to a less-than-significant level with the incorporation of mitigation measures summarized in **Section 5.2.8**.

Phase II

Construction of Phase II would result in an increase in trips over existing roadway traffic that includes trips generated by the operation of Phase I. Construction employees, heavy equipment deliveries, and construction material importation trips would be added to the roadway network. As with Phase I, adverse effects would be temporal, and reduced through implementation of similar mitigation that would have been implemented during construction of Phase I. With the incorporation of mitigation summarized in **Section 5.2.8**, impacts to the transportation network from the construction of Phase II of Alternative A would be less than significant.

OPERATION

Project Trip Generation

Trip generation rates for the proposed project were established separately for the casino and for the hotel. Trip generation data for Indian gaming-style casinos is not readily available due to their unique trip generation characteristics as compared to more traditional Nevada-style casinos, which are less isolated and contain a larger variety of gaming devices. Therefore, trip generation rates for the proposed Ione Casino project were derived from surveys conducted at a total of eight Indian gaming casinos located in Minnesota, Californian, and the Mississippi Gulf Coast. The following surveys and sources were utilized to establish various trip rates:

- Unidentified Casino-Hotel Counts- Traffic counts were collected at a Casino-Hotel site in southern California, specifically for the Ione Casino project. Seven day/24-hour tube counts along the roadway in front of the casino, inbound and outbound volumes along each of the four driveways into the site during the AM and PM peak hours of a typical weekday (Wednesday September 17, 2004) and the peak hour of a typical Saturday (September 20, 2004) were collected. The Saturday peak period was established using the same tube counts collected on the previous Saturday. To establish trip generation rates for the casino portion of the site, raw driveway counts were adjusted to deduct trips to/from the 522-room hotel, 168 RV Resort, and a gas station/convenience store.
- Unidentified Casino Counts- Traffic counts were collected May 2003 at an 115,590 square foot California Indian gaming casino. This casino is not identified for confidentiality reasons.
- Unidentified Casino Counts- Traffic counts were collected November 2003 at a 200,000 square foot California Indian gaming casino. This casino is not identified for confidentiality reasons.
- Barona Indian Gaming Casino Survey- Weeklong driveway count data from the 120,000 square foot casino in San Diego County were included with “Tuolumne Casino Traffic Impact Analysis,” issued on August 18, 2000 by Linscott, Law & Greenspan Engineers. This data was used to establish peak hour trip generation rates for the facility.
- Shingle Springs Rancheria Hotel-Casino Traffic Study- Trip generation in this study was based on surveys on inbound/outbound traffic at five California Indian gaming casinos ranging in size from 17,300 square feet to 70,000 square feet in size (size of entire casino). This study also used weekday PM peak hour data as included within the “United Auburn Indian Community of the Auburn Rancheria Environmental Assessment,” issued June 2000.
- Mystic Lake Casino Survey- Actual trip generation data, as established by driveway surveys, were included within the St. Croix Meadows Racing Park Proposed Casino Traffic Impact Study; Hudson, Wisconsin (also called the Hudson Casino). The Mystic Lake Casino-Hotel is a large stand-alone Indian Gaming casino-hotel facility in southwestern Minnesota with a total size of 447,600 square feet, 101,500 square feet of gaming floor area, 416-room hotel, and 3,916 gaming positions. Trip rates were established based on surveys of existing weekday PM peak hour and Saturday peak hour trips at the facility.
- San Diego County Casino Study- The San Diego County Department of Public Works prepared a study of casino trip generation entitled, “Report on the Potential Impacts of Tribal Gaming on Northern and Eastern San Diego County.” The traffic study portion of this report, entitled “Preliminary Traffic Assessment of Indian Gaming Projects in the San Diego Region, dated

October 17, 2000,” established that when a hotel is part of a casino-hotel establishment, it is reasonable to assume that the hotel portion of the project would generate an additional 3.0 trips per room on an average day, which is approximately 36.5-percent of comparable Institute of Transportation Engineers (ITE) trip rates.

- Mississippi Gulf Coast Casino Study- This traffic study surveyed traffic volumes at eight casinos on a Saturday along the Mississippi coast. As four of the casinos had hotels while the remaining four did not, this provides an opportunity to see how the presence of a hotel effects trip generation.
- ITE *Trip Generation Manual*- The ITE Manual, 6th edition was used to help establish trip generation rates for the hotel.

The existence of a hotel will not necessarily result in a significant increase in trip generation from that which the casino would generate if the hotel did not exist. The survey of the eight Mississippi Gulf casinos, referenced earlier, in which only half of the casinos had hotels showed that the weighted Saturday peak hour average rate developed for hotels with casinos is lower than the rates developed for hotels without casinos (as well as the rate for all casinos either with or without hotels). This is not to imply that a hotel would add no additional trips, but to help show that hotels do not add significantly to casino-hotel trip generation. The San Diego County study, referenced earlier, established that it is reasonable to assume that the hotel portion of the project would generate an additional 3.0 trips per room on an average day. The ITE *Trip Generation Manual* shows that a standard hotel (land use code 310) will generate 8.23 trips per room on an average day. Thus, the San Diego County study assumed that a hotel combined with a casino will generate 36.5-percent of the trips which a stand alone hotel would generate on an average day. Detailed tables and graphics showing how rates and enter and exit splits were established using logarithmic best fit curve equations are included in the Traffic Study (**Appendix M**) appendices.

Pass-By and Diverted Trips

Not all traffic to and from the proposed project would be newly generated trips. A percentage of traffic would be drawn to the project for a variety of reasons. Some traffic already on State Route 49 (SR 49) and other local roads passing the project site would be drawn to the casino-hotel. This trip is classified as a *pass-by trip* and not a new trip to the project. Due to the low traffic volumes, which exist along SR 49 within the vicinity of the project site, a flat pass-by reduction of 3-percent (not related to a specific destination such as Jackson Rancheria Casino-Hotel) was not taken, since any such trips would be small and negligible when compared to the trip generation of the project site. However, some existing trips to and from the nearby Jackson Rancheria Casino-Hotel would most likely stop at the nearby project site. These trips would not be new trips, as they already exist along SR 49 and other roadways and highways in the study area. Trips that would pass by the project site on SR 49 are referred to as *pass-by trips*, while trips to and from Jackson Rancheria Casino-

Hotel that would not naturally travel along SR 49 past the project site, but perhaps along the nearby state routes (SR-16 or SR-88); would be “diverted” from their normal route to visit the project site. These trips are referred to as *diverted trips*. It is assumed that 3-percent of all of the trips generated by the proposed project would be pass-by or *diverted trips* on their way to, or leaving from, the Jackson Rancheria Casino-Hotel. These trips are not added to any of the study area roadway segments and intersections, but rather are accounted for by adjusting the effected segment and intersection volumes based on these diversions.

Phase I

Trip Generation

As summarized in **Table 4.8-1**, Phase I of Alternative A is expected to generate an average of 7943 weekday daily trips to the circulation network, with 529 trips (275 inbound, 256 outbound) occurring during the weekday PM Peak Hour and 738 (364 inbound, 364 outbound) trips occurring during the Saturday PM Peak Hour.

TABLE 4.8-1
PROJECT TRIP GENERATION PHASE I

Generator	Trip Generation Rate			Weekday PM Peak Hour (In, Out)	Weekend PM Peak Hour (In, Out)	Weekday Average Daily Trips
	Weekday PM Peak Hour	Weekend PM Peak Hour	Average Daily Trips			
Casino	4.54/ksf ¹	6.25/ksf ¹	68.24/ksf ¹	545 (283,262)	750 (375,375)	8189
Pass-By trips		N/A		-16	-22	-246
Generated Trips		N/A		529	738	7943

NOTES: ¹ ksf = 1000 square feet.

² 3% of all the trips generated by the Ione Casino would be pass-by or diverted trips on their way to, or leaving from, the Jackson Rancheria.

SOURCE: Appendix M

Daily Roadway Segment Effects

To determine the impact of Phase I of Alternative A to the study roadway segments, weekday average daily trips from **Table 4.8-1** were added to the existing setting of the study roadway segments according to the estimated trip distribution. The LOS for the study roadway segments were then calculated using the same methodology as the LOS calculations for the existing environment in **Section 3.8**. The LOS ratings for Phase I conditions are summarized in **Table 4.8-2**.

Table 4.8-2 summarizes the results of this daily roadway segment analysis for the roadway network at the time Phase I becomes operational, identifying LOS conditions scenarios with and without implementation of Phase I of Alternative A. With the traffic added to the study roadway segments by Alternative A, none of the roadway segments would operate at an unacceptable LOS.

TABLE 4.8-2
PHASE I DAILY ROADWAY SEGMENT LEVEL OF SERVICE (LOS)

Roadway Segment	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service		LOS Threshold ¹
		No Project ²	Alt A Phase I ³	No Project	Alt A Phase I	No Project	Alt A Phase I	
SR 49 North of Shenandoah Road	15,500	2,400	3,950	0.15	0.25	B	C	C
SR 49 South of SR16	18,900	8,300	8,650	0.44	0.46	C	C	E
SR 16 West of Old Sacramento Road	20,200	5,200	8,050	0.26	0.40	B	C	C
SR 124 South of SR 16	18,900	1,900	4,400	0.10	0.23	A	B	C
SR 88 West of SR 124	20,200	7,400	9,800	0.37	0.49	C	C	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²Existing plus approved projects

³Existing plus approved projects plus Alternative A Phase I

SOURCE: Appendix M

Peak Hour Intersection Effects

Table 4.8-3 summarizes the weekday and Saturday intersections LOS for the 2006 no project condition. **Table 4.8-4** summarizes the weekday and Saturday intersections LOS for Phase I of Alternative A. With the traffic added to the study intersections by Alternative A, the following intersections would operate at an unacceptable LOS:

- SR 49 and Main Street during the weekday and Saturday PM Peak Hour
- SR 49 and Empire Street during the Saturday PM Peak Hour
- SR 49 and SR 16 during the weekday and Saturday PM Peak Hour
- SR 16 and Latrobe Road (Amador) during the weekday PM Peak Hour
- SR 104 (Preston Avenue) and SR 124 during the weekday and Saturday PM Peak Hour
- SR 104 (Main Street) and SR 124 (Church Street) during the weekday PM peak hour
- SR 88 and SR 12 (East) during the weekday and Saturday PM Peak Hour
- SR 88 and SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 16 and Stone House Road during the weekday PM Peak Hour
- SR 16 and Grant Line Road during the weekday PM Peak Hour
- SR 16 and Excelsior Road during the weekday PM Peak Hour
- SR 49 and Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 and Service Access Driveway during the weekday and Saturday PM Peak Hour

TABLE 4.8-3
NO PROJECT LEVEL OF SERVICE

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	28.5	C	19.2	B
SR-16 / Murieta South Parkway	D	14.7	B	8.1	A
SR-16 / Murieta Parkway	D	18.7	B	15.7	B
SR-16 / Dillard Road	D	13.1	B	8.1	A
SR-16 / Grant Line Road	E	70.5	E	27.8	C
SR-16 / Sunrise Boulevard	D	32.9	C	16.0	B
SR 16 / Bradshaw Road	D	31.1	C	15.8	B
Worst Intersection Movement					
Intersection	LOS Standard ¹	Worst Intersection Movement		Worst Intersection Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49SR 49 / Miller Road	D	9.2	A	9.0	A
SR 49SR 49 / Main Street	C	21.7	C	18.4	C
SR 49SR 49 / Poplar Street	D	11.1	B	11.0	B
SR 49SR 49 / Empire Street	C	22.7	C	23.9	C
SR 49SR 49 / SR-16	C	31.3	D	37.6	E
SR-16 / SR-124	D	14.3	B	11.3	B
SR-16 / Latrobe Road (Amador)	C	18.1	C	14.2	B
SR-104 (Preston Avenue) / SR-124	C	55.0	F	35.6	E
SR-104 (Main Street) / SR-124	C	20.6	C	15.9	C
SR-88 / SR-124	D	11.6	B	11.4	B
SR-88 / SR-12 (East)	D	36.8	E	19.5	C
SR-88 / SR-12 (West)	D	>100	F	>100	F
SR-16 / Lone Road	C	15.6	C	13.2	B
SR-16 / Stone House Road	E	41.0	E	21.7	C
SR 49SR 49 / Pleasant Valley Road ²	C	21.4	C	12.6	B
SR-16 / Latrobe Road (Sacramento)	D	33.1	D	23.9	C
SR-16 / Sloughhouse Road	D	19.6	C	13.0	B
SR-16 / Excelsior Road	D	>100	F	19.7	C

NOTES: **Bold** text denotes unacceptable LOS

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Indicates intersection average.

SOURCE: Appendix M

TABLE 4.8-4
LEVEL OF SERVICE WITH PHASE I

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	29.2	C	28.1	C
SR-16 / Murieta South Parkway	D	16.8	B	8.8	A
SR-16 / Murieta Parkway	D	19.4	B	16.7	B
SR-16 / Dillard Road	D	14.7	B	8.8	A
SR-16 / Grant Line Road	E	83.0	F	23.5	C
SR-16 / Sunrise Boulevard	D	38.0	D	18.1	B
SR 16 / Bradshaw Road	D	34.6	C	17.1	B
Worst Intersection Movement					
Intersection	LOS Standard ¹	Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49SR 49 / Miller Road	D	9.7	A	9.4	A
SR 49SR 49 / Main Street	C	31.9	D	31.2	D
SR 49SR 49 / Poplar Street	D	12.0	B	12.1	B
SR 49SR 49 / Empire Street	C	27.6	D	34.4	D
SR 49SR 49 / SR-16	C	>100	F	>100	F
SR-16 / SR-124	D	19.5	C	14.5	B
SR-16 / Latrobe Road (Amador)	C	25.1	D	19.5	C
SR-104 (Preston Avenue) / SR-124	C	>100	F	>100	F
SR-104 (Main Street) / SR-124	C	34.6	D	26.8	D
SR-88 / SR-124	D	12.7	B	13.0	B
SR-88 / SR-12 (East)	D	50.2	F	25.2	D
SR-88 / SR-12 (West)	D	>100	F	>100	F
SR-16 / Lone Road	C	19.3	C	17.4	C
SR-16 / Stone House Road	E	62.4	F	31.4	D
SR 49SR 49 / Pleasant Valley Road ²	C	26.4	D	14.9	B
SR-16 / Latrobe Road (Sacramento)	D	43.3	E	34.0	D
SR-16 / Sloughhouse Road	D	22.4	C	14.5	B
SR-16 / Excelsior Road	D	>100	F	24.9	C
SR 49/ Project Driveway	C	46.4	E	96.5	F
SR 49/ Service Access	C	44.5	E	73.9	F

NOTES: **Bold** text denotes unacceptable LOS

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Indicates intersection average.

SOURCE: Appendix M

Mitigation Measures

Mitigation measures for the project intersections plus Phase I of Alternative A have been developed for the intersections showing unacceptable LOS (bold text) as presented in **Table 4.8-4** and are discussed in **Section 5.2.8** of the Draft EIS. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS; therefore, be considered to have less-than-significant impacts

Phase II (Full Build-Out)*Trip Generation*

As summarized in **Table 4.8-5**, full build-out of Alternative A would generate 8,688 average trips per day, including 584 trips weekday PM Peak Hour (304 inbound, 280 outbound) and 793 Saturday PM Peak Hour (40 inbound, 393 outbound) trips.

TABLE 4.8-5
PROJECT TRIP GENERATION PHASES I AND II

Generator	Trip Generation						
	Weekday	Weekday PM Peak Hour			Saturday PM Peak Hour		
	Daily	Inbound	Outbound	Total	Inbound	Outbound	Total
Casino	8,189	283	262	545	375	375	750
Hotel	745	29	26	55	36	29	65
Total (Casino + Hotel)	8,934	312	288	600	411	411	815
Reductions:							
Pass-by/Diversion ¹	-246	-8	-8	-16	-11	-11	-22
New Primary Trips (Casino + Hotel)	8,688	304	280	584	400	393	793

¹ 3% of all the trips generated by the Casino/Hotel would be pass-by.
Source: Appendix M

Daily Roadway Segment Effects

Table 4.8-6 summarizes the results of this daily roadway segment analysis for the roadway network at the time Phase II became operational, identifies the LOS condition scenarios with and without implementation of Phase II of Alternative A. With the traffic data added to the study roadway segments by Alternative A, none of the roadway segments would operate at an unacceptable LOS and be considered to have less-than-significant impacts.

TABLE 4.8-6
ALTERNATIVE A PHASE I & II DAILY ROADWAY SEGMENT LEVEL OF SERVICE

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt A Phase I & II ³	No Project	Alt A Phase I & II	No Project	Alt A Phase I & II
			SR49 North of Shenandoah Road	C	15,500	2,600	4,310	0.17
SR49 South of SR16	E	18,900	8,900	9,290	0.47	0.49	C	C
SR16 West of Old Sacramento Road	C	20,200	5,600	8,710	0.28	0.43	B	C
SR124 South of SR16	C	18,900	2,000	4,740	0.11	0.25	A	B
SR88 West of SR124	D	20,200	7,900	10,520	0.39	0.52	C	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²Existing plus approved projects

³Existing plus approved projects plus alternative A phases I and II

SOURCE: Appendix M

Peak Hour Intersection Effects

Table 4.8-7 summarizes the weekday and Saturday intersections LOS for no project conditions, which represent Phase I mitigated traffic conditions. **Table 4.8-8** summarizes the weekday and Saturday intersections LOS for Phase II. With the traffic added to the study intersections by Phase II, the following intersections would operate at an unacceptable LOS:

- SR 16 / Latrobe Road (Sacramento County) during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

Mitigation Measures

Mitigation measures for full build-out of Alternative A for the intersections with an unacceptable LOS (bold text) are discussed in **Section 5.2.8** of this document. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS and be considered as less-than-significant impacts.

TABLE 4.8-7
EXISTING PHASE II (MITIGATED PHASE I) LEVEL OF SERVICE (LOS)

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	28.9	C	21.5	C
SR-16 / Murieta South Parkway	D	13.9	B	8.3	A
SR-16 / Murieta Parkway	D	18.8	B	15.4	B
SR-16 / Dillard Road	D	15.2	B	8.5	A
SR-16 / Grant Line Road	E	65.3	E	24.7	C
SR-16 / Sunrise Boulevard	D	39.2	D	17.2	B
SR 16 / Bradshaw Road	D	36.9	D	16.5	B
SR 49SR 49 / Main Street	C	6.1	A	6.3	A
SR 49SR 49 / Empire Street	C	6.1	A	6.9	A
SR 49SR 49 / SR-16	C	12.4	B	13.8	B
SR-104 (Preston Avenue) / SR-124	C	6.6	A	6.4	A
SR-88 / SR-12 (East)	D	10.6	B	11.5	B
SR-88 / SR-12 (West)	D	31.3	C	32.6	C
SR-104 (Main Street) / SR-124	C	8.9	A	6.8	A
SR-16 / Excelsior Road	D	17.5	B	9.4	A
Worst Intersection Movement					
Intersection	LOS Standard ¹	Worst Intersection Movement		Worst Intersection Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49SR 49 / Miller Road	D	9.3	A	9.0	A
SR 49SR 49 / Poplar Street	D	11.6	B	11.4	B
SR-16 / SR-124	D	15.4	C	11.7	B
SR-16 / Latrobe Road (Amador)	C	17.9	C	16.6	C
SR-88 / SR-124	D	12.1	B	11.8	B
SR 49SR 49 / Pleasant Valley Road ²	C	27.6	D	13.5	B
SR-16 / Ione Road	C	16.6	C	13.8	B
SR-16 / Stone House Road	E	24.7	C	18.6	C
SR-16 / Latrobe Road (Sacramento)	D	38.1	E	26.5	D
SR-16 / Sloughhouse Road	D	21.6	C	13.5B	B

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Indicates intersection average.

SOURCE: Appendix M

TABLE 4.8-8
PHASE I AND II LEVEL OF SERVICE

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	28.9	C	27.7	C
SR-16 / Murieta South Parkway	D	13.9	B	9.3	A
SR-16 / Murieta Parkway	D	18.8	B	17.3	B
SR-16 / Dillard Road	D	15.2	B	9.5	A
SR-16 / Grant Line Road	E	64.7	E	24.4	C
SR-16 / Sunrise Boulevard	D	39.2	D	19.2	B
SR 16 / Bradshaw Road	D	36.9	D	18.0	B
SR 49SR 49 / Main Street	C	7.0	A	7.0	A
SR 49SR 49 / Empire Street	C	7.5	A	6.9	A
SR 49SR 49 / SR-16	C	14.3	B	16.3	B
SR-104 (Preston Avenue) / SR-124	C	7.2	A	7.1	A
SR-88 / SR-12 (East)	D	11.3	B	12.4	B
SR-88 / SR-12 (West)	D	32.4	C	32.0	C
SR-104 (Main Street) / SR-124	C	10.5	B	7.7	A
SR-16 / Excelsior Road	D	17.5	B	9.4	A
Worst Intersection Movement					
Intersection	LOS Standard ¹	Worst Intersection Movement			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49SR 49 / Miller Road	D	9.9	A	9.6	A
SR 49SR 49 / Poplar Street	D	12.6	B	12.7	B
SR-16 / SR-124	D	23.0	C	15.8	C
SR-16 / Latrobe Road (Amador)	C	20.5	C	18.4	C
SR-88 / SR-124	D	13.5	B	13.8	B
SR 49SR 49 / Pleasant Valley Road ²	C	35.9	E	16.8	C
SR-16 / Ione Road	C	21.4	C	19.0	C
SR-16 / Stone House Road	E	32.6	C	24.9	C
SR-16 / Latrobe Road (Sacramento)	D	52.0	F	39.5	E
SR-16 / Sloughhouse Road	D	25.2	D	15.4	C
SR 49/ Project Driveway	C	77.6	F	>100	F
SR 49/ Service Access	C	49.7	E	>100	F
NOTES: Bold text denotes unacceptable LOS					
¹ LOS becomes unacceptable below level indicated, based on the standards of significance in Table 3.8-3 .					
² Indicates intersection average.					
SOURCE: Appendix M					

Public Transportation

Trips generated by Alternative A could adversely impact public transportation if impacts to intersections and roadway segments adversely impact the ability of public transportation to meet set schedules and adequately serve the public. Although trips generated as a result on Alternative A, Phases I and II would result in adverse impacts to local intersections; mitigation has been incorporated into Alternative A, which would ensure adequate LOS at the intersections. With adequate LOS and with the incorporation of mitigation measures in **Section 5.2.8**, impacts from Alternative A to public transportation would be less than significant.

Pedestrian Circulation

As discussed in **Section 3.8**, there are no existing pedestrian circulation features surrounding the project area. Although development of Alternative A would result in an increase in vehicle trips, and would introduce two new access points where vehicles would be existing and entering HWY-49, there are no existing pedestrian circulation features to be impacted. Therefore, implementation of Alternative A would result in no impact to pedestrian circulation.

LAND USE

Because all the parcels would be taken into trust during Phase I and Phase II, Alternative A would not result in additional changes in land use, Phases I and II of Alternative A are separated out in the following impact discussion.

Tribal Sovereignty

Following approval of 25 CFR Part 151 Trust Acquisition, all of the project parcels would be exempt from City and County land use regulations. The only applicable land use regulations on the trust lands are those of the Tribe. The Tribe relies upon the Tribal Council, the governing body of the Tribe, to enact land use regulations for Tribal lands. However, the Tribal Government desires to work cooperatively with local and State authorities on matters related to land use. Additionally, NEPA requires an assessment of the project effects on adopted land use plans. Accordingly, City and County land use regulations and project effects are assessed below.

Effects to Project Area

Consistency with the City of Plymouth General Plan

Alternative A would replace existing commercial and residential lands with a casino, events center, food and beverage areas, and parking facilities. The eight City project parcels are designated as Commercial (C). According to the Land Use Element of the City of Plymouth General Plan, the C designation is best suited for retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity. Development of these parcels would be considered

commercial development and consistent with the C designation. **Table 4.8-9** explains the land use consistency for each of the project alternatives with respect to the City of Plymouth General Plan.

TABLE 4.8-9
PROPOSED ACTION AND ALTERNATIVES CONSISTENCY WITH THE CITY OF PLYMOUTH GENERAL
PLAN LAND USE

City of Plymouth General Plan		Consistency (Yes or No)				Discussion
Section	Goal or Policy	Alt A	Alt B	Alt C	Alt D	
N/A	Land Use Element Vision Statement	Yes	Yes	Yes	Yes	While the Tribe has ultimate approval of development on Tribal land, the Tribe desires to work cooperatively with the City on all land use and development decisions. As a cooperating agency, the City of Plymouth provided comments on the Proposed Action and Alternatives.
Goal 2.1.2	Achieve an orderly and efficient pattern of community development consistent with economic, social, and environmental needs.	Yes	Yes	Yes	Yes	Development of any of the Alternatives would add new revenue for the City of Plymouth, create jobs for the surrounding area, place new commercial development within commercially zoned areas identified by the City, and mitigate any environmental impacts associated with development.
Goal 2.1.3	Provide for a diversified economic base with a range of employment opportunities for all residents.	Yes	Yes	Yes	Yes	Development of any of the Alternatives would create a substantial number of jobs for the surrounding area including new jobs and other economic growth for the City of Plymouth.
Policy 2.1.3	Maximize opportunities to bring out-of-town dollars into the community.	Yes	Yes	Yes	Yes	Development of any of the Alternatives would create a new commercial venue within the City of Plymouth, which could potentially create economic growth within the City by attracting patrons from outside of the City and the County.
Policy 2.1.4	Actively promote business development activities that will generate local employment opportunities and help diversify the local economy.	Yes	Yes	Yes	Yes	The casino project would generate local employment opportunities as identified in the Socioeconomic discussion. The project would also result in a diversification of the local economy as it would be the only casino in the City of Plymouth.
Policy 2.1.6	Protect areas designated for business use from encroachment by non-commercial activities.	Yes	Yes	Yes	Yes	Development of all the Alternatives would place new commercial development within a commercially designated area as identified by the City General Plan.
Policy 2.1.7	To the extent feasible, locate new and rehabilitate property and structures serving the public.	Yes	Yes	Yes	Yes	Development of all the Alternatives would create new commercial development within the City.
Circulation Element: Goals and Policies						
Section	Goal or Policy	Alt A	Alt B	Alt C	Alt D	

City of Plymouth General Plan		Consistency (Yes or No)				Discussion
Goal 2.5.2	Implement physical and operational capacity improvements to improve existing problems and support the planning and design of improvements to accommodate future travel demands.	Yes	Yes	Yes	Yes	Development of all the Alternatives will contribute to proportionate share roadway infrastructure improvements. In addition, the Tribe will pay for 100% of traffic improvements where identified in the mitigation measures.
Goal 2.5.3	Implement planned improvements to accommodate future travel demand.	Yes	Yes	Yes	Yes	Development of all the Alternatives will contribute to proportionate share roadway infrastructure improvements. In addition, the Tribe will pay for 100% of traffic improvements where identified in the mitigation measures.

Housing Element: Goals and Policies

Section	Goal or Policy	Alt A	Alt B	Alt C	Alt D	
Policy 1.3	The City shall ensure that adequate infrastructure and public services are available prior to approval of developments projects within the City.	Yes	Yes	Yes	Yes	Development of all the Alternatives includes mitigation of impacts to roadway infrastructure and public services. Mitigation to these impacts is provided in Section 5.2.8 of this Draft EIS.
Goal 2.5.1	A balanced residential environment with access to employment locations, community facilities, and adequate services.	Yes	Yes	Yes	Yes	Development of all the Alternatives will provide a new source of employment for the City.

Conservation and Open Space Element: Goals and Policies

Section	Goal or Policy	Alt A	Alt B	Alt C	Alt D	
Policy 2.4.7	Preserve critical wildlife habitats, which enhance a rural atmosphere for present and future residents of Plymouth.	Yes	Yes	Yes	Yes	Development of all of the Alternatives will mitigate and minimize impacts to, vernal pools, jurisdictional waters, and other wetlands and riparian habitat, oak trees, elderberry shrubs, and other sensitive biological resources. Mitigation to these impacts is provided in Section 5.2.5 of this Draft EIS.

Noise Element: Goals and Policies

Section	Goal or Policy	Alt A	Alt B	Alt C	Alt D	
Goal 2.5.1	Achieve and maintain ambient noise levels that preserve the quiet rural atmosphere of Plymouth.	Yes	Yes	Yes	Yes	Development of all of the Alternatives include mitigation to reduce noise impacts which include the noise attenuating walls placed on the west end of the Service Court. This will reduce loading dock noise below 45 Leq at the nearest off-site sensitive receptor.

Safety Element: Goals and Policies

Section	Goal or Policy	Alt A	Alt B	Alt C	Alt D	
Goal 2.6.1	Provide a safe and hazard free environment for the citizens of the City.	Yes	Yes	Yes	Yes	Development of all of the Alternatives will provide a safe and hazard free development
Goal 2.6.5	Consider the imposition of impact fees or other acceptable measure upon new residential, commercial, industrial, or other developments for the purpose of mitigating the development impact upon	Yes	Yes	Yes	Yes	The Tribe has committed to pay impacts for public services and facilities required for the alternatives.

City of Plymouth General Plan	Consistency (Yes or No)	Discussion
public services or facilities.		
Goal 2.6.6 New development will be required to accurately identify any significant increase to natural surface water flow and sewage flow and address on and off-site impacts created by such flows.	Yes Yes Yes Yes	Development of all of the Alternatives includes a detention basin to store and hold surface water run-off during peak storm events. This will ensure that post development surface flows are the same as pre project surface runoff. The on-site wastewater treatment plant and disposal facilities will ensure that highly treated wastewater is recycled for landscape irrigation and toilet flushing and also gradually disposed of without creating harmful impacts to the surrounding environment.

SOURCE: City of Plymouth, 2001

Consistency with the City of Plymouth Zoning Ordinance

The development footprint is zoned Commercial by the City of Plymouth Zoning Ordinance.

Acceptable uses for the Commercial zone include, retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity.

Four of the eight project parcels located within the City of Plymouth are within the Scenic Corridor (SC) Combined Zone classification. Generally, the SC Combined Zone includes all parcels that are zoned commercial, industrial, or light industrial and adjacent to the SR 49 right-of-way. In the case of the project site, four project parcels are zoned Commercial and within the SC Combined Zone. The Scenic Corridor Combined Zone was established to preserve the visual character and preserve the historical image of development within the SR 49 corridor. All uses that are allowed in the regular zone with which the SC zone is combined are allowed. Regulations specific to the Scenic Corridor Combined Zone are limited to the consideration of design review guidelines specified in Chapter 19.50 of the City of Plymouth Municipal Code.

Development of Alternative A is considered a commercial development and would generally be consistent with the commercially zoned City parcels. However, development of Alternative A would be inconsistent with the subdivision ordinance, building density standards for commercial development, and required plan review as required by the City of Plymouth Municipal Code. These ordinances address allowed setbacks, building heights, parking standards, landscaping standards and other typical design requirements. While the Tribe has ultimate approval of development on Tribal land, the Tribe desires to work cooperatively with the City on all development decisions. While not required to obtain permits or engage in plan review for Alternative A, the Tribe will solicit the City’s input regarding design review guidelines to further the goals addressed by the City of Plymouth

Zoning Ordinance. **Section 5.2.8** includes mitigation to address design review by the City of Plymouth in order to reduce any impacts to a less-than-significant level.

Consistency with the Amador County General Plan

Development of Alternative A on County land would replace sparsely developed rural residential land with casino parking areas, a hotel and conference center, a fire station, and a wastewater treatment plant and disposal facilities. The County project parcels are designated as Residential Suburban (RS). And Special Use (X). According to the Land Use Element of the Amador County General Plan, the RS designation is best suited for rural residential development not serviced by urban services. Zoning for parcels within the Special Use land use zone are loosely defined by allowing all uses subject to securing a use permit from the County. This leaves development proposals up to the discretion of the County.. No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the hotel and conference center, surface parking areas, a fire station, and a wastewater treatment plant and disposal areas and, thus, would not be consistent with the RS designation.

Further, **Table 4.8-10** discusses the consistency of Alternative A with respect to Amador County General Plan land use policies.

TABLE 4.8-10
PROPOSED ACTION AND ALTERNATIVES CONSISTENCY WITH THE AMADOR COUNTY GENERAL PLAN LAND USE

Amador County General Plan		Land Use Consistency (Yes or No)				Discussion
Scenic Highways Element: Implementation Policies and Issues						
Section	Policy Summary	Alt A	Alt B	Alt C	Alt D	
Background and Purpose (1)	1. The entire length of SR 49 from the El Dorado County line to the Calaveras County Line is eligible for official designation as scenic highways.	NA	NA	NA	NA	The Proposed Action and Alternatives will place some development within the Scenic Highway eligibility area for SR 49. Land use consistency associated with this is described below.
b. Regulations- Generally	2. All Development projects submitted to Amador County which are proposed to be located partially on wholly within the scenic highway corridor shall be submitted for review and comment to the Tri County Technical Advisory Committee.	Yes	Yes	Yes	Yes	Development of any of the Alternatives would only be subject to review by the Tribal Government and not require review by the Tri County Technical Advisory Committee. However, the Tribal Government desires to work cooperatively with local and State authorities on matters related to land use and will provide development proposals to the Tri County Technical Advisory Committee and other interested parties for information comment.

Amador County General Plan		Land Use Consistency (Yes or No)				Discussion
	3. The California Public Utilities commission requires under grounding of utilities "within 1,000 feet from each edge of the right-of-way of designated State Scenic Highways."	Yes	Yes	Yes	Yes	The incorporation of underground utilities is a development feature for all of the Alternatives.
	4. Billboards shall not be permitted in the scenic highway corridor. Appurtenant, or on-site advertising structures shall require County review and approval prior to erection.	Yes	Yes	Yes	Yes	On-site signage for the Alternatives will be limited to "City" Parcels. No other billboards or signage are proposed for "County" parcels within the project site.
c. Regulations-Site Specific	2. The exterior colors of the sides and roofs of structures and sign supports shall not contrast with natural colors in the area.	Yes	Yes	Yes	Yes	Development of any of the Alternatives would be architecturally designed to be complementary to the surrounding environment. Landscaped areas will contribute to an aesthetically agreeable visual component.
	3. Commercial structures shall be restricted to having only two occupancy floor levels.	No	No	Yes	Yes	Alternatives A and B include the development of a five-story hotel room, which would be inconsistent with site-specific regulations. Alternatives C and D do not include development over two occupancy floor levels.
	4. Proposals to cut, fill, or otherwise move more than fifty cubic yards of earth shall require an engineered grading plan to be filed with the Building Department prior to any work-taking place.	Yes	Yes	Yes	Yes	An engineered grading plan will be developed prior to the construction of any of the Alternatives. While the Tribe would not be required to submit a grading plan to the County Building Department once the land was taken into trust, the grading plan will be submitted to the County for information and comment.
	5. A landscaping plan shall be submitted as part of the application for any project or permittee within the scenic highway corridor.	Yes	Yes	Yes	Yes	The Tribe would not be required to submit a landscaping plan to the County once the land was taken into trust. However, a landscaping plan will be made available to the County for information and comment.
	7. A parking plan shall be submitted with all commercial use applications to the County. Minimum parking requirements shall be one space per 200 feet.	Yes	Yes	Yes	Yes	The tribe would not be required to submit a parking plan to the County once the land was taken into trust. However, a parking plan will be made available to the County for information and comment.

Amador County Development Policy Statement

Section	Policy Summary	Alt A	Alt B	Alt C	Alt D	
13	Scenic roads and highways will receive special protection against future incompatible development. Overhead utility lines will be discouraged whenever practicable or feasible.	Yes	Yes	Yes	Yes	As mentioned above, the incorporation of underground utilities is a development feature for all of the Alternatives.

Amador County General Plan	Land Use Consistency (Yes or No)				Discussion	
14	<p>1. All federal agencies shall inform the County of Amador of all pending, contemplated, or proposed actions. Notification shall include enough information to inform lay persons of its intent and effects, including the effects on the customs, culture, economy, resources, and environmental of the County of Amador, as defined and described in the following subsections of this general plan. Such notification shall include a report on the purpose, objectives, and estimated impacts of the proposed action on Amador County and its citizens. These reports shall be provided to the County of Amador for review response.</p>	Yes	Yes	Yes	Yes	<p>A Notice of Intent (NOI) for the proposed action was published in the Federal Register on two occasions, November 7, 2003 and January 20, 2004. Two public scoping meetings were held in Plymouth to obtain feedback regarding the proposed action. In addition, a meeting with Amador County representatives was held by the BIA in early 2004 to receive comments from the County re: issues associated with the proposed project. All comments submitted were summarized, published, and distributed to all interested parties. In addition, the BIA has formally requested Cooperating Agency participation from the several agencies including the County of Amador. To date, only the National Indian Gaming Association, City of Plymouth, and U.S. EPA have responded that they would serve as a Cooperating Agency.</p>
	<p>2. All federal agencies shall, to the fullest extent permissible by law, comply with all applicable procedures, policies, and practices issued by the State of California and the County of Amador.</p>	Yes	Yes	Yes	Yes	<p>The BIA will, to the fullest extent permissible by law and without compromising the Tribe's sovereignty, comply with all applicable procedures, policies, and practices issued by the State of California and the County of Amador, with the preparation of this Draft EIS and fee-to-trust land transfer.</p>
	<p>3. Notification of the availability of related documents shall be available for the minimum time set forth by the federal statute for such review or, if none is established by law, for a period of not less than 45 days prior to the proposed date of action, adoption, or approval. Any proposed substantive revisions to any proposed actions shall be processed in the same manner and given the same notification as the original proposal.</p>	Yes	Yes	Yes	Yes	<p>This Draft EIS will be distributed to federal, tribal, state, and local agencies and other interested parties for a 45-day review and comment period. The review and comment period begins after the Notice of Filing with the EPA in the Federal Register. The Notice of Availability published by the BIA provides the time and location of public hearing(s) to inform the public regarding the alternatives considered in this Draft EIS. Comments received during the comment period, including those submitted or recorded at public hearing(s), must be answered. The responses to comments are included in the Final EIS along with any changes that are made in the Draft EIS as a result of review and revision.</p>

Amador County General Plan	Land Use Consistency (Yes or No)				Discussion
7. Whenever any federal agency proposes to take any action, including the formation of any policy, which will affect Amador County, the Board of Supervisors may request that the federal agency enter into a memorandum of understanding with the Board so that said federal agency shall act in accordance with this resolution. It shall be the policy of the Board of Supervisors to enter into MOU's with federal agencies that the County deals with on a regular basis.	Yes	Yes	Yes	Yes	The BIA has formally requested Cooperating Agency participation from the County of Amador. Cooperating agencies participate in the scoping process and, on the lead agency's request, may develop information to be included in the Draft EIS. To date, the County has refused Cooperating Agency status.
15 Special consideration and care should be devoted to the aesthetics, architecture and visual appearance of proposed development in the following areas: 10. Other areas having outstanding scenic or historical interest-upon request of the residents or owners.	Yes	Yes	Yes	Yes	Development of any of the Alternatives would be architecturally designed to be complementary to the surrounding environment. Landscaped areas will contribute to an aesthetically agreeable visual component.
16 Billboards along the highways will be restricted in size and number, prohibited in scenic areas (which includes most rural areas of Amador County) and confined to commercial or industrial zones.	Yes	Yes	Yes	Yes	On-site signage for the any of the Alternatives will be limited to the City Parcels. No other billboards or signage are proposed for the County project parcels.

SOURCE: County of Amador, 1967

Consistency with the Amador County Zoning Plan

Parcels #2, #3 and #12 are zoned Single-Family Residential Agricultural District (R1-A) by the County of Amador. The R1-A classification is applied to lands best suited to low-density residential uses in suburban areas not served by both domestic water and sewer systems, or by various other urban services. Appropriate uses are single-family residential, agricultural and schools, parks, etc. Parcel #1 is zoned Special Use (X). Zoning for this parcel is loosely defined by allowing all uses subject to securing a use permit from the County. This leaves development proposals up to the discretion of the County.

No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the hotel and conference center and surface parking areas and would not be consistent with the R1-A Zone. Development on Parcel #1 would include a fire station, a wastewater treatment plant, and disposal areas and, thus, could be consistent with the X Zone subject to approval by the County. While the County will not have jurisdiction over Tribal lands once the project parcels are

taken into trust, the County will be provided with the development proposal for information and comments. The Tribe, prior to development, may consider any comments.

Effects to Project Area

Proposed land uses for Parcels #4 through #11, which is located entirely on land within the jurisdiction of the City of Plymouth, include the main casino building and parking facilities. These land uses would be consistent with the City of Plymouth General Plan and Zoning Commercial Designations. Parcels #8 and #9 are currently developed with a land use (single-family dwelling) that is inconsistent with the City of Plymouth General Plan designation for the parcels. Alternative A would replace this use with a casino parking area that would be consistent with the existing planned land use designation. Though consistent with the City General Plan, the development of the City Parcels would result in a noticeable increase in land use intensity.

Development of the County parcels would consist of parking areas, hotel and conference center, water and wastewater treatment facilities, and a fire station. This would occur only on Parcel #1 and Parcel #3. No development is proposed for Parcel #2 and Parcel #12 and land use intensity would remain the same. Development of the parking areas and the hotel/conference center on Parcel #3 and development of the water and wastewater treatment facilities and the fire station on Parcel #1 would result in a noticeable increase in land use intensity.

Agriculture

The project site does not contain prime or unique farmlands or farmland of statewide importance (**Appendix N**). The City of Plymouth and the County of Amador Planning Department have not issued or identified any Williamson Act contracts. Currently, moderate grazing occurs on Parcels #1-#3. Upon development, grazing would be excluded from the project site. However, since the project site does not contain prime or unique farmlands or farmlands of statewide importance, development of Alternative A would have no impact on agriculture.

4.8.2 ALTERNATIVE B – REDUCED CASINO WITH HOTEL ALTERNATIVE

TRANSPORTATION/CIRCULATION

Site Access

Phase I and II

Phase I and II site access would be similar to Alternative A. Impacts associated with entrance and exiting the project site would be the similar to Alternative A, and mitigation is outlined in **Section 5.2.8** to bring any impacts to a less-than-significant level.

