DRAFT PROGRAM

ENVIRONMENTAL IMPACT REPORT

Washington Boulevard Transit Oriented Development Specific Plan Project

APPENDICES

Appendix A: Biological Resources

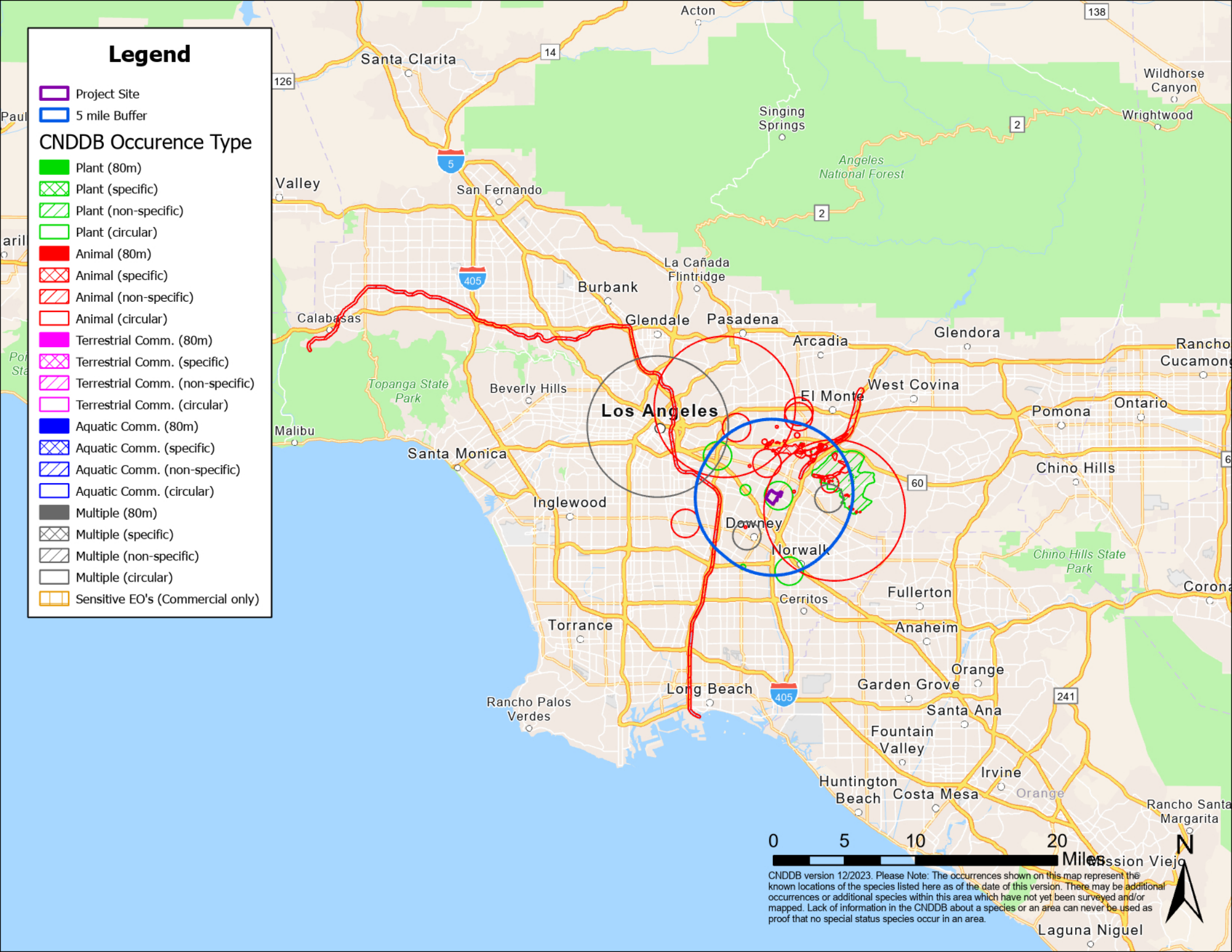
Appendix B: Cultural Resources

Appendix C: Mobility Assessment

Appendix D: NOP and Scoping Meeting Materials

May 2025

APPENDIX A – BIOLOGICAL RESOURCES


Legend
Project Site
5 mile Buffer
CNDDB Occurence Type
Plant (80m)
Plant (specific)
Plant (non-specific)
Plant (circular)
Animal (80m)
Animal (specific)
Animal (non-specific)
Animal (circular)
Terrestrial Comm. (80m)
Terrestrial Comm. (specific)
Terrestrial Comm. (non-specific)
Terrestrial Comm. (circular)
Aquatic Comm. (80m)
Aquatic Comm. (specific)
Aquatic Comm. (non-specific)
Aquatic Comm. (circular)
Multiple (80m)
Multiple (specific)
Multiple (non-specific)
Multiple (circular)
Sensitive EO's (Commercial only)
Acton
Santa Clarita
Wildhorse Canyon
Wrightwood
Singing Springs
Angeles National Forest
Valley
San Fernando
La Cañada Flintridge
Burbank
Calabasas
Glendale
Pasadena
Arcadia
Glendora
Topanga State Park
Beverly Hills
Los Angeles
El Monte
West Covina
Pomona
Ontario
Malibu
Santa Monica
Chino Hills
Inglewood
Downey
Norwalk
Chino Hills State Park
Fullerton
Cerritos
Torrance
Anaheim
Orange
Garden Grove
Long Beach
Rancho Palos Verdes
Santa Ana
Fountain Valley
Irvine
Huntington Beach
Costa Mesa
Rancho Santa Margarita
Laguna Niguel
0 5 10 20 Miles
N
CNDDB version 12/2023. Please Note: The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Special-Status Wildlife

