SECTION 5.0

MITIGATION MEASURES

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MITIGATION MEASURES

5.1 INTRODUCTION

The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations require that mitigation measures be developed for all of a proposal's effects on the environment where it is feasible to do so (CEQ 46 Fed. Reg. 18026, 19a; 40 C.F.R. §§ 1502.14(f) and 1502.16(h)). The NEPA Regulations define mitigation as "avoiding the impact altogether by not taking a certain action or parts of an action, minimizing impacts by limiting the degree or magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitating, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, compensating for the impact by replacing or providing substitute resources or environments" (40 C.F.R. § 1508.20). These principles have been applied to guide design and siting criteria for each of the alternatives and in negotiating Memorandums of Understanding (MOUs) with affected jurisdictions. Where potential effects on the environment were identified in early stages of project design and Environmental Impact Statement (EIS) preparation, appropriate changes in the project description were made to minimize or eliminate them. Other applications of mitigation have been incorporated into the design of the alternatives and have been mentioned throughout the EIS. In addition to the mitigation measures that have been incorporated into the design of the alternatives, the following section provides measures to mitigate specific effects identified in the preparation of the EIS. Mitigation measures have been identified where feasible to address specific effects regardless of whether they are considered "significant" (CEQ 46 Fed. Reg. 18026, 19a). The inclusion of mitigation measures for a particular alternative do not constitute endorsement of or preference for the alternative. The mitigation measures recommended for a particular alternative would apply only if the alternative is chosen by the National Indian Gaming Commission (NIGC) in its Record of Decision (ROD).

5.2 MITIGATION MEASURES

5.2.1 LAND RESOURCES

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F, G, and H:

SOIL

A. The following mitigation measures shall be implemented to result in a less than significant impact to the development from expansive soils:

    a. For structures with a light to moderate bearing load (one to three stories), a shallow, spread footing foundation system would be sufficient to provide support under expansive soil conditions (see **Appendix K** for more details and optional systems). However, a shallow foundation system shall be designed to reduce the potential for seasonal moisture variation under the buildings by providing continuous perimeter strip footings that extend below the depth of seasonal moisture variation (typically 18 inches or deeper).

    b. For structures with a high bearing load, either a post-tensioned concrete slab, or heavily reinforced structural mat slab (shallow foundation systems), or a deep foundation system such as a drilled piers would be necessary to provide support under expansive soil conditions (see **Appendix K** for more detail). Shallow system designs applied to high bearing load structures will also be designed to reduce the potential for seasonal moisture variation.

    c. To mitigate impacts to pavement caused by expansive soil, one or a combination of the following measures shall be required:

        i. Removal and replacement with non-expansive soils.

        ii. Lime treatment of soils.

        iii. Design of pavement sections to withstand potential swelling pressures.

B. All structures shall be designed in compliance with the California Building Code (CBC) Building Code (Article VI Chapter 6.04) current at the start of construction such that risks to the health or safety of workers or members of the public from earthquake hazards are reduced to a less-than-significant level.

Implementation of the above mitigation will reduce land resource impacts to a less-than-significant level.

5.2.2 WATER RESOURCES

SURFACE WATER

The following measures are recommended for Alternatives A, B, C, D, E, F, G, and H:

Construction Impacts

A. During construction, surface water quality shall be protected by using Best Management Practices (BMPs) as listed in the Erosion Control recommendations found in **Appendix C**. These BMPs would be included in the Stormwater Pollution Prevention Plan (SWPPP) to be filed with either the U.S. Environmental Protection Agency (USEPA) or the Regional Water Quality Control Board (RWQCB), as appropriate.

B. A stormwater sampling and monitoring program shall be developed and implemented to assess the quality of surface water entering and leaving development sites. At a minimum, sampling sites shall include: a location upstream at an elevation above all proposed development; and a location downstream of all development, yet at an interception point prior to surface waters entering the Laguna de Santa Rosa. Analyses shall include total suspended solids (TSS), oils and grease.

C. If the on-site wastewater treatment option is operated and discharge is to be made into the Bellevue-Wilfred Channel or Laguna de Santa Rosa, construction of the discharge's outfall structure shall be undertaken during the dry season and under permit from the Department of the Army, Corps of Engineers, if required. Bioengineered rip-rap and habitat restoration of the agricultural ditch is proposed to offset construction impacts to existing bank vegetation. The ditch is currently vegetated with non-native weeds and grasses.

Implementation of the above mitigation will reduce the impacts of construction on surface water to a less than significant level.

The following measures are recommended for Alternatives A, B, C, D, E, F, and H:

Operational Impacts

D. Application of fertilizer shall be limited to the minimum amount necessary and shall be adjusted for the nutrient levels in the water used for irrigation. Fertilizer shall not be applied immediately prior to anticipated rain.

E. The garbage bin area shall be covered. Any runoff or drainage from the garbage bin area shall be directed to the sewer system and treated by the wastewater treatment plant (WWTP).

F. Landscape irrigation shall be adjusted based on weather conditions and shall be reduced or eliminated during the wet portion of the year in order to prevent excessive runoff.

Implementation of the above mitigation will reduce the operational impacts of the project on surface water to a less-than-significant level.

The following measure is recommended for Alternative G:

Operational Impacts

G. A stormwater detention basin(s) shall be included on-site to reduce stormwater discharges to pre-project levels.

H. At least 15 percent of surface parking areas shall be constructed of pervious surfaces.

Implementation of the above mitigation will reduce the operational impacts of the project on surface water to a less-than-significant level.

Wastewater

The following measures are recommended for Alternatives A and H if the on-site wastewater treatment option is chosen; and for Alternatives B, C, D, E, and F:

I. Effluent temperature shall be reduced by storing effluent in tanks and holding ponds to the extent possible without impairing the operation of the wastewater treatment facility.

J. The Tribe shall restrict discharge of effluent to the Laguna de Santa Rosa from May 15 to September 30 each year, or other period, as specified in the National Pollutant Discharge Elimination System (NPDES) permit.

K. The discharge of effluent to surface waters shall not be allowed until the Russian River flow reaches 1,000 cubic feet per second (cfs) measured at the Hacienda Bridge, or as otherwise specified in the NPDES permit.

L. Effluent shall be discharged to land via sprayfields during the period when effluent may not be discharged to surface waters due to conditions of the NPDES permit (see Mitigation Measures I and J).

M. In order to maintain the water balance described in **Section 4.3.1**, a minimum of 50 gallon per minute (gpm) of treated wastewater shall be designated for use by the casino and hotel.

N. Dechlorination facilities shall be added to the surface water discharge treatment facilities, along with chlorine residual monitors to ensure no significant chlorine residual in the effluent.

O. The WWTP shall be staffed with operators who are qualified to operate the plant safely, effectively, and in compliance with all permit requirements and regulations. The operators shall have qualifications similar to those required by the State Water Resources

Control Board Operator Certification Program for municipal wastewater treatment plants. This program specifies that for tertiary level wastewater treatment plants with design capacities of 1.0 MGD or less, the chief plant operator must be a Grade III operator. Supervisors and Shift Supervisors must be Grade II operators. An Operations and Maintenance Program must be followed by the plant operators. Emergency preparedness shall include all appropriate measures, including a high level of redundancy in the major systems.

The following measure is recommended for Alternatives A and H if the off-site wastewater treatment option is chosen:

P. Tribe shall enter into an agreement with the subregional wastewater disposal system, to allow for conveyance of the project's wastewater to a treatment plant operated by the system, and treatment of the project's wastewater at such treatment plant. The Tribe shall also enter into an agreement to purchase 50 gpm of recycled water, in order to maintain the water balance described in **Section 4.3.1**. The Tribe shall implement all conditions of the agreements.

Implementation of the above mitigation will reduce the wastewater impacts of the project on surface water to a less-than-significant level.

REGIONAL GROUNDWATER

Operation of on-site groundwater wells is expected to result in a less-than-significant regional groundwater impact for Alternatives A-E and H. In order to further reduce these less-than-significant impacts, the following measures are recommended for Alternatives A, B, C, D, E, and H:

Q. Existing on-site wells shall be abandoned and sealed. On the Wilfred site, two wells shall be abandoned and capped. On the Stony Point site, one well shall be abandoned and capped. The well on the Stony Point site is estimated to have had an original capacity in excess of 300 gpm.

R. The Tribe shall implement water conservation measures (if applicable), including use of low flow faucets and showerheads, recycled water for toilets, and voluntary towel re-use by guests in the hotel; use of low-flow faucets, recycled water for toilets, and pressure washers and brooms instead of hoses for cleaning, in public areas and the casino; use of garbage disposal on-demand, re-circulating cooling loop for water cooled refrigeration and ice machines where possible, and service of water to customers on request, in restaurants; use of recycled and/or gray water for cooling, checking steam traps and

ensuring return of steam condensate for boiler reuse, and limitation of boiler blowdown, in the Central Plant; and use of recycled water for irrigation (HydroScience, 2006b).

S. In order to offset the groundwater used by implementation of the project, the Tribe shall implement one or more of the following measures:

   a. The Tribe shall work with the City of Rohnert Park and SCWA to allocate and deliver more surface water, aiding in the City's compliance with the City's settlement with the South County Resource Preservation Committee.

   b. The Tribe shall work with and compensate the City and/or SCWA to implement a water conservation program and/or a conjunctive water use program. The program shall (1) assess existing and potential sources of reclaimed wastewater within SCWA's service area, and determine potential points of use for the reclaimed wastewater, and/or (2) supplement the City's and/or SCWA's existing water conservation programs to identify and implement additional conservation measures within City and/or SCWA service areas. The program(s) shall incorporate reclaimed water use and/or conservation to an extent that would completely offset groundwater pumping associated with the selected project Alternative.

   c. The Tribe shall participate in the creation of or create an off-site artificial recharge project, such as purchasing a groundwater well in the sub-basin and retiring the well from service in order to offset a portion of the groundwater used by implementation of the project (in lieu recharge).

T. The Tribe shall cooperate with the conduct of the ongoing Joint USGS/SCWA Study of the Santa Rosa Plain Groundwater Sub-basin by providing its Groundwater Study and any aquifer testing and monitoring data compiled during the EIS mitigation phase. In addition, the Tribe shall join other stakeholders in participating in the *Cooperative Agreement to Provide Funding and Support Information for Santa Rosa Plain Groundwater Study* for Years 4 and 5 of the study and future supplemental studies, subject to the agreement of the other stakeholders in the Tribe's participation. If added to the agreement, the Tribe shall provide funding of an equitable share that is proportionate with other participating non-tribal stakeholders, and that considers its fraction of the municipal groundwater demand in the Santa Rosa Plain Groundwater Basin (currently about 1.8%). In addition, the Tribe shall participate in the identification and implementation of reasonable measures or action plans developed through the study, in the same manner as participating non-tribal stakeholders, and in proportion to its contribution to any basin decline identified by the study.

U. As part of the Tribe's Memorandum of Understanding (MOU) with the City of Rohnert Park, the Tribe will contribute to help establish or support ongoing water conservation measures city-wide in Rohnert Park.

V. Water conservation measures including use of reclaimed water for landscape watering, cooling tower makeup water, and toilets shall be implemented. In addition, the following water conservation measures shall be adopted (resulting in a water savings of approximately 12,800 gallons per day for the full size casino/hotel alternatives):

a. Check steam traps and ensuring return of steam condensate to boiler for reuse.

b. Limit boiler blowdown and adjusting for optimal water usage.

c. Use low flow faucets and/or aerators in casino and hotel.

d. Use low flow showerheads in hotel.

e. Encourage voluntary towel re-use by hotel guests.

f. Use pressure washers and water brooms instead of hoses for cleaning.

g. Use garbage disposal on-demand in restaurant.

h. Incorporate a re-circulating cooling loop for water cooled refrigeration and ice machines in restaurants.

i. Serve water to customers only upon request at restaurants.

j. Use air-cooled units in central plant.

k. Use low volume spray rinse valve for pre-cleaning dishes.

l. Use low volume dishwasher.

m. Operate dishwashers with full loads only.

n. Use high pressure/low flow spray rinsers with automatic shut off for pot washing.

o. Reuse dishwasher wastewater for low-grade purposes such as pre-washing and garbage disposals.

p. Use self-contained (connectionless) vegetable steamers.

q. Reduce flow to minimum necessary in scrapper troughs, wash down, and frozen food thawing.

r. Use air-cooled ice machines.

Implementation of the above mitigation will further reduce the already less-than-significant regional impacts from Alternatives A, B, C, D, E, and H to the groundwater basin or sub-basin.

Operation of on-site groundwater wells on the Lakeville Site are expected to result in a potentially significant regional groundwater impact for Alternatives F. In order to reduce impacts to the groundwater basin, the following measures are recommended for Alternative F:

W. The Tribe shall implement water conservation measures, including use of low-flow faucets and showerheads, recycled water for toilets, and voluntary towel re-use by guests in the hotel; use of low flow faucets, recycled water for toilets, and pressure washers and brooms instead of hoses for cleaning, in public areas and the casino; use of garbage disposal on-demand, re-circulating cooling loop for water cooled refrigeration and ice machines where possible, and service of water to customers on request, in restaurants; use of recycled and/or gray water for cooling, checking steam traps and ensuring return of steam condensate for boiler reuse, and limitation of boiler blowdown, in the Central Plant; and use of recycled water for irrigation (HydroScience, 2006b).

X. The Tribe shall participate in or create an off-site artificial recharge project, such as purchasing a groundwater well in the sub-basin and removing the well from service in order to offset a portion of the groundwater used by implementation of the project (in lieu recharge).

Y. The Tribe shall work with the Cities of Rohnert Park and Petaluma and SCWA to find and deliver more surface water, reducing pressures on the Cities to pump additional groundwater.

Z. The Tribe shall contribute to the current study of the groundwater basin conducted jointly by SCWA and USGS, if funding is needed. The Tribe shall also participate in future regional water planning activities.

AA. The Tribe shall implement a pump test and monitoring plan as described below under Localized Groundwater and in Appendix G. Groundwater levels and signs of seawater intrusion shall be monitored. The Tribe shall provide monitoring results annually to a qualified independent consultant or to a qualified governmental agency to examine the results for signs of seawater intrusion. Should seawater intrusion be detected, the Tribe shall consult with the San Francisco Bay Regional Water Quality Control Board, USGS, and Sonoma County to devise a plan for eliminating seawater intrusion that is acceptable to all parties (assuming all parties are acting in good faith and are not unreasonably withholding their agreement to a particular plan). The plan may include the injection of Title 22, tertiary treated wastewater to the aquifer between production wells and the source of seawater intrusion. Should Alternative F be chosen, the Tribe shall sign a

legally binding agreement, prior to opening the hotel/casino resort to the public, agreeing not to operate their facility in such a way to cause seawater intrusion and agreeing to comply with the terms of a seawater intrusion elimination plan as described above should signs of seawater intrusion be detected.

Implementation of the above mitigation will reduce the regional impacts from Alternative F to the groundwater basin or sub-basin to a less-than-significant level.

LOCALIZED GROUNDWATER

Operation of on-site groundwater wells may cause neighboring water supply wells to experience a substantially lowered water table, negatively and in some cases significantly affecting well operations. In order to reduce these potential impacts to a less-than-significant level, the following measures are recommended for Alternatives A, B, C, D, E, F, and H:

BB. The Tribe shall implement a groundwater monitoring program preceded by a pump test (see Appendix G for a detailed description of the recommended pump test and monitoring program) as soon as feasible after project approval and preferably at least one year before opening of the project facilities to the public (to allow for baseline monitoring). The pump test shall include at least one shallow monitoring well located in close proximity to the Laguna de Santa Rosa in order to verify that pumping associated with the proposed Alternatives would not affect the Laguna de Santa Rosa.