Construction

Phase I and II

Construction activities during Phase I and II of Alternative B would be similar to Alternative A. Additional trips generated during construction of Phases I and II of Alternative B include employee trips, heavy equipment delivery, and material importation/expectation. Mitigation measure to reduce construction related impacts are outlined in **Section 5.2.8** and will reduce any impacts to a less-than-significant level.

Operation

Phase I

Project Trip Generation

Trip generation rates for Alternative B were established in the same manner as in Alternative A. As summarized in **Table 4.8-11**, Phase I of Alternative A is expected generate 7943 weekday daily trips to the circulation network, with 529 trips (275 inbound, 256 outbound) occurring during the weekday PM Peak Hour and 738 (364 inbound, 364 outbound) trips occurring during the Saturday PM Peak Hour.

TABLE 4.8-11
PROJECT TRIP GENERATION

Generator	Trip Generation Rate			Weekday PM Peak Hour (In, Out)	Weekend PM Peak Hour (In, Out)	Weekday Average Daily Trips
	Weekday PM Peak Hour	Weekend PM Peak Hour	Average Daily Trips			
Casino	4.54/ksf ¹	6.25/ksf ¹	68.24/ksf ¹	457 (238,219)	630 (315,315)	6,875
Pass-By trips		N/A		-14	-18	-206
Generated Trips		N/A		443	612	6,669

NOTES: ¹ ksf = 1000 square feet.

² 3% of all the trips generated by the Ione Casino would be pass-by or diverted trips on their way to, or leaving from, the Jackson Rancheria.

SOURCE: Appendix M

Daily Roadway Segment Effects

To determine the impact of Phase I of Alternative B to the study roadway segments, weekday average daily trips from **Table 4.8-11** (above) were added to the existing setting of the study roadway segments according to the estimated trip distribution. The LOS for the study roadway segments were then calculated using the same methodology as the LOS calculations for the existing environment in **Section 3.8**. The LOS ratings for Phase I conditions are summarized in **Table 4.8-12**.

Table 4.8-12 summarizes the results of this daily roadway segment analysis for the roadway network at the time Phase I becomes operational, identifying LOS conditions scenarios with and without

implementation of Phase I of Alternative A. With the traffic added to the study roadway segments by Alternative A, none of the roadway segments would operate at an unacceptable LOS.

Peak Hour Intersection Effects

Table 4.8-3 summarizes the weekday and Saturday intersections for the no project LOS. **Table 4.8-13** summarizes the weekday and Saturday intersections LOS for Phase I of Alternative A. With the traffic added to the study intersections by Alternative A, the following intersections would operate at an unacceptable LOS:

- SR 49 and Main Street during the weekday and Saturday PM Peak Hour
- SR 49 and Empire Street during the Saturday PM Peak Hour
- SR 49 and SR 16 during the weekday and Saturday PM Peak Hour
- SR 104 (Preston Avenue) and SR 124 during the weekday and Saturday PM Peak Hour
- SR 88 and SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 49 and Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 and Service Access Driveway during the weekday and Saturday PM Peak Hour

Mitigation Measures

Mitigation measures for the 2006 intersections plus Alternative B have been developed for the intersections showing unacceptable LOS (bold text) as presented in **Table 4.8-13** and are discussed in **Section 5.2.8** of the Draft EIS. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS; therefore, be considered to have less-than-significant impacts.

TABLE 4.8-12
PHASE I DAILY ROADWAY SEGMENT LEVEL OF SERVICE

Roadway Segment	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service		LOS Threshold ¹
		No Project ²	Alt B Phase I ³	No Project	Alt B Phase I	No Project	Alt B Phase I	
SR49 North of Shenandoah Road	15,500	2,400	3,950	0.15	0.24	B	C	C
SR49 South of SR16	18,900	8,300	8,650	0.44	0.46	C	C	E
SR16 West of Old Sacramento Road	20,200	5,200	8,050	0.26	0.38	B	C	C
SR124 South of SR16	18,900	1,900	4,400	0.10	0.21	A	B	C
SR88 West of SR124	20,200	7,400	9,800	0.37	0.47	C	C	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²Existing plus approved projects

³Existing plus approved projects plus Alternative A Phase I

SOURCE: Appendix M

TABLE 4.8-13
ALTERNATIVE B PHASE I LEVEL OF SERVICE

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	28.5	C	31.8	C
SR-16 / Murieta South Parkway	D	14.5	B	8.5	A
SR-16 / Murieta Parkway	D	19.3	B	16.1	B
SR-16 / Dillard Road	D	14.5	B	8.7	A
SR-16 / Grant Line Road	E	81.2	F	23.7	C
SR-16 / Sunrise Boulevard	D	37.0	D	17.7	B
SR 16 / Bradshaw Road	D	34.9	C	16.9	B
Worst Intersection Movement					
Intersection	LOS Standard ¹	Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49SR 49 / Miller Road	D	9.6	A	9.3	A
SR 49 / Main Street	C	29.6	D	28.0	D
SR 49 / Poplar Street	D	11.8	B	11.9	B
SR 49 / Empire Street	C	26.8	D	32.5	D
SR 49 / SR-16	C	>100	F	>100	F
SR-16 / SR-124	D	18.3	C	13.7	B
SR-16 / Latrobe Road (Amador)	C	23.7	C	18.5	C
SR-104 (Preston Avenue) / SR-124	C	>100	F	>100	F
SR-104 (Main Street) / SR-124	C	31.2	D	24.1	C
SR-88 / SR-124	D	12.5	B	12.7	B
SR-88 / SR-12 (East)	D	47.6	E	24.0	C
SR-88 / SR-12 (West)	D	>100	F	>100	F
SR-16 / Lone Road	C	18.6	C	16.6	C
SR-16 / Stone House Road	E	58.0	F	29.4	D
SR 49 / Pleasant Valley Road ²	C	25.4	D	14.4	B
SR-16 / Latrobe Road (Sacramento)	D	41.4	E	32.0	D
SR-16 / Sloughhouse Road	D	21.9	C	14.3	B
SR-16 / Excelsior Road	D	>100	F	24.0	C
SR 49/ Project Driveway	C	34.6	D	54.8	F
SR 49/ Service Access	C	36.4	E	50.1	F

NOTES: **Bold** text denotes unacceptable LOS

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Indicates intersection average.

SOURCE: Appendix M

*Phase II (Full Build-Out)***Trip Generation**

As summarized in **Table 4.8-14**, Phases I and II of Alternative B is expected generate 7,414 weekday daily trips to the circulation network, with 498 trips (260 inbound, 238 outbound) occurring during the weekday PM Peak Hour and 677 (342 inbound, 335 outbound) trips occurring during the Saturday PM Peak Hour.

Daily Roadway Segment Effects

Table 4.8-15 summarizes the results of this daily roadway segment analysis for the roadway network at the time Phase II becomes operational, identifying LOS conditions scenarios with and without implementation of Phase II of Alternative B. With the traffic added to the study roadway segments by Alternative B, none of the roadway segments would operate at an unacceptable LOS and be considered to have less-than-significant impacts.

Peak Hour Intersection Effects

Table 4.8-16 summarizes the weekday and Saturday intersections LOS for no project, which is the same as Phase I mitigated traffic. **Table 4.8-17** summarizes the weekday and Saturday intersections LOS for Phase I and II. With the traffic added to the study intersections by Phase I and II, the following intersections would operate at an unacceptable LOS:

- SR 16 / Latrobe Road (Sacramento County) during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

TABLE 4.8-14
ALTERNATIVE B TRIP GENERATION PHASES I AND II

Generator	Trip Generation						
	Weekday	Weekday PM Peak Hour			Saturday PM Peak Hour		
	Daily	Inbound	Outbound	Total	Inbound	Outbound	Total
Casino	6,875	238	219	457	315	315	630
Hotel	745	29	26	55	36	29	65
Total (Casino + Hotel)	7,620	267	245	512	351	344	695
Reductions:							
Pass-by/Diversion ¹	-206	-7	-7	-14	-9	-9	-18
New Primary Trips (Casino + Hotel)	7,414	260	238	498	342	335	677

¹ 3% of all the trips generated by the Casino/Hotel would be pass-by.

Source: Appendix M

TABLE 4.8-15
ALTERNATIVE B PHASE I & II DAILY ROADWAY SEGMENT LEVEL OF SERVICE (LOS)

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt A Phase I & II ³	No Project	Alt A Phase I & II	No Project	Alt A Phase I & II
			SR49 North of Shenandoah Road	C	15,500	2,600	4,060	0.17
SR49 South of SR16	E	18,900	8,900	9,230	0.47	0.49	C	C
SR16 West of Old Sacramento Road	C	20,200	5,600	8,260	0.28	0.41	B	C
SR124 South of SR16	C	18,900	2,000	4,340	0.11	0.23	A	B
SR88 West of SR124	D	20,200	7,900	10,140	0.39	0.50	C	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²Existing plus approved projects

³Existing plus approved projects plus alternative A phases I and II

SOURCE: Appendix M

TABLE 4.8-16
EXISTING PHASE II (MITIGATED PHASE I) LEVEL OF SERVICE (LOS)

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	28.9	C	21.5	C
SR-16 / Murieta South Parkway	D	13.9	B	8.3	A
SR-16 / Murieta Parkway	D	18.8	B	15.4	B
SR-16 / Dillard Road	D	15.2	B	8.5	A
SR-16 / Grant Line Road	E	65.3	E	24.7	C
SR-16 / Sunrise Boulevard	D	39.2	D	17.2	B
SR 16 / Bradshaw Road	D	36.9	D	16.5	B
SR 49 / Main Street	C	6.1	A	6.3	A
SR 49 / Empire Street	C	6.1	A	6.9	A
SR 49 / SR-16	C	12.4	B	13.8	B
SR-104 (Preston Avenue) / SR-124	C	6.6	A	6.4	A
SR-88 / SR-12 (East)	D	10.6	B	11.5	B
SR-88 / SR-12 (West)	D	31.3	C	32.6	C
SR-104 (Main Street) / SR-124	C	8.9	A	6.8	A
SR-16 / Excelsior Road	D	17.5	B	9.4	A

Intersection	LOS Standard ¹	Worst Intersection Movement			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49 / Miller Road	D	9.3	A	9.0	A
SR 49 / Poplar Street	D	11.6	B	11.4	B
SR-16 / SR-124	D	15.4	C	11.7	B
SR-16 / Latrobe Road (Amador)	C	17.9	C	16.6	C
SR-88 / SR-124	D	12.1	B	11.8	B
SR 49 / Pleasant Valley Road ²	C	27.6	D	13.5	B
SR-16 / Lone Road	C	16.6	C	13.8	B
SR-16 / Stone House Road	E	24.7	C	18.6	C
SR-16 / Latrobe Road (Sacramento)	D	38.1	E	26.5	D
SR-16 / Sloughhouse Road	D	21.6	C	13.5B	B

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Indicates intersection average.

SOURCE: Appendix M

TABLE 4.8-17
PHASE I AND II LEVEL OF SERVICE (LOS)

Intersection	LOS Standard ¹	Weekday PM		Saturday PM	
		Intersection Average			
		Delay (Sec)	LOS	Delay (Sec)	LOS
Signalized Intersections					
SR-88 / Kettleman Lane	D	28.9	C	27.7	C
SR-16 / Murieta South Parkway	D	13.9	B	9.3	A
SR-16 / Murieta Parkway	D	18.8	B	17.3	B
SR-16 / Dillard Road	D	15.2	B	9.5	A
SR-16 / Grant Line Road	E	64.7	E	24.4	C
SR-16 / Sunrise Boulevard	D	39.2	D	19.2	B
SR 16 / Bradshaw Road	D	36.9	D	18.0	B
SR 49 / Main Street	C	7.0	A	7.0	A
SR 49 / Empire Street	C	7.5	A	6.9	A
SR 49 / SR-16	C	14.3	B	16.3	B
SR-104 (Preston Avenue) / SR-124	C	7.2	A	7.1	A
SR-88 / SR-12 (East)	D	11.3	B	12.4	B
SR-88 / SR-12 (West)	D	32.4	C	32.0	C
SR-104 (Main Street) / SR-124	C	10.5	B	7.7	A
SR-16 / Excelsior Road	D	17.5	B	9.4	A

		Delay (Sec)	LOS	Delay (Sec)	LOS
Unsignalized Intersections					
SR 49 / Miller Road	D	9.9	A	9.6	A
SR 49 / Poplar Street	D	12.6	B	12.7	B
SR-16 / SR-124	D	23.0	C	15.8	C
SR-16 / Latrobe Road (Amador)	C	20.5	C	18.4	C
SR-88 / SR-124	D	13.5	B	13.8	B
SR 49 / Pleasant Valley Road ²	C	35.9	E	16.8	C
SR-16 / Lone Road	C	21.4	C	19.0	C
SR-16 / Stone House Road	E	32.6	C	24.9	C
SR-16 / Latrobe Road (Sacramento)	D	52.0	F	39.5	E
SR-16 / Sloughhouse Road	D	25.2	D	15.4	C
SR 49/ Project Driveway	C	77.6	F	>100	F
SR 49/ Service Access	C	49.7	E	>100	F

NOTES: **Bold** text denotes unacceptable LOS

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Indicates intersection average.

SOURCE: Appendix M

Mitigation Measures

Mitigation measures for full build-out of Alternative B for the intersections with an unacceptable LOS (bold text) are discussed in **Section 5.2.8** of this document. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS and be considered to have less-than-significant impacts.

Public Transportation

Public transportation would be the same as Alternative A and have less-than-significant impacts.

Pedestrian Circulation

Pedestrian circulation would be the same as Alternative A and have less-than-significant impacts.

LAND USE

Tribal Sovereignty

Following approval of the 25 CFR Part 151 Trust Acquisition, all of the project parcels would be exempt from City and County land use regulations. The only applicable land use regulations on the trust lands are those of the Tribe. The Tribe relies upon the Tribal Council, the governing body of the Tribe, to enact land use on Tribal lands. However, the Tribe desires to work cooperatively with local and State authorities on matters related to land use. Accordingly, City and County land use regulations and project effects are assessed below.

Effects to Project Area

Consistency with the City of Plymouth General Plan

Alternative B would replace existing commercial and residential lands with a casino, events center, food and beverage areas, and parking facilities. The eight City project parcels are designated as Commercial (C). According to the Land Use Element of the City of Plymouth General Plan, the C designation is best suited for retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity. Development of these parcels would be considered commercial development and consistent with the C designation. Therefore a less-than-significant compatibility impact is expected with respect to City of Plymouth General Plan Land Use designations. **Table 4.8-9** above explains the land use consistency for each of the project alternatives with respect to the City of Plymouth General Plan.

Consistency with the City of Plymouth Zoning Ordinance

The development footprint is zoned commercial by the City of Plymouth Zoning Ordinance. Acceptable uses for the commercial zone include, retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity.

Four of the eight project parcels located within the City of Plymouth are within the Scenic Corridor Combined (SC) Zone classification. Generally, the SC Combined Zone includes all parcels that are zoned commercial, industrial, or light industrial and adjacent to the SR 49 right of way. In the case of the project site, four project parcels are zoned commercial and within the Scenic Corridor Combined Zone. The Scenic Corridor Combined Zone was established to preserve the visual character and preserve the historical image of development within the SR 49 corridor. All uses allowed under the regular zoning designation with which the SC zone is combined are allowed. Regulations specific to the Scenic Corridor Combined Zone are limited to the consideration of design review guidelines specified in Chapter 19.50 of the City of Plymouth Municipal Code.

Development of Alternative B is considered a commercial development and would generally be consistent with the commercially zoned City parcels. However, development of Alternative B would be inconsistent with the subdivision ordinance, building density standards for commercial development, and required plan review as required by the City of Plymouth Municipal Code. These ordinances address allowed setbacks, building heights, parking standards, landscaping standards and other typical design requirements. While the Tribe has ultimate approval of development on Tribal land, the Tribe desires to work cooperatively with the City on all development decisions. While not required to obtain permits or engage in plan review for Alternative B, the Tribe will solicit the City's input regarding design review guidelines to further the goals addressed by the City of Plymouth Zoning Ordinance. **Section 5.2.8** includes mitigation to address design review by the City of Plymouth to reduce any impacts to a less-than-significant level.

Consistency with the Amador County General Plan

Development of Alternative B on County land would replace existing, sparsely developed rural residential land with casino parking areas, a hotel and conference center, a fire station, and a wastewater treatment plant and disposal facilities. The four parcels under County jurisdiction are designated as Residential Suburban (RS). According to the Land Use Element of the Amador County General Plan, the RS designation is best suited for rural residential development not serviced by urban services. No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the hotel and conference center, surface parking areas, a fire station, and a wastewater treatment plant and disposal areas, and would not be consistent with the RS designation.

Further, **Table 4.8-10** discusses the consistency of Alternative B with respect to Amador County General Plan land use policies.

Consistency with the Amador County Zoning Plan

Parcels #2, #3 and #12 are zoned Single-family Residential Agricultural District (R1-A) by the County of Amador. The R1-A classification is applied to lands best suited to low-density residential uses in suburban areas not served by both domestic water and sewer systems, or by various other urban services. Appropriate uses are single-family residential, agricultural and schools, parks, etc. Parcel #1 is zoned Special Use (X). Zoning for this parcel is loosely defined by allowing all uses subject to securing a use permit from the County. This leaves development proposals up to the discretion of the County.

No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the hotel and conference center and surface parking areas and would not be consistent with the R1-A Zone. Development on Parcel #1 would include a fire station, a wastewater treatment plant, and disposal areas, and could be consistent with the X Zone subject to approval by the County. While the County will not have jurisdiction over tribal lands once the project parcels are taken into trust, the County will be provided with the development proposal for information and comments. Any comments may be considered by the Tribe prior to development.

Effects to Project Area

Proposed land uses for Parcels #4 through #11, which is located entirely on land within the jurisdiction of the City of Plymouth, include the main casino building and parking facilities. These land uses would be consistent with the City of Plymouth General Plan and Zoning Commercial Designations. Parcels #8 and #9 are currently developed with a land use (single-family dwelling) that is inconsistent with the City of Plymouth General Plan designation for these parcels. Alternative B would replace this use with a casino parking area, and would be consistent with the existing planned land use designation. Though consistent with the City General Plan, the development of the City Parcels would result in a noticeable increase in land use intensity.

Development of the County parcels would consist of parking areas, hotel and conference center, water and wastewater treatment facilities, and a fire station. This would occur only on Parcel #1 and Parcel #3. No development is proposed for Parcel #2 and Parcel #12 and land use intensity would remain the same. Development of the parking areas on Parcel #3 and development of the water and wastewater treatment facilities and the fire station on Parcel #1 would result in a noticeable increase in land use intensity.

AGRICULTURE

The project site does not contain prime or unique farmlands, or farmlands of statewide importance. The City of Plymouth and the County of Amador Planning Department have not issued or identified any Williamson Act contracts. Currently, moderate grazing occurs on Parcels #1-#3; upon development grazing would be excluded from project site. However, since the project site does not contain prime or unique farmlands or farmlands of statewide importance, development of Alternative B would have a no impact on agriculture.

4.8.3 ALTERNATIVE C – REDUCED CASINO

TRANSPORTATION/CIRCULATION

A detailed traffic analysis was developed for Alternative C. This analysis and its associated appendices are used to help evaluate potential impacts to the transportation/circulation system under this alternative within this section of the Draft EIS.

Site Access

Access to the project site will be gained through two driveways located on SR 49. The northern driveway will provide the main access to the casino's porte cochere and parking area. The southern driveway will provide a service entrance and secondary access to the parking area. South of the proposed northern driveway is Village Drive, an existing loop road that runs from the north side of the Village Mart/Shell gas station to the Shenandoah Inn and around to the south side of the gas station, thus connecting both ends of the roadway with SR 49 (**Figure 2-14**). The existing inn will be removed, leaving the gas station and Village Drive. Village Drive will not be utilized by the proposed casino and will not provide connections to the porte cochere or casino parking area. Public use of Village Drive and the existing access to the gas station would remain with the development of this alternative.

The proximity of Village Drive to a private driveway located across from the project site and the main project driveway would create a problem for traffic entering and exiting these locations from SR 49. The resulting congestion is considered to be a significant effect. Mitigation has been identified in **Section 5.2.8** to address this effect. Mitigation would consist of limiting access on the northern intersection of Village Drive to right-in/right-out movements and reduce any associated impacts to a less-than-significant level.

Project Trip Generation

As shown in **Table 4.8-18**, Alternative C is expected to add 5,408 weekday daily trips to the circulation network, with 360 trips occurring in the weekday PM peak hour and 496 trips occurring in the Saturday PM peak hour. **Table 4.8-18** also shows, that with the construction of Alternative C and the reduction of Pass-by drivers, the project would add 5,246 new primary weekday daily trips to the circulation network, with 350 trips occurring in the weekday PM peak hour and 482 trips occurring in the Saturday PM peak hour. Based on the trip generation rates for Alternative C, and the reduced gaming floor area under this alternative, the following trip generation estimates were made (**Table 4.8-19**).

TABLE 4.8-18
ALTERNATIVE C TRIP GENERATION

Land Use	Weekday Daily Total	New Primary Trip Generation ¹					
		PM Peak Hour			Saturday PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Casino 79,250 sf *	5,408	187	173	360	248	248	496
Reductions: Jackson Rancheria Pass-by/Driver	- 162	- 5	- 5	- 10	- 7	-7	- 14
New Primary Trips (Casino & Hotel)	5,246	182	168	350	241	241	482

NOTES: ¹ New Primary Trip Generation = Total Trip - Pass-by/Diverted Trips.

² Total Trip Generation = New Primary Trips + Pass-by Trips.

³ 3% of all the trips generated by the Ione Casino would be pass-by or diverted trips on their way to, or leaving from, the Jackson Rancheria.

* sf= square feet

SOURCE: Appendix M

TABLE 4.8-19
ALTERNATIVE C DAILY ROADWAY SEGMENT PERFORMANCE

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt C	No Project	Alt C	No Project	Alt C
			SR49 North of Shenandoah Road	C	15,500	2,400	3,430	0.15
SR49 South of SR16	E	18,900	8,300	8,530	0.44	0.45	C	C
SR16 West of Old Sacramento Road	C	20,200	5,200	7,080	0.26	0.35	B	C
SR124 South of SR16	C	18,900	1,900	3,560	0.10	0.19	A	B
SR88 West of SR124	D	20,200	7,400	8,990	0.37	0.45	C	C

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²Existing plus approved projects.

SOURCE: Appendix M

Existing Plus Approved Projects Condition Plus Alternative C

Daily Roadway Segment Effects

Table 4.8-19 summarizes the results of this daily roadway segment analysis for the 2006 EPAP Condition with and without Alternative C level of service conditions. With the traffic added to the study roadway segments by Alternative C, none of the roadway segments would operate at an unacceptable LOS.

Peak Hour Intersection Effects

Table 4.8-3 summarizes the weekday and Saturday results of the intersection without Alternative C.

Table 4.8-20 summarizes the Saturday results with Alternative C level of service and average intersection delay experienced per vehicle. With Alternative C traffic added to the study intersections the following intersections would operate at an unacceptable LOS:

- SR 49 / Main Street during the weekday and Saturday PM Peak Hour
- SR 49 / Empire Road during the Saturday PM Peak Hour
- SR 49 / SR 16 during the weekday and Saturday PM Peak Hour
- SR 104 (Preston Avenue) / SR 124 during the weekday and Saturday PM Peak Hour
- SR 104 (Main Street) / SR 124 (Church Street) during the weekday PM Peak Hour
- SR 88 / SR 12 (East) during the weekday PM Peak Hour
- SR 88 / SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 16 / Stone House Road during the weekday PM Peak Hour
- SR 16 / Excelsior Road during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

Mitigation Measures

Mitigation measures for existing conditions plus Alternative C have been developed for the intersections showing unacceptable LOS (bold text) as presented in **4.8-20** and are discussed in **Section 5.2.8** of the Draft EIS. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS and be considered to have a less-than-significant effect.

TABLE 4.8-20
ALTERNATIVE C INTERSECTION LEVEL OF SERVICE

Intersection	LOS Threshold ¹	Weekday PM LOS				Saturday PM LOS			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.2	A	9.5	A	0.9	A	9.3	A
SR 49 / Main Street	C	8.0	A	27.6	D	9.9	A	25.3	D
SR 49 / Poplar Street	D	1.0	A	11.7	B	1.0	A	11.7	B

Intersection	LOS Threshold ¹	Weekday PM LOS				Saturday PM LOS			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Empire Street	C	2.4	A	25.8	D	3.5	A	30.3	D
SR 49 / SR 16	C	15.8	C	79.4	F	45.0	E	>100	F
SR 16 / SR 124	D	3.0	A	17.2	C	2.5	A	13.0	B
SR 16 / Latrobe Road (Amador)	C	3.2	A	22.2	C	1.5	A	17.4	C
SR 104 (Preston Avenue) / SR 124	C	29.1	D	>100	F	29.3	D	>100	F
SR 104 (Main Street) / SR 124	C	8.3	A	27.9	D	5.6	A	21.5	C
SR 88 / SR 124	D	3.7	A	12.3	B	3.8	A	12.4	B
SR 88 / SR 12 (East)	D	15.8	C	45.0	E	10.2	B	22.8	C
SR 88 / SR 12 (West)	D	>100	F	>100	F	62.5	F	>100	F
SR 88 / Kettleman Lane	D	28.9	C			29.6	C		
SR 49 / Pleasant Valley Road	C	24.5	C			14.0	B		
SR 16 / Ione Road	C	1.0	A	17.9	C	1.4	A	15.8	C
SR 16 / Murieta South Parkway	D	13.5	B			8.5	A		
SR 16 / Murieta Parkway	D	19.2	B			15.8	B		
SR 16 / Stone House Road	E	2.7	A	53.7	F	1.2	A	27.4	D
SR 16 / Latrobe Road (Sacramento)	E	0.7	A	39.5	E	0.5	A	30.0	D
SR 16 / Dillard Road	D	14.2	B			8.5	A		
SR 16 / Sloughhouse Road	D	0.9	A	21.4	C	0.5	A	14.0	B
SR 16 / Grant Line Road	E	79.4	E			23.8	C		
SR 16 / Sunrise Boulevard	D	36.1	D			17.2	B		
SR 16 / Excelsior Road	D	>100	F	>100	F	5.4	A	22.9	C
SR 16 / Bradshaw Road	D	34.1	C			16.9	B		

Intersection	LOS Threshold ¹	Weekday PM LOS				Saturday PM LOS			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Project Driveway	C	3.1	A	27.3	D	5.2	A	33.0	D
SR 49 / Service Access	C	1.2	A	30.6	D	2.1	A	36.0	E

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

Public Transportation

Public transportation would be the same as Alternative A and have a less-than-significant impacts.

Pedestrian Circulation

Pedestrian circulation would be the same as Alternative A and have a less-than-significant impacts.

LAND USE

Tribal Sovereignty

Following approval of the 25CFR Part 151 Trust Acquisition, all of the project parcels would be exempt from City and County land use regulations. The only applicable land use regulations on the trust lands are those that are Tribal. The Tribal Government relies upon the Tribal Council, the governing body of the Tribal Government, to guide and regulate land use on Tribal lands. However, the Tribal Government desires to work cooperatively with local and State authorities on matters related to land use. Accordingly, City and County land use regulations and project effects are assessed below.

Effects to Project Area

Consistency with the City of Plymouth General Plan

Alternative C would replace existing commercial and residential lands with a casino, events center, food and beverage areas, and parking facilities. The eight City project parcels are designated as Commercial (C). According to the Land Use Element of the City of Plymouth General Plan, the C designation is best suited for retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity. Development of these parcels would be considered commercial development and consistent with the C designation. Therefore, a less-than-significant compatibility impact is expected with respect to City of Plymouth General Plan Land Use

designations. **Table 4.8-9** above explains the land use consistency for each of the project alternatives with respect to the City of Plymouth General Plan.

Consistency with the City of Plymouth Zoning Ordinance

The development footprint is zoned commercial by the City of Plymouth Zoning Ordinance. Acceptable uses for the commercial zone include, retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity.

Four of the eight project parcels located within the City of Plymouth are within the Scenic Corridor (SC) Combined Zone classification. Generally, the SC Combined Zone includes all parcels that are zoned commercial, industrial, or light industrial and adjacent to the SR 49 right-of-way. In the case of the project site, four project parcels are zoned commercial and within the Scenic Corridor Combined Zone. The Scenic Corridor (SC) Combined Zone was established to preserve the visual character and preserve the historical image of development within the SR 49 corridor. All uses allowed under the regular zoning designation with which the SC zone is combined are allowed. Regulations specific to the Scenic Corridor Combined Zone are limited to the consideration of design review guidelines specified in Chapter 19.50 of the City of Plymouth Municipal Code.

Development of Alternative C is considered a commercial development and would generally be consistent with the commercially zoned City parcels. Despite being commercial in nature, development of Alternative C inconsistent with the subdivision ordinance, building density standards for commercial development, and required plan review as required by the City of Plymouth Municipal Code. These ordinances address allowed setbacks, building heights, parking standards, landscaping standards and other typical design requirements. While the Tribe has ultimate approval of development on Tribal land, the Tribe desires to work cooperatively with the City on all development decisions. While not required to obtain permits or engage in plan review for Alternative C, the Tribe will solicit the City's input regarding design review guidelines to further the goals addressed by the City of Plymouth Zoning Ordinance. **Section 5.2.8** includes mitigation to address design review by the City of Plymouth to reduce any impacts to a less-than-significant level.

Consistency with the Amador County General Plan

Development of Alternative C on County land would replace sparsely developed rural residential land that currently exists with casino parking areas, a fire station, and a wastewater treatment plant and disposal facilities. The four parcels under County jurisdiction are designated as Residential Suburban (RS). According to the Land Use Element of the Amador County General Plan, the RS designation is best suited for rural residential development not serviced by urban services. No development is proposed for Parcel #2 and Parcel# 12. Development on Parcel #1 and Parcel #3 will include surface parking areas, a fire station, and a wastewater treatment plant and disposal areas, and would not be consistent with the RS designation.

Further, **Table 4.8-10** discusses the consistency of Alternative C with respect to Amador County General Plan land use policies.

Consistency with the Amador County Zoning Plan

Parcels #2, #3 and #12 are zoned Single-family Residential Agricultural District (R1-A) by the County of Amador. The R1-A classification is applied to lands best suited to low-density residential uses in suburban areas not served by both domestic water and sewer systems, or by various other urban services. Appropriate uses are single-family residential, agricultural and schools, parks, etc. Parcel #1 is zoned Special Use (X). Zoning for this parcel is loosely defined by allowing all uses subject to securing a use permit from the County. This leaves development proposals up to the discretion of the County.

No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the surface parking area and would not be consistent with the R1-A Zone. Development on Parcel #1 would include a fire station, a wastewater treatment plant, and disposal areas, and could be consistent with the X Zone subject to approval by the County. While the County will not have jurisdiction over tribal lands once the project parcels are taken into trust, the County will be provided with the development proposal for information and comments. Any comments will be considered by the Tribe prior to development.

Effects to Project Area

Proposed land uses for Parcels #4 through #11, which is located entirely on land within the jurisdiction of the City of Plymouth, include the main casino building and parking facilities. These land uses would be consistent with the City of Plymouth General Plan and Zoning Commercial Designations. Parcels #8 and #9 are currently developed with a land use (single-family dwelling) that is inconsistent with the City of Plymouth General Plan designation for the parcels. Alternative C would replace this use with a casino parking area, and would be consistent with the existing planned land use designation. Though consistent with the City General Plan, the development of the City Parcels would result in a noticeable increase in land use intensity.

Development of the County parcels would consist of parking areas, water and wastewater treatment facilities, and a fire station. This would occur only on Parcel #1 and Parcel #3. No development is proposed for Parcel #2 and Parcel #12 and land use intensity would remain the same. Development of the parking areas on Parcel #3 and development of the water and wastewater treatment facilities and the fire station on Parcel #1 would result in a noticeable increase in land use intensity.

Agriculture

The project site does not contain prime or unique farmlands, or farmland of statewide importance. The City of Plymouth and the County of Amador Planning Department have not issued or identified

any Williamson Act contracts. Currently moderate grazing occurs on Parcels #1 through #3; upon development grazing would be excluded from project site. However, since the project site does not contain prime or unique farmlands or farmlands of statewide importance, development of Alternative C would have a less-than-significant effect.

4.8.4 ALTERNATIVE D – RETAIL DEVELOPMENT

TRANSPORTATION/CIRCULATION

Site Access

Alternative D site access would be similar to Alternative C. Impacts associated with entrance and exiting the project site would be the similar to Alternative C, and mitigation is outlined in **Section 5.2.8** to reduce any impacts to a less-than-significant level.

Construction

Construction activities during Alternative D would be similar to Alternative A, due to the construction footprint being similar. Mitigation measure to reduce construction related impacts are outlined in **Section 5.2.8**.

Operation

Project Trip Generation

Trip generation rates for Alternative D were established in the same manner as in Alternative A. As shown in **Table 4.8-21**, Alternative D is expected to add 5,292 weekday daily trips to the circulation network, with 462 trips occurring in the weekday PM peak hour and 613 trips occurring in the Saturday PM peak hour. Based on the trip generation rates for Alternative D, the following trip generation estimates were made:

TABLE 4.8-21
PROJECT TRIP GENERATION- ALTERNATIVE D RETAIL DEVELOPMENT

Land Use	Weekday Daily Total	Trips					
		PM Peak Hour			Saturday PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Shopping Center, 123,250 sf*	5,292	222	240	462	319	294	613

NOTES: * sf= square foot

SOURCE: Appendix M

*Existing Plus Approved Projects Condition Plus Alternative D***Daily Roadway Segment Effects**

Table 4.8-22 summarizes the results of this daily roadway segment analysis for the with and without Alternative D level of service. With Alternative D traffic added to the study roadway segments no roadway segments would operate at an unacceptable LOS.

TABLE 4.8-22
DAILY ROADWAY SEGMENT PERFORMANCE:

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt D	No Project	Alt D	No Project	Alt D
SR49 North of Shenandoah Road	C	15,500	2,400	3,480	0.15	0.22	B	C
SR49 South of SR16	E	18,900	8,300	8,570	0.44	0.45	C	C
SR16 West of Old Sacramento Road	C	20,200	5,200	7,080	0.26	0.35	B	C
SR124 South of SR16	C	18,900	1,900	3,530	0.10	0.19	A	B
SR88 West of SR124	D	20,200	7,400	8,950	0.37	0.44	C	C

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² Existing plus approved projects.

SOURCE: Appendix M

Peak Hour Intersection Effects

Table 4.8-3 shows the weekday and Saturday PM peak hour traffic for the existing conditions. **Table 4.8-23** summarizes the weekday and Saturday results of the intersection analysis with Alternative D LOS conditions and average intersection delay experienced per vehicle. With the traffic added to the study intersections by Alternative D, the following intersections would operate at an unacceptable LOS.

- SR 49 / Main Street during the weekday and Saturday PM Peak Hour
- SR 49 / Empire Road during the Saturday PM Peak Hour
- SR 49 / SR 16 during the weekday and Saturday PM Peak Hour
- SR 104 (Preston Avenue) / SR 124 during the weekday and Saturday PM Peak Hour
- SR 104 (Main Street) / SR 124 (Church Street) during the weekday PM Peak Hour
- SR 88 / SR 12 (East) during the weekday PM Peak Hour
- SR 88 / SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 16 / Stone House Road during the weekday PM Peak Hour
- SR 16 / Grant Line Road during the weekday PM Peak Hour
- SR 16 / Excelsior Road during the weekday PM Peak Hour

- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

Mitigation Measures

Mitigation measures for the existing conditions plus Alternative D have been developed for the intersections showing unacceptable LOS (bold text) as presented in **Tables 4.8-23** and are discussed in **Section 5.2.8**. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS and be considered to have less-than-significant impacts.

TABLE 4.8-23
ALTERNATIVE D INTERSECTION LEVEL OF SERVICE

Intersection	LOS Threshold ¹	Weekday PM Peak Hour				Saturday PM Peak Hour			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.2	A	9.5	A	0.9	A	9.3	A
SR 49 / Main Street	C	7.5	A	26.4	D	10.0	A	26.7	D
SR 49 / Poplar Street	D	1.0	A	11.4	B	1.0	A	11.6	B
SR 49 / Empire Street	C	2.3	A	24.5	C	3.2	A	26.9	D
SR 49 / SR 16	C	16.5	C	86.3	F	49.3	E	>100	F
SR 16 / SR 124	D	3.1	A	17.3	C	2.6	A	13.0	B
SR 16 / Latrobe Road (Amador)	C	3.0	A	21.9	C	1.5	A	17.2	C
SR 104 (Preston Avenue) / SR 124	C	26.9	D	>100	F	18.3	C	61.7	F
SR 104 (Main Street) / SR 124	C	7.6	A	25.5	D	5.5	A	19.8	C
SR 88 / SR 124	D	3.9	A	12.0	B	3.9	A	12.1	B
SR 88 / SR 12 (East)	D	16.5	C	46.4	E	10.7	B	24.0	C
SR 88 / SR 12 (West)	D	>100	F	>100	F	68.6	F	>100	F
SR 88 / Kettleman Lane	D	28.3	C			31.4	C		
SR 49 / Pleasant Valley Road	C	25.5	D			14.3	B		
SR 16 / Murieta South Parkway	D	14.3	B			1.4	A	16.5	C
SR 16 / Lone Road	C	1.0	A	18.8	C	8.4	A		
SR 16 / Murieta Parkway	D	19.3	B			16.3	B		
SR 16 / Stone House Road	E	2.8	A	58.6	F	1.3	A	29.3	D

Intersection	LOS Threshold ¹	Weekday PM Peak Hour				Saturday PM Peak Hour			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 16 / Latrobe Road (Sacramento)	E	0.7	A	41.6	E	0.5	A	31.9	D
SR 16 / Dillard Road	D	14.4	B			8.7	A		
SR 16 / Sloughhouse Road	D	0.9	A	21.9	C	0.5	A	14.3	B
SR 16 / Grant Line Road	E	81.0	F			23.4	C		
SR 16 / Sunrise Boulevard	D	37.0	D			17.6	B		
SR 16 / Excelsior Road	D	>100	F	>100	F	5.6	A	24.0	C
SR 16 / Bradshaw Road	D	35.0	C			16.8	B		
SR 49 / Project Driveway	C	5.2	A	36.8	E	8.8	A	51.6	F
SR 49 / Service Access	C	2.0	A	38.5	E	3.0	A	47.0	E

NOTES: ¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.
Bold text denotes unacceptable LOS.

SOURCE: Appendix M

LAND USE

Tribal Sovereignty

Following approval of the 25 CFR Part 151 Trust Acquisition, all of the project parcels would be exempt from City and County land use regulations. The only applicable land use regulations on the trust lands are those of the Tribe. The Tribe relies upon the Tribal Council, the governing body of the Tribe, to enact land use regulations on Tribal lands. However, the Tribe desires to work cooperatively with local and State authorities on matters related to land use. Accordingly, City and County land use regulations and project effects are assessed below.

Effects to Project Area

Consistency with the City of Plymouth General Plan

Alternative D would replace existing commercial and residential lands with a regional commercial retail outlet center. The eight City project parcels are designated as Commercial (C). According to the Land Use Element of the City of Plymouth General Plan, the C designation is best suited for retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity. Development of these parcels would be considered commercial development and consistent with the C designation. Therefore a less-than-significant compatibility impact is expected with respect to City of Plymouth General Plan Land Use designations. **Table 4.8-9** explains the land use consistency for each of the project alternatives with respect to the City of Plymouth General Plan.

Consistency with the City of Plymouth Zoning Ordinance

The development footprint is zoned commercial by the City of Plymouth Zoning Ordinance. Acceptable uses for the commercial zone include, retail, food and beverage establishments, offices, automotive sales and service, hotels and motels, storage facilities, wholesale commercial, processing services, light assembly, and other similar commercial activity.

Four of the eight project parcels located within the City of Plymouth are within the Scenic Corridor (SC) Combined zone classification. Generally, the SC Combined Zone includes all parcels that are zoned commercial, industrial, or light industrial and adjacent to the SR 49 right of way. In the case of the project site, four project parcels are zoned commercial and within the Scenic Corridor Combined Zone. The Scenic Corridor Combined Zone was established to preserve the visual character and preserve the historical image of development within the SR 49 corridor. All uses that are allowed in the regular zone with which the SC zone is combined are allowed. Regulations specific to the Scenic Corridor Combined Zone are limited to the consideration of design review guidelines specified in Chapter 19.50 of the City of Plymouth Municipal Code.

Development of Alternative D is considered a commercial development and would generally be consistent with the commercially zoned City parcels. Despite being commercial in nature, development of Alternative D inconsistent with the subdivision ordinance, building density standards for commercial development, and required plan review as required by the City of Plymouth Municipal Code. These ordinances address allowed setbacks, building heights, parking standards, landscaping standards and other typical design requirements. While the Tribe has ultimate approval of development on Tribal land, the Tribe desires to work cooperatively with the City on all development decisions. While not required to obtain permits or engage in plan review for Alternative D, the Tribe will solicit the City's input regarding design review guidelines to further the goals addressed by the City of Plymouth Zoning Ordinance. **Section 5.2.8** includes mitigation to address design review by the City of Plymouth to reduce any impacts to a less-than-significant level.

Consistency with the Amador County General Plan

Development of Alternative D on County land would replace sparsely developed rural residential land that currently exists with commercial parking areas, a fire station, and a wastewater treatment plant and disposal facilities. The four parcels under County jurisdiction are designated as Residential Suburban (RS). According to the Land Use Element of the Amador County General Plan, the RS designation is best suited for rural residential development not serviced by urban services. No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the retail surface parking areas, a fire station, and a wastewater treatment plant and disposal areas, and would not be consistent with the RS designation.

Further, **Table 4.8-10** discusses the consistency of Alternative D with respect to Amador County General Plan land use policies.