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Accipiter cooperii Cooper's hawk	Fed: None CA: WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	No	**Low** Foraging habitat is present within and surrounding the Project site. Marginal nesting opportunities present on site boundaries.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	Fed: None CA: WL	Typically found between 3,000 and 6,000 feet in elevation. Breed in sparsely vegetated shrublands on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (Artemisia californica) but can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Anniella stebbinsi southern California legless lizard	Fed: None CA: SSC	Mostly found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans. They live mostly underground, burrowing in the loose sandy soils.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Aquila chrysaetos golden eagle	Fed: None CA: FP/WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Ardea alba great egret	Fed: None CA: None	Yearlong resident throughout California, except for the high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Ardea herodias great blue heron	Fed: None CA: None	Fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains about foothills.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Arizona elegans occidentalis California glossy snake	Fed: None CA: SSC	Inhabits arid scrub, rocky washes, grassland, and chaparral. Appears in microhabitats of open areas and areas with soil loose enough for easy burrowing.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Artemisiospiza belli belli Bell's sage sparrow	Fed: None CA: WL	Occurs in chaparral dominated by fairly dense stands of chamise. Also found in coastal sage scrub in south of range.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Aspidoscelis hyperythra orangethroat whiptail	Fed: None CA: WL	Inhabits low-elevations coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats. Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: None CA: SSC	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Athene cunicularia burrowing owl	Fed: None CA: SSC	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Bassariscus astutus octavus southern California ringtail	Fed: None CA: None	Prefers rocky outcroppings, canyons, or talus slopes. Found generally in semi-arid country, deserts, chaparral, oak woodlands, pinyon pine woodlands, juniper woodlands and montane conifer forests.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Batrachoseps gabrieli San Gabriel slender salamander	Fed: None CA: None	Known from select localities in the San Gabriel Mountains and the Mt. Baldy area of Los Angeles County and the western end of the San Bernardino Mountains in San Bernardino Co., with an elevation range of 1,200- 5,085 feet. Occurs on talus slope surrounded by a variety of conifer and montane hardwood species, including bigcone spruce, pine, white fir, incense cedar, canyon live oak, black oak, and California laurel.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Bombus crotchii Crotch's bumble bee	Fed: None CA: None	Exclusive to coastal California east towards the Sierra-Cascade Crest; less common in western Nevada. Characterized as a dietary generalist, it shows favor towards milkweeds and is also commonly associated with dustymaidens, lupines, medics, phacelias, sages, and buckwheats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Bombus pensylvanicus American bumble bee	Fed: None CA: None	Prefers farmlands, meadows, grasslands, and open fields. Nests below grass or underground. Feeds on pollen of a wide variety of flowering plants including vetches, clovers, goldenrods, and many crop species.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Buteo regalis ferruginous hawk	Fed: None CA: WL	Occurs primarily in open grasslands and fields, but may be found in sagebrush flats, desert scrub, low foothills, or along the edges of pinyon-juniper woodland. Feeds primarily on small mammals and typically found in agricultural or open fields.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the Project site.
Calypte costae Costa's hummingbird	Fed: None CA: None	Found in desert and semi-desert, arid brushy foothills and chaparral habitats. Breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	**Presumed Absent** There is no suitable habitat is present within or adjacent to the Project site.
Catostomus santaanae Santa Ana sucker	Fed: **THR** CA: None	Occur in the watersheds draining the San Gabriel and San Bernardino Mountains of southern California. Steams that Santa Ana Sucker inhabit are generally perennial streams with water ranging in depth from a few inches to several feet and with currents ranging from slight to swift.	No	**Presumed Absent** There is no suitable habitat is present within or adjacent to the Project site.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: None CA: SSC	Occurs in desert and coastal habitats in southern California, Mexico, and northern Baja California, from sea level to at least 1,400 meters above msl. Found in a variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Requires low growing vegetation or rocky outcroppings, as well as sandy soils for burrowing.	No	**Presumed Absent** There is no suitable habitat is present within or adjacent to the Project site.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	Fed: None CA: SSC	Lives in coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper woodlands, and annual grasslands. Prefers moderate canopy coverage of	No	**Presumed Absent** No suitable habitat is present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
		arid shrubland or on or near rocky slopes and sandy areas.		
Cicindela tranquebarica viridissima greenest tiger beetle	Fed: None CA: None	Often occur at ground level and prefer areas of bare ground with very little vegetation. Most commonly seen in warm and sandy habitats in heaths, hillsides, and dunes. Seen regularly at Brownfield sites.	No	**Presumed Absent** There is no suitable habitat is present within or adjacent to the Project site.
Circus hudsonius northern harrier	Fed: None CA: SSC	Breeds in wide-open habitats ranging from Arctic tundra to prairie grasslands, fields, and marshes. Nests are concealed on the ground in grasses or wetland vegetation.	No	**Presumed Absent** There is no suitable habitat is present within or adjacent to the Project site.
Coleonyx variegatus abbotti San Diego banded gecko	Fed: None CA: SSC	Prefers rocky coastal sage and chaparral habitat with granite outcrops. Also occurs in dry, rocky riverbeds. Species avoids areas with a high intensity of artificial night lighting.	No	**Presumed Absent** There is no suitable habitat is present within or adjacent to the Project site.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Diadophis punctatus modestus San Bernardino ringneck snake	Fed: None CA: None	Common in open, relatively rocky areas within valley-foothill, mixed chaparral, and annual grass habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: **END** CA: CE/SSC	Primarily found in Riversidian alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub. May occur at lower densities in Riversidian upland sage scrub, chaparral and grassland in uplands and tributaries in proximity to Riversidian alluvial fan sage scrub habitats. Tend to avoid rocky substrates and prefer sandy loam substrates for	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
		digging of shallow burrows.		
Dipodomys simulans Dulzura kangaroo rat	Fed: None CA: None	Relatively common in chaparral, coastal sage scrub, Riversidean alluvial fan sage scrub, and peninsular juniper woodland habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Elanus leucurus white-tailed kite	Fed: None CA: None	Common in savannas, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields. Tend to avoid heavily cleared or grazed areas. Breeds in lowland grasslands, agricultural wetlands, oak-woodland and savannah habitats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Eremophila alpestris actia California horned lark	Fed: None CA: WL	Inhabits open ground, generally avoiding areas with trees or even bushes. May occur in a wide variety of areas that are sufficiently open such as short-grass prairies, extensive lawns such as on airports or golf courses, plowed fields, stubble fields, beaches lake flats, dry tundra of far north or high mountains.	No	**Low** Limited foraging habitat is present within and surrounding the Project site.
Eugnosta busckana Busk's gallmoth	Fed: None CA: None	Little is known about the habitat and distribution of this species.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Eumops perotis californicus western mastiff bat	Fed: None CA: SSC	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least three meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Falco mexicanus prairie falcon	Fed: None CA: WL	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Falco peregrinus anatum American peregrine falcon	Fed: DL CA: DL	Uncommon winter resident of the inland region of southern California. Active nesting sites are known along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. Breeds mostly in	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
		woodland, forest, and coastal habitats. Riparian areas and coastal and inland wetlands are important habitats yearlong, especially in nonbreeding seasons.		
Gila orcuttii arroyo chub	Fed: None CA: SSC	Warm streams of the Los Angeles Plain, which are typically muddy torrents during the winter, and clear quiet brooks in the summer, possibly drying up in places. They are found both in slow-moving and fast-moving sections, but generally deeper than 40 cm.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Icteria virens yellow-breasted chat	Fed: None CA: SSC	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting, and fairly dense brush for nesting.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Lasiurus xanthinus western yellow bat	Fed: None CA: SSC	Roosts in palm trees in foothill riparian, desert wash, and palm oasis habitats with access to water for foraging.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: None CA: None	Found in diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Openness of open scrub habitat is preferred over dense chaparral.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Microtus californicus mohavensis Mojave river vole	Fed: None CA: **END**	Prefers habitat that is moist, including meadows, freshwater marshes, and irrigated pastures in locations surrounding the Mojave River between elevations of 2,460 to 2,700 feet.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Neolarra alba white cuckoo bee	Fed: None CA: None	Typically found where other bee species are common. Known as "cleptoparasites," cuckoo bees lay their eggs in cells provisioned by host bees. Live in urban areas, forests, and woodlands.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Neotoma lepida intermedia San Diego desert woodrat	Fed: None CA: SSC	Occurs in coastal scrub communities between San Luis Obispo and San Diego Counties. Prefers moderate to dense canopies, and especially rocky outcrops.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: None CA: SSC	Often found in pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Oncorhynchus mykiss irideus pop. 10 steelhead – southern California DPS	Fed: **END** CA: CE	Found in permanent coastal streams from San Diego to the Smith River.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Pandion haliaetus osprey	Fed: None CA: WL	Found near both fresh and saltwater habitats. Prefers rivers, lakes, and coastlines where large numbers of fish are present. May be most common around major coastal estuaries and salt marshes, but also regular around reservoirs.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: None CA: SSC	Resides in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Phrynosoma blainvillii coast horned lizard	Fed: None CA: SSC	Found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (i.e., fire, floods, roads, grazing, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Polioptila californica californica coastal California gnatcatcher	Fed: **THR** CA: SSC	Obligate resident of sage scrub habitats that are dominated by California sagebrush. This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. It prefers habitat with more low-growing vegetation.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Pyrocephalus rubinus vermilion	Fed: None CA: SSC	Occupies desert riparian habitat, particularly cottonwoods, willows, mesquite, and other large desert	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
flycatcher		riparian trees, in habitat adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas where it can forage.		Project site.
Rana muscosa southern mountain yellow-legged frog	Fed: **END** CA: **END**;WL	Occurs in lower elevation habitats characterized by rocky streambeds and wet meadows, while higher elevation habitats include lakes, ponds, and streams. Occupy streams in narrow, rock-walled canyons. Often found along rock walls or vegetated banks and always within a few feet of the water.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Rhaphiomidas terminatus abdominalis Delhi Sands flower-loving fly	Fed: END CA: None	DSF habitat is limited to areas that include Delhi fine sand, an aeolian (wind-deposited) soil type. The highest density of DSF have been found in habitat that includes a variety of plants including California buckwheat, California croton, deerweed, and telegraph weed.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	Fed: None CA: SSC	Requires permanent flowing streams within summer water temperatures of 17 – 20 degrees Celsius. Inhabits shallow cobble and gravel riffles and small streams that flow through steep, rocky canyons with chaparral covered walls.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the Project site.
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: None CA: SSC	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. Requires friable soils for burrowing.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Setophaga petechia yellow warbler	Fed: None CA: SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Spinus lawrencei Lawrence's goldfinch	Fed: None CA: None	Typical habitats include valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Nearby herbaceous habitats often used for feeding. Open woodlands, chaparral, and weedy fields. Closely associated with oaks. Nests in open oak or other arid	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
		woodland and chaparral near water.		
Strix occidentalis occidentalis California spotted owl	Fed: None CA: SSC	Breeds and roosts in forests and woodland with large old trees and snags, high basal areas of trees and snags, dense canopies, multiple canopy layers, and downed woody debris. Large old trees are key as they provide nest sites and cover from weather.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Taxidea taxus American badger	Fed: None CA: SSC	Primarily occupy grasslands, parklands, farms, tallgrass and shortgrass prairies, meadows, shrub-steppe communities and other treeless areas with sandy loam soils where it can dig more easily for its prey. Occasionally found in open chaparral (with less than 50% plant cover) and riparian zones.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Vireo bellii pusillus least Bell's vireo	Fed: **END** CA: **END**	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Ambrosia monogyra singlewhorl burrobrush	Fed: None CA: None CNPS: 2B.2	Found in chaparral and woodland habitats in the Peninsular Ranges of Southern California and northern Baja California. Grows in washes and ravines in desert areas as well. Grows in sandy soils. Blooming period is August to November.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Arenaria paludicola marsh sandwort	Fed: **END** CA: **END** CNPS: 1B.1	Grows mainly in wetlands and freshwater marshes in arid climates. The plant can grow in saturated acidic bog soils and soils that are sandy with a high organic content. Found at elevations ranging from 33 to 558 feet. Blooming period is from May to August.	No	**Presumed Absent** There is no suitable habitat present within the Project site. The Project site occurs outside of the known elevation range for this species.
Calochortus plummerae Plummer's mariposa-lily	Fed: None CA: None CNPS: 4.2	Found along the coast and inland hills in chaparral, coastal sage scrub, yellow pine forest, foothill woodland, and valley grassland plant communities. Prefers dry, rocky soils. Grows at elevations of up to 5,580 feet. Blooms from May to July.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	Fed: **END** CA: **END** CNPS: 1B.2	Upper terraces and higher edges of coastal salt marshes where tidal inundation is periodic. Found at elevations ranging from 0 to 99 feet. Blooming period is from May to October.	No	**Presumed Absent** There is no suitable habitat present within the Project site. The Project site occurs outside of the known elevation range for this species.
Chorizanthe parryi var. parryi Parry's spineflower	Fed: None CA: None CNPS: 1B.1	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Chorizanthe xanti var. leucotheca white-bracted spineflowe	Fed: None CA: None CNPS: 1B.2	Grows on sandy or gravelly soils within coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodland habitats. Found at elevations ranging from 984 to 3,937 feet. Blooming period is from April to June.	No	**Presumed Absent** The Project site occurs outside of this species' known elevation range.
Cryptantha incana Tulare cryptantha	Fed: None CA: None CNPS: 1B.3	Found in lower montane coniferous forests between 4,600 to 6,600 feet in elevation. Grows in open, gravelly, and rocky soils. Blooms from May to August.	No	**Presumed Absent** No suitable habitat is present within the Project site.
Dodecahema leptoceras slender-horned spineflower	Fed: **END** CA: **END** CNPS: 1B.1	Chaparral, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes. Found at elevations ranging from 1,181 to 2,690 feet. Blooming period is from April to June.	No	**Presumed Absent** No suitable habitat is present within the Project site.
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	Fed: **END** CA: **END** CNPS: 1B.1	Grows in sandy or gravelly soils within chaparral and coastal scrub habitat. Found at elevations ranging from 299 to 2,001 feet. Blooming period is from April to September.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Galium jepsonii Jepson's bedstraw	Fed: None CA: None CNPS: 4.3	Grows mainly in moist, shady habitats in hilly and mountainous areas, often within California chaparral and woodland ecoregions.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Galium johnstonii Johnston's bedstraw	Fed: None CA: None CNPS: 4.3	Grows in chaparral, lower montane coniferous forest, pinyon and juniper woodland, and riparian woodland communities. Blooms from May to July.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Horkelia cuneata var. puberula mesa horkelia	Fed: None CA: None CNPS: 1B.1	Occurs on sandy or gravelly soils in chaparral, woodlands, and coastal scrub plant communities. Found at elevations ranging from 230 to 2,657 feet. Blooming period is from February to September.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Juglans californica	Fed: None	Found in chaparral, cismontane	No	**Presumed Absent**