CC. The Tribe shall implement a program to compensate neighboring well owners for impacts to well operation based on interference drawdown caused by project pumping. The actual amount of interference drawdown associated with the project shall be estimated from the proposed pumping test and groundwater level monitoring program (see above and Appendix G). At least one year of baseline data and one year of data after project pumping begins should be collected prior to implementation of the following well impact compensation program:

a. Well Usability (Impacts 1 and 2) – The tribe shall reimburse the owners of wells that become unusable within three years of the onset of project pumping for a portion of the prevailing, customary cost for well replacement, rehabilitation or deepening. The mitigation method for which reimbursement is made shall be the lowest-cost customary and reasonable method to restore the lost well capacity. The percentage of the cost reimbursed by the tribe shall depend upon the degree to which the impact is caused by project pumping vs. pumping by other wells. Reimbursement shall be for replacement in-kind; that is, for a well of similar construction, but deepened so as to restore the lost well capacity. A depreciation allowance shall be subtracted from the reimbursement amount for wells or

pumps that have condition issues. In order to be eligible, the well owner must provide the Tribe with documentation of the well location and construction (diameter, depth, screened interval, pump type, etc.), and that the well was constructed and usable before project pumping was initiated.

b. Diminished groundwater level near or below pump intake (Impact 3) – The Tribe shall reimburse the owners of wells with pumps that require lowering within three years of the onset of project pumping for a portion of the prevailing, customary cost for this service. The percentage of the cost reimbursed by the Tribe shall take into consideration the degree to which the impact is caused by project pumping vs. pumping by other wells, and the degree to which a well's capacity may have been reduced in the absence of project pumping due to shallow placement of the pump intake. Replacement discharge piping shall not be reimbursed, and replacement of pumps shall not be reimbursed unless the pump was damaged due to project-related interference drawdown. In order to be eligible, the well owner must provide the Tribe with documentation of the well location and construction, including pump intake depth, and that the well was constructed and usable before project pumping was initiated. The Tribe must be made aware of the cost reimbursement claim prior to lowering of the pump intake, so that the need for possible well deepening, replacement or rehabilitation can be assessed. At the Tribe's discretion, compensation may be paid toward well deepening, replacement, or rehabilitation in lieu of toward lowering the pump intake.

c. Increased Electrical and Maintenance Cost (Impact 4) – The Tribe shall reimburse well owners pumping more than 100 acre-feet/year for their additional annual electrical costs at the prevailing electrical rate based on the following formula:

$$\text{KWhr/year} = \frac{(\text{gallons Pumped/year}) \times (\text{feet of interference drawdown})}{1{,}621{,}629}$$

In order to qualify for reimbursement, the well owner must provide proof of the actual annual volume of water pumped and/or the electrical usage associated with the pumping. As an alternative to annual payments, a one-time lump sum payment of a mutually agreeable amount could be made.

d. No reimbursement would be made available for wells installed after operation of the project wells commences.

e. For any of the above impacts, the Tribe may choose at its discretion to provide the well owner with a connection to a local public or private water supply system

in lieu of the above mitigation measures, at reduced cost in proportion to the extent the impact was caused by project pumping.

f. The known owners of identified wells within two miles of the project pumping well(s) shall be notified of the well impact compensation program outlined above before project pumping begins.

g. We recommend that the Tribe contract with a third party, such as Sonoma County, to oversee this well impact compensation program.

DD. The proposed storm water detention basin shall retain a portion of the storm water runoff, where it will percolate into the ground, if possible without compromising primary stormwater flow control objectives.

Implementation of the above mitigation will reduce the localized impacts from the project Alternatives A, B, C, D, E and H on neighboring groundwater wells to a less-than-significant level.

5.2.3 AIR QUALITY

CONSTRUCTION-RELATED EMISSIONS

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F, G, and H:

A. The generation of construction-related PM_{10} and $PM_{2.5}$ emissions would cause a less-than-significant impact. However, Basic Control Measures and Enhanced Control Measures from Table 2 of the *BAAQMD CEQA Guidelines - Assessing the Air Quality Impacts of Projects and Plans* (BAAQMD, 1999) are recommended as mitigation during construction.

a. The Tribe shall designate an on-site Air Quality Construction Mitigation Manager (AQCMM) who shall be responsible for directing compliance with mitigation measures for the construction project.

b. Basic Control Measures shall include the following:

i. Water all active construction areas at least twice daily.

ii. Cover all truckloads hauling soil, sand, and other loose materials or require all truckloads to maintain at least two feet of freeboard.

iii. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers to all unpaved access roads, parking areas and staging areas at construction sites.

iv. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.

v. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

c. Enhanced Control Measures shall include the following:

i. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).

ii. Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)

iii. Limit traffic speeds on unpaved roads to 15 mph.

iv. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

v. Replant vegetation in disturbed areas as quickly as possible.

vi. Use of construction entrances to reduce soil/dust transport off-site.

vii. Time-staged construction shall be used to avoid dust/open soils.

B. The generation of ROG, NO_X, PM_{10}, and diesel particulate matter emissions from construction equipment would cause a less-than-significant impact. However, implementation of the following basic measures are recommended during the construction of any of the project alternatives in order to further reduce the effects from construction activities:

a. To the extent that equipment and technology is available and cost effective, the contractor shall use catalyst and filtration technologies

b. All diesel-fueled engines used in construction shall use ultra-low sulfur diesel fuel containing no more than 15-ppm sulfur, or a suitable alternative fuel.

c. All construction diesel engines, which have a rating of 50 hp or more, shall meet the Tier II California Emission Standards for off-road compression-ignition engines, unless certified by the AQCMM that such an engine is not available for a particular use. In the event that a Tier II engine is not available, Tier I compliant or 1996 (or newer) engines will be used preferentially. Older engines will only be used if the AQCMM certifies that compliance is not feasible.

d. All diesel fueled engines used in construction shall have clearly visible tags or other suitable means of identification showing that engine meets the above requirements

e. Idle time shall be minimized to five minutes when the equipment is not in use, unless safety requirements or manufacturers specifications indicate that more time is required.

f. Heavy duty diesel equipment shall be maintained in optimum running condition.

Implementation of the above mitigation will further reduce already less-than-significant air quality construction impacts.

OPERATIONAL EMISSIONS

The following mitigation measures are recommended for Alternatives A, B, C, D, E, and F, and H:

C. In coordination with the regional transportation agency, such as the Sonoma County Transit, the Golden Gate Transit, and the potential SMART rail, the Tribe shall provide the following to support regularly-scheduled community transit or shuttle service to and from the nearest mutually-acceptable major transit node:

   a. Transit shelter benches,

   b. Street lighting,

   c. Route signs and display, and

   d. Bus turnouts.

D. The Tribe shall implement feasible travel demand management (TDM) measures for a project of this type. This includes, but are not limited to:

   a. Designation of an on-site TDM coordinator.

   b. Provisions to encourage bicycle commuting. Bicycle lanes and parking areas will be provided wherever appropriate and feasible.

   c. Provision of transit use incentives, provision of information, printed schedules and commuter promotions.

   d. Carpool incentives, such as monetary or other rewards will be made available to employees.

   e. Installation of secure bicycle parking facilities at commercial areas.

E. Buses and other commercial diesel-fueled vehicles shall comply with the California Air Resource Board's (CARB) Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (California Code of Regulations, Title 13, Division 3, Article 1, Chapter 10, Section 2485), which requires that the driver of any diesel bus

shall not idle for more than five minutes at any location, except in the case of passenger boarding where a ten minute limit is imposed, or when passengers are onboard. Furthermore, the Tribe shall provide a "Drivers Lounge" for bus and truck drivers to discourage idling.

F. Where feasible, the Tribe shall use alternative fuels for casino vehicles.

G. The Tribe shall encourage and facilitate the use of 'carpools' for construction workers and facility employees; tour buses for casino patrons to reduce vehicular use and air pollution.

H. The Tribe shall maintain all vehicles to manufacturer's specifications.

I. The Tribe shall ensure that buildings are oriented to take advantage of solar heating and natural cooling, and use passive solar designs.

J. The Tribe shall ensure use of solar, low-emission, central, or tankless water heaters and install wall insulation that shall exceed Title 24 requirements.

The following measures are recommended for Alternative E:

K. The Tribe shall ensure that the project will provide multiple and/or direct pedestrian access (i.e. defined paths, "crow flies" access, etc.) to adjacent, complementary land uses and throughout the project.

L. The Tribe shall ensure that setback distance is minimized between development and existing/designated transit/pedestrian shelters.

The following measures are recommended for Alternative G:

M. The developer shall implement feasible travel demand management (TDM) measures for a project of this type. This would include, but is not limited to:

   a. Designation of an on-site TDM coordinator.

   b. Provisions to encourage bicycle commuting.

   c. Provision of transit use incentives, provision of information, printed schedules and commuter promotions.

   d. Carpool incentives.

   e. Installation of secure bicycle parking facilities at commercial areas and parks.

N. The developer shall ensure that the project will provide multiple and/or direct pedestrian access (i.e. defined paths, "crow flies" access, etc.) to adjacent, complementary land uses and throughout the project.

O. The developer shall ensure that setback distance is minimized between development and existing/designated transit/pedestrian shelters.

P. The developer shall ensure that buildings are oriented to take advantage of solar heating and natural cooling, and use passive solar designs.

The following measures are recommended for Alternatives A, B, C, D,F, and H:

Q. A parking structure is proposed under Alternatives A, B, C, D, and F. If mechanical ventilation is included in the parking structure design, the exhaust shall be vented in a direction away from inhabited areas. Directing the exhaust away from inhabited areas would reduce the impacts of parking structure-generated CO from Alternatives A, B, C, D, and F to a less-than-significant level.

R. The Tribe shall ensure that all shift changes occur during non-peak hours.

The following measure is recommended for Alternatives A, B, C, D, and H:

S. A final Conformity Determination has been issued (see **Appendix W**) based upon evidence of conformance with the State Implementation Plan (SIP) for NO_X and CO through the purchase of 149 tons of NO_X Emission Reduction Credits (ERCs). The ERCs will be purchased in the BAAQMD pursuant to an enforceable contract to purchase the ERCs before the start of construction (see **Appendix W**, Addendum 1).

The following measure is recommended for Alternatives A, B, C, D, E, F, and H:

T. A minimum of 20 percent of landscape maintenance equipment used by the Tribe shall be electric and outlets shall be provided on the exterior of all buildings for this use.

The following measure is recommended for Alternative F:

U. A Conformity Determination shall be conducted for emissions of NO_X that exceeds *de minimis* levels. Final Conformity Determination will be issued upon evidence of conformance with the State Implementation Plan (SIP) for NO_X.

The following measures are recommended for Alternatives A, B, C, D, E, F, G, and H:

V. An estimation of reduced operational emissions for the Alternatives A, B, C, D, F, G, and H was generated by the URBEMIS mitigation component and are presented in **Table 5-1.** The results demonstrate that regional air quality impacts from Alternatives A, B, C, D, F, G, and H would be reduced, but not to a level that is less than significant for ROG, NO_X, or PM_{10} with the addition of the above mitigation measures. However, with the additional implementation of Mitigation Measure W for ROG and PM_{10}, regional air quality impacts from Alternatives A, B, C, D, F, G and H would be less than significant, assuming Mitigation Measure W is cost and technologically feasible and appropriate mitigation programs are available within the air basin. If Mitigation Measure W is not implemented; then a significant and unavoidable impact to air quality would remain for all alternatives.

TABLE 5-1
NEAR-TERM OPERATIONAL MITIGATED EMISSIONS AND SIGNIFICANCE

Project Alternatives	ROG		NOx		PM_{10}		$PM_{2.5}$	
	ppsd	tpy	ppsd	tpy	ppd	tpy	ppd	tpy
Alternative A - Proposed Project								
Mitigated Emissions (all mitigation except 5.2.3W)	362	74	697	149	744	136	738	135
Reduction from Mitigation Measure 5.2.3W	282	59	697	149	664	121	N/A	35
Final Mitigated Emissions	80	15	0	0	80	15	N/A	100
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative - Northwest Stony Point Casino								
Mitigated Emissions (all mitigation except 5.2.3W)	364	74	697	149	744	136	738	135
Reduction from Mitigation Measure 5.2.3W	284	59	697	149	664	121	N/A	35
Final Mitigated Emissions	80	15	0	0	80	15	N/A	100
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative C - Northeast Stony Point Casino								
Mitigated Emissions (all mitigation except 5.2.3W)	364	74	697	149	744	136	738	135
Reduction from Mitigation Measure 5.2.3W	284	59	697	149	664	121	N/A	35
Final Mitigated Emissions	80	15	0	0	80	15	N/A	0
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative D - Reduced Intensity								
Mitigated Emissions (all mitigation except 5.2.3W)	252	58	486	104	521	95	517	94
Reduction from Mitigation Measure 5.2.3W	172	43	486	104	441	80	N/A	0
Final Mitigated Emissions	80	15	0	0	80	15	N/A	94
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative E - Business Park								
Mitigated Emissions (all mitigation except 5.2.3W)	58	11	66	14	66	12	65	12
Reduction from Mitigation Measure 5.2.3W	*0*	*0*	*0*	*0*	0	0	N/A	0
Final Mitigated Emissions	*58*	*11*	*66*	*14*	66	12	N/A	12
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative F - Lakeville Casino								
Mitigated Emissions (all mitigation except 5.2.3W)	364	74	698	149	746	136	740	135

Reduction from Mitigation Measure 5.2.3W	284	59	698	149	662	121	N/A	35
Final Mitigated Emissions	80	15	0	0	80	15	N/A	0
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative G - No Action								
Mitigated Emissions (all mitigation except 5.2.3W)	135	26	129	27	114	21	113	21
Reduction from Mitigation Measure 5.2.3W	55	11	49	12	34	6	N/A	0
Final Mitigated Emissions	80	15	80	15	80	15	N/A	21
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative H – Wilfred Site Reduced Intensity								
Mitigated Emissions (all mitigation except 5.2.3W)	252	58	486	104	521	95	517	94
Reduction from Mitigation Measure 5.2.3W	172	43	486	104	441	80	N/A	0
Final Mitigated Emissions	80	15	0	0	80	15	N/A	94
Significance Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*

NOTES: Emissions shown are for mobile sources and area sources. Source for significance thresholds are BAAQMD 1999 and 40 CFR 93.153 (b)(1). Significance threshold amount is 15 tpy and 80 ppd for ROG, NO_X, and PM_{10}, and 100 tpy for $PM_{2.5}$. Mitigation is outlined under Operational Emission, Mitigation for Alternatives A, B, C, D, E, and F, letter I.

SOURCE: KDA 2004, AES 2007.

W. One or more of the following measures will be implemented to reduce ROG and PM_{10} emissions to less than 15 tons per year and $PM_{2.5}$ to less than 100 tons per year.

a. Pave or resurface unpaved roadway(s) or roadway(s) in a deteriorated state within the San Francisco Bay Area Air Basin, which have a minimum daily vehicle count of 100 vehicles.

b. Contribute to a program to retrofit residential fireplaces that do not meet USEPA certification standards within the San Francisco Bay Area Air Basin.

c. Purchase low emission buses to replace older municipal or school buses used within the San Francisco Bay Area Air Basin.

d. Purchase hybrid vehicles to replace existing governmental fleet vehicles within the San Francisco Bay Area Air Basin.

e. Purchase and install on-site or within the San Francisco Bay Area Air Basin; a photovoltaic array, wind powered energy, and/or other form(s) of renewable energy.

f. Contribute a fair share percentage to the synchronization of traffic signals within the San Francisco Bay Area Air Basin.

g. Purchase Emission Reduction Credits if available from sources within the San Francisco Bay Area Air Basin.

Odor Impacts

To avoid or reduce potential significant odor effects associated with the potential wastewater treatment and disposal facility, the Tribe shall implement the following measures for Alternatives A, B, C, D, E, F, and H, if the on-site wastewater treatment option is chosen:

X. The WWTP shall be constructed with comprehensive odor control facilities, including the injection of odor control oxidants at the sewage lift station and construction of a covered headworks with odor scrubber at the WWTP.

Y. Spray drift from the WWTP or spray disposal field shall be monitored daily during operation by qualified personnel. Spray drift from these two sources shall not be allowed to migrate out of the plant's property boundaries. In the event that spray drift emanating from sprayfield does migrate outside of the property boundaries, operational measures shall be taken to eliminate offsite drift of spray.

Z. Spray field irrigation will cease when winds exceed 30 mph.

The Tribe shall implement the following measure for Alternative E only:

AA. The Tribe shall obtain a letter from the USEPA confirming that the proposed use will not create an objectionable odor.

Adoption of the above mitigation will reduce the adverse odor air quality impacts of the alternatives to a less-than-significant level.

Toxic Air Contaminants Impacts

To avoid or reduce potential significant toxic air contaminant (TAC) effects associated with this facility, the Tribe shall ensure the following measures are included in the design and operation of the project for Alternatives A, B, C, D, E, F, G, and H:

BB. Proposed commercial land uses (e.g., loading docks) that have the potential to emit toxic air emissions shall be located as far away as feasibly possible from existing and proposed sensitive receptors in accordance with CARB's Air Quality and Land Use Handbook. In addition, loading docks will provide refrigeration trucks with electrical outlets. Truck using the loading docks shall not idle for more than five minutes.

CC. Air intakes associated with the heating and cooling system for buildings shall not be located next to potential TAC-emitting locations (e.g., loading docks) in accordance with CARB's Air Quality and Land Use Handbook.

The Tribe shall implement the following measures for Alternative E only:

DD. The Tribe shall provide an adequate buffer between any dry cleaning operation and any sensitive receptors (e.g., schools, households, etc.).