Consistency with the Amador County Zoning Plan

Parcels #2, #3 and #12 are zoned Single-family Residential Agricultural District (R1-A) by the County of Amador. The R1-A classification is applied to lands best suited to low-density residential uses in suburban areas not served by both domestic water and sewer systems, or by various other urban services. Appropriate uses are single-family residential, agricultural and schools, parks, etc. Parcel #1 is zoned Special Use (X). Zoning for this parcel is loosely defined by allowing all uses subject to securing a use permit from the County. This leaves development proposals up to the discretion of the County.

No development is proposed for Parcel #2 and Parcel #12. Development on Parcel #1 and Parcel #3 will include the retail parking area and would not be consistent with the R1-A Zone. Development on Parcel #1 would include a fire station, a wastewater treatment plant, and disposal areas and could be consistent with the X Zone subject to approval by the County. While the County will not have jurisdiction over tribal lands once the project parcels are taken into trust, the County will be provided with the development proposal for information and comments. These comments, if any, may be considered by the Tribe prior to development.

Effects to Project Area

Proposed land uses for Parcels #4 through #11, which is located entirely on land within the jurisdiction of the City of Plymouth, include retail outlet center and associated parking facilities. These land uses would be consistent with the City of Plymouth General Plan and Zoning Commercial Designations. Parcels #8 and #9 are currently developed with a land use (single-family dwelling) that is inconsistent with the City of Plymouth General Plan designation for the parcels. Alternative D would replace this use with the retail parking area and would be consistent with the existing planned land use designation. Though consistent with the City General Plan, the development of the City Parcels would result in a noticeable increase in land use intensity.

Development of the County parcels would consist of the retail parking areas, water and wastewater treatment facilities, and a fire station. This would occur only on Parcel #1 and Parcel #3. No development is proposed for Parcel #2 and Parcel #12 and land use intensity would remain the same. Development of the parking areas on Parcel #3 and development of the water and wastewater treatment facilities and the fire station on Parcel #1 would result in a noticeable increase in land use intensity.

Agriculture

The project site does not contain prime or unique farmlands, or farmland of statewide importance. The City of Plymouth and the County of Amador Planning Department has not issued or identified any Williamson Act contracts. Currently moderate grazing occurs on Parcels #1 through #3. Upon development grazing would be excluded from project site. However, since the project site does not

contain prime or unique farmlands or farmlands of statewide importance, development of Alternative D would have a less-than-significant effect.

4.8.5 ALTERNATIVE E – NO ACTION

TRANSPORTATION/CIRCULATION

Under the no action alternative there would be no Tribal casino built; however, the site may be utilized in the future. The traffic conditions under the No Action Alternative would be as described for the baseline conditions for each target year; however, future traffic increases may occur due to future approved projects.

Site Access

Under the no action alternative the site access outlined in Alternatives A through D would not exist; however, future projects may require access to the site.

Construction

There would not be any impacts due to construction traffic under the no action alternative. However, if the site were approved for a future project there would be construction traffic impacts.

Operation

Under the no action alternative there would be no impacts due to operational traffic; however, future approved projects would create operational traffic impacts.

LAND USE

Under this alternative, the tribe would have no means of attaining economic self-sufficiency. While all current land uses would be retained, some of these uses are not consistent with the City or County General Plan/zoning designations.

Agriculture

Land zoned for agricultural uses would not be lost and grazing would continue. No impacts would occur under this alternative.

4.9 PUBLIC SERVICES

This section identifies the effects to Public Services that would result from the development of each alternative described in **Section 2.0**. Effects are measured against the environmental baseline presented in **Section 3.9**. An impact analysis using the methodology below is provided for each alternative. Cumulative and/or indirect impacts are discussed in **Sections 4.11** and **4.12**, respectively. Measures to mitigate for adverse effects identified in this section are presented in **Section 5.2.9**.

METHODOLOGY

To determine the impact on public services the water supply, wastewater, solid waste, energy, telecommunications, law enforcement, fire protection and emergency medical services, demand for each alternative are considered. An adverse impact would occur if project-related demands on public services would cause an exceedance of system capacities that result in effects to the physical environment. The water supply and wastewater analysis presented herein relies on data presented in the water and wastewater feasibility study included as **Appendix B**.

4.9.1 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

MUNICIPAL WATER SERVICE

As discussed in **Section 2.2.1**, there are two options for meeting water demands of both phases of Alternative A. Option 1 would entail a connection to the City of Plymouth's municipal system, while Option 2 includes the development of an on-site water supply system.

Option 1

Phase I

Water demand during Phase I of Alternative A under Option 1 would be met by connecting to the City of Plymouth's municipal water supply system. As discussed in **Section 2.2.1**, Option 1 would become a viable option when the Plymouth Pipeline is constructed to convey Amador Water Agency (AWA) water resources to the City of Plymouth. The construction of the Plymouth Pipeline would provide the City with a secure water supply up to 410 gallons per minute (gpm), equivalent to the 2025 demands as estimated in the City's General Plan (City of Plymouth, 2006). The Plymouth Pipeline would provide potable water to users within the City's jurisdiction, which includes the existing population and planned growth within the City and the City's sphere of influence, which includes a portion of the project site. Phase I water demands would constitute for 25-percent of average day water supplies of the City system. With the option to utilize recycled water from the proposed on-site wastewater treatment plant (WWTP), the water demand of Phase I of Alternative A would account for 17-percent of City average day water supplies. The increase in capacity from the implementation of the Plymouth Pipeline

would provide adequate capacity to serve Phase I of Alternative A. With or without the use of recycled water, implementation of Phase I would result in a less-than-significant impact to the City of Plymouth municipal water system.

During construction of Phase I, the project site would be connected to the existing water system via the existing 10-inch loop located on Village Drive (**Figure 2-3**). As discussed in **Section 2.2.1**, the existing line has a capacity of 2,000 gpd. The water demand for Phase I would account for 6-percent of the capacity of the pipeline (160,500 gpd = 111.5 gpm). With the use of recycled water, Phase I would account for 3-percent of the capacity of the existing pipeline (98,000 gpd = 68.1 gpm). Therefore, when taken into account the additional capacity of the system provided by the removal of the Shenandoah Inn from service, implementation of Phase I of Alternative A would result in a less-than-significant-than-significant impact to existing water supply infrastructure.

Phase II

With the completion of Phase II of Alternative A, water demand would increase by 18-percent over existing operations. Added to the Phase I water demand, operation of Phase II would result in a full build-out water demand that would account for 32-percent of the City of Plymouth's supply capacity. With the inclusion of recycled water from the WWTP, full build-out of Alternative A (Phases I and II) would account for 20-percent of the City of Plymouth supply capacity.

The connection to the City municipal water system would have been established during construction of Phase I of Alternative A. Implementation of Phase II would increase demand on the existing supply line by one-percent for a full build-out demand accounting for 7-percent of the total capacity of existing supply line. With the incorporation of recycled water, full build-out of Alternative A would account for 4-percent of the capacity of the supply line. Implementation of Phase II and subsequent full build-out of Alternative A would have a less-than-significant-than-significant impact to existing water supply infrastructure.

Option 2

Phases I and II

For both phases of Alternative A, Option 2 would utilize groundwater wells and water supplied from a water purveyor to meet projected water demands as described in **Section 2.2.1**. Pumping rates would be maximized during Phase I; therefore implementation of Phase II would not increase potential impacts. No City of Plymouth municipal connections would be established. The Tribe would not utilize capacity from the Plymouth Pipeline project and the existing water line would not be accessed. As indicated in **Section 3.9**, the City of Plymouth utilizes both surface water and groundwater as potable water sources to meet existing demands. As depicted in **Appendix B** of the Draft EIS, groundwater at the project site that would be accessed to meet

project water demands primarily occurs under confined conditions at depth in the fractured bedrock zones. No connectivity between fractures was observed during the hydrogeotechnical survey (**Appendix B**). Therefore, accessing groundwater reserves serviced by the existing on and off-site groundwater wells described in **Section 2.2.1** would have no impact on the municipal groundwater wells supplying the City of Plymouth.

MUNICIPAL WASTEWATER TREATMENT AND DISPOSAL

Phases I and II

An on-site WWTP would be developed on-site to treat wastewater discharged from Phases I and II of Alternative A. A membrane bioreactor (MBR) was chosen to treat wastewater due to its small layout and its ability to reliably produce high-quality effluent allowing for potential reuse as recycled water for landscape irrigation and non-potable uses within the casino, hotel, and event center. A preliminary-level design of the recommended MBR WWTP is included in **Appendix B** for Alternative A. With the development of an on-site WWTP and no required connections to the municipal wastewater treatment system, implementation of Phases I and II would have no impact on municipal wastewater treatment facilities.

Options for treated effluent disposal are discussed in **Section 2.2.1**. Option 1 involves discharging treated effluent through evaporative techniques (sprayfields, landscape irrigation), and subsurface disposal in the dry season and storing treated effluent in an on-site reservoir during the rainy season. Option 2 also involves dry weather discharge via sprayfields, landscape irrigation, and subsurface disposal, but includes discharge into the surface waters. With the development of on-site wastewater disposal options, utilized for both phases, implementation of Phases I and II of Alternative A would have no impact on municipal wastewater conveyance systems.

SOLID WASTE

Construction waste

Phases I and II

Solid waste would be generated during construction of Phases I and II of Alternative A. Potential solid waste streams from construction are expected to include the following:

- Paper, wood, glass, and plastics from packing materials, waste lumber, insulation, and empty non-hazardous chemical containers;
- Excess concrete from construction practices;
- Excess metal, including steel from welding/cutting operations, packing materials, and empty non-hazardous chemical containers, and aluminum from packing materials and electrical wiring.

Demolition debris from the Shenandoah Inn and typical construction materials associated with the construction of buildings and facilities is expected to result in a temporary increase in waste generation. Materials would be sorted into recyclable materials and materials requiring disposal. As discussed in **Section 3.10**, some of the residences that would be demolished may contain asbestos. These materials would be disposed of according to the Asbestos Hazard Emergency Response Act (AHERA) and applicable regulations including disposal at regulated facilities and payment of associated fees. Recyclable, non-asbestos containing materials would be taken to the Western Amador Recycling Facility (WARF). Waste that cannot be recycled would be disposed of at the Keifer Landfill, which accepts construction/demolition materials. Please see the solid waste discussion under **Section 3.9** for a more detailed discussion of the Keifer Landfill. Effects to regional waste disposal and related services are considered temporary and less-than-significant-than-significant. Mitigation measures listed in **Section 5.2.9** would further reduce impacts to the waste stream.

Operational Waste

Phase I

The California Integrated Waste Management Board (CIWMB) has established waste generation rates for the operation of different business types and residences. The rate is expressed as tons per employees per year. Estimated waste generation estimates for Phase I of Alternative A are shown in **Table 4.9-1**. The waste generation including recyclable waste resulting from Alternative A's various components is estimated to be 5.14 tons per day. The Tribe would either retain the services of Amador Disposal Services or conduct a competitive bidding process for a waste haul contract for solid waste transport during Phase I. Recycle and waste containers would be placed throughout the facilities and deposited into collection containers then taken to the WARF. The estimated waste stream generated during Phase I would account for 6-percent of the remaining capacity of the transfer station. The amount of materials transported to the WARF would not result in exceedance of the permitted capacity of the WARF. Waste that cannot be recycled at the WARF transfer station would be disposed of at the Keifer Landfill. Waste generated from Phase I of Alternative A, under the conservative assumption that no recycling occurred, would be less than 0.06-percent of the average daily remaining capacity at the landfill (Goodrich, 2004). Therefore operation of Phase I of Alternative A would result in a less-than-significant-than-significant effect to solid waste services and disposal. Mitigation measures listed in **Section 5.2.9** would further reduce the effects to regional waste services.

Phase II

Waste generation estimates for Phase II, constituting the full build-out of Alternative A, are shown in **Table 4.9-2**. The waste generation rate for full build-out of Alternative A is estimated to be 5.6 tons per day. The estimated waste stream generated during Phase I would account for 7-

TABLE 4.9-1
SOLID WASTE DISPOSAL ESTIMATE
PHASE I OF ALTERNATIVE A

Employment Category	Jobs	CIWMB Business Type	Rate (Tons/employees/year)	Tons per year	Tons per day
Gaming	618	38 ^a	0.9	556	1.52
Food and Beverage	199	29 ^c	3.1	617	1.69
Entertainment	9	33 ^d	1.7	15	0.04
Gift Shop	3	33	1.7	5	0.01
Admin	173	33	1.7	294	0.81
Marketing	80	33	1.7	136	0.37
Maintenance	103	33	1.7	175	0.48
Security	86	38	0.9	77	0.21
Total waste disposal				1876	5.14

NOTES: ^a Includes SIC code 79 Amusement and Recreation Services

^b Includes SIC code 70 Hotels

^c Includes SIC code 58 Eating and Drinking Places

^d Includes SIC code 73 Business Services

SOURCE: CIWMB, 2004; GVA Marquette Advisors, 2004

TABLE 4.9-2
SOLID WASTE DISPOSAL ESTIMATE
FULL BUILD-OUT OF ALTERNATIVE A

Employment Category	Jobs	CIWMB Business Type	Rate (Tons/employees/year)	Tons per year	Tons per day
Gaming	649	38 ^a	0.9	584	1.60
Hotel	40	32 ^b	2.1	84	0.23
Food and Beverage	212	29 ^c	3.1	657	1.80
Entertainment	9	33 ^d	1.7	15	0.04
Gift Shop	3	33	1.7	5	0.01
Admin	177	33	1.7	301	0.82
Marketing	84	33	1.7	143	0.39
Maintenance	105	33	1.7	179	0.49
Security	86	38	0.9	77	0.21
Total waste disposal				2,045	5.60

NOTES: ^a Includes SIC code 79 Amusement and Recreation Services

^b Includes SIC code 70 Hotels

^c Includes SIC code 58 Eating and Drinking Places

^d Includes SIC code 73 Business Services

SOURCE: CIWMB, 2004; GVA Marquette Advisors, 2004

percent of the remaining capacity of the transfer station. The amount of materials transported to the WARF would not result in exceedance of the permitted capacity of the WARF. Waste that cannot be recycled at the WARF transfer station would be disposed of at the Keifer Landfill. Waste generated from Phase I of Alternative A, under the conservative assumption that no recycling occurred, would be less than 0.06-percent of the average daily remaining capacity at the landfill (Goodrich, 2004). Therefore operation of both Phase I and II (full build-out) of Alternative A would result in a less-than-significant-than-significant effect to solid waste services and disposal. Mitigation measures listed in **Section 5.2.9** would further reduce the effects to regional waste services.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Underground Service Alert (USA) provides a free "Dig Alert" service to all excavators in California. The excavator's call to USA would automatically notify all USA Members (utility service providers) who may have underground facilities at their work site. In response, the USA Members would mark or stake the horizontal path of their underground facilities, provide information about, or give clearance to dig. This simple safety service protects the excavator from personal injury and underground facilities from being damaged.

The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas. The Joint Utilities Coordination Committee has developed procedures to assist cities, counties and utilities in coordinating public improvement projects to alleviate scheduling and construction conflicts.

Phases I and II

Electricity

The electricity usage rate for Alternative A was generated using peaking factors obtained from Pacific Gas and Electric (PG&E) engineers. Peaking factors include 12.9-watts/square foot for the casino and event center and 5.1-watts/square foot for the hotel. Using these rates, it was determined that Phase I would use approximately 46,440 kilowatts per day and Phase II would use approximately 66,819 kilowatts per day. Alternative A would be served by a major 12-kilovolt line on the corner of Main Street and Shenandoah Road that serves an area from the City of Plymouth to Sutter Creek. According to Larry Bolton, a PG&E Engineering and Planning representative, the substation near Main Street and Shenandoah Road has the capacity to serve Alternative A (Bolton, pers. comm.). However, the power lines are not currently designed to handle the potential demand of Alternative A; therefore, result in a significant impact. Mitigation has been included in **Section 5.2.9** to reduce potential impacts to less-than-significant-than-significant levels by upgrading the power lines to support the demands of the project.

Natural Gas

Natural gas lines do not exist on the project site, nor would the project depend on natural gas; therefore no impacts to natural gas supplies are expected to occur.

Telecommunications

AT&T-SBC currently provides telephone service on-site at the Shenandoah Inn and the three existing residents. Consultation with SBC during the construction phase of the project is recommended in order to discuss the types of services desired for Alternative A. Implementation of Alternative A is expected to result in a less-than-significant-than-significant impact to telecommunications.

PUBLIC HEALTH AND SAFETY

Because development of the casino constitutes the majority of the demand on public health and safety, the following analysis includes both phases of Alternative A.

Amador County Sheriff*Phases I and II*

The development of Alternative A would potentially result in an impact to public health and safety services provided by the Amador County Sheriff's Office (ACSO). The Sheriff's Office would have the authority to handle State criminal laws on the proposed trust lands as authorized by Public Law 280. A Tribal security force would provide security patrol and monitoring needs of the casino as described in **Section 2.2.1**. The Tribe would employ security personnel to provide surveillance of the casino, parking areas, and surrounding grounds. Security guards would patrol the facilities to reduce and prevent criminal and civil incidents. Security guards would carry two-way radios to request and respond to back up or emergency calls. Tribal security personnel would work cooperatively with the ACSO, which provides general law enforcement services to the City of Plymouth on a contract basis. The need for ACSO assistance would likely be required only in situations where there were a serious threat to life and property and where arrests would be made.

The Jackson Rancheria is located within Amador County approximately 14 miles to the southeast near the City of Jackson along SR 88. The ACSO currently has no service agreement with the Rancheria, but provides service to the Rancheria in accordance with Public Law 280. In 2003, the Jackson Rancheria accounted for 130 incidences out of the total 16,566 ACSO incidences. Out of the 130 calls for service from the Rancheria in the year 2003, 105 were felony arrests with approximately ninety of those arrests for drug use and possession and the other approximately 15 calls were for theft, while the remaining 25 were non-arrest related calls (Knoblauch, pers. com., 2004). The Rancheria accounted for approximately 16-percent of the total County arrests (650), less than one-percent of the total incidences (16,566) and approximately 2-percent of the total

calls for service (6,820) (ACSO, 2004b). Alternative A is similar in size and roughly similar in distance from regional urban centers as the Jackson Rancheria and would be expected to result in similar demand on the ACSO services.

According to consultation with the ACSO, upon development of Alternative A, the City would require a 24-hours a day/ 7 days a week/ 365 days per year law enforcement presence (**Appendix L**). The ACSO estimates that an addition of 6.5 full time equivalent officers above the current level of service for a total of seven deputies and one supervisor would be required to provide Alternative A with 24-hour per day public safety coverage (ASCO, 2004a). A staff of seven officers is typically required to put one officer on the road 24-hours a day. This accounts for normal days off, vacation leave, sick leave, and training. One patrol supervisor generally manages seven officers and therefore the project would require the addition of one patrol supervisor. The development of Alternative A would increase the number of full-time employment (FTE) officers by 6.5 officers. This is considered a potentially significant impact; mitigation measures listed in **Section 5.2.9** would reduce effects to law enforcement services to a less-than-significant level.

Amador County District Attorney

Phases I and II

Alternative A would have an impact on the caseload of the Amador District Attorney's (DA) Office. The Amador County District Attorney processes criminal referrals from the ACSO, including infractions, felony referrals, misdemeanor referrals and juvenile referrals. Since Alternative A would be similar in size and geographical location to the Jackson Rancheria, statistics relating to the Jackson Rancheria would give an appropriate estimate of demands for services and the effects on caseload levels that could be expected from Alternative A. The DA's office currently processes criminal referrals relating to the Jackson Rancheria. The DA's office estimates that approximately 135 criminal filings of the County's total 1,248 criminal filings in the calendar year 2003 were related to crimes committed at the Jackson Rancheria, representing approximately 10.8-percent of the total County criminal filings (**Appendix L**). The impact from Alternative A is expected to be similar to that of the Jackson Rancheria. This is considered a potentially significant impact; mitigation measures listed in **Section 5.2.9** would reduce any effects to these services.

California Highway Patrol

Phases I and II

The Amador County CHP Office estimates that an increase of 2-3 cars and 2-4 officers would be necessary to cover the Shift C in order to address additional service demands from Alternative A. Currently, one CHP car is typically assigned to the shift and generally stays centrally located in order to be able to respond to all parts of Amador County. However, the CHP anticipates that the

24-hour character of the casino and hotel would create an additional demand on CHP services (Knudsen, pers. comm., 2004). This is considered a potentially significant impact. Mitigation measures have been identified in **Section 5.2.9** to reduce the potential effects to CHP services to a less-than-significant level.

Fire Protection

Phases I and II

The Tribe has developed a Fire Plan (**Appendix F**) to address the construction and operation of the fire station, as well as, the built-in fire detection and suppression features of the proposed casino. The design of the proposed casino and hotel would incorporate built-in fire protection features utilizing Type I non-combustible, fire-resistive construction as defined by the California State Building Code. All facilities would also be equipped with a hydraulically calculated automatic sprinkler system designed to comply with the California Building Code. The facilities would include an automatic fire detection and alarm system located throughout the buildings. Operation of the detection devices would trigger the emergency voice alarm-signaling system. These features would serve to immediately and automatically detect, notify and respond to any incidence of fire in the facilities. This automatic built-in response would greatly reduce the occurrence of a catastrophic event.

As part of the project, the Tribe would develop an independent, on-site fire station . The fire station would be located immediately south of the southern driveway, which would provide ingress and egress to SR 49. The on-site fire station would be equipped, at a minimum, with a 1,750 gpm quint, plus a 1,500 gallons per minute (gpm) pumper and 750 gpm grass fire/foam truck (for wildfire suppression/protection and vehicle fires). The Tribe would contract or hire adequately trained personnel. All the members of the Tribal Fire Department, including the Chief Officer, would be trained to a minimum level of Fire Fighter I (standards as defined in National Fire Protection Associate standard 1001 NFPA and standard for Fire Fighter Professional Qualifications, Chapter 5, 2002 edition). In addition to being trained professional fire fighters under the 1001 NFPA standard, the members of the Tribal Fire Department would be trained to the Paramedic (advanced life support) level under California licensure. It is expected that the Tribal Fire Station would enter into a mutual-aid agreement with Amador Fire Protection District (AFPD) and other local fire protection providers. The mutual-aid agreement would provide the terms and conditions under which the parties would respond and assist in calls for aid.

The fire station would provide apparatus bays, administrative offices, conference room, staff rooms, and operation support facilities. The fire station would include a staff parking area, downcast exterior lighting, and landscaping. Water delivery to the fire department would be provided by the on-site water supply facilities as described above. Fire flow under this option would be provided by on-site facilities, including the 2.4 million gallons of water tank capacity

on-site. The fire protection features identified in the Fire Plan would address the fire protection requirements of Alternative A.

Emergency Medical Services

The use of the proposed casino by patrons and employees would result in an increased demand for emergency medical services. Currently, a private ambulance company provides paramedic services to the project area. Because the costs for emergency medical services are born by individuals who call for service, coupled with the paramedic training of all Tribal Fire Department members, development of Alternative A is expected to have a less-than-significant-than-significant effect to emergency and medical services.

Emergency Call Taking and Dispatching

Development of Alternative A has the potential to increase the volume of call taking and dispatching for fire, emergency medical service and police protection beyond the capability of current staffing. This is considered a significant effect. Mitigation has been identified in **Section 5.2.9** to address impacts associated emergency call taking and dispatching services.

4.9.2 ALTERNATIVE B – REDUCED CASINO AND HOTEL

MUNICIPAL WATER SERVICE

As discussed in **Section 2.2.2**, there are two options for meeting water demands of both phases of Alternative B. Option 1 would entail connection to the City of Plymouth municipal system, while Option 2 includes the development of an on-site water supply system.

Option 1

Phase I

Water demand during Phase I of Alternative B under Option 1 would be met by connecting to the City of Plymouth's municipal water supply system. Phase I water demands would constitute for 24-percent of average day water supplies of the City system if the pipeline project were completed prior to development of Phase I of Alternative B. With the option to utilize recycled water from the proposed on-site WWTP, the water demand of Phase I of Alternative B would account for 15-percent of City average day water supplies. The increase in capacity from the implementation of the Plymouth Pipeline would provide adequate capacity to serve Phase I of Alternative B. With or without the use of recycled water, implementation of Phase I would result in a less-than-significant impact to the City of Plymouth municipal water system.

As discussed in **Section 2.2.2**, the existing water line adjacent to the project site has a capacity of 2,000 gpd. The water demand for Phase I would account for 5-percent of the capacity of the pipeline (139,800 gpd = 97.08 gpm). With the use of recycled water, Phase I would account for

3-percent of the capacity of the existing pipeline (86,500 gpd = 68.1 gpm). Therefore, when taken into account the additional capacity of the system provided by the removal of the Shenandoah Inn from service, implementation of Phase I of Alternative B would result in a less-than-significant impact to existing water supply infrastructure.

Phase II

With the completion of Phase II of Alternative B, water demand would increase by 20-percent over existing operations. Added to the Phase I water demand, operation of Phase II would result in a full build-out water demand that would account for 28-percent of the City of Plymouth's supply capacity. With the inclusion of recycled water from the WWTP, full build-out of Alternative B (Phases I and II) would account for 18-percent of the City of Plymouth supply capacity.

The connection to the City municipal water system would have been established during construction of Phase I of Alternative B. Implementation of Phase II would increase demand on the existing supply line by one-percent for a full build-out demand accounting for 6-percent of the total capacity of existing supply line. With the incorporation of recycled water, full build-out of Alternative B would account for 4-percent of the capacity of the supply line. Implementation of Phase II and subsequent full build-out of Alternative B would have a less-than-significant impact to existing water supply infrastructure.

Option 2

Phases I and II

For both phases of Alternative B, Option 2 would utilize groundwater wells and water supplied from a water purveyor to meet projected water demands as described in **Section 2.2.2**. No City of Plymouth municipal connections would be established. The Tribe would not utilize capacity from the Plymouth Pipeline project and the existing water line would not be accessed. As depicted in **Appendix B** of the Draft EIS, groundwater at the project site that would be accessed to meet project water demands primarily occurs under confined conditions at depth in the fractured bedrock zones. No connectivity between fractures was observed during the hydrogeotechnical survey (**Appendix B**). Therefore, accessing groundwater reserves serviced by the existing on and off-site groundwater wells described in **Section 2.2.2** would have no impact on the municipal groundwater wells supplying the City of Plymouth.

MUNICIPAL WASTEWATER TREATMENT AND DISPOSAL

Phases I and II

An on-site WWTP would be developed on-site to treat wastewater discharged from Phases I and II of Alternative B. With the development of an on-site WWTP and no required connections to

the municipal wastewater treatment system, implementation of Phases I and II would have no impact on municipal wastewater treatment facilities.

Options for treated effluent disposal are discussed in **Section 2.2.2**. With the development of on-site wastewater disposal options, utilized for both phases, implementation of Phases I and II of Alternative B would have no impact on municipal wastewater conveyance systems.

SOLID WASTE

Construction waste

Phases I and II

Solid waste would be generated during construction of Phases I and II of Alternative B. As with Alternative A, demolition debris from the Shenandoah Inn and typical construction materials associated with the construction of buildings and facilities is expected to result in a temporary increase in waste generation. Materials would be sorted into recyclable materials and materials requiring disposal. Asbestos containing materials would be disposed of according to the Asbestos Hazard Emergency Response Act (AHERA) and applicable regulations including disposal at regulated facilities and payment of associated fees. Recyclable non-asbestos containing materials would be taken to the WARF. Waste that cannot be recycled would be disposed of at the Keifer Landfill, which accepts construction/demolition materials. Based on the existing available capacity of the transfer station and landfill, effects to regional waste disposal and related services are considered temporary and less than significant. Mitigation measures listed in **Section 5.2.9** would further reduce any impacts to the waste stream.

Operational Waste

Phase I

Estimated waste generation estimates for Phase I of Alternative B are shown in **Table 4.9-3**. The waste generation including recyclable waste resulting from the various components of Phase I is estimated to be 4.34 tons per day. The estimated waste stream generated during Phase I would account for 5-percent of the remaining capacity of the transfer station. The amount of materials transported to the WARF would not result in exceedance of the permitted capacity of the WARF.

Waste that cannot be recycled at the WARF transfer station would be disposed of at the Keifer Landfill. Waste generated from Phase I of Alternative B, under the conservative assumption that no recycling occurred, would be less than 0.05-percent of the average daily remaining capacity at the landfill (Goodrich, 2004). Therefore operation of Phase I of Alternative B would result in a less-than-significant effect to solid waste services and disposal. Mitigation measures listed in **Section 5.2.9** would further reduce the effects to regional waste services.

TABLE 4.9-3
SOLID WASTE DISPOSAL ESTIMATE
PHASE I OF ALTERNATIVE B

Employment Category	Jobs	CIWMB Business Type	Rate (Tons/employees/year)	Tons per year	Tons per day
Gaming	540	38 ^a	0.9	1.33	540
Food and Beverage	149	29 ^b	3.1	1.27	149
Entertainment	8	33 ^c	1.7	0.04	8
Gift Shop	3	33 ^d	1.7	0.01	3
Admin	153	33	1.7	0.71	153
Marketing	68	33	1.7	0.32	68
Maintenance	100	33	1.7	0.47	100
Security	80	38	0.9	0.20	80
Total waste disposal				1584	4.34

NOTES: ^a Includes SIC code 79 Amusement and Recreation Services

^b Includes SIC code 70 Hotels

^c Includes SIC code 58 Eating and Drinking Places

^d Includes SIC code 73 Business Services

SOURCE: CIWMB, 2004; GVA Marquette Advisors, 2004

Phase II

Waste generation estimates for Phase II, constituting the full build-out of Alternative B, are shown in **Table 4.9-4**. The waste generation rate for full build-out of Alternative B is estimated to be 4.78 tons per day. The estimated waste stream generated during Phase I would account for 6-percent of the remaining capacity of the transfer station. The amount of materials transported to the WARF would not result in exceedance of the permitted capacity of the WARF. Waste that cannot be recycled at the WARF transfer station would be disposed of at the Keifer

Landfill. Waste generated from Phase I of Alternative B, under the conservative assumption that no recycling occurred, would be less than 0.06-percent of the average daily remaining capacity at the landfill (Goodrich, 2004). Therefore operation of both Phase I and II of Alternative B would result in a less-than-significant effect to solid waste services and disposal. Mitigation measures listed in **Section 5.2.9** would further reduce the effects to regional waste services.

TABLE 4.9-4
SOLID WASTE DISPOSAL ESTIMATE
FULL BUILD-OUT OF ALTERNATIVE B

Employment Category	Jobs	CIWMB Business Type	Rate (Tons/employees/year)	Tons per year	Tons per day
Gaming	570	38 ^a	0.9	513	1.41
Hotel	40	32 ^b	2.1	84	0.23

Food and Beverage	160	29 ^c	3.1	496	1.36
Entertainment	8	33 ^d	1.7	14	0.04
Gift Shop	3	33	1.7	5	0.01
Admin	157	33	1.7	267	0.73
Marketing	72	33	1.7	122	0.34
Maintenance	102	33	1.7	173	0.48
Security	80	38	0.9	72	0.20
			Total waste disposal	1746	4.78

NOTES: ^a Includes SIC code 79 Amusement and Recreation Services

^b Includes SIC code 70 Hotels

^c Includes SIC code 58 Eating and Drinking Places

^d Includes SIC code 73 Business Services

SOURCE: CIWMB, 2004; GVA Marquette Advisors, 2004

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Phases I and II

Electricity

Using the methodology described above under Alternative A, it was determined that the Phase I of Alternative B would use approximately 40,480 kilowatts per day. The Phase II hotel and event center would use approximately 60,859 kilowatts per day. As with Alternative A, the power lines are not currently adequate to handle the potential demand of Alternative B, therefore resulting in a significant impact. Mitigation has been included in **Section 5.2.9** to reduce potential impacts to a less-than-significant level by upgrading the power lines to support the demands of the project.

Natural Gas

Natural gas lines do not exist on the project site, nor would the project depend on natural gas; therefore no impacts to natural gas supplies are expected to occur.

Telecommunications

AT&T-SBC currently provides telephone service on-site at the Shenandoah Inn and the three existing residents. Consultation with SBC during the construction phase of the project is recommended in order to discuss the types of services desired for Alternative B. Implementation of Alternative B is expected to result in a less-than-significant impact to telecommunications.

PUBLIC HEALTH AND SAFETY

Because development of the casino constitutes the majority of the demand on public health and safety, the following analysis includes both phases of Alternative B.

Law Enforcement and Processing

Phases I and II

The operation of the casino and retail facilities may result in law enforcement and processing demands as described under Alternative A. The Tribe would also implement additional measures as described under Alternative A and listed in **Section 5.2.9**. Under Public Law 280, the State of California and other local law enforcement agencies have authority to handle criminal activities on Tribal land. Implementation of Alternative B would result in a less-than-significant effect on law enforcement and processing.

Fire Protection

Phases I and II

Construction and operation of the casino may introduce potential sources of fire to the project site as described under Alternative A. However, the Tribe would construct an on-site fire station as detailed under Alternative B for fire protection and emergency medical services. Adherence to the Fire Plan would result in a less-than-significant impact to fire protection and emergency medical services.

Emergency Medical Services

The use of the proposed casino by patrons and employees would result in an increased demand for emergency medical services. Currently, a private ambulance company provides paramedic services to the project area. Because the costs for emergency medical services are born by individuals who call for service, coupled with the paramedic training of all Tribal Fire Department members, development of Alternative B is expected to have a less-than-significant effect to emergency and medical services.

Emergency Call Taking and Dispatching

Development of Alternative B has the potential to increase the volume of call taking and dispatching for fire, emergency medical service, and police protection beyond the capability of current staffing. This is considered a significant effect. Mitigation has been identified in **Section 5.2.9** to address impacts associated emergency call taking and dispatching services.

4.9.3 ALTERNATIVE C – REDUCED CASINO

MUNICIPAL WATER SERVICE

As discussed in **Section 2.2.3**, there are two options for meeting water demands of Alternative C. Option 1 would entail connection to the City of Plymouth municipal system, while Option 2 includes the development of an on-site water supply system.

Option 1

Water demand for Alternative C would be met by connecting to the City of Plymouth's municipal water supply system. Water demands would constitute for 18-percent of average day water supplies of the City system if the pipeline project were completed prior to development of Alternative C. With the option to utilize recycled water from the proposed on-site WWTP, the water demand of Alternative C would account for 11-percent of City average day water supplies. The increase in capacity from the implementation of the Plymouth Pipeline would provide adequate capacity to serve Alternative C. With or without the use of recycled water, implementation of Alternative C would result in a less-than-significant impact to the City of Plymouth municipal water system.

As discussed in **Section 2.2.3**, the existing water line adjacent to the project site has a capacity of 2,000 gpd. The water demand for Alternative C would account for 4-percent of the capacity of the pipeline (105,100 gpd = 72.99 gpm). With the use of recycled water, Alternative C would account for 2-percent of the capacity of the existing pipeline (64,900 gpd = 45.07 gpm). Therefore, when taken into account the additional capacity of the system provided by the removal of the Shenandoah Inn from service, implementation of Alternative C would result in a less-than-significant impact to existing water supply infrastructure.

MUNICIPAL WASTEWATER TREATMENT AND DISPOSAL

An on-site WWTP would be developed to treat wastewater discharged from Alternative C. With the development of an on-site WWTP and no required connections to the municipal wastewater treatment system, implementation of Alternative C would have no impact on municipal wastewater treatment facilities.

Options for treated effluent disposal are discussed in **Section 2.2.3**. With the development of on-site wastewater disposal options, implementation of Alternative C would have no impact on municipal wastewater conveyance systems.

SOLID WASTE***Construction Waste***

Solid waste would be generated during construction activities and during the operation of Alternative C. Potential solid waste streams from construction are expected to include the same materials as listed under Alternative A. Demolition debris from the Shenandoah Inn and typical construction materials associated with the construction of buildings and facilities is expected to result in a temporary increase in waste generation. Materials would be sorted into recyclable materials and materials requiring disposal. Recyclable materials would be taken to the WARF and waste that cannot be recycled would be disposed of at the Keifer Landfill, which accepts

construction/demolition materials. Please see the solid waste discussion under **Section 3.9** for a more detailed discussion of the Keifer Landfill. Impacts to regional waste disposal and related services are considered less-than-significant and mitigation measures listed in **Section 5.2.9** would further reduce any impacts to the waste stream.

Operational Waste

An estimate of solid waste generation for Alternative C, based on number of employees per CIWMB employment category, is shown in **Table 4.9-5**. Waste generation from Alternative C is estimated at 3.14 tons per day, comparably much less than both Alternative A and B. Waste generated by Alternative C would account 4-percent of the remaining capacity at both the WARF and Kiefer landfill. Mitigation measures listed in **Section 5.2.9** would further reduce the impacts to regional waste services and result in a less-than-significant impact.

TABLE 4.9-5
ALTERNATIVE C – SOLID WASTE DISPOSAL ESTIMATE

Employment Category	Jobs	CIWMB Business Type	Rate (Tons/employees/year)	Tons per year	Tons per day
Gaming	473	38 ^a	0.9	383	1.05
Food and Beverage	120	29 ^c	3.1	335	0.92
Entertainment	3	33 ^d	1.7	12	0.03
Gift Shop	7	33	1.7	3	0.01
Admin	119	33	1.7	182	0.50
Marketing	39	33	1.7	60	0.16
Maintenance	84	33	1.7	129	0.35
Security	53	38	0.9	43	0.12
Total waste disposal				1147	3.14

NOTES: ^a Includes SIC code 79 Amusement and Recreation Services

^b Includes SIC code 70 Hotels

^c Includes SIC code 58 Eating and Drinking Places

^d Includes SIC code 73 Business Services

SOURCE: CIWMB, 2004; GVA Marquette Advisors, 2004

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Electricity

The same methodology used for Alternative A was used to generate the electricity usage rate for Alternative C. The Casino would use approximately 24,535 kilowatts per day. The Project would be served by a major 12-kilovolt line on the corner of Main Street and According to Larry Bolton, a PG&E Engineering and Planning representative, upgrades to existing lines limited to reconductoring of the existing lines would still be necessary for Alternative C. Since the power lines are not currently adequate to handle the potential demand of Alternative C, implementation of the project would result in a significant impact. Mitigation has been included in **Section 5.2.9**

to reduce potential impacts to a less-than-significant level by upgrading the power lines to support the demands of the project.

Natural Gas

Natural gas lines do not exist on the project site, nor would the project depend on natural gas; therefore, no impacts to natural gas supplies are expected to occur.

Telecommunications

SBC currently provides telephone service on-site at the Shenandoah Inn and the three existing residents. Consultation with SBC during the construction phase of the project is recommended in order to discuss the types of services desired for Alternative C. Implementation of Alternative C is expected to result in a less-than-significant impact to telecommunications.

PUBLIC HEALTH AND SAFETY

Law Enforcement and Processing

The operation of Alternative C would require far less law enforcement and processing demands than those described under Alternative A. Under Public Law 280, the State of California and other local law enforcement agencies have authority to handle criminal activities on Tribal land. As in Alternatives A and B, the Tribe would maintain a Tribal security force to provide law enforcement services at the casino facility and grounds. A less-than-significant effect is expected and no further mitigation is required for Alternative C.

Fire Protection

Construction and operation of the casino may introduce potential sources of fire to the project site as described under Alternative A. However, the Tribe would construct a fire station, as detailed under Alternative A, for fire protection and emergency medical services. Additionally the casino would be constructed with fire prevention features as described in **Section 2.2.3**. Adherence to the Fire Plan and design provisions would result in a less-than-significant impact to fire protection and emergency medical services.

Emergency Medical Services

The use of the proposed casino and retail development by patrons and employees would result in an increased demand for emergency medical services. Currently, a private ambulance company provides paramedic services to the project area. Because the costs for emergency medical services are born by individuals who call for service, coupled with the paramedic training of all Tribal Fire Department members, development of Alternative C is expected to have a less-than-significant effect to emergency and medical services.

Emergency Call Taking and Dispatching

Development of Alternative C has the potential to increase the volume of call taking and dispatching for fire, emergency medical service and police protection beyond the capability of current staffing. This is considered a significant effect. Mitigation has been identified in **Section 5.2.9** to address impacts associated emergency call taking and dispatching services.

4.9.4 ALTERNATIVE D – RETAIL ALTERNATIVE

MUNICIPAL WATER SERVICE

As discussed in **Section 2.2.4**, there are two options for meeting water demands of Alternative D. Option 1 would entail connection to the City of Plymouth municipal system, while Option 2 includes the development of an on-site water supply system.

Option 1

Water demand for Alternative D would be met by connecting to the City of Plymouth's municipal water supply system. Water demands would constitute for 6-percent of average day water supplies of the City system if the pipeline project were completed prior to development of Alternative D. The increase in capacity from the implementation of the Plymouth Pipeline would provide adequate capacity to serve Alternative D. Implementation of Alternative D would result in a less-than-significant impact to the City of Plymouth municipal water system.

As discussed in **Section 2.2.4**, the existing water line adjacent to the project site has a capacity of 2,000 gpd. The water demand for Alternative D would account for 1-percent of the capacity of the pipeline (34,400 gpd = 23.89 gpm). Therefore, when taken into account the additional capacity of the system provided by the removal of the Shenandoah Inn from service, implementation of Alternative D would result in a less-than-significant impact to existing water supply infrastructure.

MUNICIPAL WASTEWATER TREATMENT AND DISPOSAL

An on-site WWTP would be developed on-site to treat wastewater discharged from Alternative D. With the development of an on-site WWTP and no required connections to the municipal wastewater treatment system, implementation of Alternative D would have no impact on municipal wastewater treatment facilities.

Options for treated effluent disposal are discussed in **Section 2.2.4**. With the development of on-site wastewater disposal options, implementation of Alternative D would have no impact on municipal wastewater conveyance systems.

SOLID WASTE**Construction Waste**

Solid waste would be generated during construction activities and during the operation of Alternative D. Potential solid waste streams from construction are expected to include the same materials as listed under Alternative A. Demolition debris from the Shenandoah Inn and typical construction materials associated with the construction of buildings and facilities is expected to result in a temporary increase in waste generation. Materials would be sorted into recyclable materials and materials requiring disposal. Recyclable materials would be taken to the WARF and waste that cannot be recycled would be disposed of at the Keifer Landfill, which accepts construction/demolition materials. Please see the solid waste discussion under **Section 3.9** for a more detailed discussion of the Keifer Landfill. Impacts to regional waste disposal and related services are considered less-than-significant and mitigation measures listed in **Section 5.2.9** would further reduce any impacts to the waste stream.