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
southern California black walnut	CA: None CNPS: 4.2	woodland, coastal scrub, and riparian woodland habitats. Found at elevations ranging from 164 to 2,953 feet. Blooming period is from March to August.		There is no suitable habitat present within the Project site.
Lepidium virginicum var. robinsonii Robinson's pepper-grass	Fed: None CA: None CNPS: 4.3	Dry soils on chaparral and coastal sage scrub. Found at elevations ranging from 3 to 2,904 feet. Blooming period is from January to July.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Lilium humboldtii ssp. ocellatum ocellated Humboldt lily	Fed: None CA: None CNPS: 4.2	Found in openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland habitats. Found at elevations ranging from 98 to 5,906 feet in elevation. Blooming period is from March to August.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Lilium parryi lemon lily	Fed: None CA: None CNPS: 1B.2	Occurs in lower montane coniferous forest, meadows and seeps, riparian forest, and upper montane coniferous forest habitats. Generally, occurs in wet, mountainous terrain; forested areas; on the shady edges of streams; or in open, boggy meadows and seeps. Found at elevations ranging from 4,003 to 9,006 feet above msl. Blooming period is from July to August.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the Project site.
Lycium parishii Parish's desert-thorn	Fed: None CA: None CNPS: 2B.3	Habitats include coastal scrub and Sonoran Desert scrub. Found at elevations ranging from 443 to 3,281 feet. Blooming period is from March to April.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Malacothamnus parishii Parish's bush-mallow	Fed: None CA: None CNPS: 1A	Grows in chaparral and coastal scrub habitats. Found at elevations ranging from 1,001 to 1,493 feet. Blooming period is from June to July.	No	**Presumed Absent** There is no suitable habitat present within the Project site. The Project site occurs outside of the known elevation range for this species.
Monardella pringlei Pringle's monardella	Fed: None CA: None CNPS: 1A	Prefers sandy soils within coastal scrub habitat. Found at elevations ranging from 984 to 1,312 feet. Blooming period is from May to June.	No	**Presumed Absent** There is no suitable habitat present within the Project site. The Project site occurs outside of the known elevation range for this species.
Monardella Saxicola rock monardella	Fed: None CA: None CNPS: 4.2	Found in yellow pine forest and chaparral communities. Grows in rocky and serpentinite soils, blooming time is May to August.	No	**Presumed Absent** No suitable habitat is present within the Project site.
Opuntia basilaris	Fed: None	Habitats include chaparral, Joshua tree	No	**Presumed Absent**