EE. The Tribe shall provide an adequate buffer between any gasoline dispensing facility and any sensitive receptors (e.g., schools, households, etc.).

The developer shall implement the following measures for Alternative G only:

FF. The developer shall provide an adequate buffer between any dry cleaning operation and any sensitive receptors (e.g., schools, households, etc.).

GG. The developer shall provide an adequate buffer between any gasoline dispensing facility and any sensitive receptors (e.g., schools, households, etc.).

Adoption of the above mitigation will reduce the toxic air contaminant (TAC) air quality impacts of the alternatives to a less-than-significant level.

Indoor Air Quality

The following measures are recommended for Alternatives A, B, C, D, E, F, and H (except where otherwise noted):

HH. The Tribe shall ensure that ventilation of outdoor air is consistent with ASHRAE Standard 62-19991 under all operating conditions.

II. To limit public exposure to environmental tobacco smoke, the Tribe shall provide non-smoking areas, or "smoke-free zones" in the casino gaming area (except for alternatives that do not include a casino gaming area).

JJ. The Tribe shall provide non-smoking rooms in the hotel (except for alternatives that do not include a hotel).

KK. The Tribe shall ensure that comfort levels are acceptable to most occupants, and be consistent with ASHRAE Standard 55-1992[2], under all operating conditions.

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1 ASHRAE Standard 62-1999, *Ventilation for Acceptable Indoor Air Quality*, is the generally accepted standard for commercial buildings in the United States.

2 ASHRAE Standard 55-1992, *Thermal Environmental Conditions for Human Occupancy*, identifies many factors that influence thermal comfort and the perception of thermal conditions. Among them are temperature, radiation, humidity, air movement, vertical, and horizontal temperature differences, temperature drift, personal activity, and clothing.

LL. Signage shall be prominently displayed alerting patrons and employees of areas that permit smoking, noting that environmental tobacco smoke has been found to be deleterious to health, and noting the availability of a brochure(s) describing the health effects of exposure environmental tobacco smoke.

MM. A brochure(s) describing the health effects of exposure to environmental tobacco smoke shall be made available to casino patrons in common areas that permit smoking.

NN. Prospective employees shall be informed, prior to their hire, that indoor smoking is permitted in portions of the buildings where they may be employed.

OO. Prospective employees shall be given a brochure(s) describing the health effects of exposure to environmental tobacco smoke.

PP. The Tribe shall ensure that significant expected sources of pollutant emissions are isolated from occupants using physical barriers, exhausts, and pressure controls.

QQ. The Tribe shall ensure that outdoor air entering the building is protected from contamination from local outdoor sources and from building exhausts and sanitation vents.

RR. The Tribe shall ensure that provisions are made for easy access to HVAC equipment requiring periodic maintenance.

SS. The Tribe shall ensure that occupant exposure to construction contaminants is minimized using protocols for material selection, preventive installation procedures, and special ventilation and pressure control isolation techniques.

TT. The Tribe shall ensure the use of low-emitting building products pursuant to Integrated Waste Management Board's Section 01350[3] where feasible.

The following measures are recommended for Alternative G:

UU. The developer shall ensure that ventilation of outdoor air is consistent with ASHRAE Standard 62-1999 under all operating conditions.

VV. The developer shall ensure that comfort levels are acceptable to most occupants, and consistent with ASHRAE Standard 55-1992, under all operating conditions.

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3 Section 01350 contains specification language on environmental and public health considerations for building projects. This specification establishes goals and provides an overview of special environmental requirements. It covers guidelines for energy, materials, and water efficiency, indoor air quality (IAQ), nontoxic performance standards for cleaning and maintenance products, and sustainable site planning and landscaping considerations, among other measures. (http://www.ciwmb.ca.gov/greenbuilding/specs/section01350/default.htm)

WW. The developer shall ensure that significant expected sources of pollutant emissions are isolated from occupants using physical barriers, exhausts, and pressure controls.

XX. The developer shall ensure that outdoor air entering the building is protected from contamination from local outdoor sources and from building exhausts and sanitation vents.

YY. The developer shall ensure that provisions are made for easy access to HVAC equipment requiring periodic maintenance.

ZZ. The developer shall ensure that occupant exposure to construction contaminants is minimized using protocols for material selection, preventive installation procedures, and special ventilation and pressure control isolation techniques.

AAA. The developer shall ensure the use of low-emitting building products pursuant to Integrated Waste Management Board's Section 01350 where feasible.

Implementation of the above mitigations will reduce indoor air quality impacts to less-than-significant levels, except for Alternative G, which would result in a less-than-significant impact with or without the above mitigation.

Climate Change

As noted in **Table 5-2**, a less than significant cumulative impact to global climate change would result for Alternatives A, B, C, D, E, F, and H after the implementation of Mitigation Measures 5.2.3e. In addition, the implementation of the following mitigation measures are recommended for all Alternatives, subject to the discretion of the Tribe, to further reduce project climate change impacts.

BBB. The Tribe shall ensure the use of low-emitting building products pursuant to Integrated Waste Management Board's Section 01350 where feasible.

CCC. The Tribe shall plant trees and vegetation on-site or fund such plantings off-site. The addition of photosynthesizing plants would reduce atmospheric CO_2, because plants use CO_2 for elemental carbon and energy production. Trees planted near buildings would result in additional benefits by providing shade to the building; thus reducing heat absorption, reducing air conditioning needs and saving energy.

DDD. The Tribe shall ensure use of solar, low-emission, central, or tankless water heaters and install wall insulation that shall exceed Title 24 requirements.

EEE. The Tribe Shall use energy efficient appliances in the hotel and casino.

FFF. Environmentally preferable materials shall be used to the extent practical for construction of facilities.

GGG. The Tribe shall install a photovoltaic cell array(s) on the roof of the proposed parking garage and/or the roof(s) of other on-site structures, if feasible. The installation of photovoltaic (PV) on-site would reduce dependence on PG&E electricity. PV cells convert energy from the sun into electrical energy with no emission of GHGs; thus, the indirect GHG emissions from the project would be reduced.

HHH. The Tribe shall enroll in the ClimateSmart program that is offered to PG&E customs to reduce their indirect GHG emissions form electrical generation to zero. PG&E provides electricity uses with the opportunity to become "carbon neutral" under the ClimateSmart program.

III. The Tribe shall purchase CO_2e offsets to reduce or eliminate GHG impacts, where feasible.

JJJ. The Tribe shall increase the recycling goal noted in Mitigation Measure 5.2.8d from 25 to 50 percent.

TABLE 5-2
COMPLIANCE WITH STATE EMISSIONS REDUCTION STRATEGES

Exec Order S-3-05 / AB 32 Strategy	Project Design / Mitigation Measure Compliance
Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Project would be in compliance after implementation of Mitigation Measure 5.2.3e.
Achieve 50 percent statewide Recycling Goal: Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Project would be in compliance as discussed in Section 4.12.
Water Use Efficiency: Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions	Project would be in compliance as discussed in Section 4.12.

SOURCE: State of California, Environmental Protection Agency, and Climate Action Team, 2006

5.2.4 BIOLOGICAL RESOURCES

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F, G, and H (unless otherwise noted):

A. For impacts to wetlands or other waters of the U.S., authorization from the U.S. Army Corps of Engineers (USACE) is required. Replacement of directly affected wetlands will be at a ratio approved by the USACE. Clean Water Act (CWA) Section 401 water quality certification will also be required from the USEPA.

B. Wetland mitigation shall be accomplished through creation/restoration of seasonal wetlands onsite and/or within an open space preserve. This creation/restoration will

provide an increase in the inventory of seasonal wetlands for the area. The proposed 1.5:1 ratio of seasonal wetland restoration/creation to impacted acreage is expected to be sufficient to satisfy the ratio of replacement to impacted acreage required by regulatory agencies based on wetland functions and values present on the Wilfred, Stony Point, or the Lakeville sites. A detailed mitigation plan shall be designed that includes monitoring and reporting requirements, responsibilities, performance success criteria, reporting procedures and contingency requirements.

The mitigation requirements for each of the eight additional options of Alternatives A-E, and H are shown in **Table 5-3**.

TABLE 5-3
MITIGATION REQUIREMENTS FOR IMPACTS TO LISTED PLANT SPECIES OF THE SANTA ROSA PLAIN (ACRES)

Alternative	**A1 (acres)**	**A2 (acres)**	**A3 (acres)**	**B1 (acres)**	**B2 (acres)**	**C1 (acres)**	**C2 (acres)**	**D1 (acres)**	**D2 (acres)**	**E1 (acres)**	**E2 (acres)**	**H1 (acres)**	**H2 (acres)**	**H3 (acres)**
Seasonal Wetland Impacts	0.81	1.60	1.60	21.14	26.43	21.79	25.70	19.77	21.91	19.69	20.96	0.70	1.49	1.49
Mitigation: Occupied or established habitat	0.81	1.60	1.60	23.90	29.91	21.79	25.70	21.31	23.45	19.69	20.96	0.70	1.49	1.49
Mitigation: Established habitat	0.41	0.80	0.80	9.88	12.52	10.90	12.85	9.50	10.57	9.85	10.48	0.35	0.75	0.75
Total mitigation requirement	1.22	2.40	2.40	33.70	42.43	32.69	38.55	30.81	34.02	29.54	31.44	1.05	2.24	2.24

C. A plan shall be developed and implemented to conserve ecological resources in the southern portion of the Wilfred and Stony Point sites (note that this would not be required for Alternatives F or G). The plan shall address management activities to ensure maintenance of breeding, refugial, and dispersal habitats for California tiger salamander (CTS); should provide prescriptions for management of sensitive resources including existing wetlands and populations of Sonoma sunshine; and should provide a grazing regimen that will conserve populations of Sonoma sunshine and Burke's goldfields. The current mitigation ratios for listed plants species on the Santa Rosa Plain as required in the Programmatic Biological Opinion (BO) are based on the presence of suitable versus occupied habitat, and the potential for presence of Burke's goldfields and Sonoma sunshine; or Sebastopol meadowfoam (USFWS 2007). The 2009 BO issued by the USFWS for the Preferred Alternative (**Appendix JJ**) requires mitigation ratios for listed plant species consistent with the Programmatic BO as displayed in **Table 5-3**. All mitigation for impacts to listed plant species shall be consistent with USFWS requirements pursuant to formal consultation (see **Appendix JJ** for requirements applicable to the Preferred Alternative - Alternative A, Option 3).

D. Development impacts on aestivation habitat for the CTS aestivation habitat on the Wilfred site (Alternatives A and H, Options 1, 2 and 3) have been previously evaluated in a Section 7 Biological Opinion (BO) for a different project on the same site. The USFWS issued a BO on August 5, 2005 related to a Section 7 consultation conducted as part of the USACE permit application process for a mixed use project (commercial, residential and light industrial) proposed by Redwood Equities, L.P. This approved BO for the mixed-use project requires mitigation for CTS aestivation habitat at a ratio of 0.5:1. Discussions with USFWS have found that USFWS would consider an amendment to the existing BO as the means to obtain the requisite "take" authorization. The BO is valid for a commercial project at the site and has not expired, as it is in response to a request made by USACE for Section 7 consultation for an existing on-going permit application. The applicant proposes to move mitigation for CTS aestivation habitat from the less stringent 0.5:1 ratio required in the previous BO to a more stringent 1:1 ratio. The 2007 Programmatic Biological Opinion requires mitigation at a ratio of 3:1 for projects that are within 500 feet of a breeding site; 2:1 for projects that are greater than 500 feet and within 2200 feet of a known breeding site, and projects beyond 2200 feet from a known breeding site, but within 500 feet of an adult occurrence; and 1:1 for projects that are greater than 2200 feet and within 1.3 miles of a known breeding site. As development under any Alternative A option would be between 2200 feet and 1.3 miles of a known breeding site, a 1:1 mitigation of CTS habitat is recommended subject to the ongoing Section 7 consultation with the USFWS.

Alternative A, Option 1 will impact 62.08 acres of CTS habitat and will require that 62.08 acres of existing CTS habitat be purchased form a mitigation bank, or alternatively that 62.08 acres of farmland providing habitat for CTS be purchased and placed in conservation easement. Alternative A, Option 2 will impact 68.42 acres of CTS habitat and will require that 68.42 acres of existing CTS habitat be purchased form a mitigation bank, or alternatively that 68.42 acres of farmland providing habitat for CTS be purchased and placed in conservation easement as above. With impacts to 82.17 acres of CTS habitat, Alternative A, Option 3 would require similar purchase of 82.17 acres in a mitigation bank or of farmland purchase and placement under conservation easement pursuant to the methodology outlined above; however, the USFWS has recently issued a BO for Alternative A, Option 3, which requires the purchase or preservation of 86.85 acres (**Appendix JJ**) With impacts to 57.77 acres of CTS habitat, Alternative H Option 1 would require purchase of 57.77 acres in a mitigation bank or of farmland purchase and placement under conservation easement. With impacts to 65.28 acres of CTS habitat, Alternative H Option 2 would require purchase of 65.28 acres in a mitigation bank or of farmland purchase and placement under conservation easement. With impacts to 76.05 acres of CTS habitat, Alternative H Option 3 would require purchase of 76.05 acres in a mitigation bank or of farmland purchase and placement under conservation easement. Impacts to CTS aestivation habitat shall be mitigated off-site and shall consist of purchase of CTS credits from an approved mitigation bank or purchase of farmland providing suitable habitat for CTS (where CTS are known to occur) and placement of the land under conservation easement.

Spraying of reclaimed wastewater is proposed within the 180-acre parcel under Alternatives A and H, Options 2 and 3, east of the Bellevue–Wilfred channel. Under Alternatives A and H, Option 2, no spraying would occur within 250 feet of any wetland, resulting in sprayfields of 54 and 37-acres respectively. Under Option 3 of Alternatives A and H, sprayfields of 111.4 and 83 acres respectively would be laid out such that a 50-foot buffer would be provided from any wetland located in this area.

Biological monitors would be present during construction of the project and during excavation associated with wetland creation to remove the animals from the work area and relocate them to suitable habitat approved by the USFWS.

Calculations of impacts to CTS habitat from Alternatives B through E (the 360-acre site) and mitigation requirements based on the 2007 Programmatic Biological Opinion related to mitigation of CTS in the Santa Rosa Plain are shown in **Table 5-4**. All mitigation for impacts to CTS shall be consistent with USFWS requirements pursuant to formal consultation (see **Appendix JJ** for requirements applicable to the Preferred Alternative - Alternative A, Option 3).All CTS mitigation would be accomplished off-

site and would consist of purchase of CTS credits from an approved mitigation bank or purchase of farmland providing suitable habitat for CTS (actually where CTS are known to occur) and placing the area under a conservation easement. Mitigation for impacts to CTS shall also include the conservation and protection measures identified in the 2009 BO (**Appendix JJ**).

TABLE 5-4
IMPACTS AND MITIGATION REQUIREMENTS FOR CTS

Alternative	Option	Approximate Acreage of Relevant Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (acres)	Approximate Ungraded On-Site Open Space Preserve (acres) (little-to-no CTS habitat)	Portion of Open Space to be used as Spray Fields (acres)	Wetland Preservation in On Site Open Space Preserve (acres)
A	1	253	62.08	62.08	191	0.0	17.19
A	2	253	68.42	68.42	185	54.0	16.36
A	3	253	82.17	86.85	169	111.4	16.07
B	1	360	83.97	151.00	277	78.0	39.75
B	2	360	100.43	167.46	261	111.4	34.46
C	1	360	86.90	152.25	259	78.0	38.19
C	2	360	98.30	162.59	238	111.4	31.70
D	1	360	66.92	133.91	281	57.0	41.11
D	2	360	99.77	166.65	269	101.0	38.94
E	1	360	48.36	106.76	283	19.0	41.36
E	2	360	55.03	113.42	277	37.0	40.08
H	1	253	57.77	57.77	195	0.0	17.3
H	2	253	65.28	65.28	188	37.0	16.45
H	3	253	76.05	76.05	177	83.0	16.16

Source: The Huffman-Broadway Group, Inc., 2007; USFWS, 2009.

E. A pre-construction survey for burrowing owls shall be conducted to ensure impacts to burrowing owls, if present in the construction area, do not occur during the nesting season. The pre-construction survey shall be conducted within 30 days prior to initiation of construction activity. If active burrows are found prior to the nesting season, passive relocation measures shall be provided for each burrow in the area of the Wilfred, Stony Point site or Lakeville Site, as appropriate, that is rendered biologically unsuitable. Passive relocation measures shall include the creation of two natural or artificial burrows for each burrow rendered biologically unsuitable. Daily monitoring shall be implemented until the owls have been relocated to the new burrows. This

measure will reduce potential impacts to burrowing owls. Other mitigation measures may be implemented in lieu of the proposed mitigation, including avoidance or passive relocation with one-way doors, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG, 1995).