Operational Waste

The retail alternative would generate an estimated 0.15 tons per day of solid waste as shown in **Table 4.9-6**. Construction and operational waste associated with the Retail Alternative would require waste haul and disposal services similar to those described in Alternative A. Operation of Alternative D would generate a negligible amount of solid waste (0.2-percent of the WARF remaining capacity) and would have a less-than-significant impact on regional solid waste services and facilities. Mitigation measures listed in **Section 5.2.9** would further reduce impacts from the retail complex.

TABLE 4.9-6
ALTERNATIVE D – SOLID WASTE DISPOSAL ESTIMATE

Employment Category	Jobs	CIWMB Business Type	Rate (Tons/employees/year)	Tons per year	Tons per day
Retail	180	26 ^a	0.3	54	0.15
Total waste disposal				54	0.15

NOTES: ^a Includes SIC code 26 Retail Trade – General Merchandise Stores

SOURCE: CIWMB, 2004; GVA Marquette Advisors, 2004

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS**Electricity**

The electricity usage rate for Alternative D was generated using peaking factors obtained from PG&E engineers. Peaking factors include 6.2 watts/sf for the Retail component. Using the rate above, it was determined that the Alternative D would use approximately 18,340 kilowatts per day. According to PG&E, the supply line would still be inadequate to serve the project;

therefore, implementation of Alternative D would result in a significant impact. Through implementation the mitigation measure in **Section 5.2.9**, as recommended by PG&E, impacts would be reduced to a less-than-significant level by upgrading the power lines to support the demands of the project.

Natural Gas

Natural gas lines do not exist on the project site, nor would the project depend on natural gas; therefore, no impacts to natural gas supplies are expected to occur.

Telecommunications

SBC currently provides telephone service on-site at the Shenandoah Inn and the three existing residents. Consultation with SBC during the construction phase of the project is recommended in order to discuss the types of services desired for Alternative D. Implementation of Alternative D is expected to result in a less-than-significant impact to telecommunications.

PUBLIC HEALTH AND SAFETY

Law Enforcement

The operation of Alternative D would require less law enforcement and processing demands than those described under Alternative A, B or C. Under Public Law 280, the State of California and other local law enforcement agencies have authority to handle criminal activities on Tribal land. As in Alternatives A, B, and C, the Tribe would maintain a Tribal security force to provide law enforcement services at the retail facility and grounds. A less-than-significant effect is expected and no further mitigation is required for Alternative D.

Fire Protection

Construction and operation of retail land uses may introduce potential sources of fire to the project site as described under Alternative A. However, the Tribe would construct a fire station, as detailed under Alternative A, for fire protection and emergency medical services. Additionally the casino would be constructed with fire prevention features as described in **Section 2.2.4**. Adherence to the Fire Plan and design provisions would result in a less-than-significant impact to fire protection and emergency medical services.

Emergency Medical Services

The use of the proposed development by patrons and employees would result in an increased demand for emergency medical services. Currently, a private ambulance company provides paramedic services to the project area. Because the costs for emergency medical services are born by individuals who call for service, coupled with the paramedic training of all Tribal Fire

Department members, development of Alternative D is expected to have a less-than-significant effect to emergency and medical services.

Emergency Call Taking and Dispatching

Development of Alternative D has the potential to increase the volume of call taking and dispatching for fire, emergency medical service and police protection beyond the capability of current staffing. This is considered a significant effect. Mitigation has been identified in **Section 5.2.9** to address impacts associated emergency call taking and dispatching services.

4.9.5 ALTERNATIVE E – NO ACTION

WATER SUPPLY

Under the No Action Alternative, no development would take place in the immediate future. For the long-term, as discussed in **Section 4.3**, it can be assumed that non-tribal development would be required to connect to the City's municipal water system. The Plymouth Pipeline would provide the City with a water supply to meet projected General Plan 2025 projected water demands. Non-tribal development would be required, through CEQA processes, to determine if adequate water supply is available. Additionally, non-tribal development would have to obtain approval from the project from the City, which would limit development equivalent to water supply. Through compliance with the environmental review process, as well as City and County requirements, implementation of non-tribal development would have a less-than-significant impact on the water supply.

WASTEWATER

No increase in wastewater treatment or discharge would occur under the No Action Alternative in the short-term. For the long-term, it is anticipated that non-tribal development would be required to connect to the municipal wastewater system. Currently, the City's WWTP is currently inadequate to meet demand, therefore non-tribal development would result in significant impacts to the City's WWTP.

SOLID WASTE

No increased development would take place under this alternative in the short-term.. For the long-term, based on the available capacity at both the WARF transfer station and Kiefer landfill, non-tribal development and associated generation of solid waste would not result in adverse impacts to these facilities.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Electricity

No increased development would take place under this alternative in the short-term. Non-tribal development on the project site would most likely exclude demolition of the inn and residences. Therefore, any development on the project site would be required to upgrade the existing power lines, similar to that of the development alternatives addressed above. Non-tribal development would result in a significant impact on electrical systems.

Natural Gas

No natural gas lines are located on the project site. No short-term or long-term impacts would occur.

Telecommunications

Telecommunications would not be impacted in the short-term. If long-term development results in residential land use on the project site, telecommunication systems in the area may be significantly impacted.

PUBLIC HEALTH AND SAFETY

Law Enforcement

No short-term increase in development would take place under this alternative. Under the long-term assumption of non-tribal development, residential land use on the project site, and additional commercial land uses, would result in significant impacts to law enforcement by increasing the number of service calls.

Fire Protection / Emergency Medical Service

With residential developed assumed for the project site, Alternative E would result in an increased need for fire protection and emergency medical services. However, the Tribe would not fund the construction or operation of an on-site fire station. With increased service calls and no additional fire station, impacts associated with non-tribal development would be significant to fire protection and emergency medical services.

4.10 OTHER VALUES

The section analyses the potential environmental impacts that could occur to other environmental values discussed in **Section 3.10** as a result of the implementation of each project alternative. Issues discussed in this section include potential impacts to the ambient noise environment, hazardous materials management, and visual resources in the project area. An impact analysis using methodology below is provided for each alternative within and surrounding the project site. Cumulative and/or indirect impacts are discussed in **Sections 4.11** and **4.12**, respectively. Mitigation or mitigating factors included in the project description are discussed in **Section 5.2.10**.

4.10.1 METHODOLOGY

NOISE

Overview

The project alternatives have the potential to affect the existing ambient noise environment in the immediate project vicinity and along the roadway network to the project site due to the following noise sources:

- Construction activities would cause short-term increase in the ambient noise environment.
- Increases in traffic volumes on the local roadway network that serves the project site.
- On-site traffic flow and parking lot activities that would cause increases in the ambient noise environment.
- Truck deliveries/loading dock activities associated with the ongoing operations that would result in intermittent increases in ambient noise in the immediate vicinity of loading dock areas.
- Mechanical equipment associated with the heating, ventilating, and air conditioning (HVAC) systems as well as refrigeration equipment associated with food cold storage that could cause an appreciable permanent increase in ambient noise levels in the immediate project vicinity.

Analysis Methodology

Because Phase II of Alternatives A and B would negligibly add to the ambient noise environment during construction and operation when compared to the project as a whole, the impact analysis analyzes full the build-out of Alternatives A and B. To evaluate changes in the ambient noise environment that would result from each project alternative, this analysis uses noise surveys, existing acoustical literature, and noise prediction methodologies. Absolute noise levels generated by the on-site noise sources described above were compared against existing noise

criteria to evaluate the consequences of on-site noise sources relative to existing residential uses located in the project vicinity. In general, project activities that result in a 5 A-rated decibel change (dBA) increase at a sensitive receptor, would be considered significant.

For this focused analysis, the project alternatives would be deemed to have a significant effect on the environment if it would substantially increase the ambient noise levels for adjoining areas. A change in noise levels of less than 3 dBA is not discernible to the general population. An increase in the noise environment of 5 dBA or greater is considered to be the minimum required increase for a change in community reaction (U.S. Department of Transportation, 1995). For the purposes of this analysis, a 5-dBA increase in noise levels constitutes a criterion for a significant noise impact. Since nighttime levels in the area are approximately 40 dBA, nighttime levels with the project above 45 dBA at sensitive receptors would be significant.

Absolute traffic noise levels predicted at existing residential land uses located along the roadway network were compared against the FHWA Noise Abatement Criteria. See **Section 3.10** for a description of this methodology. A more specific description of the methodology employed in the evaluation of environmental consequences for each of these project components follows.

Construction

Activities associated with construction within the project site would result in temporary periods of elevated noise levels. Activities involved in construction would typically generate maximum noise levels ranging from 85 to 88 L_{max}¹ at 50 feet, as indicated in **Table 4.10-1**. **Table 4.10-2** estimates construction noise levels at increasing distances from the construction equipment.

TABLE 4.10-1
CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	L _{max} at 50 feet
Backhoe	85
Concrete Mixer (truck)	85
Dozers	87
Dump Truck	88
Generator	76
Pneumatic Tools	85
Scraper	88

SOURCE: *Environmental Noise Pollution* Patrick R. Cunniff, 1977

¹ L_{max} is the highest sound level measured over a given period of time.

TABLE 4.10-2
CONSTRUCTION NOISE LEVELS

Distance from nearest construction activity (feet)	Sound Level, Leq
50	88
100	82
200	76
400	68
800	62
1,600	56
3,200	50

SOURCE: AES, 2004; *Environmental Noise Pollution*, Patrick R. Cunniff, 1977; and US EPA, *Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours. Nonetheless, the proximity of nearby residences to certain aspects of the project construction could result in substantial short-term increases in noise during construction.

Operation – Mechanical Equipment

Although information pertaining to specific equipment types, sizes, location, and sound output is not available for the proposed alternatives, it is likely that a combination of chillers, compressors, fans, condensers, and pumps would be needed to meet the refrigeration and HVAC requirements. Noise levels at nearby residences are estimated based on measurements of similar equipment at another casino and sound attenuation factors used to predict sound reductions over distances.

On August 15, 2004, noise measurements were taken from the rooftop HVAC and other mechanical equipment at the Jackson Rancheria casino near Jackson, California. The measurements were taken at 2 p.m. on a hot day and the sound level is assumed to represent full operation of an HVAC system for a casino. The measured sound level was 61 Leq² at a distance of approximately 100 feet from the nearest HVAC equipment. **Table 4.10-3** was developed for analysis of HVAC effects of the project alternatives, using the measurements from the Jackson Rancheria casino and a sound attenuation of 3 dBA per doubling of the reference distance and sound level.

Operation Truck Deliveries and Loading Dock Activity

Noise levels at nearby residences are estimated based on reported measurements from other environmental analyses in California that have presented noise levels from loading docks. A study in Sacramento County indicated that during a busy hour of loading dock operations, the measured hourly L50 noise level was 53 dBA at a distance of 50 feet from the loading dock

² Leq is the average ambient noise level over one hour

(Sacramento County, 2003). The measured Lmax was 82. Although the Lmax is usually an instantaneous spike in noise levels, such noise levels can be expected periodically from unloading activities that can include forklifts moving inside trucks and trucks decompressing their brakes.

TABLE 4.10-3
MECHANICAL EQUIPMENT NOISE

Distance from Rooftop Mechanical Equipment (feet)	Sound Level, Leq
100	61
200	55
300	52
400	49
500	47
600	45
1,000	41

SOURCE: AES, 2004

Based on these reported loading dock noise levels, predicted noise levels will conservatively be estimated using a noise level of 70 Leq (hourly) at 50 feet, with a sound attenuation of 6 dBA per doubling of the reference distance. **Table 4.10-4** shows noise levels that would occur, using these assumptions, at various distances from the loading dock.

TABLE 4.10-4
LOADING DOCK NOISE LEVELS

Distance from Loading Dock (feet)	Sound Level, Leq (hourly)
50	70
100	64
200	58
300	54
400	52
500	50
600	48
800	46
1,600	40

SOURCE: AES, 2004

Operation - Off-Site Traffic Noise Evaluation Methodology

To evaluate noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used. The FHWA model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions.

Traffic volumes (existing and future, project and no-project conditions) were obtained from **Appendix M**. Concurrent traffic counts and noise measurements on roadway segments were conducted to calibrate the noise model to actual conditions.

Operation - On-Site Traffic and Parking Lot Noise Evaluation Methodology

Noise levels at nearby residences are estimated based on measurements taken at a nearby casino parking lot and sound attenuation factors used to predict sound reductions over distances.

On August 15, 2004, noise observations and measurements were conducted of the noise level in parking areas at the Jackson Rancheria casino near Jackson, California. The measurements were taken between 1 p.m. and 4 p.m. Short-term average noise levels varied between 47 and 62 Leq. At the time of the survey, there were no observations or measurements taken from idling RV's or any other noisy equipment. The main source of noise in the parking areas was customer vehicles driving slowly searching for parking spaces or leaving the parking lot. Shuttle vans were another noise source. The shuttle vans were either driving slowly to either enter or exit the parking area. Short-term noise levels from all vehicle activity ranged up to a peak of 65 Lmax at a distance of 50 feet. **Table 4.10-5** was developed for analysis of off-site parking lot noise, using the measurements from the Jackson Rancheria casino and a sound attenuation of 3 dBA per doubling of distance.

TABLE 4.10-5
PARKING LOT NOISE LEVELS

Distance from Travel lanes in Parking Lot or Shuttle Stops (feet)	Sound Level, Leq
50	62
100	59
200	56
300	54
400	53
800	50
1,000	49

SOURCE: AES, 2004

HAZARDOUS MATERIALS

Impacts associated with hazardous materials include impacts from hazardous materials and impacts to hazardous materials management. A project would be considered to have significant hazardous materials impacts, if the project site has existing hazardous materials on-site that would require remediation prior to development of a proposed project. Additionally, if a project would result in the use, handling, or generation of hazardous materials, of which would increase the potential for public contact resulting in reduction of quality of life or loss of life, then the project would have a significant impact related to hazardous materials.

VISUAL RESOURCES

Phases I and II

Assessing the impacts of a project on visual resources is in large part subjective by nature. For Alternative A, the project area will be broken up into defined view corridors, which are typically defined by natural and urban separators. The impact to the viewshed will be defined by the magnitude of the visual impact in terms of distance, viewer position, and the frequency of views. For Alternative A, the majority of the sensitive receptors within the viewshed will be limited to commuters along State Route (SR) 49, employees who work at the adjacent commercial businesses, and the residential uses to the west of the project site.

4.10.2 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

NOISE EFFECTS

Phases I and II

Construction

Typical noise levels of construction equipment are shown in **Table 4.10-1** with the loudest noise levels around 88 L_{max} at a distance of 50 feet. Construction activities would result in short-term increases in the local ambient noise environment in excess of the 5 dB threshold of significance. Because construction activities would be temporary in nature, no significant environmental consequences are identified for such activities, provided they occur during normal daytime hours. Mitigation provided in **Section 5.2.10** of this Draft EIS will limit construction activities to normal daytime hours.

Operation

Mechanical Equipment Noise Effects

The nearest source of major mechanical equipment to off-site residences would be from the casino. Most of the mechanical equipment would be expected to be roof-mounted. Because the estimated distance from the casino (a mechanical equipment source) to the nearest off-site residence (a sensitive noise receptor is approximately 500 feet), the mechanical equipment noise from the casino would not be expected to approach significant noise levels at the nearest sensitive noise receptor. **Table 4.10-3** shows that predicted noise levels from mechanical systems would be approximately 47 L_{eq} at 500 feet. Any intervening structures or rooftop shielding would further reduce this predicted noise level. Nonetheless, because mechanical equipment noise levels can be highly variable, this is considered to be a potentially significant impact. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

Truck Delivery / Loading Dock Noise Effects

The nearest residence is approximately 200 feet from the loading dock area (Service Court). At this distance the noise level from the loading docks would attenuate to approximately 58 Leq from distance alone. At night this level would be more than 5 dBA above existing nighttime levels in this area. This is considered to be a potentially significant impact. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

Off-Site Traffic Noise Effects

Alternative A would result in changes in traffic noise levels as identified in Table 4.10-6. According to that table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed. Because traffic levels are predicted to almost double, the predicted increase is approximately 3 Leq during Phase I and Phase II on SR 124 south of SR 16. This segment would have the largest change in noise level. The resulting noise level would be 61 Leq during the peak hour, a level below the Noise Abatement Criteria identified by FHWA. This is a less-than-significant effect.

TABLE 4.10-6
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS ALTERNATIVE A (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Year 2006			Year 2009		
	No Project	Phase I	Change	No Project	Phase II	Change
	Peak hour (Leq)	Leq		Peak hour (Leq)	Leq	
SR 49 North of Shenandoah Road	58	60	+2	58	60	+2
SR 49 South of SR16	63	63	0	63	63	0
SR 16 West of Old Sacramento Road	61	62	+1	61	62	+1
SR 124 South of SR 16	58	61	+3	58	61	+3
SR 88 West of SR 124	64	65	+1	65	66	+1

SOURCE: AES using FHWA RD-77-108 with traffic inputs from CCS/TY Lin, 2004

On-Site Traffic Flow and Parking Lot Noise Effects

Parking lot activities include vehicles arriving and departing, engines starting and stopping, car doors opening and closing, and busses idling. Based on estimates from prior documents and recent measurements described in the methodologies, the noise level for on-site traffic flow is estimated to be 50-60 Leq at the edge of the parking areas (USDOJ, 2003). Under Alternative A, parking areas in the southwestern and northwestern portion of the project site have the potential to increase off-site noise levels. This effect would be somewhat diminished by noise from traffic on SR 49; however, when there is no traffic on SR 49 parking lot noise could be more than 5 Leq above the background noise levels at the residential receptors west of the project site. Based on **Table 4.10-5**, parking lot noise would be approximately 49 dBA at the nearest sensitive receptors

to the northwest (approximately 1,000 feet from the parking area) and 53 dBA at the nearest sensitive receptors to the southwest (approximately 400 feet from the bus parking area). This is considered to be a potentially significant impact. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

HAZARDS AND HAZARDOUS MATERIALS

Because Phases I and II cover the same area, and activities during Phase I would have the same potential to either discover or have the same propensity to require utilization of hazardous materials, a general analysis of both phases is provided below.

Introduction

Hazards and hazardous materials are subject to numerous laws and regulations at all levels of government. With respect to Tribal lands, presidential memorandums outline Federal Indian policy and provide direction and guidance for federal governmental agencies regarding the administration of their responsibilities on Indian reservations and tribal lands. However, these agencies recognize that tribal governments are sovereign entities and, thus, these agencies are to work directly with these tribal governments in their capacity as independent sovereign entities

Existing Sources

According to the Phase I Environmental Site Assessment (**Appendix O**), there are no reportable hazardous materials contaminated sites in or near the project area. Therefore, implementation of Alternative A will not cause the environment or public to be affected by existing hazardous materials sites

Construction

During grading and construction the use of hazardous materials would include substances such as gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. These materials would be used for the operation and maintenance of equipment and directly in the construction of the facilities. Regular fueling and oiling of construction equipment would be performed daily. To reduce the potential for accidental releases, fuel, oil, and hydraulic fluids would be transferred directly from a service truck to construction equipment tanks and would not otherwise be stored on-site. Paint, thinner, solvents, cleaners, sealants, and lubricants used during construction would be stored in a locked utility building, handled per the manufacturers' directions and replenished as needed.

The most likely possible incidents would involve the dripping of fuels, oil, and grease from construction equipment, and during handling and transfer from one container to another. The small quantities of fuel, oil, and grease that may drip would have low relative toxicity and concentrations. Typical construction management practices limit and often eliminate the effect of

such accidental releases. An accident involving a service or refueling truck would present the worst-case scenario for the release of hazardous materials. Depending on the relative hazard of the hazardous material, if a spill were to occur of significant quantity, the accidental release could pose both a hazard to construction employees, as well as, the environment. However, as discussed in **Section 4.3**, implementation of Alternative A would include the development of a Storm Water Pollution Prevention Plan (SWPPP), which includes Best Management Practices (BMPs) designed to plan for containment of accidental releases. Therefore, with the incorporation of the BMPs as mitigation in **Section 5.2.2**, impacts from Alternative A would be less than significant.

Demolition-related asbestos hazards have been addressed in **Section 4.8** and include mitigation to reduce exposures to construction personnel and the public-at-large to a less-than-significant level. Demolition of the existing on-site residences may expose people or the environment to toxic lead-based paint materials. Exposure to lead-based paint can result in high blood pressure, headaches, digestive problems, kidney damage, mood changes, nerve disorders, sleep disturbances, and muscle or joint pain. A single, very high exposure to lead can result in poisoning. This effect is potentially significant. Mitigation has been included within **Section 5.2.10** to reduce the significance of the hazardous materials effects to a less-than-significant impact.

Operation

During operation of the casino and hotel facilities included under Alternative A, the majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be generated would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be generated from the use and maintenance of the sewage treatment facility, fire station, casino, emergency generators, and other project facilities. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues. Based upon the amount and type of hazardous materials that will be stored, used, maintained and generated during operation of Alternative A, effects to the environment or public are considered to be less than significant.

Diesel fuel storage tanks would be needed for the operation of emergency generators provided for the casino and other facilities. The fuel tanks will be housed above ground within the individual generator units. The largest generators will have storage tanks of approximately 1,000 gallons. The storage tanks will have double walls with integrated leak detection systems. If a leak were to occur within the inner tank, the outer tank would contain the leak, while a pressure sensor would signal the leak on the indicator panel of the generator unit. Security personnel would monitor the generator units. Security personnel would be on site at all times and will be trained in emergency response procedures. The generators will be located in areas that are easily accessed by maintenance and emergency personnel, near the service entrance/loading docks of these facilities.

Fuel storage tanks on the project site would be regulated by the Spill Prevention, Control and Countermeasure regulations (40 CFR Part 112) if a total of 1,320 gallons or more of any petroleum product is stored in containers 55 gallons or larger. Compliance with the SPCC regulations, as described above, will ensure that storage of diesel fuel on-site will be less than significant.

VISUAL RESOURCES

Phases I and II

For the purposes of this analysis, the view corridors are defined as the segment of SR 49 1,000 feet south of the proposed fire station and 4,000 feet north of the main entryway of the development. Commuters traveling to and from the City of Plymouth use SR 49. SR 49 also serves the Shenandoah Valley vineyards and through traffic to U.S. 50 to the north. There are two approaches to the view corridor: (1) northbound SR 49 (north traveling direction); and (2) southbound SR 49 (south traveling direction). The area along SR 49 consists of a rural residential and commercial development (**Figure 2-2**). Features that dominate the landscape include rolling pasture, oak trees, power poles, power lines, rural residential development, and commercial development including, but not limited to, gas stations, restaurants, supermarkets, and lumber yards.

Visual Changes to View Corridor

Development of Alternative A would result in the change of views for both north and south bound travelers along SR 49. Views of Alternative A will be blocked from northbound SR 49 travelers by steep hills and trees south of main casino building. The first noticeable visual change for travelers along SR 49 would be of the proposed fire station to the east. Past the fire station, travelers would first notice the main casino building, the service court and the service entrance to the east. Travelers will also see the existing gas station north of the main casino building and other commercial development along the SR 49 corridor. The first noticeable visual change for southbound SR 49 travelers will be the casino parking area, main entryway, and casino signage. Travelers will also see the existing commercial development on both sides of SR 49. Just beyond the existing gas station, southbound travelers will first notice the main casino building.

Development of Alternative A at this location would change the type of view and character for this corridor. However, because of existing commercial development in the project vicinity and planned commercial development for the majority of the project site by the City of Plymouth General Plan, the change in visual character from rural undeveloped land to commercial development has been planned for. Additionally, the change in intensity would be minimized through the preservation of existing trees and vegetation, the planting of complimentary landscaping, and use of earth tone paints and building materials. Trash enclosures, walls, and fences will be screened with landscaping. The incorporation of these features would break up and

soften the massing of the proposed casino building. The addition of the Alternative A at this location will not substantially degrade the visual character of the site and its surroundings. All lighting fixtures on the project site will be downcast to decrease light impacts to the surrounding vicinity. This downcast lighting produced will be directed away from surrounding areas and onto the project site. Accordingly, impacts to visual resources are considered a less-than-significant effect

4.10.2 ALTERNATIVE B – REDUCED CASINO AND HOTEL ALTERNATIVE

NOISE EFFECTS

Phases I and II

Construction

Typical noise levels of construction equipment are shown in **Table 4.10-1 with the** loudest noise levels around 88 Lmax, at a distance of 50 feet. Construction activities would result in short-term increases in the local ambient noise environment in excess of the 5 dBA threshold of significance. Because construction activities would be temporary in nature, no significant environmental consequences are identified for such activities, provided they occur during normal daytime hours. Mitigation provided in **Section 5.2.10** of this Draft EIS will limit construction activities to normal daytime hours.

Operation

Mechanical Equipment Noise Effects

The nearest source of major mechanical equipment to off-site residences would be from the casino. Most of the mechanical equipment would be expected to be roof-mounted. Because the estimated distance from the casino (a mechanical equipment source) to the nearest off-site residence (a sensitive noise receptor is approximately 500 feet away), mechanical equipment noise from the casino would not be expected to approach significant noise levels at the nearest sensitive receptor. **Table 4.10-3** shows that predicted noise levels from mechanical systems would be approximately 47 Leq at 500 feet. Any intervening structures or rooftop shielding would further reduce this predicted noise level. Implementation of mitigation identified in **Section 5.2.10** will reduce potential mechanical equipment noise effects to a less-than-significant level.

Truck Delivery / Loading Dock Noise Effects

The nearest residence is approximately 200feet from the loading dock area (Service Court). At this distance the noise level from the loading docks would attenuate to approximately 58 Leq from distance alone. At night this level would be more than 5 dBA above existing nighttime levels in this area and would be a significant effect, without further mitigation. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

Off-Site Traffic Noise Effects

Alternative B would result in changes in traffic noise levels as identified in **Table 4.10-7**. According to that table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed. Because traffic levels are predicted to almost double, the predicted increase is approximately 3 Leq during Phase I and Phase II on SR 124 south of SR 16. The resulting noise level would be 61 Leq during the peak hour; this is below the Noise Abatement Criteria identified by FHWA, and considered to be a less-than-significant impact.

TABLE 4.10-7
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERNATIVE B (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Year 2006			Year 2009		
	No Project	Phase I	Change	No Project	Phase II	Change
	Peak hour (Leq)	Leq	Leq	Peak hour (Leq)	Leq	Leq
SR 49 North of Shenandoah Road	58	59	+1	58	60	+2
SR 49 South of SR16	63	63	0	63	63	0
SR 16 West of Old Sacramento Road	61	62	+1	61	62	+1
SR 124 South of SR 16	58	60	+2	58	61	+3
SR 88 West of SR 124	64	65	+1	65	65	0

SOURCE: AES using FHWA RD-77-108 with traffic inputs from CCS/TY Lin, 2004

On-Site Traffic Flow and Parking Lot Noise Effects

Parking lot activities include vehicles arriving and departing, engines starting and stopping, car doors opening and closing, and busses idling. Based on estimates from prior documents and recent measurements described in the methodologies, the noise level for on-site traffic flow is estimated to be 50-60 Leq at the edge of the parking areas. Under Alternative B, parking areas in the southwestern and northwestern portion of the project site have the potential to increase off-site noise levels. This effect would be somewhat diminished by noise from traffic on SR 49; however, when there is no traffic on SR 49, parking lot noise could be more than 5 Leq above the background noise levels at the residential receptors west of the project site. Based on **Table 4.10-5**, parking lot noise would be approximately 49 dBA at the nearest sensitive receptors to the northwest (approximately 1,000 feet from the parking area) and 53 dBA at the nearest sensitive receptors to the southwest (approximately 400 feet from the bus parking area). This is considered to be a potentially significant effect. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

HAZARDS AND HAZARDOUS MATERIALS

Because Phases I and II cover the same area, and activities during Phase I would have the same potential to either discover or have the same propensity to require utilization of hazardous materials, a general analysis of both phases is provided below.

Existing Sources

According to the Phase I Environmental Site Assessment (**Appendix O**), there are no reportable hazardous materials contaminated sites in or near the project area. Therefore, implementation of Alternative B will not cause the environment or public to be affected by existing hazardous materials sites.

Construction

During grading and construction the use of hazardous materials would be similar to Alternative A. Standard precautions, as described for Alternative A, would be taken including storage and handling protocols to reduce the potential for accidental releases. The most likely possible incidents would involve the dripping of fuels, oil, and grease from construction equipment, and during handling and transfer from one container to another. The small quantities of fuel, oil, and grease that may drip would have low relative toxicity and concentrations. Typical construction management practices limit and often eliminate the effect of such accidental releases. An accident involving a service or refueling truck would present the worst-case scenario for the release of hazardous materials. Depending on the relative hazard of the hazardous material, if a spill were to occur of significant quantity, the accidental release could pose both a hazard to construction employees as well as the environment. However, as discussed above under Alternative A, Alternative B would include the development of a SWPPP, which includes BMPs designed to contain accidental releases of hazardous materials. Therefore, with the incorporation of the BMPs and mitigation measures in **Section 5.2.2**, impacts from Alternative B would be less than significant.

Demolition-related asbestos hazards have been addressed in **Section 4.8** and include mitigation to reduce exposures to construction personnel and the public-at-large to a less-than-significant level of impact. Demolition of the existing on-site residences may expose people or the environment to toxic lead-based paint materials. This effect is potentially significant. Mitigation has been included within **Section 5.2.10** to reduce the significance of the hazardous materials effects to a less-than-significant impact.

Operation

The majority of waste produced would be nonhazardous. The small quantities of hazardous materials that would be generated would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be generated from the use and

maintenance of the sewage treatment facility, fire station, casino, emergency generators, and other project facilities. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues.

Diesel fuel storage tanks would be needed for the operation of emergency generators provided for the casino and other facilities. The fuel tanks will be housed above ground within the individual generator units. The largest generators will have storage tanks of approximately 1,000 gallons. The storage tanks will have double walls with integrated leak detection systems. If a leak were to occur within the inner tank, the outer tank would contain the leak, while a pressure sensor would signal the leak on the indicator panel of the generator unit. Security personnel would monitor the generator units. Security personnel would be on site at all times and will be trained in emergency response procedures. The generators will be located in areas that are easily accessed by maintenance and emergency personnel, near the service entrance/loading docks of these facilities.

Fuel storage tanks on the project site would be regulated by the Spill Prevention, Control and Countermeasure regulations (40 CFR Part 112) if a total of 1,320 gallons or more of any petroleum product is stored in containers 55 gallons or larger. Compliance with the SPCC regulations, as described above, will ensure that storage of diesel fuel on-site will be less than significant.

Based upon the amount and type of hazardous materials that would be stored, used, and generated during operation of this alternative, effects to the environment or public are considered to be less than significant.

VISUAL RESOURCES

Phases I and II

As in Alternative A, the proposed structures would be architecturally designed to be complementary to the surrounding environment (**Figure 2-10**). Landscaped areas will contribute to an aesthetically agreeable visual component and serve as a visual break of continuous building surfaces. Lighting will be downcast to decrease light impacts to the surrounding vicinity. The development of Alternative B along the viewshed of SR 49 would be shielded by the topography and the commercial developments along the highway. This is considered a less-than-significant effect.

4.10.3 ALTERNATIVE C – REDUCED CASINO ALTERNATIVE

NOISE EFFECTS

Construction

Noise levels typical of construction equipment are shown in **Table 4.10-1, with the** loudest noise levels around 88 Lmax at a distance of 50 feet. Construction activities would result in short-term

increases in the local ambient noise environment in excess of the 5 dBA threshold of significance. Because construction activities would be temporary in nature, no significant environmental consequences are identified for such activities, provided they occur during normal daytime hours, construction noise impacts would be less-than-significant, provided they occur during normal daytime hours. Mitigation provided in **Section 5.2.10** will limit construction activities to normal daytime hours.

Operation

Mechanical Equipment Noise Effects

The nearest source of major mechanical equipment to off-site residences would be from the casino. Most of the mechanical equipment would be expected to be roof-mounted. Because the estimated distance from the casino (a mechanical equipment source) to the nearest off-site residence (a sensitive noise receptor is approximately 500 feet away), the mechanical equipment noise from the casino would not be expected to approach significant noise levels at the nearest sensitive receptor. **Table 4.10-3** shows that predicted noise levels from mechanical systems would be approximately 47 Leq at 500 feet. Any intervening structures or rooftop shielding would further reduce this predicted noise level. Nonetheless, because mechanical equipment noise levels can be highly variable, this is considered to be a potentially significant impact. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

Truck Delivery / Loading Dock Noise Effects

The nearest residence is approximately 200 feet from the loading dock area (Service Court). At this distance the noise level from the loading docks would attenuate to approximately 58 Leq from distance alone. At night this level would be more than 5 dBA above existing nighttime levels in this area and would be a significant effect, without further mitigation. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant level of impact.

Off-Site Traffic Noise Effects

Alternative C would result in changes in traffic noise levels as identified in **Table 4.10-8**. According to that table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed. This is a less-than-significant effect.

On-Site Traffic Flow and Parking Lot Noise Effects

Parking lot activities include vehicles arriving and departing, engines starting and stopping, car doors opening and closing, and busses idling. Based on estimates from prior documents and recent measurements described in the methodologies, the noise level for on-site traffic flow is

estimated to be 50-60 Leq at the edge of the parking areas. Under Alternative C, parking areas in the southwestern and northwestern portion of the project site have the potential to increase off-site noise levels. This effect would be somewhat diminished by noise from traffic on SR 49; however, when there is no traffic on SR 49 parking lot noise could be more than 5 Leq above the background noise levels at residential receptors west of the project site. Based on **Table 4.10-5**, parking lot noise would be approximately 49 dBA at the nearest sensitive receptors to the northwest (approximately 1,000 feet from the parking area) and 53 dBA at the nearest sensitive receptors to the southwest (approximately 400 feet from the bus parking area). This is considered to be a potentially significant effect. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

TABLE 4.10-8
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERATIVE C (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Year 2006		Change Leq
	No Project Peak hour (Leq)	Project	
SR 49 North of Shenandoah Road	58	59	+1
SR 49 South of SR16	63	63	0
SR 16 West of Old Sacramento Road	61	62	+1
SR 124 South of SR 16	58	60	+2
SR 88 West of SR 124	64	65	+1

SOURCE: AES using FHWA RD-77-108 with traffic inputs from CCS/TY Lin, 2004

HAZARDS AND HAZARDOUS MATERIALS

Existing Sources

According to the Phase I Environmental Site Assessment (**Appendix O**), there are no reportable hazardous materials contaminated sites in or near the project area. Therefore, implementation of Alternative C will not cause the environment or public to be affected by existing hazardous materials sites.

Construction

During grading and construction the use of hazardous materials would be similar to Alternative A. As discussed above under Alternative A, Alternative C would include the development of a SWPPP, which includes BMPs designed to plan for containment of accidental releases.

Therefore, with the incorporation of the BMPs as mitigation in **Section 5.2.2**, impacts from Alternative C would be less than significant.

Demolition-related asbestos hazards have been addressed in **Section 4.8** and include mitigation to reduce exposures to construction personnel and the public-at-large to a less-than-significant impact level. Demolition of the existing on-site residences may expose people or the

environment to toxic lead-based paint materials. This effect is potentially significant. Mitigation has been included within **Section 5.2.10** to reduce the significance of the hazardous materials effects to a less-than-significant impact.

Operation

The majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be generated would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be generated from the use and maintenance of the sewage treatment facility, fire station, casino, emergency generators, and other project facilities. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues.

Diesel fuel storage tanks would be needed for the operation of emergency generators provided for the casino and other facilities. The fuel tanks will be housed above ground within the individual generator units. The largest generators will have storage tanks of approximately 1,000 gallons. The storage tanks will have double walls with integrated leak detection systems. If a leak were to occur within the inner tank, the outer tank would contain the leak, while a pressure sensor would signal the leak on the indicator panel of the generator unit. Security personnel would monitor the generator units. Security personnel would be on site at all times and will be trained in emergency response procedures. The generators will be located in areas that are easily accessed by maintenance and emergency personnel, near the service entrance/loading docks of these facilities.

Fuel storage tanks on the project site would be regulated by the Spill Prevention, Control and Countermeasure regulations (40 CFR Part 112) if a total of 1,320 gallons or more of any petroleum product is stored in containers 55 gallons or larger. Compliance with the SPCC regulations, as described above, will ensure that storage of diesel fuel on-site will be less than significant.

Based upon the amount and type of hazardous materials that would be stored, used, and generated during operation of this alternative, effects to the environment or public are considered to be less than significant.

VISUAL RESOURCES

As in Alternative A, the proposed structures would be architecturally designed to be complementary to the surrounding environment (**Figure 2-15**). Landscaped areas will contribute to an aesthetically agreeable visual component and serve as a visual break of continuous building surfaces. Lighting will be downcast to decrease light impacts to the surrounding vicinity. The development of Alternative C along the viewshed of SR 49 would be shielded by the topography and the commercial developments along the highway. This is considered a less-than-significant effect.

4.10.4 ALTERNATIVE D – RETAIL DEVELOPMENT

NOISE EFFECTS

Construction

Noise levels typical of construction equipment are shown in **Table 4.10-1**, with the loudest noise levels around 88 Lmax at a distance of 50 feet. Construction activities would result in short-term increases in the local ambient noise environment in excess of the 5 dB threshold of significance. Because construction activities would be temporary in nature, construction noise impacts would be less-than-significant, provided they occur during normal daytime hours. Mitigation provided in **Section 5.2.10** will limit construction activities to normal daytime hours.

Operation

Mechanical Equipment Noise Effects

The nearest source of major mechanical equipment to off-site residences would be from the anchor stores. Most of the mechanical equipment would be expected to be roof-mounted. Because the estimated distance from the anchor stores (a mechanical equipment source) to the nearest off-site residence (a sensitive noise receptor is approximately 400 feet away), the mechanical equipment noise from the anchor stores could be significant at the nearest sensitive receptor. The predicted noise levels from mechanical systems would be approximately 49 Leq at 400 feet. Any intervening structures or rooftop shielding would further reduce this predicted noise level. Nonetheless, because mechanical equipment noise levels can be highly variable, this is considered to be a potentially significant impact. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

Truck Delivery / Loading Dock Noise Effects

The nearest residence is approximately 200 feet from the loading dock areas and service road behind the regional shopping mall. At this distance the noise level from the loading docks would attenuate to approximately 58 Leq from distance alone. At night this level would be more than 5 dBA above existing nighttime levels in this area and would be a significant effect without further mitigation. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

Off-Site Traffic Noise Effects

Alternative D would result in changes in traffic noise levels as identified in **Table 4.10-9**. According to that table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed and, thus, such impacts are considered less than significant.

TABLE 4.10-9
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERATIVE D (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Year 2006		Change Leq
	No Project Peak hour (Leq)	Project Peak hour (Leq)	
SR 49 North of Shenandoah Road	58	59	+1
SR 49 South of SR16	63	63	0
SR 16 West of Old Sacramento Road	61	62	+1
SR 124 South of SR 16	58	60	+2
SR 88 West of SR 124	64	65	+1

SOURCE: AES using FHWA RD-77-108 with traffic inputs from CCS/TY Lin, 2004

On-Site Traffic Flow and Parking Lot Noise Effects

Parking lot activities include vehicles arriving and departing, engines starting and stopping, and car doors opening and closing. Based on estimates from recent measurements described in the methodologies, the noise level for on-site traffic flow is estimated to be 50-60 Leq at the edge of the parking areas. Alternative D is designed so that the shopping center buildings are between the parking lot and the nearest off-site residential receptors to the northwest. Based on **Table 4.10-5**, parking lot noise would be approximately 59 dBA at the nearest receptors to the southwest (approximately 200 feet away). This is considered to be a potentially significant impact. The mitigation identified in **Section 5.2.10** is proposed to reduce this effect to a less-than-significant impact.

HAZARDS AND HAZARDOUS MATERIALS

Existing Sources

According to the Phase I Environmental Site Assessment (**Appendix O**), there are no reportable hazardous materials contaminated sites in or near the project area. Therefore, implementation of Alternative D will not cause the environment or public to be affected by existing hazardous materials sites.

Construction

During grading and construction the use of hazardous materials would be similar to Alternative A. As discussed above under Alternative A, Alternative D would include the development of a SWPPP, which includes BMPs designed to plan for containment of accidental releases. Therefore, with the incorporation of the BMPs as mitigation in **Section 5.2.2**, impacts from Alternative D would be less than significant.

Demolition-related asbestos hazards have been addressed in **Section 4.8** and include mitigation to reduce exposures to construction personnel and the public-at-large to a less-than-significant level of impact. Demolition of the existing on-site residences may expose people or the environment to

toxic lead-based paint materials. This effect is potentially significant. Mitigation has been included within **Section 5.2.10** to reduce the significance of the hazardous materials effects to a less-than-significant impact.

Operation

Small quantities of hazardous materials generated under Alternative D would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues.

A diesel fuel storage tank will be needed for the operation of one emergency generator provided for the wastewater treatment facility. This storage tank will be located above ground with integrated leak containment and indicator features and will be monitored by security personnel.

Fuel storage tanks on the project site would be regulated by the Spill Prevention, Control and Countermeasure regulations (40 CFR Part 112) if a total of 1,320 gallons or more of any petroleum product is stored in containers 55 gallons or larger. Compliance with the SPCC regulations, as described above, will ensure that storage of diesel fuel on-site will be less than significant.

Based upon the amount and type of hazardous materials that will be stored, used, and generated during operation of Alternative D, effects to the environment or public are considered to be less than significant.

VISUAL RESOURCES

As in Alternatives A, B & C, the proposed structures would be architecturally designed to be complementary to the surrounding environment (**Figure 2-19**). Landscaped areas will contribute to an aesthetically agreeable visual component and serve as a visual break in continuous building surfaces. Lighting will be down turned to decrease light impacts to the surrounding vicinity. The structures in Alternative D would be smaller than those of the other development alternatives and would therefore result in a similar yet reduced visual effect. The development of Alternative D along the view shed of SR 49 would be shielded by the topography and the commercial developments along the highway. This is considered a less-than-significant effect.

