
4.0 LIST OF MITIGATION MEASURES

4.1 SUMMARY OF MITIGATION MEASURES

AESTHETIC RESOURCES (SECTION 3.1)

- MM 3.1-1** The City shall provide compensation to residences that would require a 10-foot tall sound wall in the backyard area. This compensation is to be used by the property owner to purchase and install landscaping that would shield the view of the sound wall from the residential backyard area.

AIR QUALITY (SECTION 3.2)

- M.M. 3.3-1** The project shall provide a plan, for approval by Rancho Cordova Planning Department and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter reduction, compared to the most recent CARB fleet average at time of construction. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.¹
- M.M.3.3-2** The project representative shall submit to Rancho Cordova Planning Department and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
- M.M.3.3-3** The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and Rancho Cordova Planning Department and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted to Rancho Cordova

¹ Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. However, this requirement is neither supported by Caltrans nor FHWA due to the State's obligations under the California Public Contract Code regarding restraint of competitive bidding process resulting from the requirement that newer equipment be used, thereby creating a potential disadvantage in bidding opportunities for smaller businesses that do not have inventories of such equipment.

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Planning Department an SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulations.

- M.M.3.3-4** To off-set the project's construction emissions that would continue to exceed the SMAQMD daily NOx emission thresholds after implementation of the above mitigation, the City of Rancho Cordova shall pay, and obtain proof of payment of, an off-site air quality mitigation fee in the amount of \$16,781, as calculated by the SMAQMD *Construction Emission Mitigation Fee Calculator*.

BIOLOGICAL RESOURCES (SECTION 3.4)

- MM 3.4-1** To compensate for the permanent loss of potential foraging habitat, the City of Rancho Cordova shall preserve 0.75 acres of similar Swaisson's hawk foraging habitat for each acre lost, within a ten-mile radius of the project site, or at a CDFG-approved Swaisson's hawk preservation bank that services the project area.

- MM 3.4-2** If proposed construction activities are planned to occur during the nesting seasons for avian species (typically March 1st through August 31st), the City shall retain a qualified biologist to conduct a focused survey for active nests of raptors and migratory birds within and in the vicinity (no less than 100-feet outside project boundaries, where possible) of the construction area no more than 30 days prior to ground disturbance or tree removal. If active nests are identified during preconstruction surveys, USFWS and/or CDFG shall be notified regarding the status of the nests. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG). Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100-feet around the nest for raptors and 50-foot radius for migratory birds) or alteration of the construction schedule. No action is necessary if construction will occur during the non-breeding season (generally September 1st through February 28th).

- MM 3.4-3a** Prior to any groundbreaking activity, an Arborist Report shall be prepared by an arborist and submitted to the Planning Department for review. The report shall identify all native trees 6" diameter-at-breast-height (dbh) or larger and all non-native trees 18" dbh or larger that could be affected by the project. The report shall include the following minimum components:

- Tree species
- Tree dbh (diameter at breast height, measured at 4.5 feet above ground level)

- Tree dripline radius (measured from the trunk to the tip of the longest limb)
- Overall health and condition of each tree
- A map of the project site showing the location of each tree
- Based on this report, the City Planning Department will determine which trees would be suitable candidates for protection, and which trees will need to be mitigated if removed. Trees that would be removed or otherwise harmed by the project shall be mitigated for pursuant to the City's Tree Preservation and Protection Ordinance.

MM 3.4-3b

Prior to any groundbreaking activity, a Replacement Tree Planting Plan shall be prepared by an arborist or landscape architect and shall be submitted to the City Planning Department for review and approval. The Replacement Tree Planting Plan(s) shall follow the standards set forth in the City of Rancho Cordova Municipal Code, and shall include the following minimum elements:

- a) Species, size, and locations of all replacement plantings.
- b) Method of irrigation
- c) A tree planting detail, including a 10-foot depth-boring hole to provide for adequate drainage.
- d) Planting, irrigation, and maintenance schedules.
- e) Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 5-year establishment period and to replace any of the replacement trees which do not survive during that period.

The Plan shall include enough replacement plantings to allow for inch-for-inch replacement of all trees called out by the City as appropriate candidates for mitigation. Replacement inches will be calculated based on the following size categories.

- One J-pot = ½ inch dbh
- One 15-gallon tree = 1 inch dbh
- One 24-inch box tree = 2 inches dbh
- One 36-inch box tree = 3 inches dbh

In order to meet some of the mitigation requirement, existing native trees on-site proposed for removal that are less than 6" dbh and are in fair or better condition may be transplanted to the new planting area. If existing trees are successfully transplanted, mitigation requirements may be reduced.

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No replacement tree shall be planted within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement trees shall be 15 feet on-center. J-pots may be planted closer at the discretion of the City Arborist or the consulting arborist.

MM 3.4-3c

To avoid damage during construction to trees proposed for preservation, the following protective measures are recommended:

- 1) A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.
 - a. Protective fencing shall be installed at the driplines of the protected trees prior to the start of any construction work (including grading or placement of vehicles on site), in order to avoid damage to the trees and their root systems. This fencing may be installed around the outermost dripline of clusters of trees proposed for protection, rather than individual trees. Fencing shall be shown all project plans.
 - b. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees. A laminated sign indicating such shall be attached to fencing surrounding trees on-site.
 - c. No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.
 - d. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
 - e. No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.
 - f. The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system shall be installed under the supervision of a certified arborist. Wherever possible, pervious concrete shall be used as an alternative to traditional concrete, when it is required under tree driplines.
 - g. No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines

of protected trees. An above ground drip irrigation system is recommended.