F. Pre-construction surveys for nesting birds shall be conducted within 30 days prior to initiation of construction activity. If feasible, construction and tree removal (grubbing, vegetation removal) should be timed to take place during late summer months and through winter, ideally from September through February, to avoid impacting nesting birds and other sensitive wildlife species. The approximate nesting season extends from February to September, with a peak nesting period between March through June. If construction or grubbing activities are to take place between late February and late June, a pre-construction survey shall be performed by a qualified biologist to identify any active nests or other special-status species, at least two weeks prior to the start of construction. If bird nests are found, appropriate buffer zones shall be established around all active nests to protect nesting adults and their young from construction disturbance. Through direct consultation with wildlife agency staff, the size of buffer zones shall be determined based on site conditions and species involved. If impacts to nests are unavoidable, consultation shall continue with specific agency guidelines followed for relocation. If construction is delayed for more than two weeks, a second survey shall be performed.

G. All grading and clearing shall be conducted after April 15 and before October 15 of any year, depending on rainfall and/or site conditions to minimize erosion. Access roads and routes will be limited, as well as the construction staging area, to the minimum size required to achieve the goals of the project. A speed limit of 15 mph on dirt roads shall be maintained. These practices will limit erosion and dust borne particles.

H. During construction, vegetation shall only be cleared from the permitted construction footprint and necessary lay-down and assembly areas. Areas cleared of vegetation, pavement, or other substrates shall be stabilized as quickly as possible and BMPs applied (erosion fencing, straw and other material applied to soils) to prevent erosion and runoff that could affect steelhead fish in the Laguna de Santa Rosa.

I. Hazardous materials including fuels, oils, solvents, etc., shall be stored in sealed containers in a designated location at a minimum of 200 feet from aquatic environments. All fueling and maintenance of equipment shall be conducted at a minimum of 200 feet from aquatic environments.

J. All food items and food-related trash shall be sealed in containers prior to leaving the construction site at the end of the workday; these items shall be removed from the site

once every three days. This measure will limit attraction of wildlife and eliminate trash pollution in the Laguna de Santa Rosa.

K. Where appropriate, vegetation removed as a result of project activities shall be replaced with native species that are of value to local wildlife. Native plants have a significant cultural value, are generally more valuable as wildlife food sources, and require less irrigation, fertilizers, and pesticides than exotic species.

L. Treatment of wastewater to remove phosphates and nitrates shall occur to the extent technically feasible during spring discharge from March 20 to May 15 each year. Levels of endocrine disrupting and biostimulatory substances shall be monitored biweekly during this period. If levels of endocrine disrupting and biostimulatory substances that would be harmful to Threatened and Endangered fish species are detected in wastewater discharged into surface waters during this period, additional treatment shall be implemented. The additional treatment shall be implemented during this spring discharge period, and shall reduce the concentration of endocrine disrupting and biostimulatory substances to levels that would not be harmful to Threatened and Endangered fish species. Therefore, this mitigation will reduce the effects of wastewater discharge on Threatened and Endangered Species of fish, and reduce the amounts of biostimulatory substances in tertiary-treated wastewater to less-than-significant levels during the critical spring months. In addition to treatment of the wastewater, the temperature of the released wastewater shall not exceed a 5-degree (°F) variation from the receiving water body. All discharges will be consistent with the requirements of the NPDES permit.

M. Turn off as many exterior and interior lights as possible during the peak bird migration hours of midnight to dawn to reduce potential building collisions with migration birds.

N. Install downcast lights with top and side shields to reduce upward and sideways illumination. This will reduce potential disorientation affects from non-directed shine to birds and wildlife species.

O. Section 7 Consultation shall be initiated with the NOAA Fisheries (also known as National Marine Fisheries Service, or NMFS) regarding potential impacts to steelhead if treated wastewater is to be discharged into the Laguna de Santa Rosa.

P. The Tribe shall make feasible changes to the parking lot design, in consultation with the USACE, to reduce wetland fill.

Implementation of the above mitigation will reduce the impacts of the project on biological resources to a less-than-significant level.

The following mitigation measures are recommended for each option of Alternative F:

Q. A management plan shall be developed for the north and west sections of the Lakeville site. The plan shall be developed to conserve ecological resources in that area and to provide necessary mitigation for possible impacts to sensitive species resulting from development. The plan shall address management activities to ensure maintenance of breeding, refugial, and dispersal habitats for California red-legged frog; habitats for both larval and adult stages of Callipe Silverspot and Myrtle's Silverspot butterflies; breeding and foraging habitat for burrowing owl; foraging area for raptor species of concern; and shall provide a grazing regimen that will conserve populations of saline clover.

R. Development plans for the Middle section of the Lakeville site shall be designed with appropriate setbacks from California red-legged frog breeding sites, i.e., 300 feet or greater. Habitat for this species shall be enhanced in the Northern portion of the site in coordination with the USFWS to compensate for any indirect effects to habitat.

S. Isolated populations of saline clover may be affected on the Lakeville site if development occurs in the Middle section or eastern portion. A mitigation plan will be developed to transplant the plants or collect seed, as appropriate. Transplant individuals or seed may be planted in appropriate protected habitat or open space preserves established in the project area.

T. Appropriate setbacks from the Middle section of the Lakeville site shall be implemented to prevent indirect impacts to raptors (red-tailed hawk and great-horned owl), which are known to nest in the adjacent eucalyptus groves.

U. A pre-construction survey for the California horned lark and loggerhead shrike shall be conducted to ensure that the construction area is not nesting habitat. Pre-construction surveys must be completed 30 days prior to the initiation of construction activity. The presence of nests of either species would require the delay of construction until after the young have fledged.

V. Turn off as many exterior and interior lights as possible during the peak bird migration hours of midnight to dawn to reduce potential building collisions with migration birds.

W. Install downcast lights with top and side shields to reduce upward and sideways illumination. This will reduce potential disorientation affects from non-directed shine to birds and wildlife species.

X. Section 7 Consultation shall be initiated with the NOAA Fisheries (also known as National Marine Fisheries Service, or NMFS) regarding potential impacts to green sturgeon, tidewater goby, Delta smelt, river lamprey, Pacific lamprey, Coho salmon, steelhead, Chinook salmon, Sacramento splittail, and long-fin smelt, if treated wastewater is to be discharged into the Petaluma River.

Implementation of the above mitigation will reduce the impacts of the project on biological resources to a less-than-significant level.

5.2.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F, and H:

A. The Tribe will implement all mitigation measures concurred upon by the State Historic Preservation Officer (SHPO) during the Section 106 consultation process, including, but not limited to, the following:

    a. Alternatives B, D, and E: Section 106 concurrence of *no historic properties are affected* by SHPO is required prior to any ground disturbance.

    b. Alternatives A, B, C, D, E, and H: Site RPC-5 shall be avoided by all ground disturbing activity.

    c. Alternative F: (CA-SON-204): Permanent fencing shall be installed to provide a buffer zone of 100 feet in width around the site to ensure there are no adverse impacts to the site during construction or project operation. Security guards shall also regularly monitor the site to ensure the fence has not been breached.

B. To avoid potential impacts to previously unknown cultural resources, including subsurface resources, the Tribe shall include the following requirements in construction contract specifications for the project:

    a. In the event of any inadvertent discovery of archaeological resources during construction-related earth-moving activities, all such finds shall be subject to Section 106 of the National Historic Preservation Act (NHPA) as amended (36 CFR 800). Once the land has been taken into trust for the Tribe, the inadvertent discovery of archaeological resources is also subject to the Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC 3001 et seq.) and the Archaeological Resources Protection Act (ARPA) of 1979 (16 U.S.C. 470 aa-mm). Specifically, procedures for post review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. The following shall apply to the inadvertent discovery of both archaeological or paleontological resources: All work within 50 feet of the find shall be halted until a professional archaeologist, or paleontologist as appropriate, can assess the significance of the find. If any find is determined to be significant by the archaeologist, or the paleontologist, then representatives of the Tribe and BIA shall meet with the archaeologist, or paleontologist, to determine the appropriate course of action.

b. If human remains are discovered during ground-disturbing activities on Tribal lands, pursuant to NAGPRA, Section 10.4 Inadvertent Discoveries, the County coroner, the Tribal Official, and representatives from the BIA and NIGC shall be contacted immediately. No further disturbance shall occur until the County coroner, the Tribal Official, and the BIA and NIGC representatives have made the necessary findings as to the origin and disposition.

Implementation of the above mitigation will reduce cultural resources and paleontological impacts to a less-than-significant level.

5.2.6 SOCIOECONOMIC CONDITIONS

The following mitigation measures are recommended for Alternatives A, B, and C:

A. The fiscal analysis estimates that annual fiscal impacts to the County will be between $153,766 and $181,724 (including costs for law enforcement services and criminal justice system costs), depending on the number of employees (see **Table 4.7-9**). Thus, the Tribe shall negotiate a MOU with Sonoma County that provides annual payments of at least $181,724 to mitigate for fiscal impacts to Sonoma County. The County and the Tribe are free to negotiate payments greater than this amount; however, the MOU must at least provide for annual payments of $181,724 in order to mitigate fiscal impacts to a less-than-significant level.

B. The Tribe shall negotiate a MOU to mitigate crime impacts. According to the literature, on average, California tribes pay affected communities $700,000 annually to mitigate law enforcement impacts from casinos. However, the average tribal casino is smaller than that proposed under Alternatives A, B, and C. Thus, the Tribe shall negotiate a MOU that provides the County and neighboring Cities within ten miles with annual payments of at least $700,000 to mitigate for crime impacts to Sonoma County and neighboring Cities (in addition to the $500,000 already slated in the City MOU for the City of Rohnert Park, which should be most directly impacted by any increase in crime). The combination of funding for law enforcement services, and crime mitigation funding would serve to mitigate crime impacts to a less than significant level. **Table 5-5** shows the minimum crime impact mitigation cost distributions to the County and neighboring cities (see **Appendix N** for more detailed methodology and calculations).

C. In addition to the $125,000 provided in the City MOU, the Tribe shall provide $125,000 per year to a problem gambling treatment and prevention program(s). In order to maximize the effectiveness of MOU payments to treatment and prevention programs, the organization that receives the payments for problem gambling treatment must serve the Sonoma County region, and be accessible to County residents.

D. The Tribe shall prominently display (including on any automatic teller machines (ATMs) located on-site) materials describing the risk and signs of problem and pathological gambling behaviors. Materials shall also be prominently displayed (including on any ATMs located on-site) that provide available programs for those seeking treatment for problem and pathological gambling disorders, including, but not limited to a toll-free hotline telephone number.

E. The Tribe shall train employees to recognize domestic violence and sexual assault situations, display domestic violence hotline numbers, and work with local agencies in domestic violence and sexual assault prevention.

F. The Tribe shall conduct annual customer surveys in an attempt to determine the number of problem and pathological gamblers and make this information available to state or federal gaming regulators upon request.

G. The Tribe shall undertake responsible gaming practices that at a minimum require that employees be educated to recognize signs of problem gamblers, that employees be trained to provide information to those seeking help, and that a system for voluntary exclusion be made available.

H. ATMs shall be not be visible from gaming machines and gaming tables.

TABLE 5-5
ALTERNATIVES A-D AND H, CRIME IMPACT MITIGATION

Jurisdiction	Minimum Mitigation (dollars)
Cotati	12,808
Petaluma	102,591
Santa Rosa	286,923
Sebastopol	14,596
Unincorporated Sonoma County	283,082

Source: BAE, 2008.

The following mitigation measures are recommended for Alternative D and H:

I. The Tribe shall negotiate a MOU with Sonoma County that provides annual payments of at least $146,777 per year to mitigate for fiscal impacts to the County. The County and the Tribe are free to negotiate payments greater than this amount; however, the MOU must at least provide for annual payments of $147,777 in order to mitigate fiscal impacts to a less-than-significant level.

J. Given that Alternatives D and H have a gaming component that is smaller than Alternatives A-C, but still larger than most in California, the same crime mitigation requirements cited in **Table 5-5** would apply. In addition, the Tribe shall not assert the right under the existing City MOU to reduce the $500,000 contribution to the City for law enforcement.

K. In addition to the $125,000 provided in the City MOU (which shall be not be reduced), the Tribe shall provide $125,000 per year to a problem gambling treatment and prevention program(s). In order to maximize the effectiveness of MOU payments to treatment and prevention programs, the organization that receives the payments for problem gambling treatment must serve the Sonoma County region, and be accessible to County residents.

L. The Tribe shall prominently display (including on any ATMs located on-site) materials describing the risk and signs of problem and pathological gambling behaviors. Materials shall also be prominently displayed (including on any ATMs located on-site) that provide available programs for those seeking treatment for problem and pathological gambling disorders, including, but not limited to a toll-free hotline telephone number.

M. The Tribe shall train employees to recognize domestic violence and sexual assault situations, display domestic violence hotline numbers, and work with local agencies in domestic violence and sexual assault prevention.

N. The Tribe shall conduct annual customer surveys in an attempt to determine the number of problem and pathological gamblers and make this information available to state or federal gaming regulators upon request.

O. The Tribe shall undertake responsible gaming practices that at a minimum require that employees be educated to recognize signs of problem gamblers, that employees be trained to provide information to those seeking help, and that a system for voluntary exclusion be made available.

P. ATMs shall be not be visible from gaming machines and gaming tables.

The following mitigation measure is recommended for Alternative E:

Q. The Tribe shall negotiate a MOU with Sonoma County that provides annual payments of at least $139,788 per year to mitigate for fiscal impacts to the County. The County and the Tribe are free to negotiate payments greater than this amount; however, the MOU must at least provide for annual payments of $139,788 in order to mitigate fiscal impacts to a less-than-significant level.

The following mitigation measures are recommended for Alternative F:

R. The Tribe shall negotiate a MOU with Sonoma County that provides up to $1,000,000 towards the development of a fire station near the Lakeville Site and annual payments of at least $181,724 per year to mitigate for fiscal impacts to the County. The County and the Tribe are free to negotiate payments greater than these amounts; however, the MOU must at least provide for one-time payment of $1,000,000 and annual payments of $81,724 in order to mitigate fiscal impacts to a less-than-significant level.

S. Given that Alternative F is the same size as Alternatives A-C, the same minimum crime mitigation requirements would be required as discussed above for Alternatives A-C, except different cities neighbor the Lakeville site. **Table 5-6** shows the minimum crime impact mitigation cost distributions for Alternative F to the County and neighboring cities (see **Appendix N** for more detailed methodology and calculations).

T. The Tribe shall negotiate a MOU in which it agrees to provide payments to a problem gambling treatment program(s) of at least $43,200 per year.

U. In order to maximize the effectiveness of MOU payments to treatment and prevention programs, the organization that receives the payments for problem gambling treatment must serve the Sonoma County region, and be accessible to County residents.

V. The Tribe shall prominently display (including on any ATMs located on-site) materials describing the risk and signs of problem and pathological gambling behaviors. Materials shall also be prominently displayed (including on any ATMs located on-site) that provide available programs for those seeking treatment for problem and pathological gambling disorders, including, but not limited to a toll-free hotline telephone number.

W. The Tribe shall train employees to recognize domestic violence and sexual assault situations, display domestic violence hotline numbers, and work with local agencies in domestic violence and sexual assault prevention.

X. The Tribe shall conduct annual customer surveys in an attempt to determine the number of problem and pathological gamblers and make this information available to state or federal gaming regulators upon request.

Y. The Tribe shall undertake responsible gaming practices that at a minimum require that employees be educated to recognize signs of problem gamblers, that employees be trained to provide information to those seeking help, and that a system for voluntary exclusion be made available.

Z. ATMs shall be not be visible from gaming machines and gaming tables.

TABLE 5-6
ALTERNATIVE F, CRIME IMPACT MITIGATION

Jurisdiction	Minimum Mitigation (dollars)
Petaluma	177,251
Sonoma	33,659
Unincorporated Sonoma County	489,090

SOURCE: BAE, 2008.

Implementation of the above mitigation will reduce socioeconomic impacts to a less-than-significant level.

5.2.7 RESOURCE USE PATTERNS

TRANSPORTATION

Mitigation for Intersections

Recommended intersection improvements identified in the traffic impact study (TIS) for Alternatives A through E and H are identified in **Table 5-7**. **Figure 5.2.7-1** shows the location of the intersections at which improvements have been recommended for Alternatives A through E and H. **Figures 5.2.7-2** through **5.2.7-7** provide a close-up view of the intersections. Recommended intersection improvements identified in the traffic impact study for Alternative F are identified in **Table 5-8**. **Figure 5.2.7-8** shows the location of the intersections at which improvements have been recommended for Alternative F. **Figures 5.2.7-9** through **5.2.7-11**

provide close-up views of the intersections. Additional detail on the recommended intersection improvements is contained in **Appendix O**.