4.10.5 ALTERNATIVE E – NO ACTION

NOISE

In the short-term future, the No Action Alternative would result in a continuation of existing uses on the project site. As such, the No Action Alternative would not increase the ambient noise environment through construction or operation of facilities. Over the long-term, the ambient noise environment would continue to increase with increased development. Development would

be required to comply with the City and County noise policies. Impacts would be considered less-than-significant due to compliance with local regulations required by non-tribal projects.

HAZARDS AND HAZARDOUS MATERIALS

There is no reportable hazardous materials contamination in or near the project area. Existing uses on the project site would continue under the No Action Alternative. Long-term development would potentially increase low levels of hazardous materials ranging from cleaning products at commercial developments to household hazardous materials such as pesticides, paints, and automobile fluids. The increase in hazardous materials use over the long-term on the project site would be considered significant.

VISUAL RESOURCES

There would be no urban development over the short-term of the project site under the No Action Alternative. In the long-term, it is anticipated that the project site will be incorporated in residential development at a greater density than existing settings. Furthermore, it is anticipated that the SR 49 corridor will generate additional commercial development along the project site borders. Based on long-term, anticipated development, the rural character of the project site will most likely be transformed, significantly impacting existing visual resources.

4.11 CUMULATIVE EFFECTS

INTRODUCTION

Cumulative effects analysis broadens the scope of analysis to include effects beyond those solely attributable to the direct effects of the alternatives. For a discussion of the growth inducing effects of the proposed alternatives, please refer to **Section 4.12**. Cumulative effects are defined as the effects:

“on the environment which result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Sec. 1508.7).”

The analysis in this section expands the geographic and temporal borders to include the effects on specific resources, ecosystems, and human communities that occur incrementally in conjunction with other actions, projects and trends. The purpose of cumulative effects analysis, as stated by the Council on Environmental Quality (CEQ), “is to ensure that federal decisions consider the full range of consequences” (CEQ, 1997:3).

The cumulative analysis begins by: 1) identifying past, present, and future actions and projects in association with the status of the resources, ecosystems, and human communities that may be affected and 2) defining geographic borders and time frame of the analysis.

The status of affected resources is based upon the information provided in **Section 3.0** of this document from specific resource studies that have been undertaken for the alternatives and additional review and analysis.

The geographic boundaries of the cumulative effects zone have been determined based on the nature of the resources affected and the distance that such effects may travel. As an example, increased sedimentation of waterways that result from a project is limited to the watershed in which they occur. As a result, it is only necessary to examine effects within that watershed. Air quality emissions from a project travel over far greater distances and, therefore, necessitate analysis on a County, air basin, or regional level. For this analysis, the geographic boundary of the cumulative effects zone is generally that of Amador County, although with many resources (water, biological etc.) smaller natural or cultural boundaries are used.

The time frame of the cumulative effects analysis extends to 2025. For many resources, information is unavailable to extend meaningful analysis to 2025; however, attempts have been made to provide all relevant information.

CUMULATIVE ENVIRONMENT

The most substantial changes that are expected to occur in the region's environment will occur as the result of the population and employment growth that is estimated to occur over the next 20 years. The amount of growth expected to occur in the region is discussed below. Additionally, two other Indian casinos in Amador County, one of which is proposed and one of which is existing, are considered in the cumulative environment. These casinos are discussed in greater detail below. Amador County was contacted to obtain a list of projects occurring in the region. No projects were suggested by Amador County for inclusion as cumulative projects. To capture ongoing development projects in the County, the cumulative analysis addresses residential and commercial growth as identified in regional growth projections and local land use plans.

Regional Growth

Over the last decade, Amador County has grown by 11.5-percent (**Table 4.11-1**). This growth rate is somewhat slower than the 15-percent growth rate of the state in general; over the same period. The towns of Plymouth and Sutter Creek grew at a faster pace than that of the County and the state at approximately 20-percent. As shown in **Table 4.11-2**, over the next 20 years, the population of Amador County is expected to grow by over 17-percent. Growth is expected to be primarily residential development, with associated neighborhood commercial development. Residential growth is expected to occur primarily throughout the western portion of the County near existing communities where the existing water and wastewater services make development more affordable. Amador County has identified parcels available for residential development near Martell, Jackson, Ione, Sutter Creek, Plymouth, Camanche Village, Pioneer, and Pine Grove (Amador County, 2005). Much of this development would be infill in existing subdivisions and residential areas.

TABLE 4.11-1
1994-2004 AREA POPULATION GROWTH

Area	1994	2003	2004	Percent Change 2003-2004	Percent Change 1994-2004
Amador County	33,050	36,650	36,850	0.5	11.5
Plymouth	890	1,080	1,070	- 0.9	20.2
Ione	7,125	7,475	7,525	0.7	5.6
Jackson	3,870	4,080	4,100	0.5	5.9
Sutter Creek	2,060	2,450	2,480	1.2	20.4
Amador	200	210	210	0	5.0
Unincorporated	18,900	21,350	21,450	0.5	13.5
State	31,418,000	35,612,000	36,144,000	13.3	15.0

Source: CDOF, 2004; AES, 2004

Commercial and industrial employment is also expected to continue growing especially in growth sectors such as retail, construction, education and services (EDD, 2004). Most commercial and industrial growth is expected to occur in significant commercial/industrial development, such as Ione, Jackson, Plymouth and other regional cities. These areas have existing services such as water and wastewater service for businesses.

TABLE 4.11-2
ESTIMATED AMADOR COUNTY GROWTH 2004-2030

	2004	2020	2025	2030	Percent Change 2004-2025
Population	36,850	42,257	43,331	44,404	17.6

Notes: Interpolated from 2020 and 2030 figures.
Source: CDOF, 2004

City of Plymouth Growth

The City of Plymouth General Plan (amended 2001) includes growth projections through the year 2020 based on California Department of Finance projections. The General Plan estimated a 2004 population of 1,275, which has not been met according to more recent estimates. The General Plan projects an estimated population of 1,880 persons in 2020 (City of Plymouth, 2001). As with the remainder of Amador County, most growth in Plymouth is expected to be residential growth. The City has identified approximately 57-vacant acres for residential development located primarily in the northern portion of the City. The City has also identified approximately 34-vacant acres for commercial/industrial development primarily along State Route (SR) 49. Redevelopment of existing residential and commercial properties would also be expected.

Other Amador County Casinos

In addition to regional growth, the cumulative environment also includes consideration of two other casinos. The first casino is the Jackson Rancheria Casino located on New York Ranch Road near the City of Jackson in Amador County. The Jackson Rancheria Casino has been in operation since 1991 and recently expanded to include approximately 1,500 slot machines, 40 gaming tables, 146-room hotel and a conference center. The Jackson Rancheria Casino employs approximately 1,400 people and is one of the largest employers in Amador County (Jackson Rancheria, 2005). The second casino considered is that proposed by the Buena Vista Rancheria of Me-wuk Indians of California (Buena Vista Tribe), which would be located near the City of Ione in Amador County.

The Buena Vista Tribe is currently proposing to develop a casino at 4650 Coal Mine Road in Ione, Amador County. Off-site environmental impacts will need to be addressed in a Tribal Environmental Impact Report (TEIR) in compliance with the Tribal-State Compact entered into by the Buena Vista Tribe and the State of California. The schedule of the environmental review

and ultimate approval and development of the Buena Vista casino project is unknown. What is known is that the Buena Vista Tribe has recently released a Draft TEIR (May 11, 2005) and a Notice of Preparation (NOP) of a Draft TEIR (Amador County, 2005 & Buena Vista Tribe, 2005). The following description is summarized from the description provided in the Draft TEIR.

The proposed Buena Vista Casino would approximately occupy a 15-acre portion of tribal land near the City of Ione in Amador County. As outlined in the NOP, the casino would include 55,000 square feet of main gaming floor that would provide space for approximately 2,000 slot machines and 80 gaming tables. Additional facilities would include restaurants and dining areas, entertainment lounge, a retail shop, ballroom, coffee shop, food court, a multi-purpose ballroom, meeting rooms, and administrative offices. Non-gaming space would total approximately 245,405 square feet and a multi-level parking garage would provide space for approximately 3,600 cars. The NOP identified a range of options for water supply and wastewater disposal. Water would be obtained from on-site wells, tanker truck, or from off-site resources. Wastewater would be treated to a tertiary level by an on-site wastewater treatment plant. Options for the disposal of treated effluent include on-site crop irrigation, subsurface drain fields, and surface water discharge, as well as the sale of reclaimed wastewater to off-site users. The NOP also identifies that off-site wastewater treatment alternatives will be explored.

In 2001, the Buena Vista Tribe released an Environmental Assessment (EA) for a similar casino project proposed for the same project site identified in the NOP. Information from the EA has been used in this cumulative analysis to identify potential effects associated with the current casino proposed by the Buena Vista Tribe. The locations of the Jackson Rancheria casino and the proposed Buena Vista casino are shown in **Figure 4.11-1**. To respond to comments raised during the scoping process, the cumulative effects resulting from the development of the Buena Vista casino has been highlighted in the following analysis.

4.11.1 ALTERNATIVE A – PROPOSED CASINO AND HOTEL

LAND RESOURCES

As growth occurs within the City of Plymouth and Amador County, cumulative effects to land resources may take place as the result of changes to topography, soil loss, increased seismic hazards, and loss of mineral resources. Amador County is located on the western slope of the Sierra Nevada range. The elevation of the County ranges from 200 feet in the foothills and valleys in the west to approximately 9,000 feet in the mountainous area in the east. The western foothills region is intersected by numerous faults as well as densely folded bedrock characteristic of the gold bearing Mother Lode region.

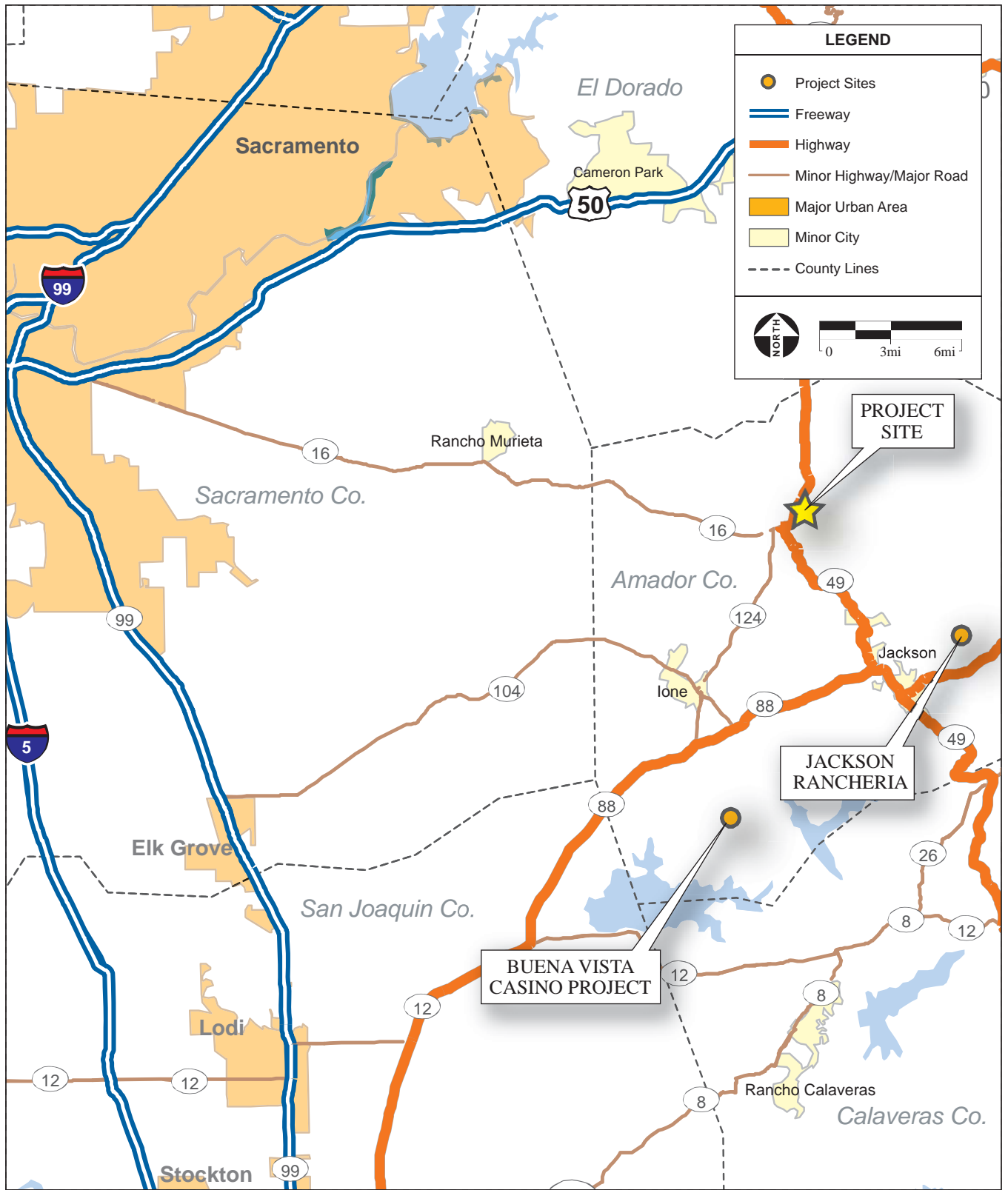


Figure 4.11-1
Location of Project Site and Other Amador County Casinos

Surrounding developments within the City of Plymouth and Amador County, including the Jackson Casino, have made only minor changes in topography. Future developments, including commercial and residential land uses in the project area, are expected to result in minor changes in the topography. The proposed Buena Vista casino site ranges from gently sloping in the north to steep terrain near the Buena Vista Peaks to the south. It is expected that development of the casino would avoid the steeper terrain due to higher construction costs and access difficulties. Accordingly, the EA completed in 2001 for a similar project at the same site, indicated that development would occur in the northern portion of the site thereby minimizing changes in the site's topography (EIP Associates, 2001). It is expected that the proposed Buena Vista casino would also include erosion control measures in compliance with the National Pollutant Discharge Elimination System (NPDES) permit program and would comply with the earthquake design provisions of the Universal Building Code (UBC).

The major topographic features of the project site would be preserved under Alternative A, and the design of the facilities would include an Erosion Control Plan and comply with the UBC. Other projects, including the Buena Vista casino and regional residential and commercial development, are expected to likewise comply with the NPDES permit program and the provisions of the UBC. Therefore, cumulative effects regarding land resources are considered to be less than significant.

WATER RESOURCES

Surface Water

Cumulative effects to water resources may take place as the result of future developments. Examples of these effects include increased sedimentation, increased pollution and increased stormwater flows. Stormwater discharges from residential and industrial areas are of concern in managing surface water quality. Pollutants that accumulate in the dry summer months, such as oil and grease, asbestos, pesticides, and herbicides, create water quality problems due to their presence in high concentrations during the first major autumn storm event.

Regionally, Amador County is located within the San Joaquin drainage basin. The San Joaquin Drainage Basin covers an area over 10 million acres and includes all tributary watersheds of the San Joaquin River and the Delta south of the Sacramento River.

Principal streams and larger tributaries of the San Joaquin drainage basin include the Cosumnes, Mokelumne, and Calaveras Rivers (CVRWQCB, 1998). Primarily the Mokelumne River to the south and the Cosumnes River to the north drain Amador County. These rivers join and flow westward into the San Joaquin River and Delta.

A watershed's runoff characteristics are altered when impervious surfaces replace natural vegetation. Changes in runoff characteristics may increase stream volumes, increase stream

velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. Urban areas, such as the cities of Jackson, Ione, and Plymouth, also have sources of non-point source pollution that can affect regional water quality. The development of the proposed Buena Vista casino may likewise affect water quality by increasing sedimentation and pollution, and increasing stormwater flows. However, as noted above, it is expected that the proposed Buena Vista casino would include erosion control measures in compliance with the NPDES permit program. The completed EA for a similar project indicated that the incorporation of best management practices (BMPs) “would ensure that erosion, siltation or an increased amount of surface runoff associated with construction activities would not adversely affect water quality” (EIP Associates, 2001).

Alternative A could contribute to changes in runoff characteristics (volume, velocity, and hydrograph) and water quality of the tributaries located near the project site as a result of the conversion of open space to developed land. The Tribe has made appropriate design allowances that will reduce cumulative effects to a less-than-significant level. These include:

- Surface water detention basins to limit post-construction runoff peak volumes to pre-construction levels.
- Stormceptor® sediment/grease traps to control and reduce the Total Suspended Solids (TSS) and other potentially environmentally polluting mineral or materials such as oils and greases, nutrients and metals by approximately 80-percent.
- Where feasible, all areas outside of buildings and roads will be kept as permeable surfaces, either as vegetation or high infiltration cover such as mulch, gravel, or turf block.
- Rooftops will drain to either embedded cisterns or vegetated driplines to maximize infiltration prior to surface water discharge.
- Pedestrian pathways will use a permeable surface where possible, such as crushed aggregate or stone with sufficient permeable joints.
- In accordance with the requirements of the NPDES Phase II General Permit for Storm Water Discharges from Construction Activities, the Tribe will prepare a Stormwater Pollution Prevention Plan (SWPPP) to control discharge of pollutants in stormwater.

As noted above, it is expected that the proposed Buena Vista casino would include erosion control measures in compliance with the NPDES permit program, and would include BMPs to protect water quality. While urban areas may adversely affect surface water quality due to non-point source pollution, the design of Alternative A incorporates water quality protection features including, a detention basin, sediment/grease traps, and minimization of impervious surfaces to protect water quality. Therefore, the development of Alternative A would not result in or contribute to a significant cumulative water resource effect.

Groundwater

As discussed in **Section 3.9**, groundwater is not a reliable source to meet the existing and future water demand of the City of Plymouth. With the planned completion of the Plymouth Pipeline in late 2008, it is anticipated that development within the city will be limited by water supply and would be required to connect to the City's municipal system. Since groundwater pumping by the City is currently at the maximum rate, additional development would not result in additional groundwater extraction. If the Buena Vista casino utilizes groundwater, the distance between the two project sites (approximately 13 miles) would isolate the individual impacts on groundwater. Therefore, Alternative A's impact from utilizing groundwater if Option 2 were selected for water supply would not be cumulatively considerable. Option 1 does not include groundwater pumping to meet projected water demands. Independent of which water supply option were selected for development, implementation of Alternative A would have a less-than-significant cumulative impact on groundwater resources.

AIR QUALITY

Air Pollutant Trends

Cumulative air quality effects are assessed by comparing the incremental emissions associated with Alternative A to Amador County-wide emissions forecasted by the California Air Resources Board (CARB) for long-term 2025 cumulative conditions (2020, the farthest planning horizon for countywide emission forecasts). The County's emissions trends from 1975 to 2020 are presented in **Table 4.11-3**.

Ozone precursors (ROG and NO_x) had a relatively small jump between 1975 and 1990, but since 1990 emissions have decreased consistently, and are projected to decrease further in the future. The three pollutants discussed above are governed by State Implementation Plans (SIPs) and therefore should decrease in the future.

TABLE 4.11-3
AMADOR COUNTY EMISSIONS TRENDS

Amador County	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
	tons per day									
ROG	9.5	10.7	10.9	12.0	10.2	9.0	8.6	8.0	7.7	7.6
NO _x	5.2	6.5	6.8	9.0	8.6	6.6	6.6	6.0	5.4	4.8

SOURCE: CARB, 2007

Criteria Air Pollutants (CAPs) Long-Term 2030 Conditions

Operation of Alternative A during long-term 2030 conditions would result in the generation of precursors for ozone for which the air basin is classified as unattainment. **Table 4.11-4** shows operation and area emissions of these precursors, oxides of nitrogen (NO_x) and reactive organic

gasses (ROGs), for Alternative A in year 2025. Precursors emissions are shown as a percentage of County total emissions.

TABLE 4.11-4
ALTERNATIVES A LONG-TERM (2025) CONDITIONS

Sources	Criteria Pollutants	
	ROG	NO _x
	tons per day	
Phase I Long-Term Operations		
Area Emissions	0.0007	0.0006
Mobile Emissions	0.02	0.05
Phase I and II Long-Term Operations		
Area Emissions	0.002	0.003
Mobile Emissions	0.04	0.07
Highest Project Total	0.042	0.073
Amador County 2020 Emissions	7.6	4.8
Project's percentage of Countywide Total (%)	0.55	1.52

Source: CARB, 2007

Since no emission projections are available for the County in 2025, 2020 emissions were used for comparison. **Table 4.11-4** shows that emissions associated with Alternative A would represent less than 0.55-percent of the county-wide emissions for ROG; 1.52-percent of the county-wide emissions for NO_x. When considered as a portion of the County's overall emission, Alternative A makes a minimal contribution to regional air quality. Furthermore, regional projects would be required to comply with the provisions of the Amador County Air Pollution Control District (ACAPCD). With the implementation of measures identified in **Section 5.2.4**, Alternative A would result in minimal cumulatively considerable adverse effects to air quality.

Greenhouse Gases

By the year 2020, Assembly Bill 32 will require GHG emissions to be reduced to 1990 standards. **Table 4.11-5** shows how these reductions will be archived. Reduction measures such as the ones shown in **Table 4.11-5** would be implemented between the years 2007 and 2009, with further reduction measures to be implemented between 2009 and 2012. The greatest reduction of GHG would come from the industrial and manufacturing standards for fuels and chemical processes; however, if the USEPA grants the State of California the right to establish stricter GHG standards, there could also be a significant reduction of GHG emission from vehicles.

BIOLOGICAL RESOURCES

Cumulative biological resource effects would occur if the project in conjunction with other projects, would result in an adverse effect to state or federally-listed species, contribute to a

reduction in the number of a listed species which would affect the species long-term sustainability, cause development which permanently disturbs a wildlife corridor, result in an effect to sensitive habitat of regional significance, or result in a conflict with regional conservation goals.

TABLE 4.11-5
GREENHOUSE GAS EMISSION REDUCTIONS

Sector of Reduction	Description	2020 Reductions (MMTCO₂E)
Transportation	Low Carbon Fuel Standard (LCFS)	10 to 20
Transportation	Reduction of HFC-134a emissions from non-professional servicing of motor vehicle air conditioning systems (MVACs)	1 to 2
Waste	Improved landfill methane capture	2 to 4
Agriculture	Manure management (methane digester protocol)	1
Agriculture	Electrification of stationary agricultural engines	0
Commercial	Specifications for commercial refrigeration	>7.3
Commercial	Reduction of Hydrofluorocarbons (HFCs) from foam production/installation including extruded polystyrene and block foam.	1
Commercial	Reduction of perfluorocarbons (PFCs) from the semiconductor industry	TBD
Education	Guidance/protocols for local governments to facilitate GHG emission reductions.	TBD
Education	Guidance/protocols for businesses to facilitate GHG emission reductions.	TBD
Electricity	Detection, repair, and recycling equipment for sulfur hexafluoride (SF ₆)	1
Energy Efficiency	Light-covered paving, cool roof and shade trees	TBD
Fire Suppression	Replacement of high global warming potential (GWP) gases used in fire protection systems with alternate chemical(s).	0
Forestry	Forestry protocol	TBD
Oil and Gas	Reduce venting/leaks form oil and gas systems	1
Transportation	Various transportation reduction and protocols refer to source for more information.	0.1 to 4

TBD = To be determined; MMTCO₂E = million metric tons (of) carbon dioxide equivalent (gases)
Source: California Environmental Protection Agency *Proposed Early Actions to Mitigate Climate Change in California*, 2006.

The project site is located within the northern Sierra Nevada floristic district contained within the Sierra Nevada biogeographic region of the larger California floristic province (Hickman, 1993). Regional habitat in the foothills of western Amador County consists of annual grassland, oak savanna, oak woodland, riparian woodland, seasonal wetlands, and vernal pools. These habitats are significant for the sustainability of listed species including, California red-legged frog (CRLF), vernal pool tadpole shrimp, Central Valley Steelhead, bald eagle, and the riparian brush rabbit. Impacts to these habitat types are likely to occur as residential and commercial growth increases in western Amador County, including near the communities of Martell, Jackson, Ione, Sutter Creek, Plymouth, Camanche Village, Pioneer, and Pine Grove.

The Buena Vista casino project site is located primarily on oak woodland and annual grassland habitats within the Foothill Belt Zone of Amador County and could potentially result in impacts to biological resources. The Buena Vista project site was previously used for cattle grazing and has experienced a high level of disturbance and degradation. Sensitive wetlands and riparian plant communities occur on the project site. During fieldwork undertaken in preparation of the EA, no special-status species were observed during field surveys on the Buena Vista Rancheria (EIP Associates, 2001). The USFWS has determined that no suitable habitat exists on the Buena Vista Rancheria property to support special-status aquatic crustaceans (i.e., vernal pool fairy shrimp).

As discussed in **Section 4.5**, implementation of Alternative A would result in an increase in human activity within the project area, which would include grading and development of about one-third of the 228± acre site. Most of the habitat disturbance would occur in annual grassland habitat, which presents limited resources for wildlife and is currently subject to disturbance from existing forms of land use, specifically cattle grazing by the tenant rancher. However, the oak savannah, oak woodland, and riparian woodland habitats occurring on-site do provide valuable habitat for a variety of wildlife and plant species. While no threatened or endangered species are known to occur on the project site, Alternative A would result in the removal of some of the habitat areas on the project site. Alternative A would also result in direct impacts to 0.37-acres of potentially jurisdictional wetlands from the construction of project components, such as parking lots and the recycled water reservoir. The removal of these habitats and the potential impacts on listed species is considered to be a significant cumulative effect when combined with other habitat loss as the result of residential and commercial growth in Amador County and potentially as a result of the Buena Vista casino project. Cumulative effects will be reduced to a less-than-significant level through implementation of the measures identified in **Section 5.2.5** of this document.

CULTURAL RESOURCES

Cumulative effects to cultural resources occur when sites that contain cultural features or artifacts are disturbed by development. As these resources are destroyed or displaced, important information is lost and our connection to past events, people and cultures is diminished. As the City of Plymouth and Amador County continue to grow, resources, including historic buildings and archaeological sites, may be lost. Amador County contains extensive cultural resources, including Miwok Indian sites and historical sites associated with early colonization and mining. Sites in western Amador County include Indian archaeological sites with bedrock mortars, village sites, and dance houses or roundhouses, and historic sites, including historic mines, homes, and churches. Impacts to these cultural resources are likely to occur as residential and commercial growth occurs in western Amador County, including near the communities of Martell, Jackson, Ione, Sutter Creek, Plymouth, Camanche Village, Pioneer, and Pine Grove.

The proposed Buena Vista casino site contains several significant prehistoric cultural sites. The surrounding area includes historic ranches and potential historic features associated with the 1850s founding of the Buena Vista village. The EA completed for the Buena Vista project site, identified mitigation measures to address potential effects, that included the monitoring of excavations by a qualified archaeologist, fencing around construction areas, and the recovery and curation of any uncovered artifacts (EIP Associates, 2001).

In regards to the development of Alternative A, a total of 12 historic archaeological sites and one historic district (Pioneer Mine District) were identified during field reconnaissance of the project site. Nine of the archaeological sites and the historic district have previously been evaluated for inclusion on the California Register of Historical Resources and were found to be ineligible. Reevaluation of these resources confirmed that they were ineligible for inclusion to the National Register of Historic Places. The three remaining sites are also expected to be ineligible, as they do not meet significance criteria.

Based on the extensive presence of cultural sites in Amador County and on and around the proposed Buena Vista casino site, it is expected that future development may result in significant losses of cultural resources. However, because no significant cultural resources have been identified on the project site, it is expected that the development of Alternative A would result in less-than-significant cumulative effects to historical resources.

SOCIOECONOMIC CONDITIONS

Cumulative socioeconomic effects could occur in the project area as the result of developments that affect the lifestyle and economic well being of residents. Examples of cumulative socioeconomic effects include impacts to the local labor market, housing availability, increased problem gambling costs, and impacts to schools and governments. These effects would occur as

the region's economic and demographic characteristics change, as the population grows and specific industries expand or contract.

Employment

The population of Amador County is expected to increase by 17.6-percent to approximately 43,331 between the years 2004 and 2025 (**Table 4.11-2**). As a comparison, the State of California is projected to grow by 25.6-percent by the year 2025 (CDOF, 2004). Information on the projected growth in employment in Amador County is limited; however, the California Employment Development Department (estimates that from 2004 to 2008 total non-farm employment will increase from 11,760 to 13,710 for a total of 1,950 new jobs (EDD, 2004d, 2005). While the current employment estimates take into account Jackson Rancheria, the projections do not take into account Alternative A or the Proposed Buena Vista Casino, which together would add an estimated additional 2,840 jobs (**Table 4.11-6**).

As discussed in **Section 4.7**, based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent of those employed by Alternative A would be residents of Amador County. It is also expected that 60-percent of those employed by the Buena Vista Casino would be residents of Amador County. Taken together, it is expected that 1,704 of those employed by Alternative A and the proposed Buena Vista Casino would reside in Amador County. As indicated in **Section 3.7**, Amador County has a labor force of 15,390 with approximately 760 unemployed workers. Employment generated by Alternative A and the proposed Buena Vista Casino would account for approximately 11-percent of the Amador County labor force and over twice the estimated number of unemployed workers in Amador County.

TABLE 4.11-6
EMPLOYMENT FROM ALTERNATIVE A AND OTHER AMADOR COUNTY CASINOS

Casino	Direct Employment
Existing Casino	
Jackson Rancheria Casino & Hotel ²	1,400
Proposed Amador County Casinos	
Alternative A ¹	1,365
Buena Vista Casino ³	1,475
Total Proposed	2,840
Total Existing & Proposed	4,240

SOURCES: ¹ Net direct jobs, GVA Marquette Advisors, 2004.

² Jackson Rancheria, 2005.

³ Estimate based on Alternative A and Jackson Rancheria, taking into account that a hotel is not proposed.

NOTES: Full-time equivalent positions.

Together these projects would substantially increase the employment of Amador County. This would have both positive and negative effects in the labor market. The increased employment

would result in a lack of available employees to fill all the jobs created by the proposed casinos and existing positions in the County. Business owners would find it increasingly difficult to fill positions, thereby adversely affecting the cost of doing business. Business owners would likely raise wages to be more competitive with businesses in and out of the local area. However, as a result, wages would likely rise as employers compete for employees, and this would beneficially impact wages in the County as it provides workers with more employment opportunities. Higher wages would also likely attract workers residing in surrounding counties, including Sacramento, San Joaquin, El Dorado and Calaveras counties.

Housing

The increase in employment that would result from the development of Alternative A and the Buena Vista Casino is expected to affect the availability of housing in Amador County. As noted above, these proposed casinos would create approximately 1,704 new jobs filled by people expected to reside in Amador County. Many of the employees hired by the proposed casinos would be expected to already reside in Amador County; however, due to the increase in job openings, it is expected that an increase in housing demand would result in Amador County. The Draft Amador County General Plan Housing Element anticipates that 946 residential units will be necessary to fill the County's housing needs for the period of 2004 to 2009 (Amador County, 2005). The Housing Element identifies that 391 of the residential units are needed to house low and very low-income households. The Housing Element estimates that 2,589 vacant single-family residential lots are available in major subdivisions located within the unincorporated portion of the County. Of these units, approximately 600 of these are identified to be in the low to moderate affordability range with the remainder in the moderate to above moderate range. Additionally, the Housing Element identifies the existing vacant and under-developed land zoned for multi-family use in the unincorporated area of the County that could support 1,117 residential units; however, development constraints will make development of residential units, especially affordable housing difficult. Key development constraints include permitting costs, the availability of water and wastewater services, topography, land costs, and construction costs. Amador County has identified strategies for providing affordable housing, which includes increasing the availability of land for residential development through re-designating lands near existing cities, increasing the maximum permitted per acre housing density, relaxing development restrictions and reducing or waiving permitting fees.

Within Plymouth, the most significant limit to residential growth is the water moratorium. In 1987, the State Department of Health Services (DHS) determined that the City was unable to adequately provide water to its residents with its existing water system. Consequently, the agency placed a moratorium on development with the City. In 1988, the City constructed a new well source to supplement its existing system and the moratorium was partially lifted in 1990 to allow the issuance of 50 building permits. However, until a reliable source of domestic water becomes available, only about 15 units can be approved with the City of Plymouth unless the City

Engineer makes a determination that there is additional water to serve residents and the moratorium is modified by DHS (City of Plymouth, 2004).

Due to the existing constraints housing developments in Amador County and the City of Plymouth, it is expected that the employment generated by Alternative A in conjunction with that created by the proposed Buena Vista casino would result in a significant effect to the availability of affordable housing in Amador County and Plymouth. Mitigation has been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County.

Social Costs of Problem Gambling

As discussed in **Section 4.7**, substantial research has been conducted on the social costs associated with gambling across the nation, most comprehensively in a report issued by the National Gambling Impact Study Commission (NGISC). The NGISC concluded that as “the opportunities for gambling become more commonplace, it appears likely that the number of people who will develop gambling problems also will increase. The development of Alternative A along with the Buena Vista Casino would introduce new casino venues within Amador County. However, because Amador County already has a casino (Jackson Rancheria) and several other casinos exist in the region (Thunder Valley Casino in Placer County, Cache Creek Casino Resort in Yolo County, and Black Oak Casino in Tuolumne County), the introduction of two additional casinos is not likely to significantly increase local residents’ access to casino gambling. Therefore, the cumulative effect of the development of Alternative A, in conjunction with the Buena Vista Casino, is considered to have a less-than-significant effect on the incidence of problem gambling in the region. However, the Tribe has identified mitigation, based on NIGSC recommendations, to address potential effects (**Section 5.2.7**).

Effects to Schools

Development of Alternative A along with the Buena Vista Casino would result in additional demands on the local education system. This increase in demand is expected to be in addition to the growth in the student body that would occur with the general population growth of Amador County. As discussed in **Section 4.7**, to determine the number of students that may result from project employment, the number of children and young adults enrolled in school (preschool-12th grade) in relation to the number of individuals in the labor force in Amador County was obtained. Based upon the figures for these two categories reported in the 2000 Census there is one student for every two persons employed or seeking employment. Therefore, based on the 1,704 new employees from Alternative A and the Buena Vista Casino expected to reside in Amador County, approximately 852 students would require education from County schools. While it is expected that many employees would already reside within the County, it is anticipated that some employees would relocate to Amador County; therefore, resulting in an increase to the number of

students in County schools. The increase in students could result in significant effects if the local schools lack capacity and staff to serve the additional students.

Five-year projections for classroom capacity illustrated that the majority of Amador County Public Schools, without consideration of the development of Alternative A or the proposed Buena Vista casino, will have an excess of classrooms (Government Financial Strategies, Inc., 2004). However, three schools were projected to be beyond classroom capacity by the year 2008 and may be unable to meet future enrollment demands. Ione Elementary and Sutter Creek Elementary schools are both projected to have a shortfall of three classrooms each, and Argonaut High School is projected to have a shortfall of five classrooms. Additional students that would be expected to attend these and other Amador County schools would further stretch the ability of the Amador County School District to serve the County's students. Mitigation has been identified in **Section 5.2.7** to address this effect.

Effects to Local Governments

Cumulative effects to the local governments may occur as the result of changes in the revenues and expenses of Amador County and the City of Plymouth. As discussed in **Section 4.7**, the development of Alternative A would remove the project site from the County's assessed property rolls, thereby removing approximately \$33,856 from the County's annual revenue. The loss of this revenue would be mitigated by payments to the County as identified in **Section 5.2.7**. The development of the Buena Vista casino would not remove property from the County's property roll as the project site is already tribal land and is not currently assessed property tax. Both Alternative A and the Buena Vista Casino would increase sales tax revenues generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area. Payroll and related taxes will also increase as a result of employment opportunities and earnings supported by the two projects. Increases in necessary expenditures could be required by Amador County and the City of Plymouth to address an increase demand for public services due to the development of Alternative A and the Buena Vista Casino. Public services that could be affected include police service, schools, transportation, public facilities, and fire and emergency medical services. Effects to these resources are discussed individually below.

TRANSPORTATION

2025 Cumulative Condition Plus Alternative A Effects

Daily Roadway Segment Effects

Table 4.11-7 summarizes the results of this daily roadway segment analysis for the 2025 Cumulative Condition with and without Alternative A Level of Service (LOS) conditions. With the traffic added to the study roadway segments by Alternative A, the roadway segment, SR 16

west of Old Sacramento Road, would have unacceptable operations, and therefore result in a significant effect.

TABLE 4.11-7
DAILY ROADWAY SEGMENT PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE A

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt A ³	No Project	Alt A	No Project	Alt A
SR49 North of Shenandoah Road	C	15,500	4,500	6,210	0.29	0.40	C	C
SR49 South of SR16	E	18,900	12,300	12,690	0.65	0.67	D	D
SR16 West of Old Sacramento Road	C	20,200	7,900	11,010	0.39	0.55	C	D
SR124 South of SR16	E	18,900	3,000	5,740	0.16	0.30	B	C
SR88 West of SR124	E	20,200	11,700	14,320	0.58	0.71	D	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²2025 Cumulative Condition No Project.

³ 2025 Cumulative Condition Plus Alternative A.

SOURCE: Appendix M

Peak Hour Intersection Effects

Table 4.11-8 summarizes the weekday results of the intersection analysis for the 2025 Cumulative Condition and **Table 4.11-9** summarizes the Saturday results with and without Alternative A. With the traffic added to the study intersections by Alternative A, the following intersections would have unacceptable operations, and therefore would result in a significant effect:

- SR 49 / Main Street during the weekday and Saturday PM Peak Hour
- SR 49 / Empire Street during the weekday and Saturday PM Peak Hour
- SR 49 / SR 16 during the weekday and Saturday PM Peak Hour
- SR 16 / SR 124 during the weekday PM Peak Hour
- SR 16 / Latrobe Road (Amador County) at the weekday and Saturday PM Peak Hour
- SR 104 (Preston) / SR 124 during the weekday and Saturday PM Peak Hour
- SR 104 (Main St) / SR 124 (Church St) at the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (East) during the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 88 / Kettleman Lane during the weekday PM Peak Hour
- SR 49 / Pleasant Valley Road during the weekday and Saturday PM Peak Hour

- SR 16 / Stone House Road during the weekday and Saturday PM Peak Hour
- SR 16 / Latrobe Road (Sacramento Co) at the weekday and Saturday PM Peak Hour
- SR 16 / Dillard Road during the weekday PM Peak Hour
- SR 16 / Sloughhouse Road during the weekday PM Peak Hour
- SR 16 / Grant Line Road during the weekday and Saturday PM Peak Hour
- SR 16 / Sunrise Boulevard during the weekday PM Peak Hour
- SR 16 / Excelsior Road during the weekday and Saturday PM Peak Hour
- SR 16 / Bradshaw Road during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

TABLE 4.11-8
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE A
WEEKDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative A			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.4	A	10.2	B	1.4	A	10.9	B
SR 49 / Main Street	C	54.7	F	>100	F	>100	F	>100	F
SR 49 / Poplar Street	D	1.2	A	14.1	B	1.2	A	15.7	C
SR 49 / Empire Street	C	3.6	A	56.0	F	4.2	A	79.0	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	4.1	A	28.5	D	13.5	B	84.3	F
SR 16 / Latrobe Road (Amador)	C	13.6	B	89.8	F	27.8	D	>100	F
SR 104 (Preston Avenue) / SR 124	C	>100	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	26.7	D	>100	F	82.4	F	>100	F
SR 88 / SR 124	D	4.1	A	16.6	C	5.9	A	20.7	C
SR 88 / SR 12 (East)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / SR 12 (West)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	28.8	C			38.4	D		
SR 49 / Pleasant Valley Road	C	>100	F			>100	F		

Intersection	LOS Threshold ¹	No Project				Alternative A			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 16 / Lone Road	C	1.7	A	28.8	D	2.2	A	42.8	E
SR 16 / Murieta South Parkway	D	9.4	A			11.8	B		
SR 16 / Murieta Parkway	D	24.4	C			43.6	D		
SR 16 / Stone House Road	E	50.0	E	>100	F	69.8	F	>100	F
SR 16 / Latrobe Road (Sac)	E	2.3	A	>100	F	3.1	A	>100	F
SR 16 / Dillard Road	D	81.3	F			>100	F		
SR 16 / Sloughhouse Road	D	2.3	A	56.3	F	2.7	A	73.6	F
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	>100	F			>100	F		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	>100	F			>100	F		
SR 49 / Project Driveway	C					33.4	E	>100	F
SR 49 / Service Access	C					10.3	B	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

TABLE 4.11-9
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE A
SATURDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative A			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.1	A	9.7	A	1.1	A	10.3	B
SR 49 / Main Street	C	59.5	F	>100	F	>100	F	>100	F
SR 49 / Poplar Street	D	1.2	A	13.6	B	1.2	A	15.6	C

Intersection	LOS Threshold ¹	No Project				Alternative A			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Empire Street	C	5.8	A	72.1	F	7.5	A	>100	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	1.7	A	14.9	B	4.0	A	22.9	C
SR 16 / Latrobe Road (Amador)	C	2.5	A	25.1	D	3.7	A	47.2	E
SR 104 (Preston Avenue) / SR 124	C	80.4	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	5.9	A	33.1	D	36.5	E	>100	F
SR 88 / SR 124	D	3.3	A	15.4	C	5.8	A	20.4	C
SR 88 / SR 12 (East)	D	56.0	F	>100	F	95.3	F	>100	F
SR 88 / SR 12 (West)	D	94.4	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	19.7	B			20.9	C		
SR 49 / Pleasant Valley Road	C	32.1	D			51.0	F		
SR 16 / Ione Road	C	2.1	A	20.9	C	2.7	A	34.1	D
SR 16 / Murieta South Parkway	D	8.4	A			9.0	A		
SR 16 / Murieta Parkway	D	21.9	C			26.5	C		
SR 16 / Stone House Road	E	19.1	C	>100	F	34.8	D	>100	F
SR 16 / Latrobe Road (Sacramento)	E	1.1	A	85.6	F	1.6	A	>100	F
SR 16 / Dillard Road	D	18.7	B			24.1	C		
SR 16 / Sloughhouse Road	D	0.8	A	19.1	C	0.8	A	22.7	C
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	55.4	E			69.9	E		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	47.8	D			55.3	E		

Intersection	LOS Threshold ¹	No Project				Alternative A			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Project Driveway	C					75.3	F	>100	F
SR 49 / Service Access	C					26.8	B	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

Mitigation Measures

Mitigation measures for the 2025 Cumulative Condition plus Alternative A have been developed for the roadway segments and intersections showing unacceptable LOS (bold text) as presented in **Tables 4.11-7, 4.11-8 and 4.11-9** and are discussed in **Section 5.2.8** of this Draft EIS. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS with the exception of SR 16/Latrobe Road (Sacramento County) and SR 16/Sloughhouse Road intersections. The LOS for SR 16/Latrobe Road (Sacramento County) in the weekday and Saturday PM peak hour and SR 16/Sloughhouse Road in the weekday PM peak hour would remain unacceptable with LOS F for both intersections for the worst movement. However, neither intersection is projected to warrant signalization under the 2025 Cumulative Conditions due to the acceptable average LOS. The following studied intersections have an existing unacceptable LOS in 2025 without the addition of project traffic and would need improvement with or without the proposed project:

- SR 49 / Main Street (weekday and Saturday PM Peak Hour)
- SR 49 / Empire Street (weekday and Saturday PM Peak Hour)
- SR 49 / SR 16 (weekday and Saturday PM Peak Hour)
- SR 16 / SR 124 (weekday PM Peak Hour)
- SR 16 / Latrobe Road (Amador) (weekday and Saturday PM Peak Hour)
- SR 104 (Preston Avenue) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 104 (Main Street) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (East) (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (West) (weekday and Saturday PM Peak Hour)
- SR 49 / Pleasant Valley Road (weekday PM Peak Hour)
- SR 16 / Stone House (weekday and Saturday PM Peak Hour)
- SR 16 / Latrobe Road (Sacramento) (weekday and Saturday PM Peak Hour)
- SR 16 / Dillard Road (weekday PM Peak Hour)

- SR 16 / Sloughhouse Road during the weekday PM Peak Hour)
- SR 16 / Grant Line Road (weekday and Saturday PM Peak Hour)
- SR 16 / Sunrise Boulevard (weekday PM Peak Hour)
- SR 16 / Excelsior Road (weekday and Saturday PM Peak Hour)
- SR 16 / Bradshaw Road (weekday PM Peak Hour)

2025 Cumulative Condition Plus Mitigated Alternative A Plus the Proposed Buena Vista Casino

This section documents the cumulative condition with the addition of the proposed Buena Vista Casino traffic for the study roadway segments and intersections. The total project size is 245,405 square feet, with 56,000 square feet of main gaming floor including 2,000 slot machines and 80 gaming tables.