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
var. brachyclada short-joint beavertail	CA: None CNPS: 1B.2	woodland, Mojavean desert scrub, pinyon and juniper woodlands. Found at elevations ranging from 1,394 to 5,906 feet. Blooming period is from April to August.		No suitable habitat is present within the Project site.
Quercus durata var. gabrielensis San Gabriel oak	Fed: None CA: None CNPS: 4.2	Grows between 1,500 and 4,500 feet in elevation. Found in chaparral slopes and ridges, and in oak woodlands in granitic soils.	No	**Presumed Absent** No suitable habitat is present within the Project site.
Senecio aphanactis chaparral ragwort	Fed: None CA: None CNPS: 2B.2	Found in sometimes alkaline soils in chaparral, cismontane woodland, and coastal scrub. Found at elevations ranging from 425 to 2,165 feet. Blooming period is from January to April.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Senecio astephanus San Gabriel ragwort	Fed: None CA: None CNPS: 4.3	Found only in the rocky slopes of the Transverse Ranges and adjacent Coast Ranges of California. Blooms from March to May.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Sphenopholis obtusata prairie wedge grass	Fed: None CA: None CNPS: 2B.2	Prefers cismontane woodland, meadows, and seeps. Found at elevations ranging from 984 to 6,562 feet. Blooming period is from April to July.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Streptanthus bernardinus Laguna Mountains jewelflower	Fed: None CA: None CNPS: 4.3	Grows in chaparral and lower montane coniferous forest on clay or decomposed granite soils. It is sometimes found in disturbed areas such as streamsides or roadcuts. From 4,724 to 8,202 feet in elevation. Blooming period is from May to August.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Symphyotrichum defoliatum San Bernardino aster	Fed: None CA: None CNPS: 1B.2	Grows in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Can be found growing near ditches, streams, and springs within these habitats. Found at elevations ranging from 7 to 6,693 feet. Blooming period is from July to November.	No	**Presumed Absent** There is no suitable habitat present within the Project site.
Riversidian Alluvial Fan Sage Scrub	CDFW Sensitive Habitat	Occur within broad washes of sandy alluvial drainages that carry rainfall runoff sporadically in winter and spring but remain relatively dry through the remainder of the year. Is restricted to drainages and floodplains with very sandy substrates that have a dearth of decomposed plant material. These areas do not develop into riparian woodland or	No	**Absent.** This plant community was not observed on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
		scrub due to the limited water resources and scouring by occasional floods.		
Southern Riparian Forest	CDFW Sensitive Habitat	Comprised of winter-deciduous trees that require water near the soil surface. Primarily composed of Willow cottonwood (*Populus* sp.) and western sycamore (*Platanus racemosa*). Associated understory species include mule fat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica ssp. holosericea*), and wild grape (*Vitis girdiana*). Found in moist canyons and drainage bottoms.	No	**Absent.** This plant community was not observed on-site.
Southern Sycamore Alder Riparian Woodland	CDFW Sensitive Habitat	Occurs below 2,000 meters in elevation, sycamore and alder often occur along seasonally flooded banks; cottonwoods and willows are also often present. Poison oak, mugwort, elderberry and wild raspberry may be present in understory.	No	**Absent.** This plant community was not observed on-site.

USFWS – Federal
END - Federal endangered
THR - Federal Threatened
Candidate END – Under Review
CDFW – California
END – California Endangered
CSC – California Species of Concern
WL – Watch List
FP – California Fully Protected
CNPS *California Rare Plant Rank*
1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B - Plants Rare, Threatened, or Endangered in California and Elsewhere
2B - Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 - Plants of Limited Distribution – A Watch List
Threat Ranks
0.1 – Seriously threatened in California
0.2 – Moderately threatened in California
0.3 – Not very threatened in California

APPENDIX B – CULTURAL RESOURCES

Kimley»Horn

MEMORANDUM

To: City of Pico Rivera, Community & Economic Development Department
6615 Passons Boulevard, Pico Rivera, CA 90660

From: Jamie Nord, MA, RPA
Kimley-Horn and Associates, Inc.
3801 University Ave., Ste 300, Riverside, CA 92501

Date: December 1st, 2023

Subject: Cultural Resources Inventory Report for the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan in the City of Pico Rivera, Los Angeles County, California

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To Whom It May Concern,

At the request of the City of Pico Rivera, Kimley-Horn and Associates, Inc. (KHA) conducted a Cultural Resources Inventory Report of the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan area located in the City of Pico Rivera (City), Los Angeles County, California. This study was completed to support the City's review of potential impacts to cultural resources within the property as a result of the proposed Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan (Specific Plan). A cultural resources records search and additional research was conducted to identify previously recorded and potential cultural resources within the Specific Plan area.

Project Description and Location

The Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan (Specific Plan) area is within the western City of Pico Rivera and southern portion of the County of Los Angeles, California. The Plan area includes 88 legal parcels that total of 349.80 acres with Rosemead Blvd to the east, Crider Ave to the west, and Washington Blvd to the north (Figures 1-2). The Specific Plan will be used as a policy and regulatory guide for subsequent Project-specific reviews and approvals when Project-level proposals within the Specific Plan area are submitted to the City.

Natural Setting

The Specific Plan area is located within the Los Angeles Basin with the Rio Hondo River located immediately to the west. The natural geomorphology consists of an alluvial fan associated with the river environment (SoilWeb 2023). While the Specific Plan area is now comprised of urban, developed land, this area would have once been a lush, wet environment that supported an abundance of plant and animal resources. The Specific Plan area is situated north of the Lower Elysian Park thrust Quaternary line (U.S. Geological Survey 2023).

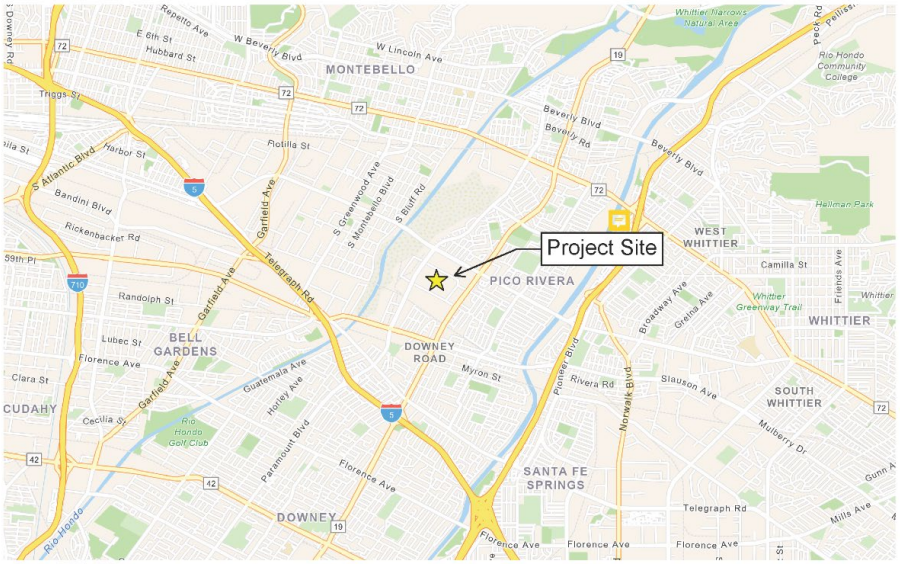

FIGURE 1: Regional Location
Washington Boulevard Transit-Oriented Development Specific Plan, City of Pico Rivera
Not to scale
Kimley»Horn

Figure 1: Regional Location

FIGURE 2: Specific Plan Project Area
Washington Boulevard Transit-Oriented Development Specific Plan, City of Pico Rivera
Not to scale
Kimley»Horn

Figure 2: Specific Plan Project Area

History

The City of Pico Rivera has been the setting for a long history of human occupation, including Native American villages, Spanish and Mexican ranchos, and post-World War II settlements. Because of this cultural and historical background, the City of Pico Rivera contains numerous historic and archaeological resources (City of Pico Rivera 2014).