In order to reduce or eliminate the alternative's traffic impact, the Tribe must pay either a proportionate share or the full cost of the implementation of the recommended traffic improvements (see **Tables 5-7** and **5-8**). A proportionate share is recommended when the LOS at the study intersection is recorded as an unacceptable LOS without the addition of project trips. In such cases, the Tribe shall be responsible for the incremental impact that the added project trips generate, calculated as a percentage of the costs involved for construction of the mitigation measure. The proportionate share is derived from the percentage that the added project trips contribute to the new total trips at the study intersection. The proportionate share calculation methodology recommended by the agency with jurisdiction shall be used for each individual improvement. In most cases, a full share is recommended when the LOS at the study intersection is recorded as an acceptable LOS without the addition of project trips. An exception to this general recommendation are situations where the project's contribution to operation of an intersection may be relatively small, but sufficient to cause an intersection that is on the verge of operating unacceptably to operate at an unacceptable LOS. Note that the Tribe has independently agreed to "fund any and all mitigation improvements for Wilfred Avenue set forth in the final EIS which are within the County's jurisdiction when the improvements are made, including, but not limited to, any required acquisitions for right of way, environmental studies, and road improvements." See Comment Letter P-3 (**Appendix CC**).

The Tribe shall make funding for implementation of the recommended near term (2008) road improvements available prior to initiation of casino construction. Funds shall be placed in an escrow account for use by the governmental entity with jurisdiction over the road to be improved so that the entity may design (funding shall be for design standards consistent with those required for similar facilities in the region, unless a deviation is approved by the entity with jurisdiction), obtain approvals/permits for, and construct the recommended road improvement (note that the entity may request that the Tribe directly perform some of these tasks). In some cases, the governmental entity may feel that an improvement slightly differing from that recommended may better facilitate traffic flow while still mitigating the alternative's impact. In this case, the terms of the escrow account shall allow use of the funds provided by the Tribe to implement the improvement even though the improvement differs slightly from that recommended by the traffic impact study.

TABLE 5-7
INTERSECTION IMPROVEMENTS – ALTERNATIVES A – E AND H

	Intersection Improvements	2008							2020						
		A	B	C	D	E	H	Share	A	B	C	D	E	H	Share
	Wilfred/Stony Point														
1	Signalize	X	X	X	X	X	X	P	X	X	X	X	X	X	P
	Optimize signal timing										X				P
	Add WB left and change WB left-through to through										X				P
	Extend WB right turn bay to 75 feet (from 35 feet)										X				P
	Add NB right and change through-right to through			X				P			X				P
	Widen Wilfred to 3 lanes (add WB left)[4]		X					P		X					P
	Wilfred/Primrose														
2	Signalize		X		X			F		X		X	X		F
	Widen Wilfred to 3 lanes (add EB left and WB left)[4]		X					F		X					F
	Add a NB right and change NB all shared to through-left											X			F
	Add a NB left and change all shared to through									X					F
	Add a NB right and change NB all shared to through-left		X					F							
	Add a NB right									X					F
	Wilfred/Whistler														
3	Add a NB right and change all shared to through-left			X				F			X				F
	Add EB right and change EB all shared to left-through			X				F			X				F
	Widen Wilfred to 3 lanes (add EB left and WB left)[4]		X					F		X					F
	Add 2 WB lefts and change all shared to through-right			X				F			X				F
	Signalize			X				F			X				F
	Langner/Wilfred														
4	Widen Wilfred to 3 lanes (add EB left and WB left)[4]		X	X				F		X					F
	Add a WB left turn lane and change all shared to through-right	X						F							
	Add EB left										X				F
	Add NB left and change all shared to through-right	X						F	X						F
	Signalize								X						F
	Labath/Wilfred														
5	Signalize	X	X	X	X	X	X	P	X	X	X	X	X	X	P
	Widen Wilfred to 3 lanes (add EB left and WB left)[4]		X	X				P							
	Add WB left and change WB all shared to through-right	X					X	P							
	Add NB right and change NB all shared to left-through			X	X		X	P	X		X	X		X	P
	Add NB right and change NB all shared to left-through	X						P							

	Intersection Improvements	2008							2020						
		A	B	C	D	E	H	Share	A	B	C	D	E	H	Share
	Add EB left and change EB all shared to through-right	X						P							
	Optimize signal timing								X	X	X	X			P
	Add 1 SB left and change SB all shared to through-right				X			P			X	X			P
	Dowdell/Wilfred														
	Signalize	X	X	X	X	X	X	P	X	X	X	X	X	X	P
	Optimize signal timing								X	X	X	X			P
	Add a second WB left-turn									X		X	X		P
	Add an EB right turn lane and change through-right to through										X				P
	Add a second WB turn lane										X				P
	Add 1 SB left turn bay and 1 SB right turn bay and change all shared to through										X				P
	Add 1 NB left turn bay and 1 NB right turn bay and change all shared to through-right										X				P
	Widen Wilfred to 3 lanes (add EB left and WB left)[4]		X	X				P							
	Add WB through			X				P							
	Add an EB right turn lane and change all shared to through			X				P							
6	Add 1 SB left turn bay and change all shared to through-right									X					P
	Add EB right turn bay and change the EB through-right to through									X					P
	Add WB left and change WB all shared to through right	X					X	P							
	Add WB left (drop lane) and change all shared to through right				X			P							
	Add SB left and change SB all shared to through-right											X	X		P
	Add EB left and change EB all shared to through-right	X					X	P							
	Add NB right and change NB all shared to left-through		X		X			P				X			P
	Add NB left and second NB right and change all shared to through											X	X		P
	Add NB left turn bay and NB right turn bay and change all shared to through-right									X					P
	Add a NB right overlap phase									X	X				P
	Wilfred/Redwood														
	Change WB left-through to through	X	X	X	X	X	X	F	X	X	X	X	X	X	P
	Change phasing east-west to protected from split	X	X	X	X		X	F	X	X	X	X	X	X	P
7	Change phasing east-west to protected and permitted from split					X		F							P
	Change phasing north-south to split from protected									X	X	X	X		P
	Change NB through to through-left									X	X	X	X		P

	Intersection Improvements	2008							2020						
		A	B	C	D	E	H	Share	A	B	C	D	E	H	Share
	Add WB through			X				F		X	X				P
	Add EB through			X	X			F							
	Optimize signal timing						X	F	X	X	X	X		X	P
	Add EB right and change EB all-shared to left through					X		F							
	Add EB left and change all shared to through-right				X		X	F							
	Add EB left and EB right and change EB all shared to right-through			X				F							
	Add EB left and EB right and change EB all-shared to through	X						F							
	Add EB left and through and change EB all-shared to through-right		X					F							
8	**Redwood/Commerce**														
	Modified Intersection (not analyzed)														
9	**Wilfred/US-101 SB Ramps**														
	Optimize signal timing											X			F
10	**Golf Course/Commerce**														
	Add an exclusive EB right turn lane										X				
	Add an EB right overlap phase		X	X	X	X		F		X	X	X	X	X	P
	Add a second exclusive EB right turn lane and change EB through- -right to through											X			P
	See Commerce Blvd./US-101 NB Ramps mitigation	X						F	X						P
11	**Golf Course Dr./Roberts Lake Rd**														
	Optimize signal timing											X			F
12	**Commerce Blvd./US-101 NB Ramps**														
	Add SB right overlap phase		X	X				F			X	X			P
	Extend SB right turn bay back to the Golf Course Dr./Commerce Blvd. intersection as a drop lane (to 345 feet from 175 feet)		X					F							P
	Add a second SB right turn lane. Will require a two lane on-ramp with one lane as an auxiliary lane between the Wilfred Avenue and Santa Rosa Avenue interchanges. May require additional bridge structure widening over Wilfred Avenue as well as over the Northwest Pacific Railroad tracks										X	X			P
	Optimize signal timing								X		X	X			P
	Construct State Farm – Business Park Overcrossing and a southbound slip ramp from the US-101 NB Ramps to the overcrossing	X					X	F	X					X	F

	Intersection Improvements	2008							2020						
		A	B	C	D	E	H	Share	A	B	C	D	E	H	Share
	Modify intersection to realign Wilfred Avenue, Commerce Blvd., Golf Course Dr., and US-101 NB Ramps and combine with the Golf Course Dr./Commerce Blvd. intersection. The southbound approach will be from Wilfred Avenue, the northbound approach will be from Commerce Boulevard, the eastbound approach will be from the US-101 NB off-ramp, and the westbound approach will be from Golf Course Dr.								X						F
13	**Project Driveway/Stony Point Rd**														
	Signalize		X		X	X		F		X		X	X		F
	Add NB right and change NB through-right to through		X		X	X		F		X		X	X		F
	Add WB left out of project driveway		X		X	X		F		X		X	X		F
14	**Business Park/Labath**														
	Alternatives A and H access intersection	X					X	F						X	F
16	**Stony Point Rd./Rohnert Park Expwy**														
	Extend WB right turn bay to 400 feet (from 175 feet)		X					F		X					F
	Extend WB right turn bay to 250 feet				X			F							
17	**Labath/Rohnert Park Expwy**														
	Change SB through-right to all-shared	X						F	X			X			F
	Change NB/SB phasing from protected to split phasing	X						F	X			X			F
	Extend SB left turn bay to 350 feet (from 100 feet)	X						F	X						F
	Extend SB left turn bay to 300 feet (from 100 feet)						X	F						X	F
	Optimize signal timing		X					F		X					F
20	**US-101 NB Ramps/Rohnert Park Expwy**														
	Extend NB left turn lane bay to 400 feet (from 225 feet)	X			X			F	X			X			F
	Extend NB left turn lane bay to 600 feet (from 225 feet)		X					F		X					F
	Extend NB left turn lane bay to 350 feet (from 225 feet)						X	F						X	F
	Extend NB left turn bay to 275 feet (from 225 feet)			X				F			X				F
	Add second NB left turn lane	X	X	X	X	X	X	F	X	X	X	X	X	X	F
21	**Commerce Blvd./Rohnert Park Expwy**														
	Optimize signal timing	X	X	X	X		X	F		X	X	X	X		F
	Add an EB right overlap phase			X	X		X	F				X			F
	Add a third EB through lane that merges back into 2 lanes east of the intersection									X	X	X	X		F
22	**Stony Point Rd./SR-116**														
	Optimize signal timing		X					F	X	X		X		X	F
	Add an EB right turn bay for 100 feet		X					F	X	X		X		X	F
23	**Redwood Dr./SR-116**														
	Optimize signal timing								X	X	X	X			F
	Add a WB right turn overlap phase									X	X				F
26	**Millbrae/Stony Point Rd**														

	Intersection Improvements	2008							2020						
		A	B	C	D	E	H	Share	A	B	C	D	E	H	Share
	Signalize	X	X	X	X	X	X	P	X	X	X	X	X	X	P

NOTE: F = full cost of mitigation measure, P = proportionate cost of mitigation measure, NB = northbound, SB = southbound, EB = eastbound, WB = westbound

[1]See **Appendix O** for additional information.

[2]May require other structural improvements. See **Appendix O** for additional information.

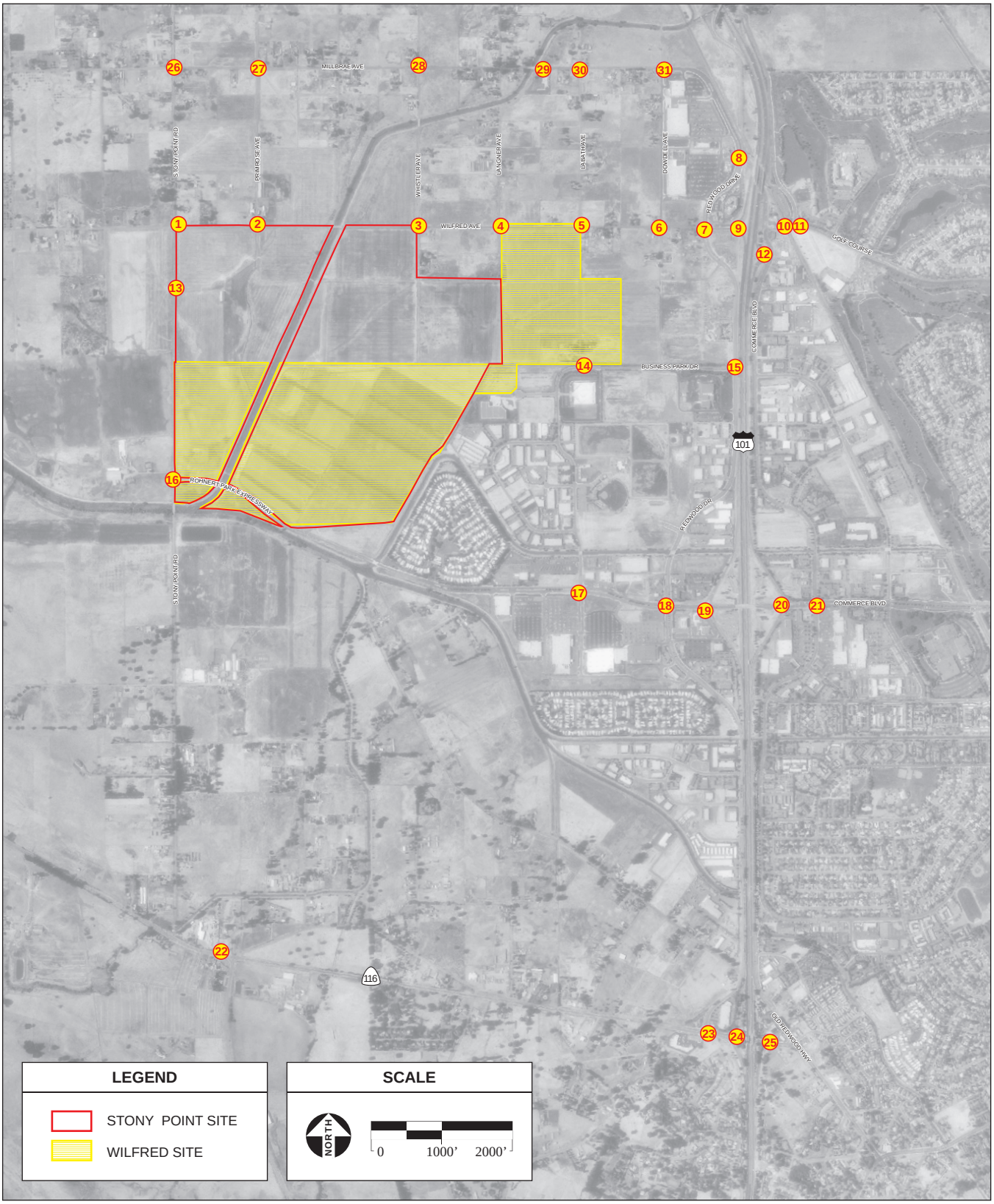
[3]May obstruct access to the proposed SMART station from Commerce Blvd via Golf Course Dr – access will be provided from Commerce Blvd via Redwood Dr.

[4]In summary, widen Wilfred Ave. to 3 lanes from Stony Point Rd. to the Urban Growth Boundary

SOURCE: Kimley-Horn and Associates 2008; AES 2007.

Implementation of the mitigation identified in **Table 5-7** and **Table 5-8** would result in the improvement of the LOS at each intersection. **Table 5-9** shows the resulting LOS in 2008 after mitigation for Alternatives A-E and **Table 5-10** shows the resulting LOS after mitigation in 2020. The resulting LOS after mitigation in 2008 and 2020 for Alternative F is shown in **Table 5-11**.