Buena Vista Casino Trip Generation

Trip generation estimates for the Buena Vista Casino project are presented in **Table 4.11-10**. The trip generation used is obtained from the Buena Vista EA to maintain consistency with the previously published analysis. (EIP Associates, 2001).

The trip generation land use estimates are based on the data provided in the NOP of the Draft Tribal Environmental Impact Report (TEIR) for the Buena Vista Rancheria of Me-Wuk Indians of California, signed January 7, 2005. The trip rate estimates are based on the assumptions made in the Buena Vista Environmental Assessment.

The project will provide approximately 3500 to 4000 parking spaces. Other facilities may include restaurants, coffee shop, food court, ballrooms etc. The trip generation estimates are presented below in **Table 4.11-10**.

Trips generated by the Jackson Rancheria Casino off SR 88 in the City of Jackson are included in the Amador Regional Transportation Plan, SACMET traffic model, San Joaquin Council of Governments traffic models that the project used and are therefore included in the background traffic volumes for all scenarios analyzed.

Buena Vista Project Trip Distribution

Trip distribution patterns used in this analysis are based on the trip distributions presented in the Buena Vista EA. The trip distribution extends from the project site onto local roadways. The directional distribution, shown in the Buena Vista Casino EA, was used to identify the common study roadway segments and intersections.

TABLE 4.11-10
TRIP GENERATION ESTIMATES – BUENA VISTA CASINO

Variable	Quantity	Source	Daily Rates	PM Peak Hour Rates			Daily Trips	PM Peak Hour Trips		
				In	Out	Total		In	Out	Total
Gaming Devices	2355	ITE		0.19	0.24	0.43		447	1013	1460
		SANDAG	97				5,432			
Casino ksf	56	Range from 97 to 130	130				7,280			
		ITE		8.5	8.8	17.3		476	969	1445
Parking Spaces	3750	R. Trout		0.32	0.18	0.5		1200	1875	3075
							Average	708	1285	1993

NOTES: Parking quantity assumes an average of 3500 and 4000 spaces. Daily trip generation rates are derived from the San Diego Association of Governments unpublished data. The number of gaming devices was adjusted to reflect an increase in floor space from the original project description in the Environmental Assessment.

SOURCE: Appendix M

Travel patterns of the two casinos overlap on SR 16, SR 124, and SR 88, as trips for both casinos would come northeast from Stockton area or southwest from the Sacramento area to visit either casino. It was determined that there are four intersections and three roadway segments that overlap between the project and the Buena Vista Casino project trip distributions. These roadway segments and intersections would receive both Buena Vista Casino project trips and the trips for the proposed project.

Overlapping Roadway Segments

- SR 16 West of Old Sacramento Road
- SR 124 South of SR 16
- SR 88 West of SR 124

Overlapping Intersections

- SR 104 (Preston Avenue) / SR 124
- SR 104 (Main Street) / SR 124
- SR 88 / SR 124
- SR 16 / Ione Road

It is estimated that 20-percent of the Buena Vista trips would impact the project roadway facilities described above. The Buena Vista project trips were assigned to the roadway segments and intersections by applying the respective trip distribution percentage to the trip generation. Those

trips were then added to the project Cumulative Plus Alternative A with Mitigation Measures condition traffic volumes.

Daily Roadway Segment Effects

The results of the roadway segment LOS analysis are presented below in **Table 4.11-11**. As shown, none of the overlapping roadway segments have an unacceptable LOS and therefore result in no significant effect.

TABLE 4.11-11
ROADWAY SEGMENT LEVEL OF SERVICE CUMULATIVE PLUS ALTERNATIVE A WITH MITIGATION PLUS BUENA VISTA CASINO

Roadway Segment	LOS Threshold ¹	Capacity	Class	Cumulative Plus Alternative A with Mitigation Measures			Cumulative Plus Alternative A with Mitigation Measures (Plus Buena Vista Casino)		
				ADT	V/C	LOS	ADT	V/C	LOS
SR 16 West of Old Sacramento Road	C	34,900	Arterial	11,010	0.32	B	11,738	0.34	B
SR 124 South of SR 16	E	18,900	Arterial II	5,740	0.30	C	6,322	0.33	C
SR 88 West of SR 124	E	34,900	Arterial	14,320	0.71	D	19,052	0.94	E

NOTES: Capacity and Class are the standards for the Recommended Improvements

Bold denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

Peak Hour Intersection Effects

The results of the intersection LOS analysis are presented below in **Table 4.11-12**. As shown below, the following intersections will have an unacceptable LOS and therefore result in a significant effect:

- SR 104 (Preston Avenue) / SR 124
- SR 16 / Ione Road

The addition of the project trips and Buena Vista Casino trips on the roadway network represents the worst-case scenario, as it analyzes the cumulative condition with the trips generated from both casinos overlaid.

Mitigation Measures

Mitigation measures for the 2025 Cumulative Condition plus Mitigated Alternative A plus Buena Vista Casino scenario have been developed for the intersections showing unacceptable LOS (bold text) as presented in **Table 4.11-12** and are discussed in **Section 5.2.8** of this document. With the incorporation of project mitigation measures, each of the intersections that are shown to have an

unacceptable LOS in this scenario would be improved to an acceptable LOS. This reduces the impact to a less-than-significant effect.

TABLE 4.11-12
CUMULATIVE PLUS ALTERNATIVE A WITH MITIGATION PLUS BUENA VISTA CASINO
INTERSECTION LEVEL OF SERVICE – WEEKDAY PM PEAK HOUR

Intersection Location	LOS Threshold ¹	Cumulative Plus Alternative A with Mitigation				Cumulative Plus Alternative A with Mitigation (Plus Buena Vista Casino)			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Signalized Intersection									
SR 104 (Preston Avenue) / SR 124	C	32.6	C			69.5	E		
SR 104 (Main Street) / SR 124	C	22.8	B			17.7	B		
Unsignalized Intersection									
SR 88 / SR 124	C	5.9	A	20.7	C	6.3	A	24.5	C
SR 16 / Lone Road	E	2.2	A	42.8	E	26.7	D	220.4	F

NOTES: Average control delay is seconds per vehicle based on the *Highway Capacity Manual* (NRC, 2000). Delay and LOS are for all vehicles at signalized, and for the worst movement at unsignalized intersections.

Bold denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

LAND USE

Cumulative land use effects may occur as the result of expected growth and disruption of orderly development. As discussed under the socioeconomic section above, the development of Alternative A in conjunction with the Buena Vista Casino is expected to increase demand for housing within Amador County. In the short-term the increased demand may increase the housing and housing rental prices as more people seek to locate in the region. Over time, the cumulative demand is expected to increase development interest in Amador County. As described in the Draft Amador County General Plan Housing Element of the County General Plan, there are numerous constraints to the development of housing, especially affordable housing. These constraints include permitting costs, the availability of water and wastewater service, topography, land costs, and construction costs. These constraints substantially increase the cost of developing affordable housing in Amador County and make it more difficult for those seeking a home in Amador County to purchase or build a home. Amador County has identified the need to remove these constraints and provide incentives to promote the provision of

affordable housing in the County. Programs identified in the Housing Element include increasing the availability of land for residential development through re-designating lands near existing cities, increasing the maximum permitted housing density from 18 to 25 units per acre, relaxing development restrictions and the reduction or waiver of permit fees.

The constraints to the development of affordable housing may result in increased commuting from surrounding counties, especially Sacramento and San Joaquin counties, where more affordable housing choices exist. However, development of Alternative A and the Buena Vista casino is expected to significantly increase demand for housing development in Amador County. As previously identified, mitigation measures have been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County. The housing program would coordinate its activities with Amador County and the City of Plymouth in order to further countywide planning efforts.

Agriculture

As growth occurs within the region, cumulative effects to agriculture may occur as the result of the transformation of agricultural lands to other land uses. The most economically significant agricultural products in Amador County are wine grapes and cattle. The Shenandoah Valley, located directly northeast of Plymouth, is the center of the wine industry in Amador County. The project site has supported cattle grazing, but does not contain prime or unique farmlands or farmlands of statewide importance. Likewise, the Buena Vista site supports grazing but has soils that are classified as marginal agricultural soils which provide low yields (EIP Associates, 2001). Development of the project site and the Buena Vista site would transform land that is currently used for grazing with limited potential for other agricultural uses. Therefore, the development of Alternative A is not considered to significantly contribute to a cumulative loss of agricultural lands in Amador County.

PUBLIC SERVICES

Water Supply

As growth occurs within the region, cumulative effects to water supply may take place as the result of the overdraft of groundwater and effects to water delivery facilities. Water supply in the project area is provided by the City of Plymouth, which utilizes groundwater and imports water from the Middle Fork of the Consumnes River via the Arroyo Ditch. In 1987, the State Department of Health Services (DHS) determined that the City was unable to adequately provide water to its residents with its existing water system. Consequently, the agency placed a moratorium on development with the City. In 1988, the City constructed a new well source to supplement its existing system and the moratorium was partially lifted in 1990 to allow the issuance of 50 building permits. The City is looking at a minimum of two alternatives to obtain a reliable water supply. In the early 90s, the City investigated the feasibility of constructing a dam

on Big Indian Creek. This project stalled during the environmental review process due to increased construction costs associated with mitigating impacts to cultural resources. The second potential water supply would be obtaining water from the Amador Water Agency with the construction of a pipeline from Sutter Creek. Until a reliable source of domestic water becomes available, approximately 15 units can be approved by the City of Plymouth, unless the City Engineer makes a determination that there is additional water to serve residents and the moratorium is modified by DHS (City of Plymouth, 2004). Water on the outskirts of the City, near the project site, is also supplied by private wells.

Beyond the City of Plymouth, the Amador Water Agency (AWA) provides water supply for the majority of the Amador County. The AWA obtains its water primarily from the North Fork of the Mokelumne River and distributes water to Jackson, Ione, Amador City, Sutter Creek, Drytown and other areas of the County. AWA has an allocation of 15,000-acre-feet of water; however, with evaporation and seepage from the County's water conveyance system, only 7,000± acre-feet of this water allocation is available to customers as of 2003. The 7,000-acre-feet of water available to the County's customers can be said to be at or near capacity with approximately 13,000 residential units served. The Amador Transmission Project was undertaken to replace the 23.5± miles of deteriorating transmission system with a 30" pipeline, thereby making most of the 15,000-acre feet of water allocated to AWA available to County customers. The project was delayed by litigation, but is slated to commence construction in summer, 2005. It is anticipated that completion of the project will take 18 months, increasing the available water supply for Amador County commencing in early 2007. Upon completion of the project, AWA estimates that water supplies available to the western portion of the County should approximately double—providing the capacity necessary to support a similar increase in population and housing (Amador County, 2005).

Also necessary to this capacity increase is the expansion of the Tanner, Buckhorn and Ione water treatment facilities. Participation fees will provide funding for this expansion and other improvements to the water system. In short, upon completion of the Amador Transmission Project and the expansion of the above water treatment plants, the two primary constraints related to water supply in the unincorporated County will be removed (Amador County, 2005).

The Buena Vista Tribe proposes to obtain water supply for its proposed casino in the short-term by wells located on the project site and/or by trucking water to the site. For long-term supply, the Buena Vista Tribe is considering construction of an off-site pipeline to utilize water provided by off-site sources (Buena Vista Tribe, 2005). It is most likely that off-site water sources would consist of either groundwater wells or connection to the AWA system.

The development of Alternative A and the Buena Vista casino, along with expected regional growth, is not expected to result in significant cumulative effects to water supply in Amador

County. Amador County and the City of Plymouth have projected water demands based on growth projected to occur in the development of land uses identified in the respective General Plans. Projected water demands are based upon the average water usage of residences and equivalent commercial and industrial usage rates. These usage rates are then applied to the number of residential and commercial parcels expected to be developed in the future. Alternative A would not increase the projected water demands for the City of Plymouth or Amador County, as the casino and hotel would be located on land designated by Plymouth for commercial use and the water supply obtained from the City of Plymouth's municipal system would be limited to that already provided to the parcels.

An adequate water supply has been identified for Alternative A on the basis of pumping tests of the three source wells and tanker truck delivery. It is uncertain which water supply option the Buena Vista casino would utilize; however, due to the projected doubling of supply projected by the AWA, it is expected that ample water supplies would be available for residential and commercial growth in Amador County. No significant cumulative effects are expected to occur as the result of the development of Alternative A in conjunction with the Buena Vista casino and regional growth.

Wastewater Service

Within the City of Plymouth, wastewater service is provided by the City's wastewater system. The City operates a 170,000-gallon per day Wastewater Treatment Plant (WWTP) that utilizes aerated and non-aerated treatment ponds. Treated wastewater is disposed by spray irrigation on 85-acres of grasslands from April through October and stored in a 185-acre foot reservoir during the winter months. The City's Long-Term Wastewater Management Plan identifies necessary improvements required to provide for future growth within the City. Necessary improvements include repairing the City's collection system, converting the existing treatment plant to an advanced secondary plant, reducing storage volumes or expanding storage capacity and expanding the existing spray disposal area and constructing a tailwater confinement system (Eco:Logic, 2002).

As described in **Section 2.2.1**, wastewater from Alternative A would be treated in the Tribe's WWTP. The Buena Vista Tribe proposes to construct and operate a tertiary wastewater treatment plant on the project site to treat wastewater from the proposed casino and other facilities. Options for the disposal of treated effluent include on-site crop irrigation, subsurface drain fields, and surface water discharge, as well as the sale of reclaimed wastewater to off-site users. The Buena Vista Tribe also identifies that off-site wastewater treatment alternatives will be explored. The development of Alternative A and the Buena Vista casino, along with expected regional growth, are not expected to result in significant cumulative effects to wastewater service in Amador County. Wastewater service demand from regional growth, including upgrades necessary to the City of Plymouth's treatment plant and other regional treatment plants, would be provided by

connection and usage fees. The wastewater generated by Alternative A will be treated and disposed of on the project site without requiring service by the City of Plymouth or AWA. The Buena Vista casino will either treat wastewater on-site or will contract with a service provider such as the City of Ione or AWA. If the wastewater generated by the Buena Vista casino is treated by a service provider, the Buena Vista Tribe would be required to pay connection fees and any infrastructure improvements required to serve the casino. Because the Buena Vista casino site is located 13 miles from the project site, the wastewater treatment and disposal of each project would not affect the other. No significant cumulative effects to wastewater service are expected to occur as the result of the development of Alternative A in conjunction with the Buena Vista casino and regional growth.

Law enforcement

Cumulative effects related to law enforcement could occur in the region as the result of inadequate police and judicial service to expanded commercial and residential development. Adverse effects could include an insufficient number of patrolling officers, an overburdened judicial service, and inadequate facilities.

The Amador County Sheriff's Office (ACSO) provides law enforcement in the project area. ACSO provides general law enforcement services to the City of Plymouth on a contract basis and throughout the rest of the unincorporated portion of Amador County. The California Highway Patrol (CHP) provides traffic enforcement services to all of the unincorporated areas of Amador County. Cities within Amador County, including Jackson and Ione, provide law enforcement through municipal police departments. The ACSO currently has no service agreement with the Jackson Rancheria but provides service in accordance with Public Law 280. In 2003, the Jackson Rancheria accounted for 130 incidences out of the total 16,566 ACSO incidences, accounting for approximately 16-percent of the total County arrests (650), less than one-percent of the total incidences (16,566) and approximately 2-percent of the total calls for service (6,820) (ACSO, 2004b). Alternative A and the proposed Buena Vista casino are similar in size and scope as the Jackson Rancheria and would be expected to result in similar demand on the ACSO services. The development of these casinos in combination with growth that is expected to occur in the region may overburden the ability of the ACSO, CHP and other law enforcement agencies to provide adequate service to businesses and residents of Amador County. Therefore, Alternative A is expected to result in a potentially significant cumulative effect. Mitigation has been identified in **Section 5.2.9** to address the potential law enforcement effects to Amador County and reduce the impact to a less-than-significant level.

Fire protection and emergency medical services

Cumulative effects related to fire protection and emergency medical services could occur in the region as the result of inadequate response time to existing and planned development. Adverse

effects could include an insufficient number of staff, equipment, and stations to provide for the safety of persons and property in Amador County.

The Amador Fire Protection District (AFPD) provides emergency fire, rescue, and medical aid service to the communities and surrounding areas of the City of Plymouth, Amador Pines, Pioneer, Pine Grove, Pine Acres, Volcano, Martell, Drytown, Willow Springs, Fiddletown, and River Pines. The AFPD also provides service to the Jackson Rancheria casino. Cities within Amador County, including Jackson and Ione, provide fire protection and emergency medical services through municipal fire departments.

To address the fire protection and emergency medical service requirements of Alternative A, the Tribe will develop an independent fire station on the project site. The Tribe will contract or hire adequately trained personnel. All the members of the Tribal Fire Department, including the Chief Officer, will be trained to a minimum level of Fire Fighter I (standards as defined in the 1001 standard of the National Fire Protection Associate standard and standard for Fire Fighter Professional Qualifications, Chapter 5, 2002 edition). In addition to being trained as professional fire fighters under the 1001 NFPA standards, the members of the Tribal Fire Department will be trained to the Paramedic (advanced life support) level under California standards. It is anticipated that the Tribal Fire Station would enter into a mutual-aid agreement with Amador Fire Protection District (AFPD) and other local fire protection providers. The mutual-aid agreement would provide the terms and conditions under which the parties would respond and assist in calls for aid.

The Buena Vista Tribe has not indicated how fire protection and emergency medical services will be provided for its proposed casino. It can be expected that the Tribe will either enter a service agreement with service providers or develop an independent tribal service.

The development of Alternative A and the Buena Vista casino, along with expected regional growth is not expected to result in significant cumulative effects to fire protection and emergency medical service in Amador County. The Tribe will provide these services to the proposed casino and hotel by an on-site independent fire station. The Tribal Fire Station would enter into a mutual-aid agreement with AFPD and other local fire protection providers and, therefore, increase the availability of fire protection and emergency medical service (EMS) in the project area. If the Buena Vista casino is provided fire protection and EMS by AFPD or another service provider, the Buena Vista Tribe would be required to pay for the services by contract or agreement. No significant cumulative effects to fire protection and emergency medical service are expected to occur as the result of the development of Alternative A in conjunction with the Buena Vista casino and regional growth.

Other Public Services

Cumulative effects to other public services may occur if service providers are unable to provide adequate services to existing and planned development. As discussed in **Section 4.9**, solid waste, electricity, natural gas, and telephone services would be provided to the project site. The Tribe will coordinate with the desired service providers for utilities. The Tribe will pay for these services through service agreements and fees and the proposed Buena Vista casino would also be expected to pay for these services.

As discussed in **Section 4.9**, the solid waste generated by Alternative A is estimated to be 6.25 tons per day. A contract waste hauler would deliver waste from Alternative A to the Keifer Landfill, which has a closure date of 2064. Waste generated from Alternative A would be less than 0.30-percent of the daily waste stream and would represent a negligible addition to the landfill (Goodrich, 2004). The proposed Buena Vista casino is expected to generate a similar amount of solid waste for disposal at the Keifer Landfill. Taken together, these two projects are not expected to significantly affect the daily waste stream or the ability of the Keifer Landfill to accept waste from Amador County. No significant cumulative effects to these public services have been identified.

OTHER VALUES

Noise Effects

Alternative A would result in cumulative changes in traffic noise levels as identified in **Table 4.11-13**. According to this table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed in the future year with the inclusion of project and the Buena Vista casino traffic. Because traffic levels are predicted to almost double at the roadway segment with the highest decibel increase, the predicted increase is approximately 2 Leq during Phase I and Phase II on SR 124 south of SR 16. The resulting noise level would be 62 Leq during the peak hour, a level below the Noise Abatement Criteria identified by FHWA. Therefore, cumulative noise effects are considered to be less than significant.

Hazardous Materials

Cumulative hazardous materials involvement that may occur as the result of industrial practices include the releases of hazardous materials into the environment or exposure of residents to contaminants as a result of hazardous materials releases. As identified in **Section 3.10**, there are no existing hazardous materials on the project site. The use of standard operating procedures for the safe handling, use, storage and disposal of hazardous materials during the construction of Alternative A will minimize cumulative effects for hazardous materials. Incorporation of mitigation measures included in **Section 5.2.10** will also reduce cumulative effects for the construction and operation of Alternative A.

TABLE 4.11-13
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERNATIVE A (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Cumulative Year		Change Leq
	Peak hour (Leq)		
	No Project	Alternative A	
SR 49 North of Shenandoah Road	58	60	+2
SR 49 South of SR16	63	63	0
SR 16 West of Old Sacramento Road	62	63	+1
SR 124 South of SR 16	60	62	+2
SR 88 West of SR 124	65	66	+1

Source: MEC using FHWA RD-77-108 with traffic inputs from CCS/TY Lin

Development of the proposed Buena Vista casino is not expected to pose a significant risk to human health and/or the environment. This conclusion is based on current management practices, a lack of reported hazardous materials, and the minimal use of hazardous materials for these projects. Alternative A is not expected to significantly increase the risk of a hazardous materials incident when combined with the proposed Buena Vista casino and other proposed and existing facilities in Amador County.

Visual Resources

As growth occurs within the City of Plymouth and Amador County, cumulative effects to visual resources may take place as the result of increase development that is considered inconsistent with the rural, small town character of the region. While growth is expected to occur over the next 20 years, due to the limited population and large land area, Amador County is expected to maintain its rural and small town character.

The development footprint is currently developed with a commercial development and is bordered by commercial developments along SR 49. Alternative A would remove the existing Shenandoah Inn and replace the building with a casino, hotel, events center with associated uses, some of which would be visible from SR 49. These developments would be partially screened by the existing gas station located immediately west of the project site and by trees and shrubs included in site landscaping. However, the development of the facilities on the project site will contribute to the ongoing and cumulative transformation of the project area. The City has planned for this transformation with the zoning of the site for commercial uses.

The proposed Buena Vista casino site is located approximately 13 miles to the southwest near Jackson Valley and the Buena Vista Peaks. The development of a casino in this area would introduce an urban element into an otherwise isolated and rural area. The proposed Buena Vista casino will therefore contribute to the cumulative transformation of Amador County.

Because development of Alternative A will occur in an area already developed with commercial land uses, modification to the natural view shed, including terrain or vegetation will be minimized. Additionally, because of the distance between Alternative A and the Buena Vista casino, the proposed sites are contained within distinctive and separate view sheds. Therefore, potential cumulative visual resource effects of Alternative A, with consideration of the Buena Vista casino, are considered to be less than significant.

4.11.2 ALTERNATIVE B – REDUCED CASINO ALTERNATIVE

LAND RESOURCES

Alternative B is designed to avoid the steeper areas of the project site and would not require substantial changes in existing grades. An erosion control plan would be implemented as part of construction procedures to minimize soil erosion. Additionally, project features would be incorporated into the proposed facilities to direct and detain stormwater runoff, limiting the potential for erosion on and off the project site. Other future developments, including commercial and residential land uses in the project area, are expected to result in minor changes in the topography. It is also expected that the proposed Buena Vista casino would avoid the steeper terrain and likewise have minor topographic effects. The proposed Buena Vista casino would also include erosion control measures in compliance with the NPDES permit program and would comply with the earthquake design provisions of the UBC. The major topographic features of the project site would be preserved under Alternative B, and the design of the facilities would include an Erosion Control Plan and comply with the UBC. Other projects including the Buena Vista casino are expected to likewise comply with the NPDES permit program and the provisions of the UBC. Therefore, cumulative effects regarding land resources are considered to be less than significant.

WATER RESOURCES

Surface Water

The Tribe has made appropriate design allowances that will reduce cumulative water resource effects of Alternative B to a less-than-significant level. As with Alternative A, these features include detention basins, Stormceptor® sediment/grease traps, and reducing impervious surfaces. The Tribe will also prepare a SWPPP to control discharge of pollutants in stormwater. The development of the proposed Buena Vista casino may likewise affect water quality by increasing sedimentation and pollution, and increasing stormwater flows. However, as noted above, it is expected that the proposed Buena Vista casino would include erosion control measures in compliance with the NPDES permit program. With the incorporation of the identified design features and BMPs included in the preparation of a SWPPP, Alternative B would not result in a significant cumulative water resource effect.

Groundwater

As with Alternative A, implementation of Alternative B may result in groundwater extraction to meet projected water demands depending upon the water supply option selected by the Tribe. As discussed above, it is anticipated that non-tribal development would be required to connect to the City's municipal water supply system, which would rely mainly on water from the Plymouth Pipeline project as groundwater extraction has already reached maximum pumping capacity. Additionally, if the Buena Vista casino utilizes groundwater, the distance between the two project sites (approximately 13 miles) would isolate the individual impacts on groundwater. Therefore, groundwater extraction to meet the water demands of Alternative B would not be cumulatively considerable. Option 1 does not include groundwater pumping to meet projected water demands. Independent of water supply option, implementation of Alternative B would have a less-than-significant cumulative impact on groundwater resources.

AIR QUALITY

The regional setting and long-term conditions for Alternative B would be similar to Alternative A; however, Alternative B is a reduced version of Alternative A. With the implementation of measures identified in **Section 5.2.4**, Alternative B would result in minimal adverse cumulative effects to air quality.

BIOLOGICAL RESOURCES

Alternative B would result in the grading and development of about one-third of the 228± acre site. Most of the habitat disturbance would occur in annual grassland habitat, which presents limited resources for wildlife and are currently subject to disturbance from existing forms of land uses, specifically cattle grazing by the tenant rancher. However, the oak savannah, oak woodland, and riparian woodland habitats occurring on-site do provide habitat for a variety of wildlife and plant species. While no threatened or endangered species are known to occur on the project site, Alternative B would result in removal of some of the habitat on the project site. Alternative B would also result in direct impacts to 0.35-acres of potentially jurisdictional wetlands from the construction of project components, such as parking lots and the recycled water reservoir. The removal of these habitats and the potential impacts on listed species is considered to be a significant cumulative effect when combined with other habitat loss in Amador County and potentially as a result of the Buena Vista Casino project. Cumulative effects will be decreased to a less-than-significant level through implementation of the mitigation measures identified in **Section 5.2.5** of this document.

CULTURAL RESOURCES

Based on the extensive presence of cultural sites in Amador County including the proposed Buena Vista casino site, it is expected that future development may result in significant losses of cultural resources. However, because no significant cultural resources have been identified on the project

site, it is expected that the development of Alternative B would result in less-than-significant cumulative effects to historical resources.

SOCIOECONOMIC CONDITIONS

Alternative B would introduce a new source of economic activity in the City of Plymouth and Amador County. **Table 4.11-14** summarizes the estimated employment generated by Alternative B, along with that generated by Jackson Rancheria Casino and the proposed Buena Vista Casino. Taken together, Alternative B and the Proposed Buena Vista Casino would add an estimated additional 2,667 jobs in Amador County.

As discussed in **Section 4.7**, based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent of those employed by Alternative B would be residents of Amador County. It is also expected that 60-percent of those employed by the Buena Vista casino would be residents of Amador County. Taken together, it is expected that 1,600 of those employed by Alternative B and the proposed Buena Vista casino would reside in Amador County. As indicated in **Section 3.7**, Amador County has a labor force of 15,390 with approximately 760 unemployed workers. Employment generated by Alternative B and the proposed Buena Vista casino would account for approximately 10-percent of the Amador County labor force and over twice the estimated number of unemployed workers in Amador County. Together these projects would substantially increase the employment of Amador County. This would have both positive and negative effects in the labor market. Business owners would find it increasingly difficult to fill positions, adversely affecting the cost of doing business. However, as a result, wages would likely rise as employers compete for employees. This would beneficially impact wages in the County as it provides workers with more employment opportunities.

TABLE 4.11-14
EMPLOYMENT FROM ALTERNATIVE B AND OTHER AMADOR COUNTY CASINOS

Casino	Direct Employment
Existing Casino	
Jackson Rancheria Casino & Hotel ¹	1,400
Proposed Amador County Casinos	
Alternative B ²	1,192
Buena Vista Casino ³	1,475
Total Proposed	2,667
Total Existing & Proposed	4,067

SOURCES: ¹ Jackson Rancheria, 2005.

² Net direct jobs, GVA Marquette Advisors, 2004.

³ Estimate based on Alternative A and Jackson Rancheria, taking into account that a hotel is not proposed.

NOTES: Full-time equivalent positions.

Housing

The increase in employment that would result from the development of Alternative B and the Buena Vista casino is expected to affect the availability of housing in Amador County. As noted above, these proposed casinos would create approximately 1,600 new jobs filled by people expected to reside in Amador County. Many of the employees hired by the proposed casinos would be expected to already reside in Amador County; however, due the increase in job openings it is expected that an increase in housing demand would result in Amador County. The Draft Amador County General Plan Housing Element anticipates that 946 residential units will be necessary to fill the County's housing need for the period of 2004 to 2009 (Amador County, 2005). The Housing Element identifies that development constraints will make development of residential units, especially affordable housing, difficult. Within Plymouth, the most significant limit to residential growth is the water moratorium. Until a reliable source of domestic water becomes available, only about 15 units can be approved within Plymouth unless the City Engineer makes a determination that there is additional water to serve residents and the moratorium is modified by DHS (City of Plymouth, 2004).

Due the existing constraints in developing housing in Amador County and the City of Plymouth it is expected that the employment generated by Alternative B, in conjunction with that created by the proposed Buena Vista casino, would result in a significant effect to the availability of affordable housing in Amador County and Plymouth. Mitigation has been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County.

Social Costs of Problem Gambling

The development of Alternative B, along with the Buena Vista Casino, would introduce new casino venues within Amador County. However, because Amador County already has a casino (Jackson Rancheria) and several other casinos that exist in the region, the introduction of two additional casinos is not likely to significantly increase local residents' access to casino gambling. Therefore, the cumulative effect of the development of Alternative B, in conjunction with the Buena Vista Casino, is considered to have a less-than-significant effect on the incidence of problem gambling in the region. However, the Tribe has identified measures, based on NIGSC recommendations, to further reduce potential cumulative effects (**Section 5.2.7**).

Effects to Schools

Along with the creation of jobs and increased housing demand, development of Alternative B, along with the Buena Vista Casino, would result in additional demands on the local education system. This increase in demand is expected to be in addition to the growth in the student body that would occur with the general population growth of Amador County. Based on the 1,600 new employees from Alternative B and the Buena Vista casino expected to reside in Amador County, approximately 800 students would require education from County schools. While it is expected

that many employees already reside within the County, it is also expected that some employees would relocate to Amador County. This would increase the number of students in local schools. The increase in students could result in significant effects if the local schools lack capacity and staff to serve the additional students. Mitigation has been identified in **Section 5.2.7** to address this effect.

Effects to Local Governments

Cumulative effects to the local governments may occur as the result of changes in the revenues and expenses of Amador County and the City of Plymouth. As discussed in **Section 4.7**, the development of Alternative B would remove the project site from the County's assessed property rolls, removing approximately \$33,856 from the County's annual revenue. The loss of this revenue would be mitigated by payments to the County as identified in **Section 5.2.7**. The development of the Buena Vista casino would not remove property from the County's property roll as the project site is already tribal land and is not currently assessed property tax. Both Alternative B and the Buena Vista casino would increase sales tax revenues generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area. Payroll and related taxes would also increase as a result of employment opportunities and earnings supported by the two projects. Increases in necessary expenditures could be required by Amador County and the City of Plymouth to address an increased demand for public services due to the development of Alternative B and the Buena Vista casino. Public services that could be affected include police service, schools, transportation, public facilities, and fire and emergency medical services. Effects to these resources are discussed individually below.

TRANSPORTATION

2025 Cumulative Condition Plus Alternative B Effects

Daily Roadway Segment Effects

Table 4.11-15 summarizes the results of this daily roadway segment analysis for the 2025 Cumulative Condition with and without Alternative B LOS conditions. With the traffic added to the study roadway segments by Alternative B, the roadway segment, SR 16 west of Old Sacramento Road, would have unacceptable operations, and therefore result in a significant effect.

TABLE 4.11-15
DAILY ROADWAY SEGMENT PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE B

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt B ³	No Project	Alt B	No Project	Alt B
SR49 North of Shenandoah Road	C	15,500	4,500	5,960	0.29	0.38	C	C

			Average Daily Traffic Volume	Volume to Capacity Ratio V/C		Level of Service		
SR49 South of SR16	E	18,900	12,300	12,630	0.65	0.67	D	D
SR16 West of Old Sacramento Road	C	20,200	7,900	10,560	0.39	0.52	C	D
SR124 South of SR16	E	18,900	3,000	5,340	0.16	0.28	B	C
SR88 West of SR124	E	20,200	11,700	13,940	0.58	0.69	D	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² 2025 Cumulative Condition No Project.

³ 2025 Cumulative Condition Plus Alternative B.

SOURCE: Appendix M

Peak Hour Intersection Effects

Table 4.11-16 summarize the weekday results of the intersection analysis for the 2025 Cumulative Condition and **Table 4.11-17** summarizes the Saturday results with and without Alternative A. With the traffic added to the study intersections by Alternative B, the following intersections would have unacceptable operations, and therefore would result in a significant effect:

- SR 49 / Main Street during the weekday and Saturday PM Peak Hour
- SR 49 / Empire Street during the weekday and Saturday PM Peak Hour
- SR 49 / SR 16 during the weekday and Saturday PM Peak Hour
- SR 16 / SR 124 during the weekday PM Peak Hour
- SR 16 / Latrobe Road (Amador County) during the weekday and Saturday PM Peak Hour
- SR 104 (Preston) / SR 124 during the weekday and Saturday PM Peak Hour
- SR 104 (Main Street) / SR 124 (Church Street) during the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (East) during the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 49 / Pleasant Valley Road during the weekday PM Peak Hour
- SR 16 / Stone House Road during the weekday and Saturday PM Peak Hour
- SR 16 / Latrobe Road (Sacramento County) during the weekday and Saturday PM Peak Hour
- SR 16 / Dillard Road during the weekday PM Peak Hour
- SR 16 / Sloughhouse Road during the weekday PM Peak Hour
- SR 16 / Grant Line Road during the weekday and Saturday PM Peak Hour
- SR 16 / Sunrise Boulevard during the weekday PM Peak hour
- SR 16 / Excelsior Road during the weekday and Saturday PM Peak Hour

- SR 16 / Bradshaw Road during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

TABLE 4.11-16
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE B
WEEKDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative B			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.4	A	10.2	B	1.4	A	10.8	B
SR 49 / Main Street	C	54.7	F	>100	F	93.0	F	>100	F
SR 49 / Poplar Street	D	1.2	A	14.1	B	1.2	A	15.5	C
SR 49 / Empire Street	C	3.6	A	56.0	F	4.1	A	74.8	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	4.1	A	28.5	D	11.0	B	68.9	F
SR 16 / Latrobe Road (Amador)	C	13.6	B	89.8	F	25.4	D	>100	F
SR 104 (Preston Avenue) / SR 124	C	>100	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	26.7	D	>100	F	72.7	F	>100	F
SR 88 / SR 124	D	4.1	A	16.6	C	5.6	A	19.9	C
SR 88 / SR 12 (East)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / SR 12 (West)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	28.8	C			30.4	C		
SR 49 / Pleasant Valley Road	C	>100	F			>100	F		
SR 16 / Ione Road	C	1.7	A	28.8	D	2.1	A	40.2	E
SR 16 / Murieta South Parkway	D	9.4	A			10.0	A		
SR 16 / Murieta Parkway	D	24.4	C			27.7	C		

Intersection	LOS Threshold ¹	No Project				Alternative B			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 16 / Stone House Road	E	50.0	E	>100	F	66.6	F	>100	F
SR 16 / Latrobe Road (Sacramento)	E	2.3	A	>100	F	3.0	A	>100	F
SR 16 / Dillard Road	D	81.3	F			94.4	F		
SR 16 / Sloughhouse Road	D	2.3	A	56.3	F	2.6	A	70.9	F
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	>100	F			>100	F		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	>100	F			>100	F		
SR 49 / Project Driveway	C					20.4	C	>100	F
SR 49 / Service Access	C					6.2	A	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

TABLE 4.11-17
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE B SATURDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative B			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.1	A	9.7	A	1.1	A	10.2	B
SR 49 / Main Street	C	59.5	F	>100	F	>100	F	>100	F
SR 49 / Poplar Street	D	1.2	A	13.6	B	1.2	A	15.3	C
SR 49 / Empire Street	C	5.8	A	72.1	F	7.2	A	>100	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	1.7	A	14.9	B	3.5	A	20.9	C

Intersection	LOS Threshold ¹	No Project				Alternative B			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 16 / Latrobe Road (Amador)	C	2.5	A	25.1	D	3.4	A	42.4	E
SR 104 (Preston Avenue) / SR 124	C	80.4	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	5.9	A	33.1	D	27.8	D	>100	F
SR 88 / SR 124	D	3.3	A	15.4	C	5.3	A	19.3	C
SR 88 / SR 12 (East)	D	56.0	F	>100	F	88.5	F	>100	F
SR 88 / SR 12 (West)	D	94.4	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	19.7	B			20.8	C		
SR 49 / Pleasant Valley Road	C	32.1	D			47.4	E		
SR 16 / Ione Road	C	2.1	A	20.9	C	2.6	A	31.4	D
SR 16 / Murieta South Parkway	D	8.4	A			8.9	A		
SR 16 / Murieta Parkway	D	21.9	C			25.8	C		
SR 16 / Stone House Road	E	19.1	C	>100	F	32.1	D	>100	F
SR 16 / Latrobe Road (Sacramento)	E	1.1	A	85.6	F	1.5	A	>100	F
SR 16 / Dillard Road	D	18.7	B			23.2	C		
SR 16 / Sloughhouse Road	D	0.8	A	19.1	C	0.8	A	22.1	C
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	55.4	E			67.5	E		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	47.8	D			54.1	D		
SR 49 / Project Driveway	C					45.8	E	>100	F
SR 49 / Service Access	C					15.4	C	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

Mitigation Measures

Mitigation measures for the 2025 Cumulative Condition plus Alternative B have been developed for the roadway segments and intersections showing unacceptable LOS (bold text) as presented in **Tables 4.11-15, 4.11-16 and 4.11-17** and are discussed in **Section 5.2.8**. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS with the exception of SR 16/Latrobe Road (Sacramento County) and SR 16/Sloughhouse Road. The LOS for SR 16/Latrobe Road (Sacramento County) in the weekday and Saturday PM peak hour and SR 16/Sloughhouse Road in the weekday PM peak hour would remain unacceptable with LOS F for both intersections for the worst movement. However, neither intersection is projected to warrant

signalization under the 2025 Cumulative Conditions due to the acceptable average LOS. The following study intersections have an existing unacceptable LOS in 2025 without the addition of project traffic and would need improvement with or without the proposed project:

- SR 49 / Main Street (weekday and Saturday PM Peak Hour)
- SR 49 / Empire Street (weekday and Saturday PM Peak Hour)
- SR 49 / SR 16 (weekday and Saturday PM Peak Hour)
- SR 16 / SR 124 (weekday PM Peak Hour)
- SR 16 / Latrobe Road (Amador) (weekday PM Peak Hour)
- SR 104 (Preston Avenue) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 104 (Main Street) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (East) (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (West) (weekday and Saturday PM Peak Hour)
- SR 49 / Pleasant Valley Road (weekday PM Peak Hour)
- SR 16 / Stone House (weekday and Saturday PM Peak Hour)
- SR 16 / Latrobe Road (Sacramento) (weekday and Saturday PM Peak Hour)
- SR 16 / Dillard Road (weekday PM Peak Hour)
- SR 16 / Sloughhouse Road (weekday PM Peak Hour)
- SR 16 / Grant Line Road (weekday and Saturday PM Peak Hour)
- SR 16 / Sunrise Boulevard (weekday PM Peak Hour)
- SR 16 / Excelsior Road (weekday and Saturday PM Peak Hour)
- SR 16 / Bradshaw Road (weekday PM Peak Hour)

2025 Cumulative Condition Plus Mitigated Alternative B Plus the Proposed Buena Vista Casino

Project trips generated by the proposed Buena Vista Casino added to trips generated by Alternative B with mitigation applied would have fewer impacts than under the Alternative A scenario, as trips generated by Alternative B are less than with Alternative A. To be conservative, additional mitigation needed for this scenario would be the same as identified under the Alternative A scenario with Buena Vista Casino traffic. With the implementation of the added mitigation, as detailed in **Section 5.2.8**, Alternative B would result in a less-than-significant impact.