The proposed Specific Plan site is located within the ancestral lands of the Gabrieleño/Tongva. Gabrieleño is a Spanish word associated with the San Gabriel Mission, which was located approximately 9 miles to the north. Kroeber (1925) recorded cultural territory information about southern California tribes, including the Gabrieleño/Tongva. However, exact traditional territories remain unclear, especially in the coastal regions, for several reasons. First, traditional territories were dynamic and changing. Second, early European settlement in this region displaced Native Americans living here prior to significant ethnographic documentation of their occupation in this region. Many Gabrieleño/Tongva were forcibly recruited into the Spanish Mission system. Although exact boundaries are undefined, a range of archaeological, ethnographic, and historic evidence still exists to support prehistoric occupation by Gabrieleño/Tongva peoples in this part of the Los Angeles Basin (Gabrieleño [Tongva] Band of Mission Indians 2023). Kroeber reported that the Gabrieleño/Tongva were engaging in trade with other regional communities and exporting marine resources. In addition to exploiting sea resources, Gabrieleño/Tongva hunted mammals, such as deer and antelope, and gathered and processed a variety of native plants (King 2011). A range of lithic resources were utilized, most notably steatite. Gabrieleño/Tongva established settlements throughout their traditional lands, while fostering long-distance trade that included the prominent shell bead network.

After vast decimation of Gabrieleño/Tongva communities in the region, the Specific Plan site was included in the Rancho Paso de Bartolo Mexican land grant awarded by Governor Jose Figueroa to Juan Crispin Perez in 1835 (Bowman 1947). California achieved statehood in the U.S. in 1850. Afterwards, this area was largely settled as farmland due to the rich, fertile soil. The arrival of the Union Pacific rail line and Atchison, Topeka and Santa Fe rail line in the 1880s brought new industry and increased development to the region (Los Angeles County Library 2023). The City of Pico Rivera was founded in 1958 by merging two historic communities: Pico and Rivera (City of Pico Rivera 2023). The City of Pico Rivera transformed from agricultural land into an industrial and residential community following WWII.

Cultural Resources Records Search

A cultural resources records search was conducted at the South Central Coastal Information Center (SCCIC) on November 13th, 2023 by KHA staff for the Specific Plan area and a 0.5-mile buffer. The results indicated that six (6) cultural studies were previously conducted and eight (8) cultural resources previously recorded within the Specific Plan area, consisting entirely of historic built environment resources (Table 1, Attachment A). These resources are generally concentrated in the northern and northeastern region of the Specific Plan. Seven (7) buildings were previously evaluated and recommended ineligible for listing in the National Register and California Register. However, one (1) resource, P-19-191099, was recommended eligible for the National Register. This resource, known as the Dal Rae Restaurant, appeared eligible for listing in the National Register under Criterion

at the local level of significance for its association with the broad pattern of postwar suburbanization, dining, and entertainment in Southern California after World War II (English and Moruzzi 2010). It was additionally noted that, despite modifications to the building, it continued to exhibit a high level of integrity of overall design, location, setting, feeling, and association. However, based on the resource record, the Dale Rae Restaurant remains unevaluated for the California Register. An additional 105 cultural resources were previously recorded within 0.5 miles of the Specific Plan site as a result of 12 previous cultural studies (Attachment B).

Table 1. Cultural Resources Previously Recorded in the Specific Plan Area

Resource	Age	Type	Description
P-19-191099	Historic	Building	9023 Washington Blvd, Dal Rae Restaurant, one story commercial building
P-19-191489	Historic	Building	8335 Washington Blvd, multi family residence
P-19-191490	Historic	Building	8423 Washington Blvd, Luau Manor, multi family residence
P-19-191491	Historic	Building	8535 Washington Blvd, one story commercial building
P-19-191492	Historic	Building	8737 Washington Blvd, one story commercial building
P-19-191493	Historic	Building	9033 Washington Blvd, two story commercial building
P-19-191494	Historic	Building	9049 Washington Blvd, one story commercial building
P-19-191495	Historic	Building	9055 Washington Blvd, one story commercial building

Additional Research

A review of available historical and topographic maps, aerial imagery, historic resource repository data, City General Plans, and literature was conducted to ascertain the level of existing disturbance, potential for archaeological resources, and presence of built historic resources within the Specific Plan area. A review of resource databases and repositories indicated the general area's sensitivity for historic built environment resources. For example, within Pico Rivera city limits, 371 historic resources are listed on the Built Environment Resources Directory (Office of Historic Preservation 2023).

The City also acknowledges and tracks the information regarding its historic built environment. The City's General Plan describes how the City's history has played a role in defining Pico Rivera's current land use pattern. Certain pieces of history, such as 13 buildings and sites identified by the City as having potential for historical significance, have also endured and become important assets to the community. The General Plan outlines seven (7) policies with the goal of preserving important cultural and paleontological resources that contribute to the unique identity and character of Pico Rivera (City of Pico Rivera 2014).

Historic topographic maps of the Specific Plan area date to 1896 (Historic Aerials 2023). The earliest maps portray the Atchison, Topeka and Santa Fe rail line immediately south of the Specific Plan area and the Rio Hondo River to the west. The presence of the railroad in the immediate vicinity contributes to the historical background of the Specific Plan site and indicates long-term use of this

area as an important travel corridor. Historic maps from the early 1900s also portray a tributary of the river running southeast across the Specific Plan area. Historic aerial images of the Specific Plan area from 1953 indicate that the property consisted almost entirely of vacant agricultural land at that time (Historic Aerials 2023). Throughout the 1960s, the Specific Plan site was largely developed with industrial warehouses. A small part of the Specific Plan area was also residentially or commercially developed. However, in 2002, the central part of the property was redeveloped with new warehouse buildings (ParcelQuest 2023).

A review of Los Angeles County property data revealed that of the 88 parcels within the proposed Specific Plan, 43 parcels contain buildings that are of 45 years of age or older (ParcelQuest 2023). As indicated in the cultural resources records search section above, eight (8) of these historic buildings have previously been recorded. Table 2 lists the remaining 35 properties that have not previously been subject to recordation or evaluation.

Table 2. Properties in the Specific Plan Area with Unrecorded Historic Buildings

Date of Construction	Property Address
1961	6726 Keltonview Dr
1978	8701 Washington Blvd
1973	8605 Washington Blvd
1961	7240 Crider Ave
1962	7065 Paramount Blvd
1966	8320 Rex Rd
1961	7343 Paramount Blvd
1961	6623 Rosemead Blvd
1974	6505 Rosemead Blvd
1961	6508 Rosemead Blvd
1977	7004 Rosemead Blvd
1917	7246 Rosemead Blvd
1952	7314 Rosemead Blvd
1972	6730 Rosemead Blvd
1956	8809 Washington Blvd
1963	8323 Canford St
1960	7029 Paramount Blvd
1958	7105 Paramount Blvd
1958	7141 Paramount Blvd
1959	7157 Paramount Blvd
1958	8320 Canford St
1971	8350 Rex Rd
1972	7330 Crider Ave

1961	7317 Paramount Blvd
1963	7305 Paramount Blvd
1959	7271 Paramount Blvd
1960	8300 Rex Rd
1959	7225 Paramount Blvd
1973	6525 Rosemead Blvd
1962	6540 Rosemead Blvd
1972	9050 Carron Dr
1952	9015 Carron Dr
1962	6616 Rosemead Blvd
1961	7226 Rosemead Blvd
1952	7246 Rosemead Blvd

Results

Prior to historic and modern development, the archaeological sensitivity of the Specific Plan area may have been moderate given the proximity to the Rio Hondo River and presence of natural resources associated with the river (e.g., plants and animals) that were vital for Native American communities to thrive in the environment. However, in its current condition, the Specific Plan site has a low potential for surface or subsurface archaeological resources due to the level of previous development spanning 60+ years within the Specific Plan boundaries. However, the Specific Plan area is sensitive for historic built environment resources. Eight (8) historic buildings were previously recorded within the Specific Plan area, one (1) of which was recommended eligible for listing on the National Register but remains unevaluated for the California Register. Additionally, literature review identified an additional 35 properties over 45 years of age that have not been recorded or evaluated for potential eligibility.