As shown in **Tables 5-9**, **5-10**, and **5-11**, the recommended mitigation measures would mitigate intersection impacts to a less than significant level except for the following impacts:



SOURCE: Aerial Photography August 2002; AES, 2008

Figure 5.2.7-1

Location of Traffic Mitigation Intersections – Alternatives A-E, and H

Intersection #1

Intersection #2

Intersection #3

Intersection #4

Intersection #5

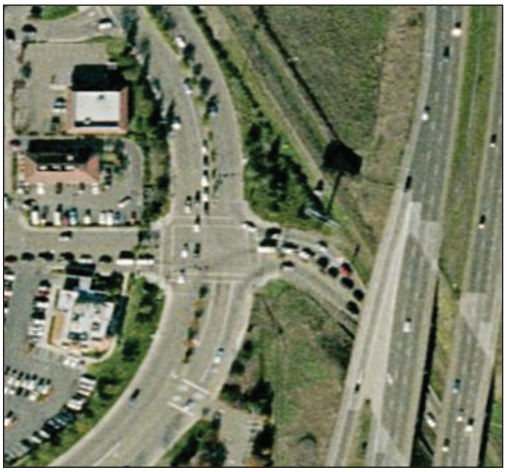
Intersection #6

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-2

Close-up View of Intersections 1-6 – Alternatives A-E, and H

Intersection #7



Intersection #8

Intersection #9

Intersection #10

Intersection #11

Intersection #12

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-3

Close-up View of Intersections 7-12 – Alternatives A-E, and H

Intersection #13

Intersection #14

Intersection #15

Intersection #16

Intersection #17

Intersection #18

SOURCE: Google Earth Arials; AES, 2007

Figure 5.2.7-4

Close-up View of Intersections 13-18 – Alternatives A-E, and H

Intersection #19

Intersection #20

Intersection #21

Intersection #22

Intersection #23

Intersection #24

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-5

Close-up View of Intersections 19-24 – Alternatives A-E, and H

Intersection #25

Intersection #26

Intersection #27

Intersection #28

Intersection #29

Intersection #30

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-6

Close-up View of Intersections 25-30 – Alternatives A-E, and H

Intersection #31

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-7

Close-up View of Intersection 31 – Alternatives A-E, and H

TABLE 5-8
INTERSECTION IMPROVEMENTS – ALTERNATIVE F

Intersection Number	Improvements	2008	Share	2020	Share
3	**Lakeville Highway/SR-37**				
	Install full interchange	X	F	X	F
4	**Lakeville Highway/Main Project Access**				
	Signalize	X	F	X	F
	Add SB right (drop lane)	X	F	X	F
	Add 2 NB lefts (turn bays = 300 feet and drop lane) and change left-through to through	X	F	X	F
	Add 2 EB rights (turn bay = 100 feet) and change all shared to left	X	F	X	F
5	**Lakeville Highway/SR-116**				
	Optimize signal timing			X	P
	Signalize	X	P	X	P
6	**SR-116/SR-121**				
	Signalize	X	P		
	Add EB left and change EB all shared to through-right	X	P	X	P
	Change east-west phasing to protected from split			X	P
	Restripe NB left turn lane to through-left and drop the lane north of the intersection			X	P
	Change north-south phasing to split from protected			X	P
	SR-121/SR-37				
	Add an EB flyover ramp	X	P	X	P
	Optimize signal timing			X	P
8	**Walnut Avenue/SR-37 EB Ramps**				
	Signalize			X	P
10	**Wilson Avenue/SR-37 EB Ramps**				
	Signalize			X	P
	Add a WB right turn lane and change WB left-right to left			X	P
11	**Wilson Avenue/SR-37 WB Off-Ramp**				
	Add EB right and change EB through-shared-right to through			X	P
12	**SR-29/SR-37 EB Off-Ramp**				
	Optimize signal timing			X	P
	Add a NB right turn overlap phase			X	P
13	**SR-29/SR-37 WB Off-Ramp**				
	Optimize signal timing			X	P
	Add a third NB through lane			X	P
	Add a WB left-shared-right lane			X	P
14	**Lakeville Hwy/US-101 SB Ramps**				
	Optimize signal timing			X	P

NOTE: F = full cost of mitigation measure, P = proportionate cost of mitigation measure, NB = northbound, SB = southbound, EB = eastbound, WB = westbound
SOURCE: Kimley-Horn and Associates 2007; AES 2007.

SOURCE: Google Earth, 2006; DigitalGlobe Satellite Photograph, 2006; ESRI Data, 2004; AES, 2006

Figure 5.2.7-8

Location of Traffic Mitigation Intersections - Alternative F

Intersection #1

Intersection #2

Intersection #3

Intersection #4

Intersection #5

Intersection #6

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-9

Close-up View of Intersections 1-6 – Alternative F

Intersection #7

Intersection #8

Intersection #9

Intersection #10

Intersection #11

Intersection #12

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-10

Close-up View of Intersections 7-12 – Alternative F

Intersection #13

SOURCE: Google Earth Aerials; AES, 2007

Figure 5.2.7-11
Close-up View of Intersection 13 – Alternative F

TABLE 5-9

INTERSECTION LOS AFTER MITIGATION – ALTERNATIVES A-E AND H (2008)

	Intersection	Criteria	Signal Control	Alt A Mitigated		Alt B Mitigated		Alt C Mitigated		Alt D Mitigated		Alt E Mitigated		Alt H Mitigated	
				LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]
1	Wilfred/Stony Point	D	TWSC	C	25.4	C	23.6	D	37.2	C	20.7	B	17.5	C	21.2
2	Wilfred/Primrose	D	TWSC	B	13.8	C	20.2	C	24.7	B	11.7	C	19.4	B	12.7
3	Wilfred/Whistler	D	TWSC	B	13.8	**F**	**51.4**	C	25.7	D	27.7	C	16.3	B	12.6
4	Wilfred/Langner	D	TWSC	C	18.0	**F**	**193.4**	**F**	**OVFL**	D	32.6	C	16.2	C	16.5
5	Wilfred/Labath	D	TWSC	C	26.9	C	27.5	D	38.8	C	21.1	C	34.0	C	26.3
6	Wilfred/Dowdell	D	TWSC	B	10.8	D	48.3	D	47.5	C	30.2	C	21.0	C	24.7
7	Wilfred/Redwood	D	TS	D	37.5	D	53.3	D	54.8	D	51.6	D	51.1	D	38.6
8	Redwood/Commerce	C	TS	C	27.5	C	25.8	C	25.3	C	25.9	C	26.5	C	25.6
9	Wilfred Ave / US-101 SB Ramps	D	TS	C	22.3	C	31.3	C	30.3	C	25.9	C	21.7	C	20.7
10	Golf Course Dr/ Commerce Blvd	D	TS	C	46.9	D	49.6	**E**	**67.9**	D	45.8	D	43.7	D	52.1
11	Golf Course Dr /Roberts Lake Rd	C	TS	C	20.1	B	18.7	B	18.5	B	18.3	B	18.4	B	17.8
12	US-101 NB Ramps/Commerce Boulevard	D	TS	D	48.5	C	28.4	D	40.9	D	54.6	D	47.4	D	47.9
13	Project Driveway/ Stony Point	D	TWSC	A	0.0	B	10.5	A	0.0	A	8.6	A	6.9	A	0.0
14	Business Park Dr /Labath Ave	D	-[b]	B	12.9	-[b]	-[b]	-[b]	-[b]	-[c]	-[c]	-[b]	-[b]	B	10.9
15	Business Park Dr /Redwood Dr	D	TWSC	D	27.5	D	27.5	D	27.5	D	27.5	D	27.5	D	27.5
16	Rohnert Park Exp /Stony Point Road	D	TS	B	19.8	D	51.4	D	39.8	C	30.0	C	27.2	B	19.6
17	Rohnert Park Exp /Labath Avenue	C	TS	C	28.6	C	24.4	C	29.6	C	29.1	C	27.0	C	29.6
18	Rohnert Park Exp /Redwood Drive	C	TS	C	26.8	C	27.3	C	25.2	C	25.4	C	25.7	C	25.8
19	Rohnert Park Exp /US-101 SB Ramps	D	TS	B	18.6	B	19.6	B	18.5	B	19.1	B	17.8	B	18.5
20	Rohnert Park Exp /US-101NB Ramps	D	TS	B	12.5	C	13.8	B	10.6	B	12.3	A	8.7	B	11.5
21	Rohnert Park /Commerce Blvd	C	TS	C	32.0	C	32.0	C	30.9	C	30.9	C	33.5	C	30.9
22	SR-116/Stony Point	D	TS	D	37.6	D	43.9	D	43.0	D	51.0	D	37.4	D	36.9
23	SR-116/ Redwood Dr	D	TS	C	27.0	C	37.4	D	28.3	C	30.6	C	26.7	C	26.8
24	SR-116/ SB US-101 SB Ramps	D	TS	B	19.1	C	21.2	B	19.3	B	19.5	B	18.8	B	19.0
25	SR-116/ NB US-101 Off Ramp	D	TS	B	11.4	B	14.3	B	12.1	B	12.6	B	10.9	B	11.2
26	Millbrae Avenue/Stony Point Road	D	TWSC	B	10.6	A	9.9	A	10.0	A	9.9	B	10.0	A	9.8
27	Millbrae Avenue/Primrose Road	D	TWSC	B	11.6	B	11.5	B	11.7	B	11.5	B	11.5	B	11.6
28	Millbrae Avenue/ Whistler Ave	D	TWSC	B	11.7	B	11.5	B	11.6	B	11.5	B	11.5	B	11.7
29	Millbrae Avenue/ Langner Ave	D	TWSC	B	11.0	A	9.9	A	9.9	A	9.9	A	9.9	B	10.7
30	Millbrae Ave/ Labath Ave	D	TWSC	B	12.0	B	11.7	B	11.7	B	11.7	B	11.7	B	11.7
31	Millbrae Ave and Dowdell Ave	D	TWSC	B	11.4	B	11.4	B	11.4	B	11.4	B	11.4	B	11.4

NOTE: a Delay in seconds
b Intersection only exists under Alternative A and H with project.
Bold text denotes LOS unacceptable after mitigation.

SOURCE: Kimley-Horn and Associates, 2007; AES, 2007.

TABLE 5-10

INTERSECTION LOS AFTER MITIGATION – ALTERNATIVES A-E AND H (2020)

	Intersection	Criteria	Signal Control	Alt A Mitigated		Alt B Mitigated		Alt C Mitigated		Alt D Mitigated		Alt E Mitigated		Alt H Mitigated	
				LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]
1	Wilfred/Stony Point	D	TWSC	D	35.2	C	34.3	D	39.8	C	24.2	C	20.2	C	28.1
2	Wilfred/Primrose	D	TWSC	C	16.2	C	25.6	D	29.3	B	12.5	A	8.5	B	14.7
3	Wilfred/Whistler	D	TWSC	C	15.8	**F**	**64.9**	C	26.3	D	32.7	C	18.3	B	14.4
4	Wilfred/Langner	D	TWSC	C	26.5	**F**	**279.6**	**F**	**OVFL**	**E**	**49.2**	C	19.3	C	21.4
5	Wilfred/Labath	D	TWSC	C	25.8	C	30.0	C	27.3	C	24.3	C	31.9	C	25.8
6	Wilfred/Dowdell	D	TWSC	C	35.0	D	38.1	D	35.5	C	33.1	D	35.8	C	35.1
7	Wilfred/Redwood	D	TS	D	40.2	D	44.7	D	41.9	D	52.2	D	45.5	D	53.1
8	Redwood/Commerce	C	TS	-[b]	-[b]	-[b]	-[b]	-[b]	-[b]	-[b]	[b]	-[b]	-[b]	-	-
9	Wilfred Ave / US-101 SB Ramps	D	TS	C	24.3	C	24.0	C	26.5	B	13.7	C	22.0	C	26.5
10	Golf Course Dr/ Commerce Blvd	D	TS	-	-	D	53.5	**E**	**63.6**	D	37.1	**E**	**55.3**	D	54.8
11	Golf Course Dr /Roberts Lake Rd	C	TS	B	12.4	B	15.1	B	18.2	B	13.7	B	19.4	B	19.4
12	US-101 NB Ramps/Commerce Boulevard	D	TS	C	28.5	**F**	**116.7**	D	50.3	D	37.1	D	43.1	D	43.8
13	Project Driveway/ Stony Point	D	TWSC	A	0.0	A	9.9	A	0.0	A	8.2	A	6.7	A	0.0
14	Business Park Dr /Labath Ave	D	-[c]	B	12.4	-[c]	-[c]	-[c]	-[c]	-[c]	-[c]	-[c]	-[c]	A	10.6
15	Business Park Dr /Redwood Dr	D	TWSC	C	22.2	C	16.7	C	16.7	C	16.7	C	16.7	C	22.2
16	Rohnert Park Exp /Stony Point Road	D	TS	C	21.7	D	44.0	D	37.6	C	26.6	C	25.5	C	21.5
17	Rohnert Park Exp /Labath Avenue	C	TS	C	28.2	C	25.2	C	31.6	C	26.1	C	30.4	C	29.1
18	Rohnert Park Exp /Redwood Drive	C	TS	C	27.0	C	29.1	C	28.3	C	28.9	C	29.0	C	26.9
19	Rohnert Park Exp /US-101 SB Ramps	D	TS	B	16.0	B	18.1	B	15.9	B	18.1	B	17.2	B	17.8
20	Rohnert Park Exp /US-101NB Ramps	D	TS	B	11.3	B	14.3	B	11.5	B	13.1	B	10.5	B	12.5
21	Rohnert Park Exp/Commerce Blvd	C	TS	C	37.2	C	31.9	C	32.6	C	31.8	C	31.3	C	33.7
22	SR-116/Stony Point	D	TS	D	54.5	D	46.5	D	51.6	D	42.9	D	45.6	D	52.7
23	SR-116/ Redwood Dr	D	TS	D	52.8	D	41.7	D	38.0	D	42.8	D	45.8	D	52.8
24	SR-116/ SB US-101 SB Ramps	D	TS	B	19.6	B	26.2	B	24.4	C	25.0	B	18.0	B	19.6
25	SR-116/ NB US-101 Off Ramp	D	TS	B	11.4	B	13.9	B	12.6	B	13.2	B	11.6	B	11.2
26	Millbrae Avenue/Stony Point Road	D	TWSC	B	10.1	B	10.4	B	10.4	B	10.4	B	10.5	B	10.1
27	Millbrae Avenue/Primrose Road	D	TWSC	B	12.2	B	12.4	B	12.6	B	12.4	B	11.8	B	12.1
28	Millbrae Avenue/ Whistler Ave	D	TWSC	B	12.4	B	12.5	B	12.7	B	12.5	B	12.5	B	12.3
29	Millbrae Avenue/ Langner Ave	D	TWSC	B	11.4	B	11.3	B	11.3	B	11.3	B	11.3	B	11.1
30	Millbrae Ave/ Labath Ave	D	TWSC	B	13.7	B	14.7	B	14.7	B	14.7	B	14.7	B	13.5
31	Millbrae Ave and Dowdell Ave	D	TWSC	B	11.4	B	11.7	B	11.7	B	11.7	B	11.7	B	11.4

NOTE: a Delay in seconds

bIntersection no longer exists due to planned roadway improvement.

cIntersection only exists under Alternatives A and H with project.

Bold text denotes LOS unacceptable after mitigation.

SOURCE: Kimley-Horn and Associates, 2007; AES, 2007.

TABLE 5-11
INTERSECTION LOS AFTER MITIGATION – ALTERNATIVE F (2008 AND 2020)

	Intersection	Criteria	Signal Control	Alt. F Mitigated			
				2008		2020	
				LOS	Delay*	LOS	Delay*
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	A	9.7	A	9.7
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	C	16.8	C	16.8
3	Lakeville Highway / SR-37	C	TS	-**	-**	-**	-**
4	Lakeville Highway / Main Project Access	D	TWSC	C	24.4	B	16.8
5	Lakeville Highway / SR-116	C	TWSC	C	29.1	B	10.4
6	SR-121 / SR-116	C	AWSC/TS	C	34.8	C	28.1
7	SR-121 / SR-37	C	TS	C	22.7	C	23.1
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	A	8.4	C	24.9
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	0.0	A	0.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	C	18.4	B	17.1
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	B	10.0	C	24.3
12	SR-29 / SR-37 EB Off-Ramp	C	TS	C	27.1	C	27.5
13	SR-29 / SR-37 WB Off-Ramp	C	TS	B	18.3	C	32.5
14	Lakeville Highway / US-101 SB Ramps	C	TS	C	28.2	C	34.5
15	Lakeville Highway / US-101 NB Ramps	C	TS	B	11.5	B	18.2

NOTES: *Delay in seconds.
**This intersection would be converted to a freeway interchange after mitigation.
Bold text denotes unacceptable LOS after mitigation.
SOURCE: Kimley-Horn and Associates 2007; AES 2007.

- After mitigation under Alternative B for the 2008 and 2020 scenarios an unacceptable LOS would remain at the Whistler Ave./Wilfred Ave. and Langner Ave./Wilfred Ave. intersections. These two intersections are defined in the analysis by the worst lane approach; however, when the overall intersection LOS, after mitigation, is used in the analysis the intersection would have an acceptable LOS under the current significant criteria.
- After mitigation under Alternative B for the 2020 scenario an unacceptable LOS would remain at the Commerce Boulevard/US-101 NB Ramps.
- After mitigation under Alternative C in the 2008 and 2020 scenarios an unacceptable LOS would remain at the Langner Ave./Wilfred Ave. intersection. This intersection is defined in the analysis by the worst lane approach; however, when the overall intersection LOS, after mitigation, is used in the analysis the intersection would have an acceptable LOS under the current significant criteria.
- After mitigation under Alternative C for the 2008 and 2020 scenarios an unacceptable LOS would remain at the Golf Course Drive/Commerce Boulevard intersection.
- After mitigation under Alternative D for the 2020 scenario an unacceptable LOS would remain at the Langner Ave./Wilfred Ave. intersection.
- After mitigation under Alternative E for the 2008 and 2020 scenarios an unacceptable LOS would remain at the Golf Course Dr./Commerce Blvd. intersection.