LAND USE

Cumulative land use effects may occur as the result of expected growth and disruption of orderly development. As discussed under the socioeconomic section above, the development of Alternative B in conjunction with the Buena Vista casino is expected to increase demand for housing within Amador County. As described in the Draft Amador County General Plan Housing Element, there are numerous constraints to the development of housing, especially affordable housing. These constraints include permitting costs, the availability of water and

wastewater service, topography, land costs, and construction costs. Amador County has identified the need to remove these constraints and provide incentives to promote the provision of affordable housing in the County. Development of Alternative B and the Buena Vista casino are expected to increase demand for housing development in Amador County. As discussed above, mitigation has been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County. The housing program would coordinate its activities with Amador County and the City of Plymouth in order to further Countywide planning efforts.

Agriculture

As growth occurs within the region, cumulative effects to agriculture may occur as the result of the transformation of agricultural lands to other land uses. The project site supports cattle grazing but does not contain prime or unique farmlands or farmlands of statewide importance. Likewise, the Buena Vista site supports grazing, but has soils that are classified as marginal agricultural soils that provide low yields (EIP Associates, 2001). Development of the project site and the Buena Vista site would transform land that is currently used for grazing but has limited potential for other agricultural uses. Therefore, the development of Alternative B is not considered to significantly contribute to a cumulative loss of agricultural lands in Amador County.

PUBLIC SERVICES

Water Supply

The development of Alternative B and the Buena Vista casinos, along with expected regional growth, is not expected to result in significant cumulative effects to water supply in Amador County. An adequate water supply has been identified for Alternative B on the basis of pumping tests of the three source wells. It is uncertain which water supply option the Buena Vista casino would utilize; however, due to the projected doubling of supply projected by the AWA, described under Alternative A above, it is expected that ample water supplies would be available for residential and commercial growth in Amador County. If the Buena Vista casino utilizes groundwater, the distance between the two project sites (approximately 13 miles) would isolate the individual impacts on groundwater. No significant cumulative effects are expected to occur as the result of the development of Alternative B in conjunction with the Buena Vista casino and regional growth.

Wastewater Service

The development of Alternative B and the Buena Vista casinos, along with expected regional growth, is not expected to result in significant cumulative effects to wastewater service in Amador County. The wastewater generated by Alternative B will be treated and disposed of on the project site by the proposed on-site WWTP, without requiring service by the City of Plymouth or AWA. The Buena Vista casino will either treat wastewater on-site or will contract with a service provider such as the City of Ione or AWA. If the wastewater generated by the Buena

Vista casino is treated by a service provider, the Buena Vista Tribe would be required to pay connection fees and any infrastructure improvements required to serve the casino. No significant cumulative effects to wastewater service are expected to occur as the result of the development of Alternative B in conjunction with the Buena Vista casino and regional growth.

Law enforcement

As discussed under Alternative A, based on reported law enforcement activities at the Jackson Rancheria Casino, Alternative B and the proposed Buena Vista casino are expected to result in a substantial service demand on the ACSO and CHP services. The development of these casinos in combination with growth that is expected to occur in the region may overburden the ability of the ACSO, CHP and other law enforcement agencies to provide adequate service to businesses and residents of Amador County. Therefore, Alternative B is expected to result in a potentially significant cumulative effect. Mitigation has been identified in **Section 5.2.9** to address the potential law enforcement effects to Amador County.

Fire protection, and emergency medical services

The development of Alternative B and the Buena Vista casinos, along with expected regional growth is not expected to result in significant cumulative effects to fire protection and emergency medical service in Amador County. The Tribe will provide these services to the proposed casino and hotel by an on-site independent fire station. The Tribal Fire Station would enter into a mutual-aid agreement with AFD and other local fire protection providers and therefore increase the availability of fire protection and EMS in the project area. If the Buena Vista casino is provided fire protection and emergency medical service by AFD or another service provider, the Buena Vista Tribe would be required to pay for the services by contract or agreement. No significant cumulative effects to fire protection and emergency medical service are expected to occur as the result of the development of Alternative B in conjunction with the Buena Vista casino and regional growth.

Other Public Services

Cumulative effects to other public services may occur if service providers are unable to provide adequate services to existing and planned development. As discussed in **Section 4.9**, solid waste, electricity, natural gas, and telephone services would be provided to the project site. The Tribe will coordinate with the desired service providers for utilities. The Tribe will pay for these services through service agreements and fees and the proposed Buena Vista casino would also be expected to pay for these services.

As discussed in **Section 4.9**, the solid waste generated by Alternative B is estimated to be 5.3 tons per day. A contract waste hauler would deliver waste from Alternative B to the Keifer Landfill, which has a closure date of 2064. Waste generated from Alternative B would be less than 0.26-percent of the daily waste stream and would represent a negligible addition to the landfill

(Goodrich, 2004). The proposed Buena Vista casino is expected to generate a similar amount of solid waste for disposal at the Keifer Landfill. Taken together, these two projects are not expected to significantly effect the daily waste stream or the ability of the Keifer Landfill to accept waste from Amador County. No significant cumulative effects to these public services have been identified.

OTHER VALUES

Noise Effects

Alternative B would result in changes in traffic noise levels as identified in **Table 4.11-8** for the cumulative year. According to this table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed with the inclusion of the project and the Buena Vista casino traffic. Because traffic levels are predicted to almost double at the roadway segment with the highest decibel increase, the predicted increase is approximately 2 Leq during Phase I and Phase II on SR 124 south of SR 16. The resulting noise level would be 62 Leq during the peak hour, this is below the Noise Abatement Criteria identified by FHWA. Therefore, cumulative noise effects are considered to be less than significant.

TABLE 4.11-18
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERATIVE B (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Cumulative Year		
	Peak hour (Leq)		Change Leq
	No Project	Alternative B	
SR 49 North of Shenandoah Road	58	60	+2
SR 49 South of SR16	63	63	0
SR 16 West of Old Sacramento Road	62	63	+1
SR 124 South of SR 16	60	62	+2
SR 88 West of SR 124	65	66	1

Source: MEC using FHWA RD-77-108 with traffic inputs from CCS/TY Lin

Hazardous Materials

Cumulative hazardous materials involvement that may occur as the result of industrial practices include the releases of hazardous materials into the environment or exposure of residents to contaminants as a result of hazardous materials releases. As identified in **Section 3.10**, there are no existing hazardous materials on the project site. The use of standard operating procedures for the safe handling, use, storage and disposal of hazardous materials during the construction of Alternative B will minimize cumulative effects for hazardous materials. Incorporation of mitigation measures included in **Section 5.2.10** will also reduce cumulative effects for the construction and operation of Alternative B.

Development of the proposed Buena Vista casino is not expected to pose a significant risk to human health and/or the environment. This conclusion is based on current management practices, a lack of reported hazardous materials, and the minimal use of hazardous materials for these projects. Alternative B is not expected to significantly increase the risk of a hazardous materials incident when combined with the proposed Buena Vista casino and other facilities in Amador County.

Visual Resources

The project site is currently developed commercial and is bordered by commercial developments along SR 49. Alternative B would remove the existing Shenandoah Inn and replace the building with a casino, hotel, events center with associated uses, some of which would be visible from SR 49. These developments would be partially screened by the existing gas station located immediately west of the project site and by trees and shrubs included in site landscaping. However, the development of the facilities on the project site will contribute to the ongoing and cumulative transformation of the project area. The City has planned for this transformation with the zoning of the site for commercial uses.

Because development of Alternative B will occur in an area already developed with commercial land uses, modification to the natural view shed, including terrain or vegetation will be minimized. Additionally, because of the distance between Alternative B and the Buena Vista casino, the proposed sites are contained within distinctive and separate view sheds. Therefore, potential cumulative visual resource effects of Alternative B, with consideration of the Buena Vista casino, are considered to be less than significant.

4.11.3 ALTERNATIVE C – REDUCED CASINO/NO HOTEL ALTERNATIVE

LAND RESOURCES

Alternative C is designed to avoid the steeper areas of the project site and would not require substantial changes in existing grades. An erosion control plan would be implemented as part of construction procedures to minimize soil erosion. Additionally, project features would be incorporated into the proposed facilities to direct and detain stormwater runoff, thereby limiting the potential for erosion on and off the project site. Other future developments, including commercial and residential land uses in the project area, are expected to result with minor changes in the topography. It is also expected that proposed Buena Vista casino would avoid the steeper terrain and likewise have minor topographic effects. The proposed Buena Vista casino would also include erosion control measures in compliance with the NPDES permit program and would comply with the earthquake design provisions of the UBC. The major topographic features of the project site would be preserved under Alternative C, and the design of the facilities would include an Erosion Control Plan and comply with the UBC. Other projects, including the Buena Vista casino, are expected to likewise comply with the NPDES permit program and the

provisions of the UBC. Therefore, cumulative effects regarding land resources are considered to be less than significant.

WATER RESOURCES

Surface Water

The Tribe has made appropriate design allowances that will reduce cumulative water resource effects of Alternative C to a less-than-significant level. These features include detention basins, Stormceptor® sediment/grease traps, and reducing impervious surfaces. The Tribe will also prepare a SWPPP to control discharge of pollutants in stormwater. Urban areas, such as the cities of Jackson, Ione, and Plymouth also have sources of non-point source pollution that can affect regional water quality. The development of the proposed Buena Vista casino may likewise affect water quality by increasing sedimentation and pollution, and increasing stormwater flows. However, as noted above, it is expected that the proposed Buena Vista casino would include erosion control measures in compliance with the NPDES permit program. With the incorporation of the identified design features and BMPs included in the preparation of a SWPPP, Alternative C would not result in a significant cumulative water resource effect.

Groundwater

As with Alternative A, implementation of Alternative C may result in groundwater extraction to meet projected water demands depending upon the water supply option selected by the Tribe. As discussed above, it is anticipated that non-tribal development would be required to connect to the City's municipal water supply system, which would rely mainly on water from the Plymouth Pipeline project as groundwater extraction has already reached maximum pumping capacity. Additionally, if the Buena Vista casino utilizes groundwater, the distance between the two project sites (approximately 13 miles) would isolate the individual impacts on groundwater. Therefore, groundwater extraction to meet the water demands of Alternative C would not be cumulatively considerable. Option 1 does not include groundwater pumping to meet projected water demands. Independent of water supply option, implementation of Alternative C would have a less-than-significant cumulative impact on groundwater resources.

AIR QUALITY

The regional setting and long-term conditions for Alternative C would be less than Alternative A; however, Alternative C is a reduced version of Alternative A without the hotel and conference center. With the implementation of measures identified in **Section 5.2.4**, Alternative C would result in minimal adverse cumulative effects to air quality.

BIOLOGICAL RESOURCES

Alternative C would result in the grading and development of about one-fourth of the 228± acre site. Most of the habitat disturbance would occur in annual grassland habitat, which presents

limited resources for wildlife and are currently subject to disturbance from existing forms of land uses, specifically cattle grazing by the tenant rancher. However, the oak savannah, oak woodland, and riparian woodland habitats occurring on-site do provide valuable habitat for a variety of wildlife and plant species. While no threatened or endangered species are known to occur on the project site, Alternative A would result in removal of some of the habitat on the project site. Alternative C would also result in direct impacts to 0.35-acres of potentially jurisdictional wetlands from the construction of project components, such as parking lots and the recycled water reservoir. The removal of these habitats and the potential impacts on listed species is considered to be a significant cumulative effect when combined with other habitat loss in Amador County and potentially as a result of the Buena Vista casino project. Cumulative effects will be reduced to a less-than-significant level through implementation of the mitigation measures identified in **Section 5.2.5** of this document.

CULTURAL RESOURCES

Based on the extensive presence of cultural sites in Amador County, including the proposed Buena Vista casino site, it is expected that future development may result in significant losses of cultural resources. However, because no significant cultural resources have been identified on the project site, it is expected that the development of Alternative B would result in less-than-significant cumulative effects to historical resources.

SOCIOECONOMIC CONDITIONS

Alternative C would introduce a new source of economic activity in the City of Plymouth and Amador County. **Table 4.11-19** summarizes the estimated employment generated by Alternative C, along with that generated by Jackson Rancheria Casino and the proposed Buena Vista Casino. Taken together, Alternative C and the Proposed Buena Vista Casino would add an estimated additional 2,284 jobs in Amador County.

As discussed in **Section 4.7**, based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent of those employed by Alternative C would be residents of Amador County. It is also expected that 60-percent of those employed by the Buena Vista casino would be residents of Amador County. Taken together, it is expected that 1,370 of those employed by Alternative C and the proposed Buena Vista casino would reside in Amador County. As indicated in **Section 3.7**, Amador County has a labor force of 15,390 with approximately 760 unemployed workers. Employment generated by Alternative C and the proposed Buena Vista casino would account for approximately nine-percent of the Amador County labor force and almost twice the estimated number of unemployed workers in Amador County. Together these projects would substantially increase the employment of Amador County. This would have both positive and negative effects in the labor market. Business owners would find it increasingly difficult to fill positions, thereby adversely affecting the cost of doing business. However, as a result, wages would likely rise as employers compete for

employees, this would beneficially impact wages in the County as it provides workers with more employment opportunities.

TABLE 4.11-19
EMPLOYMENT FROM ALTERNATIVE C AND OTHER AMADOR COUNTY CASINOS

Casino	Direct Employment
Existing Casino	
Jackson Rancheria Casino & Hotel ¹	1,400
Proposed Amador County Casinos	
Alternative C ²	809
Buena Vista Casino ³	1,475
Total Proposed	2,284
Total Existing & Proposed	3,684

SOURCES: ¹ Jackson Rancheria, 2005.

² Net direct jobs, GVA Marquette Advisors, 2004.

³ Estimate based on Alternative A and Jackson Rancheria, taking into account that a hotel is not proposed.

NOTES: Full-time equivalent positions.

Housing

The increase in employment that would result from the development of Alternative C and the Buena Vista casino is expected to affect the availability of housing in Amador County. As noted above, these proposed casinos would create approximately 1,370 new jobs filled by people expected to reside in Amador County. Many of the employees hired by the proposed casinos would be expected to already reside in Amador County, however, due the increase in job openings it is expected that a increase in housing demand would result in Amador County. The Draft Amador County General Plan Housing Element anticipates that 946 residential units will be necessary to fill the County's housing need for the period of 2004 to 2009 (Amador County, 2005). The Housing Element identifies that development constraints will make development of residential units, and especially affordable housing difficult. Within Plymouth, the most significant limit to residential growth is the water moratorium. Until a reliable source of domestic water becomes available, only about 15 units can be approved within Plymouth unless the City Engineer makes a determination that there is additional water to serve residents and the moratorium is modified by DHS (City of Plymouth, 2004).

Due to the existing constraints in developing housing in Amador County and the City of Plymouth it is expected that the employment generated by Alternative C, in conjunction with that created by the proposed Buena Vista casino, would result in a significant effect to the availability of affordable housing in Amador County and Plymouth. Mitigation has been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County.

Social Costs of Problem Gambling

The development of Alternative C along with the Buena Vista casino would introduce new casino venues within Amador County. However, because Amador County already has a casino (Jackson Rancheria), and several other casinos that exist in the region, the introduction of two additional casinos is not likely to significantly increase local residents' access to casino gambling.

Therefore, the cumulative effect of the development of Alternative C, in conjunction with the Buena Vista Casino, is considered to have a less-than-significant effect on the incidence of problem gambling in the region. However, the Tribe has identified mitigation based on NIGSC recommendations, to further reduce potential cumulative effects (**Section 5.2.7**).

Effects to Schools

Along with the creation of jobs and increased housing demand, development of Alternative C along with the Buena Vista casino, would result in additional demands on the local education system. This increase in demand is expected to be in addition to the growth in the student body that would occur with the general population growth within Amador County. Based on the 1,370 new employees from Alternative C and the Buena Vista casino expected to reside in Amador County, approximately 685 students would require education from County schools. While it is expected that many employees already reside within the County, it is also expected that some employees would relocate to Amador County. This would increase the number of students in local schools. The increase in students could result in significant effects if the local schools lack capacity and staff to serve the additional students. Mitigation has been identified in **Section 5.2.7** to address this effect.

Effects to Local Governments

Cumulative effects to the local governments may occur as the result of changes in the revenues and expenses of Amador County and the City of Plymouth. As discussed in **Section 4.7**, the development of Alternative C would remove the project site from the County's assessed property rolls, thereby removing approximately \$33,856 from the County's annual revenue. The loss of this revenue would be mitigated by payments to the County as identified in **Section 5.2.7**. The development of the Buena Vista casino would not remove property from the County's property roll as the project site is already tribal land and is not currently assessed property tax. Both Alternative C and the Buena Vista casino would increase sales tax revenues generated as a result of purchases made by the casino operation on goods and services and from the increase in business revenues in the area. Payroll and related taxes would also increase as a result of employment opportunities and earnings supported by the two projects. Increases in necessary expenditures could be required by Amador County and the City of Plymouth to address an increased demand for public services due to the development of Alternative C and the Buena Vista casino. Public services that could be affected include police service, schools,

transportation, public facilities, and fire and emergency medical services. Effects to these resources are discussed individually below.

TRANSPORTATION

2025 Cumulative Condition Plus Alternative C Effects

Daily Roadway Segment Effects

Table 4.11-20 summarizes the results of this daily roadway segment analysis for the 2025 Cumulative Condition with and without Alternative C LOS conditions. With the traffic added to the study roadway segments by Alternative C, none of the roadway segments would have an unacceptable LOS, and therefore no significant effect would result.

TABLE 4.11-20
DAILY ROADWAY SEGMENT PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE C

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt C ³	No Project	Alt C	No Project	Alt C
SR49 North of Shenandoah Road	C	15,500	4,500	5,530	0.29	0.36	C	C
SR49 South of SR16	E	18,900	12,300	12,530	0.65	0.66	D	D
SR16 West of Old Sacramento Road	C	20,200	7,900	9,780	0.39	0.48	C	C
SR124 South of SR16	E	18,900	3,000	4,660	0.16	0.25	B	B
SR88 West of SR124	E	20,200	11,700	13,290	0.58	0.66	D	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

² 2025 Cumulative Condition No Project

³ 2025 Cumulative Condition Plus Alternative C

SOURCE: Appendix M

Peak Hour Intersection Effects

Table 4.11-21 summarizes the weekday results of the intersection analysis for the 2025 Cumulative Condition and **Table 4.11-22** summarizes the Saturday results with and without Alternative C. With the traffic added to the study intersections by Alternative C, the following intersections would have unacceptable operations, and therefore would result in a significant effect:

- SR 49 / Main Street during the weekday and Saturday PM Peak Hour
- SR 49 / Empire Street during the weekday and Saturday PM Peak hour

- SR 49 / SR 16 during the weekday and Saturday PM Peak Hour
- SR 16 / SR 124 during the weekday PM Peak Hour
- SR 16 / Latrobe Road (Amador County) during the weekday and Saturday PM Peak Hour
- SR 104 (Preston) / SR 124 during the weekday and Saturday PM Peak hour
- SR 104 (Main Street) / SR 124 (Church Street) during the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (East) during the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 49 / Pleasant Valley Road during the weekday PM Peak Hour
- SR 16 / Stone House Road during the weekday and Saturday PM Peak Hour
- SR 16 / Latrobe Road (Sacramento County) during the weekday and Saturday PM Peak Hour
- SR 16 / Dillard Road during the weekday PM Peak Hour
- SR 16 / Sloughhouse Road during the weekday PM Peak Hour
- SR 16 / Grant Line Road during the weekday and Saturday PM Peak Hour
- SR 16 / Sunrise Boulevard during the weekday PM Peak Hour
- SR 16 / Excelsior Road during the weekday and Saturday PM Peak Hour
- SR 16 / Bradshaw Road during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

TABLE 4.11-21
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE C
WEEKDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative C			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.4	A	10.2	B	1.4	A	10.6	B
SR 49 / Main Street	C	54.7	F	>100	F	80.6	F	>100	F
SR 49 / Poplar Street	D	1.2	A	14.1	B	1.2	A	15.0	B
SR 49 / Empire Street	C	3.6	A	56.0	F	3.9	A	68.4	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	4.1	A	28.5	D	7.7	A	49.3	E
SR 16 / Latrobe Road (Amador)	C	13.6	B	89.8	F	21.2	C	>100	F
SR 104 (Preston)	C	>100	F	>100	F	>100	F	>100	F

Intersection	LOS Threshold ¹	No Project				Alternative C			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
Avenue) / SR 124									
SR 104 (Main Street) / SR 124	C	26.7	D	>100	F	55.9	F	>100	F
SR 88 / SR 124	D	4.1	A	16.6	C	5.1	A	18.7	C
SR 88 / SR 12 (East)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / SR 12 (West)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	28.8	C			29.9	C		
SR 49 / Pleasant Valley Road	C	>100	F			>100	F		
SR 16 / Ione Road	C	1.7	A	28.8	D	2.0	A	36.1	E
SR 16 / Murieta South Parkway	D	9.4	A			9.8	A		
SR 16 / Murieta Parkway	D	24.4	C			26.6	C		
SR 16 / Stone House Road	E	50.0	E	>100	F	61.4	F	>100	F
SR 16 / Latrobe Road (Sacramento)	E	2.3	A	>100	F	2.8	A	>100	F
SR 16 / Dillard Road	D	81.3	F			90.7	F		
SR 16 / Sloughhouse Road	D	2.3	A	56.3	F	2.5	A	66.0	F
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	>100	F			>100	F		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	>100	F			>100	F		
SR 49 / Project Driveway	C					7.0	A	94.6	F
SR 49 / Service Access	C					2.4	A	86.6	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

TABLE 4.11-22
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE C
SATURDAY PM PEAK HOUR

Intersection	LOS	No Project	Alternative C
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		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.1	A	9.7	A	1.1	A	10.1	B
SR 49 / Main Street	C	59.5	F	>100	F	95.1	F	>100	F
SR 49 / Poplar Street	D	1.2	A	13.6	B	1.2	A	14.7	B
SR 49 / Empire Street	C	5.8	A	72.1	F	6.7	A	>100	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	1.7	A	14.9	B	2.9	A	18.4	C
SR 16 / Latrobe Road (Amador)	C	2.5	A	25.1	D	3.0	A	35.8	E
SR 104 (Preston Avenue) / SR 124	C	80.4	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	5.9	A	33.1	D	17.0	C	>100	F
SR 88 / SR 124	D	3.3	A	15.4	C	4.7	A	18.0	C
SR 88 / SR 12 (East)	D	56.0	F	>100	F	77.5	F	>100	F
SR 88 / SR 12 (West)	D	94.4	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	19.7	B			20.5	C		
SR 49 / Pleasant Valley Road	C	32.1	D			42.3	E		
SR 16 / Ione Road	C	2.1	A	20.9	C	2.4	A	27.6	D
SR 16 / Murieta South Parkway	D	8.4	A			8.8	A		
SR 16 / Murieta Parkway	D	21.9	C			24.5	C		
SR 16 / Stone House Road	E	19.1	C	>100	F	27.9	D	>100	F
SR 16 / Latrobe Road (Sacramento)	E	1.1	A	85.6	F	1.3	A	>100	F
SR 16 / Dillard Road	D	18.7	B			21.6	C		
SR 16 / Sloughhouse Road	D	0.8	A	19.1	C	0.8	A	21.1	C
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	55.4	E			63.7	E		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	47.8	D			52.3	D		
SR 49 / Project Driveway	C					15.6	C	>100	F
SR 49 / Service Access	C					5.1	A	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

Mitigation Measures

Mitigation measures for the 2025 Cumulative Condition plus Alternative C have been developed for the intersections showing unacceptable LOS (bold text) as presented in **Tables 4.11-21 and 4.11-22** and are discussed in **Section 5.2.8** of the Draft EIS. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS with the exception of SR 16/Latrobe Road (Sacramento County) and SR 16/Sloughhouse Road. The LOS for SR 16/Latrobe Road (Sacramento County) in the weekday and Saturday PM peak hour and SR 16/Sloughhouse Road in the weekday PM peak hour would remain unacceptable with LOS F for both intersections for the worst movement. However, neither intersection is projected to warrant signalization under the 2025 Cumulative Conditions due to the acceptable average LOS. The following roadway segments and intersections have an existing unacceptable LOS in 2025 without the addition of project traffic and would need improvement with or without the proposed project:

- SR 49 / Main Street (weekday and Saturday PM Peak Hour)
- SR 49 / Empire Street (weekday and Saturday PM Peak Hour)
- SR 49 / SR 16 (weekday and Saturday PM Peak Hour)
- SR 16 / SR 124 (weekday PM Peak Hour)
- SR 16 / Latrobe Road (Amador) (weekday PM Peak Hour)
- SR 104 (Preston Avenue) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 104 (Main Street) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (East) (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (West) (weekday and Saturday PM Peak Hour)
- SR 49 / Pleasant Valley Road (weekday PM Peak Hour)
- SR 16 / Stone House (weekday and Saturday PM Peak Hour)
- SR 16 / Latrobe Road (Sacramento) (weekday and Saturday PM Peak Hour)
- SR 16 / Dillard Road (weekday PM Peak Hour)
- SR 16 / Grant Line Road (weekday and Saturday PM Peak Hour)
- SR 16 / Sunrise Boulevard (weekday and Saturday PM Peak Hour)
- SR 16 / Excelsior Road (weekday and Saturday PM Peak Hour)
- SR 16 / Bradshaw Road (weekday PM Peak Hour)

2025 Cumulative Condition Plus Mitigated Alternative C Plus the Proposed Buena Vista Casino

Project trips generated by the proposed Buena Vista Casino added to trips generated by Alternative C with mitigation applied would have fewer impacts than under the Alternative A

scenario, as trips generated by Alternative C are less than with Alternative A. To be conservative, additional mitigation needed for this scenario would be the same as identified under the Alternative A scenario with Buena Vista Casino traffic. With the implementation of the added mitigation, as detailed in **Section 5.2.8**, Alternative C would result in a less-than-significant impact.

LAND USE

Cumulative land use effects may occur as the result of expected growth and disruption of orderly development. As discussed under the socioeconomic section above, the development of Alternative C in conjunction with the Buena Vista casino is expected to increase demand for housing within Amador County. As described in the Draft Amador County General Plan Housing Element, there are numerous constraints to the development of housing, especially affordable housing. These constraints include permitting costs, the availability of water and wastewater service, topography, land costs, and construction costs. Amador County has identified the need to remove these constraints and provide incentives to promote the provision of affordable housing in the County. Development of Alternative C and the Buena Vista casino is expected to increase demand for housing development in Amador County. As discussed above, mitigation has been identified in **Section 5.2.77** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County. The housing program would coordinate its activities with Amador County and the City of Plymouth in order to further countywide planning efforts.

Agriculture

As growth occurs within the region, cumulative effects to agriculture may occur as the result of the transformation of agricultural lands to other land uses. The project site supports cattle grazing but does not contain prime or unique farmlands or farmlands of statewide importance. Likewise, the Buena Vista site supports grazing but has soils that are classified as marginal agricultural soils which provide low yields (EIP Associates, 2001). Development of the project site and the Buena Vista site would transform land that is currently used for grazing but has limited potential for other agricultural uses. Therefore, the development of Alternative C is not considered to significantly contribute to a cumulative loss of agricultural lands in Amador County.

PUBLIC SERVICES

Water Supply

The water supply for Alternative C would be provided by three wells located on and near the project site. The development of Alternative C and the Buena Vista casino, along with expected regional growth is not expected to result in significant cumulative effects to water supply in Amador County. An adequate water supply has been identified for Alternative C on the basis of pumping tests of the three source wells. It is uncertain which water supply option the Buena Vista casino would utilize; however due to the projected doubling of supply projected by the

AWA, described under Alternative A above, it is expected that ample water supplies would be available for residential and commercial growth in Amador County. If the Buena Vista casino utilizes groundwater the distance between the two project sites (approximately 13 miles) would isolate the individual impacts on groundwater. No significant cumulative effects are expected to occur as the result of the development of Alternative C in conjunction with the Buena Vista casino and regional growth.

Wastewater Service

The development of Alternative C and the Buena Vista casinos, along with expected regional growth, is not expected to result in significant cumulative effects to wastewater service in Amador County. The wastewater generated by Alternative C will be treated and disposed of on the project site by the proposed on-site WWTP, without requiring service by the City of Plymouth or AWA. The Buena Vista casino will either treat wastewater on-site or will contract with a service provider such as the City of Ione or AWA. If the wastewater generated by the Buena Vista casino is treated by a service provider, the Buena Vista Tribe would be required to pay connection fees and any infrastructure improvements required to serve the casino. No significant cumulative effects to wastewater service are expected to occur as the result of the development of Alternative C in conjunction with the Buena Vista casino and regional growth.

Law enforcement

As discussed under Alternative A, based on reported law enforcement activities at the Jackson Rancheria Casino, Alternative C and the proposed Buena Vista casino are expected to result in a substantial service demand on the ACSO and CHP services. The development of these casinos in combination with growth that is expected to occur in the region may overburden the ability of the ACSO, CHP and other law enforcement agencies to provide adequate service to businesses and residents of Amador County. Therefore, Alternative C is expected to result in a potentially significant cumulative effect. Mitigation has been identified in **Section 5.2.9** to address the potential law enforcement effects to Amador County.

Fire protection, and emergency medical services

The development of Alternative C and the Buena Vista casinos, along with expected regional growth is not expected to result in significant cumulative effects to fire protection and emergency medical service in Amador County. The Tribe will provide these services to the proposed casino and hotel by an on-site independent fire station. The Tribal Fire Station would enter into a mutual-aid agreement with AFD and other local fire protection providers and therefore increase the availability of fire protection and emergency medical service (EMS) in the project area. If the Buena Vista casino is provided fire protection and EMS by AFD or another service provider, the Buena Vista Tribe would be required to pay for the services by contract or agreement. No significant cumulative effects to fire protection and emergency medical service are expected to

occur as the result of the development of Alternative C in conjunction with the Buena Vista casino and regional growth.

Other Public Services

Cumulative effects to other public services may occur if service providers are unable to provide adequate services to existing and planned development. As discussed in **Section 4.9**, solid waste, electricity, natural gas, and telephone services would be provided to the project site. The Tribe will coordinate with the desired service providers for utilities. The Tribe will pay for these services through service agreements and fees and the proposed Buena Vista casino would also be expected to pay for these services.

As discussed in **Section 4.9**, the solid waste generated by Alternative C is estimated to be 3.48 tons per day. A contract waste hauler would deliver waste from Alternative C to the Keifer Landfill, which has a closure date of 2064. Waste generated from Alternative C would be less than 0.17-percent of the daily waste stream and would represent a negligible addition to the landfill (Goodrich, 2004). The proposed Buena Vista casino is expected to generate a similar amount of solid waste for disposal at the Keifer Landfill. Taken together, these two projects are not expected to significantly affect the daily waste stream or the ability of the Keifer Landfill to accept waste from Amador County. No significant cumulative effects to these public services have been identified.

OTHER VALUES

Noise Effects

Alternative C would result in changes in traffic noise levels as identified in **Table 4.11-23** for the cumulative year. According to this table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed with the inclusion of the project and the Buena Vista casino traffic. Because traffic levels are predicted to almost double, the predicted increase is approximately 3 Leq during Phase I and Phase II on SR 124 south of SR 16. The resulting noise level would be 61 Leq during the peak hour, this is below the Noise Abatement Criteria identified by FHWA. Therefore, cumulative noise effects are considered to be less than significant.

HAZARDOUS MATERIALS

Cumulative hazardous materials involvement that may occur as the result of industrial practices include the releases of hazardous materials into the environment or exposure of residents to contaminants as a result of hazardous materials releases. As identified in **Section 3.10**, there are no existing hazardous materials on the project site. The use of standard operating procedures for the safe handling, use, storage and disposal of hazardous materials during the construction of Alternative C will minimize cumulative effects for hazardous materials. Incorporation of

mitigation measures included in **Section 5.2.10** will also reduce cumulative effects for the construction and operation of Alternative C.

TABLE 4.11-23
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERNATIVE C (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Cumulative Year		Change Leq
	Peak hour (Leq)		
	No Project	Alternative C	
SR 49 North of Shenandoah Road	58	59	+1
SR 49 South of SR16	63	63	0
SR 16 West of Old Sacramento Road	62	63	+1
SR 124 South of SR 16	60	62	+2
SR 88 West of SR 124	65	66	+1

Source: MEC using FHWA RD-77-108 with traffic inputs from CCS/TY Lin.

Development of the proposed Buena Vista casino is not expected to pose a significant risk to human health and/or the environment. This conclusion is based on current management practices, a lack of reported hazardous materials, and the minimal use of hazardous materials for these projects. Alternative C is not expected to significantly increase the risk of a hazardous materials incident when combined with the proposed Buena Vista casino and other facilities in Amador County.

Visual Resources

The project site is currently developed with a commercial development and is bordered by commercial developments along SR 49. Alternative C would remove the existing Shenandoah Inn and replace the building with a casino, and associated uses, some of which would be visible from SR 49. These developments would be partially screened by the existing gas station located immediately west of the project site and by trees and shrubs included in site landscaping. However, the development of the facilities on the project site will contribute to the ongoing and cumulative transformation of the project area. The City has planned for this transformation with the zoning of the site for commercial uses.

Because development of Alternative C will occur in an area already developed with commercial land uses, modification to the natural view shed, including terrain or vegetation will be minimized. Additionally, because of the distance between Alternative C and the Buena Vista casino, the proposed sites are contained within distinctive and separate view sheds. Therefore, potential cumulative visual resource effects of Alternative C, with consideration of the Buena Vista casino, are considered to be less than significant.

4.11.4 ALTERNATIVE D – RETAIL DEVELOPMENT

LAND RESOURCES

Alternative D is designed to avoid the steeper areas of the project site and would not require substantial changes in existing grades. An erosion control plan would be implemented as part of construction procedures to minimize soil erosion. Additionally, project features would be incorporated into the proposed facilities to direct and detain stormwater runoff, thereby limiting the potential for erosion on and off the project site. Other future developments, including commercial and residential land uses in the project area, are expected to result in minor changes in the topography. It is also expected that proposed Buena Vista casino would avoid the steeper terrain and likewise have minor topographic effects. The proposed Buena Vista casino also is expected include erosion control measures in compliance with the NPDES permit program and would comply with the earthquake design provisions of the UBC. The major topographic features of the project site would be preserved under Alternative D, and the design of the facilities would include an Erosion Control Plan and comply with the UBC. Other projects, including the Buena Vista casino, are expected to likewise comply with the NPDES permit program and the provisions of the UBC. Therefore, cumulative effects regarding land resources are considered to be less than significant.

WATER RESOURCES

Surface Water

The Tribe has made appropriate design allowances that will reduce cumulative water resource effects of Alternative D to a less-than-significant level. These features include detention basins, Stormceptor® sediment/grease traps, and reducing impervious surfaces. The Tribe will also prepare a SWPPP to control discharge of pollutants in stormwater. Urban areas, such as the cities of Jackson, Ione, and Plymouth also have sources of non-point source pollution that can affect regional water quality. The development of the proposed Buena Vista casino may likewise affect water quality by increasing sedimentation and pollution, and increasing stormwater flows. However, as noted above, it is expected that the proposed Buena Vista casino would include erosion control measures in compliance with the NPDES permit program. With the incorporation of the identified design features and the BMPs included in the preparation of a SWPPP, Alternative D would not result in a significant cumulative water resource effect.

Groundwater

As with Alternative A, implementation of Alternative D may result in groundwater extraction to meet projected water demands depending upon the water supply option selected by the Tribe. As discussed above, it is anticipated that non-tribal development would be required to connect to the City's municipal water supply system, which would rely mainly on water from the Plymouth Pipeline project as groundwater extraction has already reached maximum pumping capacity. Additionally, if the Buena Vista casino utilizes groundwater, the distance between the two project

sites (approximately 13 miles) would isolate the individual impacts on groundwater. Therefore, groundwater extraction to meet the water demands of Alternative D would not be cumulatively considerable. Option 1 does not include groundwater pumping to meet projected water demands. Independent of water supply option, implementation of Alternative B would have a less-than-significant cumulative impact on groundwater resources.

AIR QUALITY

The regional setting and long-term conditions for Alternative D would be less than Alternative A. Alternative D is a regional shopping center. With the implementation of measures identified in **Section 5.2.4**, Alternative D would result in minimal cumulatively considerable adverse effects to air quality.

BIOLOGICAL RESOURCES

Alternative D would result in the grading and development of about 35-acres of the 228± acre site. Most of the habitat disturbance would occur in annual grassland habitat, which presents limited resources for wildlife and are currently subject to disturbance from existing forms of land use, specifically cattle grazing by the tenant rancher. However, the oak savannah, oak woodland, and riparian woodland habitats occurring on-site do provide valuable habitat for a variety of wildlife and plant species. While no threatened or endangered species are known to occur on the project site, Alternative A would result in removal of some of the habitat on the project site. Alternative D would also result in direct impacts to 0.35-acres of potentially jurisdictional wetlands from the construction of project components such as parking lots and the recycled water reservoir. The removal of these habitats and the potential impacts on listed species is considered to be a significant cumulative effect when combined with other habitat loss in Amador County and potentially as a result of the Buena Vista casino project. Cumulative effects will be lessened to a less-than-significant level through implementation of the measures identified in **Section 5.2.5** of this document.

CULTURAL RESOURCES

Based on the extensive presence of cultural sites in Amador County, including the proposed Buena Vista casino site, it is expected that future development may result in significant losses of cultural resources. However, because no significant cultural resources have been identified on the project site, it is expected that the development of Alternative B would result in less-than-significant cumulative effects to historical resources.

SOCIOECONOMIC CONDITIONS

Alternative D would introduce a new source of economic activity in the City of Plymouth and Amador County. **Table 4.11-24** summarizes the estimated employment generated by Alternative D along with that generated by Jackson Rancheria Casino and the proposed Buena Vista Casino.

Taken together Alternative D and the Proposed Buena Vista Casino would add an estimated additional 1,655 jobs in Amador County. However, Alternative D would only add 180 of these jobs.

TABLE 4.11-24
EMPLOYMENT FROM ALTERNATIVE D AND AMADOR COUNTY CASINOS

Employer	Direct Employment
Existing Casino	
Jackson Rancheria Casino & Hotel ¹	1,400
Proposed Amador Projects	
Alternative D ²	180
Buena Vista Casino ³	1,475
Total Proposed	1,655
Total Existing & Proposed	3,055

SOURCES: ¹ Jackson Rancheria, 2005.

² Net direct jobs, GVA Marquette Advisors, 2004.

³ AES, 2005. Estimate based on Alternative A and Jackson Rancheria, taking into account that a hotel is not proposed.

NOTES: Full-time equivalent positions.

As discussed in **Section 4.7**, based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 60-percent of those employed by Alternative D would be residents of Amador County. It is also expected that 60-percent of those employed by the Buena Vista casino would be residents of Amador County. Taken together, approximately 993 of those employed by Alternative D and the proposed Buena Vista casino would reside in Amador County. Of this total, Alternative D would employ 108. As indicated in **Section 3.7**, Amador County has a labor force of 15,390 with approximately 760 unemployed workers. Employment generated by Alternative D and the proposed Buena Vista casino would account for approximately six-percent of the Amador County labor force and more than the estimated number of unemployed workers in Amador County. Together these projects would substantially increase the employment of Amador County. This would have both positive and negative effects in the labor market. Business owners would find it increasingly difficult to fill positions, thereby adversely affecting the cost of doing business. However, as a result, wages would likely rise as employers compete for employees, this would beneficially impact wages in the County as it provides workers with more employment opportunities.

Housing

The increase in employment that would result from the development of Alternative D and the Buena Vista casino is expected to affect the availability of housing in Amador County. As noted above, Alternative D and the Buena Vista casino would create approximately 993 new jobs filled by people expected to reside in Amador County. Many of the employees hired by these projects would be expected to already reside in Amador County, however, due the increase in job openings it is expected that a increase in housing demand would result in Amador County. The

Draft Amador County General Plan Housing Element anticipates that 946 residential units will be necessary to fill the County's housing need for the period of 2004 to 2009 (Amador County, 2005). The Housing Element identifies that development constraints will make development of residential units, and especially affordable housing difficult. Within Plymouth, the most significant limit to residential growth is the water moratorium. Until a reliable source of domestic water becomes available, only about 15 units can be approved within Plymouth unless the City Engineer makes a determination that there is additional water to serve residents and the moratorium is modified by DHS (City of Plymouth, 2004).

Due the existing constraints in developing housing in Amador County and the City of Plymouth it is expected that the employment generated by Alternative D, in conjunction with that created by the proposed Buena Vista casino, would result in a significant effect to the availability of affordable housing in Amador County and Plymouth. Mitigation has been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County.

Social Costs of Problem Gambling

The development of Alternative D would not include a casino; therefore, this alternative would not result in potential effects related to gambling.

Effects to Schools

Along with the creation of jobs and increased housing demand, development of Alternative D along with the Buena Vista casino would result in additional demands on the local education system. This increase in demand is expected to be in addition to the growth in the student body that would occur with the general population growth within Amador County. Based on the 993 new employees from Alternative D and the Buena Vista casino expected to reside in Amador County, approximately 497 students would require education from County schools. While it is expected that many employees already reside within the County, it is also expected that some employees would relocate to Amador County. This would increase the number of students in local schools. The increase in students could result in effects if the local schools lack capacity and staff to serve the additional students. Mitigation has been identified in **Section 5.2.7** to address this effect.