Recommendations

As a result of the research and inventory efforts in this memo report, Kimley-Horn and Associates, Inc. (KHA) identified eight (8) previously recorded and 35 unrecorded historic built environment resources within the Specific Plan. One (1) of the eight (8) previously recorded resources is recommended eligible for listing in the NRHP, while the remaining seven (7) are not recommended eligible for listing in the NRHP or CRHR. The additional 35 resources have not been recorded or evaluated. Given that no development is being proposed within the Specific Plan at this time, there will be no impacts to any resources and, as such, no further action related to the consideration of cultural resources is recommended for the purposes of the proposed Specific Plan. However, future projects within the Specific Plan area should be subject to project-specific resource inventory and evaluations and adhere to applicable policies related to cultural resources within the City's 2014 General Plan, such as General Plan Policies 8.7-1 through 8.7-7 (City of Pico Rivera 2014).

Sincerely,

Jamie Nord

Jamie Nord, MA RPA
Kimley-Horn and Associates, Inc.

RPA Number: 5502

Attachment A: CA DPR Site Records

Attachment B: Cultural Resources Records Search Results for the 0.5-Mile Buffer

References:

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Attachment A: CA DPR Site Records

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191099
HR #
Trinomial
NRHP Status Code 3S
Other Listings
Review Code _____ Reviewer _____ Date _____

* Resource Name or #: 9023 Washington Blvd
P1. Other Identifier: Dal Rae Restaurant
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ____ 1/4 of ____1/4 of Sec____; _____ B.M.
c. Address 9023 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6378019067

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

This one-story restaurant building is rectangular in plan and capped by a flat roof with parapet. It is of wood frame construction and vernacular modern in style with stucco utilized for most exterior finishes. The windowless south elevation that faces Washington Boulevard is distinguished by a decorative horizontal canopy and the restaurant name "Dal Rae" rendered in rear lit plastic using a period typeface. Another sign with the word "RESTAURANT" – also of rear lit plastic – features individual light boxes for each letter the top one-third of which rise above the parapet. The building's west elevation is similar in design to the south-facing façade and also sports the same "Dal Rae" signage. The primary entrance is located on the east elevation where a concrete path leads to a large entry door bordered by a chimney of rough-hewn flagstone on its south side. Flagstone is also used for a portion of a wall that extends south towards the street as an enclosure for outdoor seating that is sheltered by a taut canvas roof. The north end of the east elevation contains another outdoor seating area similarly sheltered. Remaining elevations are primarily utilitarian in design with entrances for the kitchen, storage areas, etc. The interior features a main dining room, bar, lounge area with cocktail seating, and a separate banquet room. A renovation in 1998 resulted in the remodel of the main entry, recladding of some exterior surfaces with new flagstone, and the addition of the exterior patio dining areas. In addition, the existing interior spaces were remodeled with work being predominantly limited to the replacement of carpeting, wall finishes and material coverings, and several lighting fixtures. (continued on page 3)

* P3b. Resource Attributes: (List attributes and codes) HP06 1-3 Story Commercial Building
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
East elev, lkg northwest 7/22/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1951 (Factual) Building Permit

* P7. Owner and Address:
Sequoyah Holding Llc

* P8. Recorded by: (Name, affiliation, address)
John English, Peter Moruzzi
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 1/17/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 4

* NRHP Status Code 3S

* Resource Name or #: 9023 Washington Blvd

B1. Historic Name: None

B2. Common Name Dal Rae Restaurant

B3. Original Use: Restaurant B4. Present Use: Restaurant

* B5. Architectural Style: Vernacular Modern

* B6. Construction History: (Construction date, alterations, and date of alterations.)
Constructed in 1954
1955: Addition. Cost: $2,000.
1958:

* B7. Moved? ☑ No ☐ Yes ☐ Unknown Date _____ Original Location: _____

* B8. Related Features:

B9a. Architect: David R. Maclean b. Builder: David R. Maclean

* B10. Significance: Them Suburban postwar fine dining Area Pico Rivera

Period of Significance 1954 Property Type Commercial Applicable Criteria A

The Dal Rae restaurant appears eligible for listing in the National Register under Criterion A at the local level of significance for its association with the broad pattern of postwar suburbanization, dining, and entertainment in Southern California after World War II. Although modified in recent years, the subject property represents an excellent and rare example of a continental style fine dining restaurant in the suburb of Pico Rivera that continues to exemplify this trend.

Fine dining is associated with the upscale dinner houses that were popular in American cities from the 1940s through the 1970s. Classic fine dining establishments served "continental cuisine" – an eclectic melding of European and American dishes floridly described in elaborate menus. The key elements of a classic fine dining restaurant include white tablecloths, leather or semicircular vinyl booths of red, dark brown or black vinyl, indirect lighting in often windowless rooms, tuxedoed captains and waiters, and tableside service. Many feature dark wood paneling reminiscent of old world European restaurants. Flaming dishes prepared tableside offer the patron a theatrical restaurant experience markedly different from typical restaurants, which helps justify the cost of fine dining and attracts special event celebrations where elegant service and high prices are part of the appeal. With cocktails, dinner, dessert, and live entertainment, fine dining is an experience that often lasts the entire evening.
(continued on page 3)

B11. Additional Resource Attributes: (List attributes and codes): _____

* B12. References:

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

(Sketch map with north arrow required)

* B14. Evaluator: John English, Peter Moruzzi, ICF International
Date of Evaluation: 1/17/2010

(This space reserved for official comments.)

P3a. Description continued.

An enormous two-sided flashing neon pole sign displaying the restaurant's name is located on the Washington Boulevard frontage. Another monumental two-sided sign of neon and flashing bulbs centered by a marquee of applied letters occupies the southeast corner of the property. All noted neon and plastic rear lit signs are contributing features of the property. Lush landscaping is an important element of the overall design with a mix of green lawns, clipped hedges, shrubs, palm trees and other subtropical flora decorating the west, south, and a portion of the east elevations. An asphalt parking lot surrounds the building on three sides.

B10. Significance continued.

Los Angeles' upscale dinner houses of the 1920s and 1930s were for the most part located in and around Hollywood, downtown Los Angeles, and the central city as opposed to outlying suburbs. After World War II and paralleling national trends, Southern California restaurateurs opened new Modern, freestanding restaurants along the auto-dominated commercial corridors of newly established suburban communities such as Pico Rivera where the Dal Rae would open in 1958. Here they could draw from a growing mobile customer base that was buoyed by steady well paying jobs in manufacturing and the defense industry. In response, a profusion of new eating establishments were erected along the commercial corridors of new suburban communities. Indeed, the environment of suburban postwar Los Angeles fostered the development of many food service businesses including coffee shops, drive-in restaurants, bars and fast food franchises; however, due to the high cost of operations that translated into higher food prices, fine dining establishments were more rare.

Some of the postwar suburban fine dining restaurants that have since closed are Bordeaux in Costa Mesa, Chadney's in Burbank, Chateau Briand in Pico Rivera, Heritage Inn in Temple City, Lord Charley's in Covina, Monty's in Pasadena, The Arches in Newport Beach, and another branch of the Dal Rae in Fullerton.

Several circumstances led to the disappearance of most of Southern California's great fine dining restaurants. First, many of the original restaurateurs whose establishments were named after them either died or sold their businesses to others (who were unable to maintain the restaurant's quality and reputation). Examples include Perino's, Chasen's, LaRue, and Romanoff's in Los Angeles. Secondly, tastes changed, particularly in the 1980s when rich "continental" style offerings served in formal settings were considered passé. Suddenly, white tablecloths and tuxedoed waiters were now stuffy and formal, ushering in a new era of noisy hard surfaces and more casual dining. In addition, changes to the economy during the 1970s and the eventual downsizing and closure of industrial plants during the 1980s and 1990s, as well as demographic shifts in suburban residential populations and other distractions, spelled the end for most fine dining restaurants in Southern California. The few that remain include the Dresden in Los Feliz, the Riviera in Westminster, and the Dal Rae in Pico Rivera (the subject property).