Mitigation for Freeway Segments and Ramps

The following freeway/ramp mitigation measures are recommended by the traffic study (**Appendix O**) for Alternatives A-E and H, except where otherwise noted (due to the regional nature of freeways and highways, a proportionate share responsibility is recommended for each measure):

- Since Caltrans' funding is limited, the Tribe shall pay for a proportionate share of the remaining costs (if any) to implement the Caltrans HOV projects along US-101 between Wilfred Avenue and Old Redwood Highway, thereby assisting in a more expedited and timely construction schedule (2008).
- The Tribe shall support efforts to complete the US-101 HOV lane project so that it can become operational prior to the scheduled completion as estimated by Caltrans (2008).
- The Tribe shall contribute a proportionate share of the remaining costs (if any) of the construction of the Wilfred Avenue interchange project, including HOV lanes, ramp metering, and auxiliary lanes and support efforts related to the completion of the project in a timely fashion (2008).

- The ramp metering shall be adjusted to account for the additional project traffic at the Wilfred Avenue interchange in the long term (2020).
- Alternative A - The Tribe shall contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to West Sierra Avenue and an additional traffic lane in the northbound direction from West Sierra Avenue to Gravenstein Highway (SR-116) in the long-term (2020). The Tribe shall contribute to the construction of auxiliary lanes between Rohnert Park Expressway and SR-116 (2020).
- Alternatives B and C - The Tribe shall contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to West Sierra Avenue, as well as an additional traffic lane in the northbound direction from West Sierra Avenue to Gravenstein Highway (SR-116) in the long-term (2020).
- Alternative D - The Tribe shall contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to West Sierra Avenue, as well as an additional traffic lane in the northbound direction from Wilfred Avenue to Santa Rosa Avenue in the long term (2020).
- Alternative E – The Tribe shall contribute to the construction of an additional traffic lane in the southbound direction from Santa Rosa Avenue to Wilfred Avenue and from Gravenstein Highway (SR-116) to West Sierra Avenue in the long-term (2020).
- Should the above additional traffic lane mitigation on US-101 be infeasible or unavailable as mitigation in the near-term or long-term, the Tribe shall investigate other options to reduce traffic congestion on US-101, such as partial funding of the planned SMART commuter transit system and other regional transit programs.

The following freeway/ramp mitigation measures are recommended by the traffic study (**Appendix O**) for Alternative F (due to the regional nature of freeways and highways, a proportionate share responsibility is recommended for each measure):

- The Tribe shall contribute to the widening of SR-37 to three lanes in the eastbound direction between Atherton Avenue and Lakeville Highway in the near-term (2008) when the casino and hotel open. The Tribe shall also contribute to further widening of SR-37 to three lanes in the eastbound direction between Lakeville Highway and SR-121 and to four lanes in the eastbound direction between Walnut Avenue and Wilson Avenue in the long-term (2020).
- The Tribe shall contribute to the widening of Lakeville Highway to two lanes in each direction in the near-term (2008) when the casino and hotel open.

- The Tribe shall contribute to the widening SR-121 to two lanes in each direction in the near-term (2008) when the casino and hotel open.
- The Tribe shall contribute to the addition of ramp metering at the Wilson Avenue westbound on-ramp in the year 2020.
- The Tribe shall contribute a proportionate share of 9% to the widening of SR-37 (2008).

Table 5-12 represents the LOS for freeway segments for Alternatives A-E and H after mitigation; **Table 5-13** represents the LOS regarding freeway segments for Alternative F after mitigation. Note that no mitigation measures are recommended in 2008 for Alternatives A, E, or H, which are therefore not included in **Table 5-12**. As shown in **Tables 5-12** and **5-13**, the recommended mitigation measures would mitigate freeway and ramp impacts to a less than significant level with the exception of two freeway segments/ramps; Wilson Avenue EB Off-Ramp and Wilson Avenue WB On-Ramp under Alternative F, where significant impacts remain in 2020 after the implementation of mitigation measures.

Other Mitigation

Additionally, the following mitigation measures are recommended for Alternatives A-H (unless otherwise noted):

- A Traffic Management Plan (TMP) shall be prepared in accordance with standards set forth in the *Manual on Uniform Traffic Control Devices for Streets and Highways* (USDOT FHWA, 2003). The traffic management plan shall be submitted to each affected local jurisdiction and/or agency. Also, prior to construction, the Tribe shall work with emergency service providers to avoid obstructing emergency response service. Police, fire, ambulance, and other emergency response providers shall be notified in advance of the details of the construction schedule, location of construction activities, duration of the construction period, and any access restrictions that could impact emergency response services. The TMPs shall include details regarding emergency service coordination. Copies of the TMPs shall be provided to all affected emergency service providers.
- Flagging done in consultation with the California Highway Patrol (CHP), Caltrans, and the County's Sheriff's Department, shall be provided when necessary to assist with traffic control.
- Importation of construction material shall be scheduled outside of the area wide commute peak hours.
- Preferential carpool or vanpool spaces shall be provided at the site to encourage ridesharing by employees and patrons.

TABLE 5-12

FREEWAY/ RAMP SEGMENT LOS AFTER MITIGATION – ALTERNATIVES A-E AND H (2008 AND 2020)

US-101 Section/ Ramp	Criteria	Alt. A Mitigated 2020		Alt. B Mitigated 2008		Alt. B Mitigated 2020		Alt. C Mitigated 2008		Alt. C Mitigated 2020		Alt. D Mitigated 2008		Alt. D Mitigated 2020		Alt. E Mitigated 2020		Alt. H Mitigated 2020	
		LOS	Density	LOS	Density*	LOS	Density*	LOS	Density	LOS	Density	LOS	Density*	LOS	Density*	LOS	Density	LOS	Density
Northbound																			
US-101 South of SR-116	E	E	38.4	C	25.1	E	38.4	C	25.1	E	38.4	C	23.1	D	33.4	D	26.4	D	33.3
SR-116 Off-ramp	E	D	29.1	D	33.7	D	29.3	D	31.8	D	29.3	D	31.8	E	39.4	D	34.8	E	39.4
SR-116 On-ramp	E	E	40.4	E	35.2	E	42.1	D	33.4	E	39.3	D	33.4	E	39.1	D	33.3	E	42.5
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	E	40.4	D	28.8	E	42.1	D	28.8	E	39.3	D	27.0	E	39.1	D	33.3	E	42.5
Rohnert Park Expressway NB Off-Ramp	E	E	40.4	D	34.2	E	42.1	D	32.5	E	39.3	D	32.5	E	39.1	D	33.3	E	42.5
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	C	25.9	C	21.8	C	26.7	D	31.4	E	38.6	D	31.4	D	34.7	E	36.2	C	24.8
Rohnert Park Expressway NB On-Ramp	E	E	39.1	D	29.1	E	37.4	D	30.4	E	38.6	D	26.8	D	34.7	D	29.5	E	35.2
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	E	39.1	D	29.1	E	37.4	D	30.4	E	38.6	D	26.8	D	34.7	D	29.5	E	35.2
Wilfred Ave NB Off-Ramp	E	E	39.1	D	29.1	E	37.4	D	30.4	E	38.6	D	26.8	D	34.7	D	29.5	E	35.2
Wilfred Ave NB On-Ramp	E	E	41.0	D	33.9	E	43.0	D	33.9	E	43.0	D	32.8	D	29.7	E	42.1	D	30.4
US-101 between Wilfred Ave and Santa Rosa Avenue	E	E	41.0	D	33.9	E	43.0	D	33.9	E	43.0	D	32.8	D	29.7	E	42.1	D	30.4
Santa Rosa Avenue NB Off-ramp	E	E	41.0	D	33.9	E	43.0	D	33.9	E	43.0	D	32.8	D	29.7	E	42.1	D	30.4
US-101 North of Santa Rosa Avenue (NB)	E	D	32.6	C	23.8	D	32.6	C	23.8	D	32.6	C	23.2	D	31.7	D	31.0	D	31.7
Southbound																			
US-101 North of Santa Rosa Avenue (SB)	E	D	31.2	D	26.1	D	31.2	D	26.1	D	31.2	C	25.5	D	30.3	D	28.8	D	30.3
Santa Rosa Avenue SB On-ramp	E	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**	/**
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	C	24.8	E	39.3	C	24.8	E	36.2	C	24.8	D	31.0	C	24.4	C	23.6	C	24.4
Wilfred Ave SB Off-Ramp	E	D	33.0	E	40.8	D	34.1	E	40.8	D	32.7	E	40.2	D	32.2	D	64.0	D	32.2
Wilfred Ave SB On-Ramp	E	D	34.2	D	33.6	E	43.0	E	52.2	E	43.0	D	33.8	E	43.0	E	42.7	D	32.4
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	D	34.2	D	33.6	E	43.0	E	52.2	E	43.0	D	33.8	E	43.0	E	42.7	D	32.4
Rohnert Park Expressway SB Off-Ramp	E	D	34.2	D	33.6	E	43.0	E	52.2	E	43.0	D	33.8	E	43.0	E	42.7	D	32.4
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	C	26.1	D	34.5	E	39.8	D	33.4	E	40.7	D	33.4	E	38.1	E	36.2	C	26.0

Rohnert Park Expressway SB On-Ramp	E	D	40.0	D	34.1	E	39.8	D	32.8	E	40.7	D	32.8	E	38.1	E	36.2	E	38.5
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	D	40.0	D	27.1	E	39.8	D	27.1	E	40.7	C	25.5	E	38.1	E	36.2	E	38.5
SR-116 SB Off-ramp	E	D	40.0	D	34.0	E	39.8	D	32.5	E	40.7	D	32.5	E	38.1	E	36.2	E	38.5
SR-116 SB On-ramp	E	D	29.7	E	37.2	D	29.1	E	35.7	D	29.1	E	35.7	D	28.2	C	26.9	D	30.6
US-101 South of SR-116 (SB)	E	C	23.5	D	27.4	C	23.5	D	27.4	C	23.5	C	25.5	E	41.4	E	35.6	C	22.2

NOTE: *pc/mi/ln = passenger cars per mile per lane.
**Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2007; AES 2007.

TABLE 5-13
FREEWAY/ RAMP SEGMENT LOS AFTER MITIGATION – ALTERNATIVE F (2008 AND 2020)

Highway Section/Ramp	Criteria	2008 + Alt F Mitigated		2020 + Alt F Mitigated	
Eastbound / Northbound		**LOS**	**MOE***	**LOS**	**MOE***
Atherton Avenue EB Off-Ramp	C	C	27.6	B	19.8
SR-37 between Atherton Avenue and Lakeville hwy (EB}	C	B	18.0	C	18.5
Lakeville Highway between SR-37 and SR-116 (NB)	C	-	-	-	-
Lakeville Highway between SR-37 and Site (NB)	C	C	21.0	C	21.4
Lakeville Highway between SR-116 and Frates Road (NB)	C	B	11.4	B	11.9
Lakeville Highway between Frates Road and US-101 (NB)	C	C	18.3	C	20.5
Lakeville Highway between Site and SR-116 (NB)	C	B	12.4	B	12.6
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	25.5	B	17.9
SR-121 between SR-37 and SR-116 (NB)	C	A	9.3	A	10.1
Walnut Avenue EB Off-Ramp	C	B	19.6	C	20.4
Walnut Avenue EB On- Ramp	C	B	18.5	B	17.4
Wilson Avenue EB Off- Ramp	C	B	18.8	**D**	**29.1**
Wilson Avenue EB On- Ramp	C	B	20.0	B	15.5
SR-29 EB Off- Ramp	C	B	15.2	C	27.2
Westbound / Southbound					
SR-29 WB Off- Ramp	C	A	0.7	B	18.3
SR-29 WB On- Ramp (loop)	C	B	15.2	C	21.6
SR-29 WB On- Ramp	C	B	17.0	C	21.5
Wilson Avenue WB Off- Ramp	C	B	14.8	C	26.0
Wilson Avenue WB On- Ramp	C	B	19.1	**D**	**35.0**

Walnut Avenue WB Off- Ramp	C	A	8.9	C	25.7
Walnut Avenue WB On- Ramp	C	B	19.3	C	21.6
Lakeville Highway between US-101 and Pine View Way (SB)	C	B	14.5	B	15.7
Lakeville Highway between Pine View Way and SR-116 (SB)	C	A	6.2	A	6.3
SR-121 between SR-116 and SR-37 (SB)	C	A	7.1	A	7.1
SR-37 between SR-121 and Lakeville Hwy (WB)	C	C	21.3	C	21.3
Lakeville Highway between SR-116 and SR-37 (SB)	C	-	-	-	-
Lakeville Highway between SR-37 and Site (SB)	C	B	13.2	A	6.0
Lakeville Highway between Site and SR-116 (SB)	C	A	5.7	B	13.8
SR-37 between Lakeville Highway and Atherton (WB)	C	B	15.0	B	15.0
Atherton Avenue WB Off-Ramp	C	B	17.3	B	17.3
Atherton Avenue WB On-Ramp	C	B	16.3	B	16.3
NOTE: Bold text denotes unacceptable LOS *Measure of Effectiveness (MOE) for two lane highways = percent time following & average travel speed (mi/hr); *MOE for multi-lane highways & ramps = density (pc/mi/ln) SOURCE: Kimley-Horn & Associates, 2007; AES, 2007.					

- The Tribe shall sponsor charter buses from destinations such as Marin County and the north Bay.
- For Alternatives A-D, the Tribe shall provide a shuttle between the casino and Rohnert Park transit hubs that would operate on a half hour rotational basis during busy hours and on a on call basis in the times when the frequency of employees and patrons arriving or leaving busy is low.
- Where feasible, lane closures or obstructions associated with the construction of the project shall be limited to off-peak hours to reduce traffic congestion and delays.
- Prior to construction, the Tribe shall work to notify all potentially affected parties in the immediate vicinity of the Wilfred, Stony Point, or the Lakeville sites, as appropriate. Notification shall include a construction schedule, location of construction activities, the duration of construction period, and alternative access provisions.
- Emergency service providers shall be notified to the areas that have the greatest potential for unusual traffic delays as a result of project construction activities. Specific detours would be recommended to circumvent any area that might suffer traffic delays.
- The Tribe shall coordinate with the Green Music Center during events that will generate high traffic levels. During that period, traffic control services at the Rohnert Park Expressway interchange may be necessary. Thus, the Tribe shall provide funding for special event traffic monitoring at the Rohnert Park Expressway interchange to identify conflicts during outdoor events generating high traffic levels. Should conflicts occur, the Tribe shall provide traffic management coordination between the project and the Green Music Center, in consultation with the CHP and Caltrans.
- Debris along construction vehicle routes shall be monitored daily during construction and the roadways cleaned as necessary.
- Implement **Mitigation Measures 5.2.3, L** and **M.**
- The Tribe shall contribute their fair share to bicycle and pedestrian facilities that will increase casino patronage. The Tribe shall consider bicycle and pedestrian circulation in the design of intersections and turning movements, and that adequate sidewalk facilities, striped crosswalks, and pedestrian countdown signals for elderly and disabled citizens be provided.
- The Tribe shall minimize the amount of construction fill transported on the surrounding street network by eliminating the off-site travel route except where necessary to obtain materials that cannot be obtained on-site. Potential options for eliminating off-site transport include moving fill material via conveyors

across barriers such as creeks and ditches or installing temporary bridges for haul vehicles across the barriers.

- Construction material importation shall be scheduled outside of the area wide commute peak hours. Debris along the truck route caused by trucks should be monitored daily and the roadways shall be cleaned as necessary.
- Roadways subject to fill truck traffic shall be assessed by an independent third party consultant prior to the start of construction and following the completion of construction. If the third party determines that roadway deterioration has occurred as a result of casino construction, the Tribe shall pay to have surrounding roadways resurfaced to restore the pavement to at least pre-construction condition, unless the resurfacing is already expected to occur within a year or sooner in conjunction with other planned or proposed roadway improvements. In any event, the Tribe shall fully fund the restructuring of Labath Avenue and Langner Avenue between Wilfred Avenue and Business Park Drive following construction associated with Alternatives A or H to facilitate site access.
- Even if Wilfred Avenue is not widened to increase capacity, due to the increased use of the roadway under Alternatives A-E and H in combination with future cumulative traffic, it is recommended that the Tribe make a proportionate share contribution to roadway improvements, including widened shoulders and Class II bike lanes consistent with applicable standards.