Effects to Local Governments

Cumulative effects to the local governments may occur as the result of changes in the revenues and expenses of Amador County and the City of Plymouth. As discussed in **Section 4.7**, the development of Alternative D would remove the project site from the County's assessed property rolls, thereby removing approximately \$33,856 from the County's annual revenue. The loss of this revenue would be mitigated by payments to the County as identified in **Section 5.2.7**. The development of the Buena Vista casino would not remove property from the County's property

roll as the project site is already tribal land and is not currently assessed property tax. Both Alternative D and the Buena Vista casino would increase sales tax revenues generated as a result of purchases made on goods and services and from the increase in business revenues in the area. Payroll and related taxes would also increase as a result of employment opportunities and earnings supported by the two projects. Increases in necessary expenditures could be required by Amador County and the City of Plymouth to address an increased demand for public services due to the development of Alternative D and the Buena Vista casino. Public services that could be affected include police service, schools, transportation, public facilities, and fire and emergency medical services. Effects to these resources are discussed individually below.

TRANSPORTATION

2025 Cumulative Condition Plus Alternative D Effects

Daily Roadway Segment Effects

Table 4.11-25 summarizes the results of this daily roadway segment analysis for the 2025 Cumulative Condition with and without Alternative D level of service conditions. With the traffic added to the study roadway segments by Alternative D, none of the roadway segments would have an unacceptable LOS, and therefore no significant effect would result.

Peak Hour Intersection Effects

Table 4.11-26 summarizes the weekday results of the intersection analysis for the 2025 Cumulative Condition and **Table 4.11-27** summarizes the Saturday results with and without Alternative D. With the traffic added to the study intersections by Alternative D, the following intersections would have unacceptable operations, and therefore would result in a significant effect:

- SR 49 / Main Street during the weekday and Saturday PM Peak Hour
- SR 49 / Empire Street during the weekday and Saturday PM Peak Hour
- SR 49 / SR 16 during the weekday and Saturday PM Peak Hour
- SR 16 / SR 124 during the weekday PM Peak Hour
- SR 16 / Latrobe Road (Amador County) during the weekday and Saturday PM Peak Hour

TABLE 4.11-25
DAILY ROADWAY SEGMENT PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE D

Roadway Segment	LOS Threshold ¹	Capacity	Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
			No Project ²	Alt D ³	No Project	Alt D	No Project	Alt D
SR49 North of Shenandoah Road	C	15,500	4,500	5,530	0.29	0.36	C	C
SR49 South of SR16	E	18,900	12,300	12,530	0.65	0.66	D	D

			Average Daily Traffic Volume		Volume to Capacity Ratio V/C		Level of Service	
SR16 West of Old Sacramento Road	C	20,200	7,900	9,780	0.39	0.48	C	C
SR124 South of SR16	E	18,900	3,000	4,660	0.16	0.25	B	B
SR88 West of SR124	E	20,200	11,700	13,290	0.58	0.66	D	D

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

²2025 Cumulative Condition No Project

³ 2025 Cumulative Condition Plus Alternative D

SOURCE: Appendix M

TABLE 4.11-26
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE D
WEEKDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative D			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.4	A	10.2	B	1.4	A	10.8	B
SR 49 / Main Street	C	54.7	F	>100	F	91.1	F	>100	F
SR 49 / Poplar Street	D	1.2	A	14.1	B	1.2	A	15.4	C
SR 49 / Empire Street	C	3.6	A	56.0	F	4.0	A	73.6	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	4.1	A	28.5	D	9.0	A	57.7	E
SR 16 / Latrobe Road (Amador)	C	13.6	B	89.8	F	24.2	C	>100	F
SR 104 (Preston Avenue) / SR 124	C	>100	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	26.7	D	>100	F	63.9	F	>100	F
SR 88 / SR 124	D	4.1	A	16.6	C	5.5	A	19.7	C
SR 88 / SR 12 (East)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / SR 12 (West)	D	>100	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	28.8	C			30.1	C		
SR 49 / Pleasant	C	>100	F			>100	F		

Intersection	LOS Threshold ¹	No Project				Alternative D			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
Valley Road									
SR 16 / Ione Road	C	1.7	A	28.8	D	2.1	A	39.0	E
SR 16 / Murieta South Parkway	D	9.4	A			9.9	A		
SR 16 / Murieta Parkway	D	24.4	C			27.2	C		
SR 16 / Stone House Road	E	50.0	E	>100	F	65.1	F	>100	F
SR 16 / Latrobe Road (Sacramento)	E	2.3	A	>100	F	2.9	A	>100	F
SR 16 / Dillard Road	D	81.3	F			92.2	F		
SR 16 / Sloughhouse Road	D	2.3	A	56.3	F	2.6	A	68.7	F
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise Boulevard	D	>100	F			>100	F		
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	>100	F			>100	F		
SR 49 / Project Driveway	C					17.4	C	>100	F
SR 49 / Service Access	C					5.5	A	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

TABLE 4.11-27
PEAK HOUR INTERSECTION PERFORMANCE
2025 CUMULATIVE CONDITION PLUS ALTERNATIVE D
SATURDAY PM PEAK HOUR

Intersection	LOS Threshold ¹	No Project				Alternative D			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
SR 49 / Miller Road	D	1.1	A	9.7	A	1.1	A	10.2	B
SR 49 / Main Street	C	59.5	F	>100	F	>100	F	>100	F
SR 49 / Poplar Street	D	1.2	A	13.6	B	1.2	A	15.2	C
SR 49 / Empire Street	C	5.8	A	72.1	F	7.1	A	>100	F
SR 49 / SR 16	C	>100	F	>100	F	>100	F	>100	F
SR 16 / SR 124	D	1.7	A	14.9	B	3.3	A	19.9	C
SR 16 / Latrobe Road (Amador)	C	2.5	A	25.1	D	3.3	A	39.7	E
SR 104 (Preston Avenue) / SR 124	C	80.4	F	>100	F	>100	F	>100	F
SR 104 (Main Street) / SR 124	C	5.9	A	33.1	D	23.8	C	>100	F
SR 88 / SR 124	D	3.3	A	15.4	C	5.0	A	18.6	C
SR 88 / SR 12 (East)	D	56.0	F	>100	F	84.1	F	>100	F
SR 88 / SR 12 (West)	D	94.4	F	>100	F	>100	F	>100	F
SR 88 / Kettleman Lane	D	19.7	B			20.6	C		
SR 49 / Pleasant Valley Road	C	32.1	D			45.0	E		
SR 16 / Ione Road	C	2.1	A	20.9	C	2.5	A	29.9	D
SR 16 / Murieta South Parkway	D	8.4	A			8.8	A		
SR 16 / Murieta Parkway	D	21.9	C			25.2	C		
SR 16 / Stone House Road	E	19.1	C	>100	F	30.6	D	>100	F
SR 16 / Latrobe Road (Sacramento)	E	1.1	A	85.6	F	1.4	A	>100	F
SR 16 / Dillard Road	D	18.7	B			22.8	C		
SR 16 / Sloughhouse Road	D	0.8	A	19.1	C	0.8	A	21.9	C
SR 16 / Grant Line Road	E	>100	F			>100	F		
SR 16 / Sunrise	D	55.4	E			66.1	E		

Intersection	LOS Threshold ¹	No Project				Alternative D			
		Intersection Average		Worst Movement		Intersection Average		Worst Movement	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
Boulevard									
SR 16 / Excelsior Road	D	>100	F	>100	F	>100	F	>100	F
SR 16 / Bradshaw Road	D	47.8	D			53.1	D		
SR 49 / Project Driveway	C					30.0	D	>100	F
SR 49 / Service Access	C					9.4	A	>100	F

NOTES: **Bold** text denotes unacceptable LOS.

¹LOS becomes unacceptable below level indicated, based on the standards of significance in **Table 3.8-3**.

SOURCE: Appendix M

- SR 104 (Preston) / SR 124 during the weekday and Saturday PM Peak Hour
- SR 104 (Main Street) / SR 124 (Church Street) during the weekday and Saturday PM Peak Hour
- SR 88 / SR 12 (East) during the weekday and Saturday PM Peak Hour,
- SR 88 / SR 12 (West) during the weekday and Saturday PM Peak Hour
- SR 49 / Pleasant Valley Road during the weekday PM Peak Hour
- SR 16 / Stone House Road during the weekday and Saturday PM Peak Hour
- SR 16 / Latrobe Road (Sacramento County) during the weekday and Saturday PM Peak Hour
- SR 16 / Dillard Road during the weekday PM Peak Hour
- SR 16 / Sloughhouse Road during the weekday PM Peak Hour
- SR 16 / Grant Line Road during the weekday and Saturday PM Peak Hour
- SR 16 / Sunrise Boulevard during the weekday PM Peak Hour
- SR 16 / Excelsior Road during the weekday and Saturday PM Peak Hour
- SR 16 / Bradshaw Road during the weekday PM Peak Hour
- SR 49 / Project Driveway during the weekday and Saturday PM Peak Hour
- SR 49 / Service Access Driveway during the weekday and Saturday PM Peak Hour

Mitigation Measures

Mitigation measures for the 2025 Cumulative Condition plus Alternative D have been developed for the intersections showing unacceptable LOS (bold text) as presented in **Tables 4.11-26** and **4.11-27** and are discussed in **Section 5.2.8** of the Draft EIS. With the incorporation of project mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS. With the incorporation of project

mitigation measures, each of the roadway segments and intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS with the exception of SR 16/Latrobe Road (Sacramento County) and SR 16/Sloughhouse Road. The LOS for SR 16/Latrobe Road (Sacramento County) in the weekday and Saturday PM peak hour and SR 16/Sloughhouse Road in the weekday PM peak hour would remain unacceptable with LOS F for both intersections for the worst movement. However, neither intersection is projected to warrant signalization under the 2025 Cumulative Conditions due to the acceptable average LOS. The following study intersections have an existing unacceptable LOS in 2025 without the addition of project traffic and would need improvement with or without the proposed project:

- SR 49 / Main Street (weekday and Saturday PM Peak Hour)
- SR 49 / Empire Street (weekday and Saturday PM Peak Hour)
- SR 49 / SR 16 (weekday and Saturday PM Peak Hour)
- SR 16 / SR 124 (weekday PM Peak Hour)
- SR 16 / Latrobe Road (Amador) (weekday and Saturday PM Peak Hour)
- SR 104 (Preston Avenue) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 104 (Main Street) / SR 124 (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (East) (weekday and Saturday PM Peak Hour)
- SR 88 / SR 12 (West) (weekday and Saturday PM Peak Hour)
- SR 49 / Pleasant Valley Road (weekday PM Peak Hour)
- SR 16 / Stone House (weekday and Saturday PM Peak Hour)
- SR 16 / Latrobe Road (Sacramento) (weekday and Saturday PM Peak Hour)
- SR 16 / Dillard Road (weekday PM Peak Hour)
- SR 16 / Sloughhouse Road during the weekday PM Peak Hour
- SR 16 / Grant Line Road (weekday and Saturday PM Peak Hour)
- SR 16 / Sunrise Boulevard (weekday and Saturday PM Peak Hour)
- SR 16 / Excelsior Road (weekday and Saturday PM Peak Hour)
- SR 16 / Bradshaw Road (weekday PM Peak Hour)

2025 Cumulative Condition Plus Mitigated Alternative D Plus the Proposed Buena Vista Casino

Project trips generated by the proposed Buena Vista Casino added to trips generated by Alternative D with mitigation applied would have fewer impacts than under the Alternative A scenario, as trips generated by Alternative D are less than with Alternative A. To be conservative, additional mitigation needed for this scenario would be the same as identified under the Alternative A scenario with Buena Vista Casino traffic. With the implementation of the added mitigation, as detailed in **Section 5.2.8**, Alternative D would result in a less-than-significant impact.

LAND USE

Cumulative land use effects may occur as the result of expected growth and disruption of orderly development. As discussed under the socioeconomic section above, the development of Alternative D in conjunction with the Buena Vista casino is expected to increase demand for housing within Amador County. As described in the Draft Amador County General Plan Housing Element, there are numerous constraints to the development of housing, especially affordable housing. These constraints include permitting costs, the availability of water and wastewater service, topography, land costs, and construction costs. Amador County has identified the need to remove these constraints and provide incentives to promote the provision of affordable housing in the County. Development of Alternative D and the Buena Vista casino is expected to increase demand for housing development in Amador County. As discussed above, mitigation has been identified in **Section 5.2.7** to address this effect. Mitigation would consist of the development and implementation of a housing program to address the availability of affordable housing within Amador County. The housing program would coordinate its activities with Amador County and the City of Plymouth in order to further countywide planning efforts.

Agriculture

As growth occurs within the region, cumulative effects to agriculture may occur as the result of the transformation of agricultural lands to other land uses. The project site supports cattle grazing but does not contain prime or unique farmlands or farmlands of statewide importance. Likewise, the Buena Vista site supports grazing, but has soils that are classified as marginal agricultural soils which provide low yields (EIP Associates, 2001). Development of the project site and the Buena Vista site would transform land that is currently used for grazing but has limited potential for other agricultural uses. Therefore, the development of Alternative D is not considered to significantly contribute to a cumulative loss of agricultural lands in Amador County.

PUBLIC SERVICES

Water Supply

The development of Alternative D and the Buena Vista casino, along with expected regional growth is not expected to result in significant cumulative effects to water supply in Amador County. An adequate water supply has been identified for Alternative D on the basis of pumping tests of the three source wells. It is uncertain which water supply option the Buena Vista casino would utilize; however due to the projected doubling of supply projected by the AWA, described under Alternative A above, it is expected that ample water supplies would be available for residential and commercial growth in Amador County. If the Buena Vista casino utilizes groundwater the distance between the two project sites (approximately 13 miles) would isolate the individual impacts on groundwater. No significant cumulative effects are expected to occur as the result of the development of Alternative D in conjunction with the Buena Vista casino and regional growth.

Wastewater Service

The development of Alternative D and the Buena Vista casino, along with expected regional growth, is not expected to result in significant cumulative effects to wastewater service in Amador County. The wastewater generated by Alternative D will be treated and disposed of on the project site, without requiring service by the City of Plymouth or AWA. The Buena Vista casino will either treat wastewater on-site or will contract with a service provider such as the City of Ione or AWA. If the wastewater generated by the Buena Vista casino is treated by a service provider, the Buena Vista Tribe would be required to pay connection fees and any infrastructure improvements required to serve the casino. No significant cumulative effects to wastewater service are expected to occur as the result of the development of Alternative D in conjunction with the Buena Vista casino and regional growth.

Law enforcement

As discussed under Alternative A, based on reported law enforcement activities at the Jackson Rancheria Casino, Alternative D and the proposed Buena Vista casino are expected to result in a substantial service demand on the ACSO and CHP services. The development of these projects in combination with growth that is expected to occur in the region may overburden the ability of the ACSO, CHP and other law enforcement agencies to provide adequate service to businesses and residents of Amador County. Therefore, Alternative D is expected to result in a potentially significant cumulative effect. Mitigation has been identified in **Section 5.2.9** to address the potential law enforcement effects to Amador County.

Fire protection, and emergency medical services

The development of Alternative D and the Buena Vista casino, along with expected regional growth is not expected to result in significant cumulative effects to fire protection and emergency medical service in Amador County. The Tribe will provide these services to the proposed casino and hotel by an on-site independent fire station. The Tribal Fire Station would enter into a mutual-aid agreement with AFD and other local fire protection providers and therefore increase the availability of fire protection and EMS in the project area. If the Buena Vista casino is provided fire protection and EMS by AFD or another service provider, the Buena Vista Tribe would be required to pay for the services by contract or agreement. No significant cumulative effects to fire protection and emergency medical service are expected to occur as the result of the development of Alternative D in conjunction with the Buena Vista casino and regional growth.

Other Public Services

Cumulative effects to other public services may occur if service providers are unable to provide adequate services to existing and planned development. As discussed in **Section 4.9**, solid waste, electricity, natural gas, and telephone services would be provided to the project site. The Tribe will coordinate with the desired service providers for utilities. The Tribe will pay for these

services through service agreements and fees and the proposed Buena Vista casino would also be expected to pay for these services.

As discussed in **Section 4.9**, the solid waste generated by Alternative D is estimated to be 0.59 tons per day. A contract waste hauler would deliver waste from Alternative D to the Keifer Landfill, which has a closure date of 2064. Waste generated from Alternative D would be less than 0.03-percent of the daily waste stream and would represent a negligible addition to the landfill (Goodrich, 2004). The proposed Buena Vista casino is expected to generate a similar amount of solid waste for disposal at the Keifer Landfill. Taken together, these two projects are not expected to significantly affect the daily waste stream or the ability of the Keifer Landfill to accept waste from Amador County. No significant cumulative effects to these public services have been identified.

OTHER VALUES

Noise Effects

Alternative D would result in changes in traffic noise levels as identified in **Table 4.11-28**. According to this table, the project related traffic noise level increases are not predicted to exceed 5 Leq along any of the project segments analyzed with the inclusion of the project and the Buena Vista casino traffic. Because traffic levels are predicted to almost double, the predicted increase is approximately 3 Leq during Phase I and Phase II on SR 124 south of SR 16. The resulting noise level would be 61 Leq during the peak hour, this is below the Noise Abatement Criteria identified by FHWA. Therefore, cumulative noise effects are considered to be less than significant.

TABLE 4.11-28
PROJECT RELATED INCREASES IN TRAFFIC NOISE LEVELS
ALTERNATIVE D (100 FEET FROM ROADWAY CENTER)

Roadway Segment	Cumulative Year		
	Peak hour (Leq)		Change Leq
	No Project	Alternative D	
SR 49 North of Shenandoah Road	58	60	+2
SR 49 South of SR16	63	63	0
SR 16 West of Old Sacramento Road	62	63	+1
SR 124 South of SR 16	60	62	+2
SR 88 West of SR 124	65	66	+1

Source: MEC using FHWA RD-77-108 with traffic inputs from CCS/TY Lin

Hazardous Materials

Cumulative hazardous materials involvement that may occur as the result of industrial practices include the releases of hazardous materials into the environment or exposure of residents to contaminants as a result of hazardous materials releases. As identified in **Section 3.10**, there are

no existing hazardous materials on the project site. The use of standard operating procedures for the safe handling, use, storage and disposal of hazardous materials during the construction of Alternative D will minimize cumulative effects for hazardous materials. Incorporation of mitigation measures included in **Section 5.2.10** will also ensure a minimal cumulative effect for the construction and operation of Alternative D.

Development of the proposed Buena Vista casino is not expected to pose a significant risk to human health and/or the environment. This conclusion is based on current management practices, a lack of reported hazardous materials, and the minimal use of hazardous materials for these projects. Alternative D is not expected to significantly increase the risk of a hazardous materials incident when combined with the proposed Buena Vista casino and other facilities in Amador County.

Visual Resources

The project site is currently developed with a commercial development and is bordered by commercial developments along SR 49. Alternative D would remove the existing Shenandoah Inn and replace the building with a retail center, some of which would be visible from SR 49. These developments would be partially screened by the existing gas station located immediately west of the project site and by trees and shrubs included in site landscaping. However, the development of the facilities on the project site will contribute to the ongoing and cumulative transformation of the project area. The City has planned for this transformation with the zoning of the site for commercial uses.

Because development of Alternative D will occur in an area already developed with commercial land uses, modification to the natural view shed, including terrain or vegetation will be minimized. Additionally, because of the distance between Alternative D and the Buena Vista casino, the proposed sites are contained within distinctive and separate view sheds. Therefore, potential cumulative visual resource effects of Alternative D, with consideration of the Buena Vista casino, are considered to be less than significant.

4.11.5 ALTERNATIVE E – NO ACTION

Under Alternative E, the proposed trust parcels would not be taken into federal trust and no project-related activities would occur in these areas. Cumulative impacts from other development, such as the Buena Vista Casino and assumptions regarding general non-tribal development, have been addressed above and would still be developed in the No Action alternative where selected by the BIA. If the project site were developed by a non-tribal entity in the future, then the cumulative impacts would be the same as those described above for the no-project setting under each alternative.

4.12 INDIRECT EFFECTS

INTRODUCTION

The CEQ Regulations for Implementing NEPA define indirect effects as impacts that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR§ 1508.8). Within this section environmental effects resulting from construction of off-site traffic improvements required to mitigate project impacts are addressed.

4.12.1 INDIRECT EFFECTS FROM OFF-SITE TRAFFIC MITIGATION

This section analyzes the effects resulting from the construction of traffic mitigation measures. The effects of implementing traffic improvements are treated within this document as indirect effects due to the distance between the traffic improvement sites and the project site location. These improvements have been identified for effects discussed in **Section 4.8** and **4.11**.

IMPROVEMENTS

Roadway segment and intersection improvements recommended under each alternative are listed in **Table 4.12-1**. Mitigation measures for each roadway segment and intersection are identified in the first year of need. For example, mitigation needed in 2009 and 2025 for Alternative B, as is identified in the roadway segment on SR 16 west of Old Sacramento Road, is shown in the 2009 column only. Mitigation for Alternative A has been identified for 4 roadway segments and 21 intersections. Mitigation for Alternative B and C has been identified for 4 roadway segments and 20 intersections. Mitigation for Alternative D has been identified for 3 roadway segments and 20 intersections.

Where roadway segments and intersections are shown as having an acceptable LOS without the addition of traffic from the proposed project and unacceptable with the addition of project traffic, the Tribe is responsible to pay the full share of costs for the proposed mitigation. Where roadway segments and intersections are shown as having an unacceptable LOS both with and without the addition of project traffic, the Tribe is responsible to pay for a proportionate share of costs for the proposed mitigation.

TABLE 4.12-1
ROADWAY SEGMENT AND INTERSECTION IMPROVEMENTS

Improvements	2006	2009	2025
SR 16 West of Old Sacramento Rd			
Widen the roadway segment to 4-lanes from Bradshaw Road to Old Sacramento Road.			A, B
SR 49 and Main St			
Signalize the intersection.	A, B, C, D		
Widen all approaches to include an exclusive left-turn lane and combined			A, B, C, D

Improvements	2006	2009	2025
through/right-turn lane.			
SR 49 and Empire St			
Signalize the intersection.	A, B, C, D		
Widen the NB and SB approaches to include an exclusive left-turn lane and a combined through/right-turn lane.			A, B, C, D
SR 49 and SR 16			
Signalize the intersection.	A, B, C, D		
SR 16 and SR 124			
Signalize the intersection.			A, B, C, D
SR 16 and Latrobe Rd (Amador County)			
Add an additional through lane to the eastbound and westbound approaches.	A	B	
Signalize the intersection. Widen the eastbound approach to include an exclusive left-turn lane and a combined through/right-turn lane and an additional through lane.			A, B, C, D
SR 104 (Preston Ave) and SR 124			
Signalize the intersection. Widen northbound, southbound, and westbound approaches to include an exclusive left-turn lane and a combined through/right-turn lane. The EB and WB approaches shall be coded with split phasing.	A, B, C, D		
SR 104 (Main St) and SR 124 (Church St)			
Signalize the intersection.	A, B, C, D		
Widening the NB approach to accommodate an exclusive left-turn lane and a combined through/right-turn lane.			A, B, C, D
SR 88 and SR 12 (East)			
Signalize the intersection.	A, B, C, D		
SR 88 and SR 12 (West)			
Signalize the intersection.	A, B, C, D		
Widen the EB approach to include a left-turn lane and a combined through/right-turn lane. The EB and WB approaches shall be coded with split phasing.			A, B, C, D
SR 88 and Kettleman Ln			
Widen the EB approach to include an exclusive left-turn lane and a combined through/right-turn lane.			A
SR 49 and Pleasant Valley Rd			
Signalize the intersection. Widen the northbound approach to include an exclusive left-turn lane and an exclusive right-turn lane.			A, B, C, D
SR 16 and Stone House Rd			
Add an additional through lane to the eastbound and westbound approaches.	A, B, C, D		
Widen the eastbound approach to accommodate an exclusive left-turn lane and two through lanes. Widen the westbound approach to accommodate one through lane and one combined through/right-turn lane.		A, B, C, D	
Signalize the intersection.			A, B, C, D
SR 16 and Latrobe Rd (Sacramento County)			
Add an additional through lane at the EB and WB approaches		A	
SR 16 and Dillard Rd			
Widen the NB approach to include an exclusive left-turn lane and a right-turn lane.			A, B, C, D
SR 16 and Grant Line Rd			

Improvements	2006	2009	2025
Widen the intersection at the NB approach to include a combined through left-turn lane, and an exclusive right-turn lane. Widen the southbound approach to include an exclusive left-turn lane and a combined through/right-turn lane.	A, B, C, D		
Widen the NB and SB approaches to include an exclusive left-turn lane, an exclusive through-lane and a combined through/right-turn lane with protected phasing. Widen the EB and WB approaches to include an additional exclusive through-lane.			A, B, C, D
SR 16 and Sunrise Blvd			
Widen the SB approach to include an exclusive left-turn lane, creating dual left-turn lanes, and an additional through-lane. Widen the NB, EB, and WB approaches to accommodate an exclusive through-lane.			A, B, C, D
SR 16 and Excelsior Rd			
Signalize the intersection.	A, B, C, D		
Widen the EB and WB approach to accommodate an exclusive additional through-lane.			A, B, C, D
SR 16 and Bradshaw Rd			
Widen the NB and SB approaches to accommodate an exclusive left-turn lane, creating dual left-turn lanes. Widen the EB and WB approaches to accommodate an additional exclusive through-lane.			A, B, C, D
SR 49 and Project Driveway			
Signalize the intersection. Split out the SB approach combined through /left-turn lane into an exclusive left-turn lane and an exclusive through lane. Restrict the northern Village Drive connection with SR 49 to right-in/right-out movements enforced by a raised median, extending from the northern project driveway to just south of the northern Village Drive intersection. The southern Village Drive shall continue to allow all vehicular movement.	A, B, C, D		
SR 49 and Service Access Driveway			
Signalize the intersection.	A, B, C, D		
Prohibit left turns from exiting the driveway			C
NOTES: NB=northbound, SB=southbound, EB=eastbound, WB=westbound. SOURCE: Appendix M			

ENVIRONMENTAL CONSEQUENCES

The following section identifies the potential environmental effects from construction of the intersection improvements. Because most of the identified improvements are common to all the alternatives and because the nature and scope of effects are expected to be similar, the following analysis is provided for all the alternatives, thereby avoiding redundant discussion under each alternative.

Land Resources

The construction of roadway improvements would require grading and the introduction of fill material to extend the existing shoulders and roadbed to provide for the additional facilities. The increase of impervious surfaces and additional cut and fill embankments could result in erosion of soils. Stable fill material, engineered embankments, and erosion control features would be used

to reduce the potential for slope instability, subsidence and erosion. The roadway improvements are not expected to significantly affect the ability to extract minerals. In accordance with the federal Clean Water Act, construction of roadway improvements larger than one-acre in size would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit Program. To comply with the program a Stormwater Pollution Prevention Plan (SWPPP) would be developed that would include soil erosion and sediment control practices to reduce the amount of exposed soil, prevent runoff from flowing across disturbed area, slowing runoff from the site, and removing sediment from the runoff.

Improvements off the property and under one-acre in size will comply with stormwater pollution prevention standards of all applicable codes from the following:

- All applicable sections of the Amador County Code of Regulatory Ordinances.
- All applicable sections of the Plymouth City Code.
- Caltrans Storm Water Quality Handbook (April 1997).
- California Storm Water BMP Handbook of Construction (March 1993).

With standard construction practices and specifications required by the NPDES permit program, Caltrans, Amador County, and/or the City of Plymouth, the intersection improvements identified under the project alternatives are expected to result in less-than-significant effects to land resources.

Water Resources

The development of roadway improvements at the locations identified could affect water resources due to grading and construction activities and an increase in impervious surfaces. Potential effects include an increase of surface runoff and increased erosion that could adversely affect surface water quality due to increases in sediment and roadway pollutants such as grease and oil.

As discussed above, a SWPPP would be developed prior to the construction of the roadway improvements over one-acre in area to comply with the NPDES General Construction Permit Program, which includes soil erosion and sediment control practices. The effects to runoff volumes resulting from the increase in impervious roadways are expected to be minimal due to the limited extent of the improvements in comparison to the existing roadways. Some existing curb and gutters and stormwater drain inlets would be demolished and relocated along portions of the roadways to provide space for improvements. Curb and gutters, inlets, and other drainage facilities would be reconstructed to provide adequate facilities to direct stormwater runoff. With incorporation of these drainage features and compliance with the soil erosion and sediment control practices identified in the SWPPP, effects to water resources are expected to be less than significant.

Air Quality

Development of the roadway improvements would result in the short-term, construction related air pollution emissions. The construction phase would produce two types of air contaminants: exhaust emissions from construction equipment and fugitive dust generated as a result of demolition and soil movement. Exhaust emissions from construction activities include those associated with the transport of workers and machinery to the site, as well as those produced on-site as the equipment is used. Mitigation measures available to reduce construction emissions include watering the exposed soil to reduce dust, reducing speeds on all unpaved roads to 15 miles per hour, maintaining equipment properly and using cleaner burning fuels.

Potential long-term effects of roadway improvements could result if the roadway improvements resulted in localized increases in carbon monoxide (CO) concentrations. The construction of roadway improvements is not expected to result in changes or redistribution in traffic volumes and vehicle trips. It is also expected that the improvements would reduce congestions and improve traffic flow. This would reduce the emissions from idling vehicles at these intersections. Long-term effects are therefore considered to be less than significant.

Because some of the improvements may not be completed for 5 – 20 years, and as the actual extent of improvements may change due to the actual growth in traffic volume, it is difficult to determine the actual scope of impacts. Therefore, construction related air quality effects are considered to be potentially significant. Mitigation has been identified in **Section 5.2.4** to address the potential effects to air quality.

Biological Resources

Construction of the roadway improvements would result in the loss of some existing vegetation and modification of drainage channels. Removal of sensitive native vegetation (e.g. oak trees) and vegetation that provides habitat for special-status species or supports migratory birds could result in potentially significant effects. The modification of intermittent drainages and the direct loss or harm to sensitive animal species is also considered potentially significant effects.

Most of the habitat that does exist in the areas of roadway improvements is highly disturbed roadsides. Due to the degraded condition of the roadside areas, habitat quality is generally low and it is unlikely that expansion of the existing facilities would result in a significant effect to sensitive animal species. To address effects to sensitive habitat and species, biological surveys would be required to comply with the California Environmental Quality Act (CEQA). The lead agency under CEQA (Caltrans, the City of Plymouth, or Amador County) would be required to mitigate potential impacts to a less-than-significant level or to issue a finding of fact and statement of overriding considerations if significant impacts could not be mitigated.

Due to the limited nature of the improvements along existing roadways, the degraded condition of existing habitat, and the requirements of CEQA to address impacts to biological resources, the effects of the roadway improvements are expected to be less than significant. However, as the actual extent of improvements may change due to the actual growth in traffic volume, it is difficult to determine the actual scope of impacts. Therefore, impacts to biological resources are considered to be potentially significant. Mitigation has been identified in **Section 5.2.5** to address the potential effects to biological resources.

Cultural Resources

The construction of the roadway improvements has the potential to disturb or destroy historical features and archaeological resources. Grading roadsides to add traffic lanes may disturb previously unknown sites.

To address potential impacts to cultural resources, cultural surveys may be required to comply with the California Environmental Quality Act (CEQA). The lead agency under CEQA (Caltrans, the City of Plymouth, or Amador County) would be required to mitigate potential impacts to a less-than-significant level or to issue a finding of fact and statement of overriding considerations if significant impacts could not be mitigated. Mitigation may include the avoidance of resources, the preservation of key historical features, or the removal, documentation, and curation of cultural resources.

Due to prior grading of the existing roadways and occasional traffic on roadsides it is likely that resources remaining in the area are highly disturbed and lack integrity, thus diminishing the significance of the remaining resources. However, due to the potential to disturb previously unidentified artifacts, the effects to cultural resources are considered to be potentially significant. Mitigation has been identified in **Section 5.2.6** to address the potential effects to cultural resources.

Socioeconomic Conditions

Construction of roadway improvements would result in short-term inconveniences and minor delays do to constricted traffic movements and possible temporary detouring of traffic. The intersection improvements are not expected to result in long-term disruption of access to surrounding land uses. No minority or low-income populations are located in close proximity to the intersections identified and would therefore not experience disproportionate adverse effects.

The realignment and expansion of roadways would result in impacts to surround properties. The improvements would result in partial or full property take of adjacent parcels. In most cases no additional property would be required (e.g. intersection signalization) or the amount of additional property required would be minimal. However as the exact amount of land required is unknown,

the potential loss of private property is considered to be a potentially significant impact. Mitigation has been identified in **Section 5.2.7** to address potential effects.

Public Services

Construction of the roadway improvements may require the relocation of utilities located within and near the existing roadways. These utilities include overhead electricity, telecommunication lines, underground water, stormwater, wastewater and other utility lines. Relocation of these lines could result in a temporary break in service to some homes and businesses in the area. However because these effects are common when upgrading and maintaining utility services, and because potential service breaks would be temporary, these effects are considered to be less than significant. No effects to fire or emergency medical services are expected as access to adjacent homes and businesses would be maintained during construction of the improvements.

Other Values

Construction of the proposed improvements could potentially result in noise, hazardous materials, and visual effects. Construction activities would result in short-term increases in the local ambient noise environments. However, because construction activities would be temporary in nature and are expected to generally occur during normal daytime hours, a less-than-significant effect is expected. Long-term changes in noise levels may result at some intersections. The change in long-term traffic noise is considered to be a potentially significant effect. Mitigation has been identified in **Section 5.2.10** to address potential effects.

The accidental release of hazardous materials used during grading and construction activities could pose a hazard to construction employees and the environment. Additionally, equipment used during grading and construction activities could ignite dry grasses and weeds in construction areas. However, these hazards are common to construction activities and would be minimized with adherence to standard operating procedures, such as refueling in designated areas, storing hazardous materials in approved containers, and clearing dried vegetation. These potential hazards are considered to be less than significant.

Visual effects would occur as the result of modification and expansion of existing roadways. However, because the intersections and roadway segments are expected to conform to modern design standards and would be landscaped to suit the settings, a less-than-significant effect is expected.

4.13 GROWTH-INDUCING EFFECTS

4.13.1 INTRODUCTION

NEPA requires that an EIS analyze the “growth inducing effects” (40 CFR §1502.16 (b), 40 CFR §1508.8 (b)). A growth inducing effect is an effect that fosters economic or population growth, or the construction of additional housing, either directly or indirectly. Direct growth inducement could result, for example, if a project involved the construction of new housing. Indirect growth inducement could result if a project established substantial new permanent employment opportunities (e.g., new commercial, industrial, or governmental enterprises) or if it would remove obstacles to population growth (e.g., expansion of a waste water treatment plant that could allow more construction in the service area).

Under NEPA, growth-inducing effects are a subset of indirect effects, which are defined as effects “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable” (40 CFR §1508.8(b)).

This section deals exclusively with growth-inducing effects that will result from the development and operation of the alternatives and the employment created. The economic growth that is expected to occur has been estimated in the economic impact report completed for the project (**Appendix R**).

Estimates of indirect and induced impacts were prepared by GVA Marquette Advisors using the IMPLAN (Impact Analysis for Planning) economic model originally developed for the USDA Forest Service in cooperation with the Federal Emergency Management Agency and the USDI Bureau of Land Management. The IMPLAN model has been in use since 1979. The IMPLAN model closely follows the accounting conventions used in the “Input-Output Study of the U.S. Economy” by the Bureau of Economic Analysis and the rectangular format recommended by the United Nations. Indirect impacts calculated by the IMPLAN model reflect changes in inter-industry purchases, effectively measuring the impact of expenditures for other goods and services by the project alternatives as they too cycle through the economy. Induced impacts calculated by the IMPLAN model reflects changes in spending from households as income/population increases or decreases due to changes in production, effectively measuring the impact of wages paid as they cycle through the economy. Three areas of impact have been calculated: output (equivalent to GDP), employment, and earnings (equivalent to personal income). The analysis of growth inducing effects will focus on the employment impact as this category is related to potential impacts resulting from area population increases and potential demand for housing and commercial development.

4.13.2 EMPLOYMENT GENERATION

The direct employment created by the project alternatives has been addressed within **Section 4.7**. In addition to the direct employment generated by the proposed facilities (i.e. casino, hotel, retail employees), indirect and induced employment would also occur as the result of expenditures for other goods and services by the alternatives. **Table 4.13-1** provides a summary of the net employment impacts of the four project alternatives. The figures presented in **Table 4.13-1** take into account the substitution factor. As discussed in **Section 4.7**, due to the substitution effect of the transfer of patronage from other business located within Amador County, namely Jackson Rancheria Casino, the net job and economic impact from the casino alternatives is expected to be reduced by 10 percent. The substitution of patronage means that not all the jobs and economic impacts resulting from Alternative A would be ‘new’ to the County, as 10-percent would merely be transfers of spending within the county. Therefore the ‘new’ jobs are estimated to be 90-percent of the total jobs. In the case of Alternative D, which does not include a casino, the net job and economic impact is expected to be reduced by 75 percent. This is because a large portion of the spending at the retail stores would come from local patrons, who would have otherwise purchased those goods and services elsewhere within the Amador County.

TABLE 4.13-1
ESTIMATED NET DIRECT, INDIRECT AND INDUCED EMPLOYMENT

Classification	Alternative A	Alternative B	Alternative C	Alternative D
Direct Jobs within Amador County	1,365	1,192	809	180
Indirect & Induced Jobs within Amador County	1,423	1,247	1,068	196
Total Jobs within Amador County	2,788	2,439	1,877	376
Jobs within remainder of state	849	743	572	0
Total Jobs	3,637	3,182	2,449	376

SOURCE: GVA Marquette Advisors, 2004.

NOTES: Full-time equivalent positions.

4.13.3 POTENTIAL HOUSING GROWTH

The creation of additional jobs within Amador County is expected to result in an increase in housing demand within Amador and surrounding counties. As discussed in **Section 4.7**, based on the availability of labor in the region and the proximity of available labor to the project site, it is estimated that 5-percent of those employed would be residents of Plymouth and 60-percent of those employed by the direct jobs would reside in Amador County (including those residing in the City of Plymouth). The remaining 40-percent of those employed are expected to reside in surrounding Calaveras, Sacramento, San Joaquin, and El Dorado Counties. Of the indirect and induced jobs created in Amador County, it is expected that most would occur within the larger

cities such as Ione and Jackson due to the fact that area business are predominately located in these areas.

Due to the limited availability of labor within Plymouth and Amador County, it is also expected that 5-percent of indirect/induced employees would reside within Plymouth and 60-percent would reside within Amador County. The remaining 40-percent are expected to reside in surrounding counties. **Table 4.13-2** provides a breakdown of employees by place of residence.

TABLE 4.13-2
ESTIMATED NET DIRECT, INDIRECT AND INDUCED EMPLOYMENT BY AREA OF RESIDENCE

Classification	Alternative A	Alternative B	Alternative C	Alternative D
Direct Employees				
City of Plymouth	68	60	40	9
Amador County ¹	819	715	485	108
Surrounding Counties	546	477	324	72
Indirect/Induced Employees				
City of Plymouth	71	62	53	10
Amador County ¹	854	748	641	118
Surrounding Counties	569	499	427	78
Total Employees				
City of Plymouth	139	122	93	19
Amador County ¹	1,673	1,463	1,126	226
Surrounding Counties	1,105	1,276	751	150

NOTES: Full-time equivalent positions.

¹ Amador County figures include City of Plymouth.

SOURCE: GVA Marquette Advisors, 2004.

In the short-term, it is expected that most employees would reside within their existing communities in Amador County and surrounding counties and would not need to relocate. However, some employees that rent housing would likely choose to rent housing closer to their place of employment. As explained in **Section 3.7**, and shown in **Table 4.13-3**, approximately 35 vacant units are available in Plymouth, and a total of 689 vacant units are available in Amador County¹. The demand for these units would increase as a result of the development of the project alternatives. As described above, about 40-percent of employees are expected to reside in neighboring counties where an additional 32,494 vacant units are estimated to be available.

In the long-term, most employees would likely continue to reside within their existing communities. However, some employees would choose to buy their first home or relocate within Amador County. Additionally, the increased demand for rental housing in the area would likely result in the construction of new housing units.

¹ The estimated 689 vacant units in Amador County include the estimated 35 vacant units in Plymouth.

TABLE 4.13-3
2004 REGIONAL HOUSING ESTIMATES

Location	Estimated Vacant Units
Amador County (total)	689
Plymouth	35
Jackson	73
Ione	73
Sutter Creek	59
Amador City	1
Unincorporated County	448
San Joaquin County	7,469
Sacramento County	20,516
Calaveras County	1,128
El Dorado County	2,933
Regional Total	33,183

SOURCE: DOF, 2004a; US Census 2000

4.13.4 POTENTIAL COMMERCIAL GROWTH

The increased demand for goods and services from the proposed alternatives would result in commercial growth in the surrounding cities and counties. Examples of good and services include fresh produce, wholesale goods, marketing, and maintenance products and services. Commercial growth would also occur as the result of new employee wages, which will be used to provide the workers with housing, clothes, food, health care, and a range of other goods and services. Visitors who are attracted to the region as a result of the proposed casino and hotel or retail developments can be expected to spend money on food, transportation, accommodation and entertainment elsewhere in the region. For example, casino patrons may also stop at a local winery, or service station. Most of the commercial growth is expected to be captured by existing businesses. However, it is likely that some existing businesses would expand and other businesses would be created as the result of the increase in commercial activity. As in the case with the indirect/induced employment, commercial growth is expected to occur over a wide geographical area, due to the diversity of the businesses affected and the dispersed location of employees. However, most commercial growth is expected to occur in areas that have significant commercial development such as Plymouth, Ione, Jackson and other regional cities. These areas have existing services such as water and wastewater service to attend to local businesses. As with residential development, commercial development would be subject to approval by local government according to land use plans and ordinances. Therefore, the proposed alternatives would not likely induce “disorderly” commercial growth either directly or indirectly.