Utilizing an existing one-story freestanding restaurant building, brothers Ben and Bill Smith opened the Dal Rae restaurant in May of 1958. It subsequently expanded with additions to the north (rear) and east of the property as the business grew. The Dal Rae has continually served a predominantly middle class/upper middle class clientele that once included executives of the Ford manufacturing plant (later Rockwell Aerospace) that had been located diagonally across from the restaurant at the southwest corner of Rosemead and Washington Boulevards (since replaced by a shopping center). An enormous two-sided flashing neon pole sign displaying the restaurant's name is located on the street frontage and has been a familiar icon along the Washington Boulevard corridor for over fifty years.

The Dal Rae's menu is traditional continental fine dining with Steak Diane, Caesar Salad, and desserts such as Cherries Jubilee and Bananas Foster all prepared tableside – often flamed – in a theatrical display by the owner or maître d'. Other typical items include Oysters Rockefeller, Lobster Thermidor, Pepper Steak, and Chateaubriand for two. The Dal Rae has a separate cocktail bar with tables and, for entertainment, a piano bar. On any given night there is a microphone available for customer participation, which often would include semi-professional local musicians sitting in for the evening. The requisite banquet room at the Dal Rae situated off of the piano bar is often occupied by service organizations such as the Elks, Rotary, Soroptimist and other groups as well as receptions, charity dinners, and other special events.

How the Dal Rae has continued to thrive while so many other fine dining restaurants have disappeared is a matter of conjecture. Possible explanations include continuous family ownership with renewed energy coming from the nephews who took over from the remaining founder in the early 1990s, a consistently high level of food quality and service, lower fixed costs due to family ownership of land and building, reduced pressure on commercial land values in Pico Rivera making replacement by new development more unlikely, a suburban clientele less inclined to latch onto rapidly changing dining trends in the urban core, and a location far enough from downtown Los Angeles to make it the most convenient high-end restaurant of choice for people living in surrounding communities, particularly for the celebration of special occasions.

The Dal Rae represents one of the few remaining locations where one can enjoy continental style fine dining and entertainment typical of the early postwar years in suburban Los Angeles. Although the property has been altered it continues to exhibit a high level of integrity of overall design, location, setting, feeling, and association. As such, the subject property appears eligible for listing in the National Register under Criterion A for its association with the broad pattern of postwar suburbanization, dining, and entertainment in Southern California after World War II.

As relates to architectural merit, it does not appear that the subject property represents a level of design distinction or association with a master architect to qualify for National Register eligibility under Criterion C. Further, current research uncovered no known associations with historic personages for the property to meet Criterion B of the National Register.

19-191489

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HR # _____
Trinomial _____
NRHP Status Code 6Y
Other Listings _____
Review Code _____ Reviewer _____ Date _____

* Resource Name or #: 8335 Washington Blvd
P1. Other Identifier: _____
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ____ 1/4 of ____1/4 of Sec____; _____ B.M.
c. Address 8335 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6348026026

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: side-gable
- Entrance: metal security door to passageway
- Windows: aluminum
- Related features: decorative metal screens, grassy lawn with hedges, several trees
- Style: Vernacular Modern
- Character defining features present: low pitched roof, shallow eaves, stucco finish, minimal ornamentation
- Character defining features not present: standard stucco finish
- Status: exhibits a moderate level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
South elev, lkg northeast 4/1/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1959 (Estimated) Tax Assessor

* P7. Owner and Address:
Koneru, Kumar

* P8. Recorded by: (Name, affiliation, address)
Meghan Potter, Peter Moruzzi
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 **of** 2 *** NRHP Status Code** 6Y

*** Resource Name or #:** 8335 Washington Blvd

B1. Historic Name: None

B2. Common Name None

B3. Original Use: Multi-Family Residence B4. Present Use: Multi-Family Residence

*** B5. Architectural Style:** Vernacular Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)
Construction date: 1959

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Unknown b. Builder: Unknown

*** B10. Significance:** Theme Residential Development Area Pico Rivera

Period of Significance 1959 Property Type Residential Applicable Criteria N/A

The subject property represents one of 245 parcels within Tract 12553 that was subdivided in 1949 by Walter Bollenbacher and Louis L. Kelton. The two builders were notably prolific with many of their projects given the Allied Gardens moniker. There were Allied Gardens in Van Nuys, Reseda, Compton, Rosecrans, and the so-called Whittier citrus belt in which the subject tract is located. Indeed, it was not long before the citrus groves would give way to residential development such that its previous agricultural history would be relegated to the distant past. Later, Tract 12553 would be annexed to the City of Pico Rivera.

Bollenbacher and Kelton are typical of the well-financed large-scale developers operating in Southern California following World War II who were responsible for all aspects of a new residential project, from subdividing the land and providing street improvements to constructing the houses, then marketing, arranging financing, and selling them. Tract 12553 represents a historically consistent grouping of Minimal Traditional style single-family residences erected in 1949 that embody the response to the need for middle class housing in east Los Angeles County in the years after World War II. However, due to substantial alterations to a majority of properties within the grouping, particularly the replacement of original wood fenestration with metal or vinyl windows, the physical integrity of the residential subdivision has been severely compromised. In addition, the development history of the subdivision and its associated builders does not differ substantially from that of other similar subdivisions in the area. As a result, the residential grouping lacks overall architectural quality, distinction, and integrity and does not meet district registration requirements at the federal, state or local levels of significance.

As relates to the subject property, alterations include the application of non-original rough textured stucco finish. Because of this modification the property no longer represents a good example of the Vernacular Modern architectural style as applied to an apartment building. Therefore, for reasons of compromised integrity, this property does not appear eligible for individual listing under National Register, California Register or local criteria.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

*** B14. Evaluator:** Meghan Potter, Peter Moruzzi, ICF International
Date of Evaluation: 10/1/2010

(This space reserved for official comments.)

(Sketch map with north arrow required)

19-191490

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HR # _____
Trinomial _____
NRHP Status Code 6Y
Other Listings _____
Review Code _____ Reviewer _____ Date _____

* Resource Name or #: 8423 Washington Blvd
P1. Other Identifier: Luau Manor
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ____ 1/4 of ____1/4 of Sec____; _____ B.M.
c. Address 8423 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6370030015

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multi family residence
- Stories: 2
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: very low pitched hip
- Entrance: appears original
- Windows: aluminum
- Related features: extensive original landscaping, Luau Manor name on signboard, metal screens over windows
- Style: Vernacular Modern
- Character defining features present: roof form, stucco finish, aluminum windows, building name, landscaping
- Character defining features not present: none
- Status: exhibits a high level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
South elev, lkg northeast 4/1/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1960 Tax Assessor

* P7. Owner and Address:
Tabash, Edward Z

* P8. Recorded by: (Name, affiliation, address)
Peter Moruzzi
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 8/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*** NRHP Status Code** 6Y

*** Resource Name or #:** 8423 Washington Blvd

B1. Historic Name: Luau Manor

B2. Common Name Luau Manor

B3. Original Use: Multi-Family Residence B4. Present Use: Multi-Family Residence

*** B5. Architectural Style:** Vernacular Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)

Construction date: 1960

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Unknown b. Builder: Unknown

*** B10. Significance:** Theme Residential Development Area Pico Rivera

Period of Significance 1960 Property Type Residential Applicable Criteria N/A

The subject property represents one of 102 parcels within Tract 19509 that was subdivided in 1956 by a consortium of numerous investors. Of the numerous parcels within the subdivision, those facing Washington Boulevard, such as the subject property, were assigned for use as apartment buildings or for commercial uses. The subject multi-family dwelling retains a high level of physical integrity; however, the building represents an unexceptional example of the Vernacular Modern style as applied to an apartment building. Therefore, due to a lack of sufficient historical and architectural merit, this property does not appear eligible for individual listing under National Register, California Register or local criteria.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

*** B14. Evaluator:** Peter Moruzzi, ICF International

Date of Evaluation: 8/1/2010

(This space reserved for official comments.)