Implementation of the above mitigation will reduce transportation impacts to a less than significant level, except where otherwise noted above.

LAND USE

No mitigation is recommended.

AGRICULTURE

No mitigation is recommended.

5.2.8 PUBLIC SERVICES

WASTEWATER SERVICE

The following mitigation measure is recommended for Alternatives A and H:

A. If the Tribe disposes wastewater off-site to the Laguna WWTP, the Tribe shall coordinate with the WWTP and the City of Rohnert Park to pay appropriate connection

fees and ongoing services for wastewater treatment and recycled water. The Tribe shall also pay the fair share cost of future expansion/improvements, including environmental documentation, to increase wastewater capacity of the Laguna WWTP.

SOLID WASTE

Construction

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F and H:

B. Construction waste shall be recycled to the fullest extent practicable by diverting green waste and recyclable building materials away from the solid waste stream.

C. Environmentally preferable materials shall be used to the extent practical for construction of facilities.

Operation

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F and H:

D. A solid waste management plan shall be adopted by the Tribe that addresses recycling and solid waste reduction on-site. The plan shall have a goal of at least 25% diversion of materials from disposal, which includes reduction, recycling, and reuse measures.

E. The Tribe shall install a trash compactor for cardboard and paper products.

F. The Tribe shall install recycling bins throughout the facilities for glass, cans, and paper products.

G. Decorative trash and recycling receptacles shall be placed strategically throughout the area of the Wilfred Site, Stony Point site, or the Lakeville site, as appropriate, to encourage people not to litter at the facilities.

H Security guards shall be trained to discourage on-site littering.

I. The Tribe shall pay all standard fees for trash collection and disposal.

ELECTRICITY AND NATURAL GAS

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F and H:

J. The Project's air conditioning and refrigeration systems shall utilize environmentally friendly refrigerants. Energy efficient chillers shall also be utilized.

K. The air handling systems shall utilize outside air economizer cycles to take advantage of ambient cooling when the outside air temperature is below 55 degrees F. Economizer cycles may be able to reduce cooling requirements by 20 to 30 percent.

L. For applicable alternatives, hotel and casino buildings shall be equipped with a direct digital energy management and control system to perform energy conservation measures, such as optimum start/stop, duty cycling, and demand limiting. This management system will ensure that the project will not consume any more energy than is necessary.

M. The Tribe shall use energy efficient appliances where feasible.

PUBLIC HEALTH AND SAFETY

The following mitigation measure is recommended for Alternatives A, B, C, D, F, and H:

N. The Tribe shall make an agreement with the applicable City or County department to address inspection, maintenance, and operation of any swimming pools, spas, or hot tubs available to patrons. The terms of the agreement shall include design review of the swimming facilities, inspection of the swimming facilities prior to operation, and at least one annual inspection for seasonal swimming facilities or bi-annual inspections for year-round swimming facilities thereafter. The agreement shall include a commitment to comply with standards for design, maintenance, and operation similar to those followed by non-tribally owned businesses in the City or County, as applicable.

The following mitigation measure is recommended for Alternatives E:

O. The Tribe shall make an agreement with the applicable City or County to address building inspection, and food safety inspections prior to public use of facilities. The terms of the agreement shall include that one design inspection occur prior to public use and that ongoing inspections occur, with similar frequency to non-tribally owned businesses. The terms of the agreement shall include that the buildings adhere to the version of the California Fire Code current at the start of construction. The agreement shall include a commitment to comply with standards for design, maintenance, and operation similar to those followed by non-tribally owned businesses in the City or County, as applicable. If the agreement is with the County, the Tribe shall collaborate with the Sonoma County Health Officer on reports of food-borne illness, Health Alerts and Product Warning Bulletins that impact food and beverage consumption and other product warnings/recalls.

Law Enforcement

The following mitigation measures are recommended for Alternatives A, B, C, D, E, F and H:

P. The Tribe shall provide on-site security to reduce and prevent criminal and civil incidents.

Q. The Tribe shall ensure staff that serves alcohol is trained annually to identify the signs of intoxication and to cease serving alcohol to persons exhibiting those signs.

R. The Tribe shall support local law enforcement efforts in conducting DUI checkpoints and other programs known to reduce the impacts of alcohol on the community (support shall include fully funding at least one DUI checkpoint in the vicinity of the development monthly or less frequently at the discretion of local law enforcement providers).

S. All parking areas shall be well lit and monitored by parking staff and/or security guards. This will aid in the prevention of auto theft and other related criminal activity.

T. The Tribe shall provide traffic control with appropriate signage and the presence of peak-hour traffic control staff. This will aid in the prevention of off-site parking, which could create possible security and safety issues.

U. The Tribe shall pass an ordinance creating a standard policy that encourages responsible drinking and designated driver programs. As part of this policy, the employees serving alcohol shall undergo annual Responsible Beverage Service Training (RBST), also known as "server training." RBST educates mangers, servers and sellers at alcohol establishments about strategies to avoid illegally selling alcohol to underage youth or intoxicated patrons. The goal of RBST is to decrease the number of illegal alcohol sales to underage youth and intoxicated patrons through education programs. Information provided in server training must at a minimum include:

- The importance of checking age identification of customers who appear to be under the age of 30.
- How to identify fake IDs and what to do once a fake ID is confiscated.
- How to recognize situations in which adults are buying alcohol for underage youth.
- How to refuse sales to individuals who may supply alcohol to underage youth.
- How to identify intoxicated customers.
- How to refuse service to underage youth and intoxicated customers.

The following mitigation measures are recommended for Alternatives A, B, C, D, F and H:

V. To mitigate potential impacts to law enforcement resources, the Tribe shall adopt rules prohibiting anyone under 21 years of age from gambling, adopt

employee training programs and policies relating to responsible beverage services with annual training, conduct background checks of all gaming employees, provide a full complement of security personnel at the site at all times, and adopt programs and policies which discourage gang members from visiting the gaming facilities.

W. Hotel management shall work collaboratively with school and law enforcement personnel to prevent the use of hotel rooms for parties involving minors and the hotel shall have an internal monitoring program to reduce the incidence of such parties

X. The Tribe shall provide on-site security for casino operations to reduce and prevent criminal and civil incidents.

Y. The Tribe shall adopt employee training programs and policies relating to responsible beverage services with annual training, which would include, but not be limited to, checking patron identification and refusing service to those who have imbibed beyond their ability to function safely.

Z. Areas surrounding the gaming facilities shall have "No Loitering" signs in place, shall be well lit and shall be patrolled regularly. This will aid in the prevention of illegal loitering and loitering behavior that could potentially lead to other criminal acts.

Fire Protection/Emergency Medical Service

Construction

The following measures are recommended for Alternatives A, B, C, D, E, F and H:

AA. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. During construction, staging areas, building areas, and/or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fuel for combustion. To the extent feasible, the contractor shall keep these areas clear of combustible materials to maintain a firebreak.

Operation

The following measures are recommended for Alternatives A, B, C, D, E, F and H:

BB. The Tribe shall make reasonable provisions for adequate emergency, fire, medical, and related relief and disaster services for patrons and employees including the development of a disaster management plan.

CC. The Tribe shall use fire resistant construction materials and equip all enclosed buildings with automatic sprinkler systems. The automatic sprinkler systems shall be designed to meet or exceed the NFPA standards governing the different occupancies associated with the project structures.

DD. The Tribe shall employ the most modern construction and fire-engineering techniques in their automatic fire containment system designs so that any fire encountered is contained to the room of origin.

EE. Through the use of modern fire engineering technology, the Tribe shall create and maintain a facility equipped with early detection systems that assure an initial response time to any fire alarm (automatic, local, or report) within three minutes. These systems shall include automatic sprinkler systems in the occupied areas and smoke detection, along with automatic sprinkler systems, in the areas of the facility that are normally unoccupied, such as storerooms and mechanical areas.

FF. If only one fire pump is provided, it will be either diesel, or provided with emergency power; thereby, meeting the requirements of the CFC, and the California Building Code (CBC).

GG. Prior to operation, the Tribe shall enter into an agreement with a fire service provider to provide primary fire protection services.

HH. Prior to operation, the Tribe shall enter into a contract with AMR or another entity for ambulance service.

The following measure is recommended for Alternative F:

II. Prior to operation, the Tribe shall ensure that a fire station is constructed near the Lakeville site and staffed with at least three firefighters.

Implementation of the above mitigation measures will reduce public services impacts to a less-than-significant level.

5.2.9 OTHER VALUES

NOISE

The following measures are recommended for Alternatives A, B, C, D, E, F, and H:

A. On-site HVAC equipment shall be shielded to reduce noise.

B. To the extent feasible, HVAC equipment shall be located a significant distance from neighboring houses along Whistler Avenue, Wilfred Avenue, and Labath Avenue. Whenever an HVAC unit is to be placed within 125 feet of an existing residence, an acoustical analysis shall be required to demonstrate that the HVAC noise level does not exceed 45 dBA at the nearest residence.

C. The Tribe shall fully fund the cost of installation of acoustically-rated, dual pane windows (with a minimum Sound Transmission Class (STC) rating of 30) and acoustically rated doors on the facades facing the noise source(s) to minimize noise effects for residences adjacent to Wilfred Avenue between Redwood Drive and Stony Point Road.

D. The Tribe shall fully fund the cost for the construction of raised, landscaped berms or solid walls at least 8 feet in height (6 feet for Alternative F) in order to separate sources of unwanted noise (including on-site traffic circulation noise for Alternatives A, C, and H) from potential noise receptors along Wilfred Avenue. Should a wall be installed, it shall be attractively designed. Adjacent landowners and adjacent governmental jurisdictions shall be consulted with prior to finalizing the design of the berm or wall.

E. Unnecessary vehicle idling shall be prevented during loading dock operations occurring between the hours of 10:00 PM and 7:00 AM.

F. Buses shall not be allowed to idle unnecessarily in areas adjacent to sensitive receptors. Bus parking areas shall also be located as far as feasible from sensitive receptors.

G. To the extent feasible, project construction shall not occur prior to 7:00 AM or after 10:00 PM.

H. Pile driving, should it take place, shall not occur prior to 9:00 AM or after 5:00 PM.

I. On-site wastewater treatment plant equipment shall be shielded or enclosed.

J. Stationary noise-producing equipment such as compressors and generators shall be placed as far as practical from homes, and shielding shall be provided between any such equipment and homes when it is necessary to operate the equipment closer than 200 feet from a home.

The following measure is recommended for Alternative F:

K. The Tribe shall fully fund the cost of installation of acoustically-rated dual pane windows (with a minimum STC rating of 30) and acoustically rated doors on the facades facing the noise source(s) to minimize noise effects for residences adjacent to Lakeville Highway between SR 37 and SR 116.

Implementation of the above mitigation measures will reduce noise impacts to a less-than-significant level (or in some cases minimize already less than significant impacts).

HAZARDOUS MATERIALS

The following measures are recommended for Alternatives A, B, C, D, E, F, and H:

L. In the event that contaminated soil and/or groundwater are encountered during construction related earth-moving activities, all work shall be halted until a professional hazardous materials specialist or a qualified environmental professional can assess the extent of contamination. If contamination is determined to be significant, representatives of the Tribe shall consult with USEPA to determine the appropriate course of action, which may include the development of a Sampling Plan and Remediation Plan if necessary.

M. To reduce the potential for accidental releases, fuel, oil, and hydraulic fluids shall be transferred directly from a service truck to construction equipment and shall not otherwise be stored onsite. Paint, paint thinner, solvents, cleaners, sealants, and lubricants used during construction shall be stored in a locked utility building, handled per the manufacturers' directions, and replenished as needed.

N. Personnel shall follow written standard operating procedures (SOPs) for filling and servicing construction equipment and vehicles. The SOPs, which are designed to reduce the potential for incidents involving the hazardous materials, shall include the following:

   a. Refueling shall be conducted only with approved pumps, hoses, and nozzles.

   b. Catch-pans shall be placed under equipment to catch potential spills during servicing.

   c. All disconnected hoses shall be placed in containers to collect residual fuel from the hose.

   d. Vehicle engines shall be shut down during refueling.

   e. No smoking, open flames, or welding shall be allowed in refueling or service areas.

   f. Refueling shall be performed away from bodies of water to prevent contamination of water in the event of a leak or spill.

   g. Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents.

   h. Should a spill contaminate any soil, the soil shall be put into containers and disposed of in accordance with local, state, and federal regulations.

   i. All containers used to store hazardous materials shall be inspected at least once per week for signs of leaking or failure. All maintenance and refueling areas shall

be inspected monthly. Results of inspections shall be recorded in a logbook that shall be maintained on-site.

j. Staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fuel for combustion. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak.

k. Any construction equipment that normally includes a spark arrester shall be equipped with an arrestor in good working order.

O. The amount of hazardous materials used in project construction and operation shall be kept at the lowest required volumes.

P. The least toxic material capable of achieving the intended result shall be used to the extent practicable. Non-toxic alternatives shall include garden care products and organic non-toxic cleaners when feasible.

Q. A hazardous materials and hazardous waste minimization program shall be developed, implemented, and reviewed annually by the Tribe to determine if additional opportunities for hazardous materials and hazardous waste minimization are feasible, for both project construction and operation.

R. Use of pesticides and toxic chemicals shall be minimized to the greatest extent feasible in landscaping; or less toxic alternatives shall be used.

S. In addition to mitigation described under **Section 5.2.2,** the following mitigation shall be implemented: During the groundwater monitoring and pump tests, the potential for the vertical and lateral migration of contaminants from nearby leaking underground storage tank (LUST) sites shall be evaluated (see **Appendix Z** for detailed recommendations). The pumping test conducted shall include taking water level measurements in wells that are screened in the Lower Intermediate Zone, Upper Intermediate Zone, and uppermost portion of the saturated zone to verify the conclusions based on historical well hydrographs, refine the drawdown model for the Site, and evaluate the potential for contaminant migration using a typical wellhead protection approach. Implementation of the above measures will reduce any potential impacts to less than significant.

T. Material Safety Data Sheets (MSDS) will be available to casino and emergency personnel and to janitors that identify emergency procedures, safe handling and storage practices. A Hazardous Materials Business Plan for the WWTP will be prepared to addresses emergency response and employee training in first aide in the event a spill of citric acid and sodium hypochloride occurs that compromises the chemical storage containment vessels.

U. A Waste Water Contingency Plan shall be prepared for the WWTP prior to construction that shall identify potential system failures and containment measures. These containment measures shall be made part of the WWTP design to ensure no untreated wastewater will be released from the WWTP in the event of a system failure.

The following mitigation is recommended for Alternatives A and H:

V. Prior to demolition of any residential structures on the Wilfred site, an asbestos consultant will be hired by the Tribe to determine if Asbestos Containing Materials (ACMs) and lead based paints are present within the residential structures. If ACMs are present within the residential structures, the Tribe shall comply with any federal NESHAP laws requiring BMPs to be employed during demolition as well as recommendations from the asbestos consultant for the removal and disposal of demolition debris that contain lead based paints and ACMs. Recommendations shall at a minimum include BMPs such as applying water to the structures before, during, and after demolition.

Implementation of the above mitigation measures will reduce hazardous materials impacts to a less-than-significant level.

VISUAL IMPACTS

The following measures are recommended for Alternatives A, B, C, D, E, F, G, and H:

W. Design elements shall be incorporated into the project to minimize the impact of buildings and parking lots on the viewshed. These elements include:
   a. Incorporation of landscape amenities to complement buildings and parking areas, including setbacks, raised landscaped berms and plantings of trees and shrubs (see Noise Mitigation Measures)

   b. Use of earth tones in paints and coatings, and native building materials such as stone.

X. To minimize the impacts of light and glare:

   a. Placement of floodlights on buildings shall be set so as not to cast trespassing light off-site.

b. Uplighting of structures has a high potential for off-site light spillage and shall be minimized by limiting uplighting to the main casino and hotel facades and prohibiting uplighting of the parking structure and ancillary structures. Any uplighting of the main casino and hotel facades shall be directly focused on the structures.

c. Shielding, such as with a horizontal shroud, shall be used for all outdoor parking lot lighting so as to ensure it is downcast.

d. Timers shall be utilized so as to minimize lighting after a certain hour.

e. Signs and facades shall be tastefully designed, without the use of obtrusive light emitting devices such as neon lights or flashing lights.

f. All exterior glass shall be non-reflective low-glare glass.

Implementation of the above mitigation measures will ensure visual impacts are at a less-than-significant level under Alternatives A, G, and H. The encroachment upon open space uses that would occur under the other alternatives could not be appropriately mitigated.