- h. Landscaping beneath protected trees may include non-plant materials such as bark mulch or wood chips. The only plant species that shall be planted within the driplines of protected trees are those that are tolerant of the natural environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.
- 2) Any protected trees on the site, which require pruning, shall be pruned by an arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines."
- 3) No signs, ropes, cables (except those which may be installed by an arborist to provide limb support) or any other items shall be attached to the protected trees.

HAZARDS AND HAZARDOUS MATERIALS (SECTION 3.7)

MM 3.7-1 Prior to start of construction, the construction contractor shall designate staging areas where fueling and oil-changing activities will take place. The staging area(s) shall be reviewed and approved by City of Rancho Cordova's Environmental Mitigation Monitor and the Storm Water Pollution and Prevention Manager prior to the start of construction. No fueling and oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, day care facilities, and schools. Staging areas shall not be located near any stream, channel, or wetlands. The proposed staging areas shall be identified in the Storm Water Pollution Prevention Plan (SWPPP).

HYDROLOGY AND WATER QUALITY (SECTION 3.8)

MM 3.8-1 Prior to construction, a sediment control plan and a SWPPP shall be prepared by the contractor and submitted to the City for approval. The sediment control plan shall be designed to limit the effects of soil erosion and water degradation during construction. This plan shall be prepared and implemented in accordance with the requirements of the RWQCB's NPDES permit requirements, and shall include (but not be limited to) the following measures:

- Use of sediment control measures that utilize sediment traps, barriers, covers, or other methods approved by the Regional Water Quality Control Board;
- Plans for appropriate deposition and storage of excavated material;
- Construction phasing; and

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- Cover all stockpiles of fill material during extended periods of rain

NOISE (SECTION 3.11)

- MM 3.11-1** Site preparation and construction activities along the International Drive extension portion of the project area (i.e., construction areas closest to sensitive receptors) shall be limited to between the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. on weekends. Noise-generating construction equipment maintenance activities shall be limited to the same hours.
- MM 3.11-2** Site preparation and construction activities along the Sunrise Boulevard portion of the project area (i.e., construction areas furthest away from sensitive receptors) shall be limited to between the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. on weekends, whenever feasible. Noise-generating construction equipment maintenance activities shall be limited to the same hours, whenever feasible. Construction activities outside of these hours shall be allowed only when nighttime construction is necessary to complete improvements along Sunrise Boulevard while minimizing disruptions to traffic along this critical transportation corridor.
- MM 3.11-3** Construction equipment shall be equipped with mufflers, in accordance with manufacturers' specifications. Additionally, equipment staging areas shall be located at the furthest distance possible from nearby residential land uses.
- MM 3.11-4** If recommended improvements to the existing barrier height, as identified in mitigation measure **MM 3.11-5** as necessary to reduce long-term traffic noise levels, are to be completed as part of the project, they shall be substantially completed prior to conducting major onsite construction activities that would involve the frequent and reoccurring use of heavy-duty equipment. "Substantially completed" is defined as of sufficient length and height to block the line-of-sight between ground floor location of adjacent dwellings and on-site heavy duty construction equipment.
- MM 3.11-4** The existing sound barrier should be increased to a minimum height of 8 feet along the adjoining parcels identified as receptors 1 through 5 and to a minimum height of 10 feet for receptors 6 through 14. The height of the recommended sound barrier improvements are measured from the base elevation of the existing sound barrier. To diminish the overall aesthetic impact of the barrier, increases in height should occur gradually, preferably in increments of approximately 1-foot. In addition, it is recommended that adjoining segments of the existing sound barrier (not recommended for height improvement) be improved to provide for a gradual step-down in height. Recommended barrier heights are depicted in **Figure 3.11.6**.

TRANSPORTATION/TRAFFIC (SECTION 3.15)

- MM 3.15-1** The construction contractor shall minimize the duration of the closure of the Folsom South Canal bicycle trail to the shortest period necessary to complete construction activities. The bicycle trail shall only be closed to bicycle and pedestrian traffic when construction activities are such that they either

physically disrupt movement along the trail (i.e., during trail excavation), or construction activities could present a safety hazard to individuals passing through the construction area. The trail shall remain open during regular trail hours, unless construction activities are occurring that require closure of the trail for either physical or public safety reasons.

MM 2.15.2

Signage shall be placed at the entrances to the trail at White Rock Road and Jackson Highway notifying users of the Folsom South Canal bicycle trail of the closure. The signage shall be of sufficient size, coloring, and placement that it will be easily visible to bicyclists who may pass by it at higher speeds. When feasible, this signage will also advise users of the trail of alternative routes they may use to move between White Rock Road and Jackson Highway in-lieu of through-access at the International Drive Extension construction site. When feasible, the signage shall be installed at least five days prior to the closure to notify users in advance of the closing. The signage shall be maintained throughout the duration of any trail closure. The City of Rancho Cordova shall also notify local bicycling groups and associations prior to closure of the bicycle trail, and notify them again of its re-opening, so that the groups may help disseminate the information to their members. Notification to bicycling groups and associations shall be made at least five days in advance of any trail closures, whenever feasible.