(Sketch map with north arrow required)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HR # _____
Trinomial _____
NRHP Status Code 6Y
Other Listings _____
Review Code _____ Reviewer _____ Date _____

* Resource Name or #: 8535 Washington Blvd
P1. Other Identifier: _____
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ____ 1/4 of ____1/4 of Sec____; _____ B.M.
c. Address 8535 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6370021001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

This parcel contains an east-facing Vernacular Modern mini strip mall consists of two one-story buildings and a parking lot. The building to the west, with a shallow L-shape plan, has a flat composition roof fronted by a clay tile mansard roof over the multiple store fronts. The exterior wall surface is stucco and the storefront fenestrations consist of aluminum storefront windows and doors. The second building, a donut shop located at the corner of Washington Boulevard and Phaeton Avenue, is square in plan with a composition roof and surrounding parapet. The donut shop features a deep projecting parapet clad in stucco. Below that is a surround of glass in metal frames around all four sides, below which is located a exterior countertop with a tapered base. The underside of the overhang features a folded-plate pattern of glass and stucco. The building to the west with multiple stores exhibits a moderate level of integrity due to later alterations, and the building located at the corner of the property exhibits a high level of integrity.

* P3b. Resource Attributes: (List attributes and codes) HP06 1-3 Story Commercial Building
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
East elev, lkg west 7/22/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1964 (Factual) Building Permit

* P7. Owner and Address:
Marinos, Tim & Helen Trust

* P8. Recorded by: (Name, affiliation, address)
David Greenwood, B. Lamprecht
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 8/16/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 **of** 2 *** NRHP Status Code** 6Y

*** Resource Name or #:** 8535 Washington Blvd

B1. Historic Name: None

B2. Common Name None

B3. Original Use: Commercial Retail Building B4. Present Use: Commercial Retail Building

*** B5. Architectural Style:** Vernacular Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)
Construction Date: 1964

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Unknown b. Builder: Fred White Realty

*** B10. Significance:** Theme Commercial Development Area Pico Rivera

Period of Significance 1964 Property Type Commercial Applicable Criteria N/A

The 1964 building permit indicates that Fred White Realty was the original owner. The architect was not listed. The builder was Fred White Realty.

The building is a direct product of a major expansion of suburban development throughout the region and the resultant exploding demand for products and services by Southern California consumers during the 1950's and 1960's. However, the area's development history does not differ substantially from that of other Southern California industrial and commercial areas that responded similarly to the wave of rapid suburban growth during this period.

Although the subject property, containing a strip mall comprising two one-story buildings, exhibits a moderate to high level of integrity, it does not meet the criteria for significance required for federal, state or local designation. It does not appear to be associated with events, activities, or developments that were important in the past (Criterion A, NRHP); does not appear to be associated with the lives of people important in the past (Criterion B, NRHP); is not associated with significant architectural history, landscape history, or engineering achievement (Criterion C, NRHP); and lacks the overall architectural quality and distinction required of a good example of the Vernacular Modern architectural style. Therefore, due to a lack of sufficient historical and architectural merit, this property does not appear to be eligible for individual listing in the National Register of Historic Places, the California Register of Historical Resources, or for local designation.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

(Sketch map with north arrow required)

*** B14. Evaluator:** David Greenwood, B. Lamprecht, ICF International
Date of Evaluation: 8/16/2010

(This space reserved for official comments.)

19-191492

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HR # _____
Trinomial _____
NRHP Status Code 6Y
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 2

* Resource Name or #: 8737 Washington Blvd
P1. Other Identifier: _____
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 8737 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6370025009

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

This Vernacular Modern south-facing commercial building is one story in height located on a corner lot. The structure is steel frame construction with a rectangular shape plan. The roof is a flat composition roof with deep surrounding parapet, closely held to the wall surface. The main entrance is recessed, sheltering bank ATM machines and an entrance of aluminum frame doors and windows. The exterior wall surface is stucco with a portion of natural rock veneer located to the west end of the primary south elevation and part of the west elevation. There is a carport roof extension, supported with square columns, on the west elevation, accommodating a car drive-up ATM machine. The property exhibits a high level of integrity.

* P3b. Resource Attributes: (List attributes and codes) HP06 1-3 Story Commercial Building
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
South elev, lkg north 7/22/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1956 (Factual) Building Permit

* P7. Owner and Address:
United Calif Bk Realty Corp

* P8. Recorded by: (Name, affiliation, address)
David Greenwood, B. Lamprecht
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 8/16/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

DPR 523A (1/95)

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 **of** 2 *** NRHP Status Code** 6Y

*** Resource Name or #:** 8737 Washington Blvd

B1. Historic Name: None

B2. Common Name None

B3. Original Use: Commercial Retail Building B4. Present Use: Commercial Retail Building

*** B5. Architectural Style:** Vernacular Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)
Construction Date: 1956

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Merrill W. Baird b. Builder: Unknown

*** B10. Significance:** Theme Commercial Development Area Pico Rivera

Period of Significance 1956 Property Type Commercial Applicable Criteria N/A

The 1956 building permit indicates that California Bank was the original owner. The architect was Merrill W. Baird. The builder was not listed.

The building is a direct product of a major expansion of suburban development throughout the region and the resultant exploding demand for products and services by Southern California consumers during the 1950's and 1960's. However, the area's development history does not differ substantially from that of other Southern California industrial and commercial areas that responded similarly to the wave of rapid suburban growth during this period.

Although the subject property, containing a one story bank building, exhibits a high level of integrity, it does not meet the criteria for significance required for federal, state or local designation. It does not appear to be associated with events, activities, or developments that were important in the past (Criterion A, NRHP); does not appear to be associated with the lives of people important in the past (Criterion B, NRHP); is not associated with significant architectural history, a master architect or builder including subject property architect Merrill W. Baird, landscape history, or engineering achievement (Criterion C, NRHP); and lacks the overall architectural quality and distinction required of a good example of the Vernacular Modern architectural style. Therefore, due to a lack of sufficient historical and architectural merit, this property does not appear to be eligible for individual listing in the National Register of Historic Places, the California Register of Historical Resources, or for local designation.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

*** B14. Evaluator:** David Greenwood, B. Lamprecht, ICF International

Date of Evaluation: 8/16/2010

(This space reserved for official comments.)

(Sketch map with north arrow required)

19-191493

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HR # _____
Trinomial _____
NRHP Status Code 6Y
Other Listings _____
Review Code _____ Reviewer _____ Date _____

* Resource Name or #: 9033 Washington Blvd
P1. Other Identifier: _____
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ____ 1/4 of ____1/4 of Sec____; _____ B.M.
c. Address 9033 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6378019052

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

This Modern south-facing commercial building is two stories in height and is steel frame construction with a rectangular plan. The roof is flat with composition sheeting, and has a projecting roof overhang surrounding the four sides of the building. The primary elevation has eleven steel posts that extend from the ground to meet the bottom of the overhang where they are aligned along its center line. Windows and doors on the ground floor are vertical in orientation comprised of bands of aluminum-framed windows, while the bands of smaller windows on the second floor are square aluminum frame. The exterior wall surface is stucco with the exception of the south and part of the east elevations, where a mid course of stucco paneling separates the ground and upper story windows. The property exhibits a high level of integrity.

* P3b. Resource Attributes: (List attributes and codes) HP06 1-3 Story Commercial Building
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
South elev, lkg north 7/22/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1965 (Factual) Building Permit

* P7. Owner and Address:
Mackel, Lawrence O

* P8. Recorded by: (Name, affiliation, address)
David Greenwood, B. Lamprecht
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 8/16/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 **of** 2 *** NRHP Status Code** 6Y

*** Resource Name or #:** 9033 Washington Blvd

B1. Historic Name: None

B2. Common Name None

B3. Original Use: Commercial Office Building B4. Present Use: Commercial Office Building

*** B5. Architectural Style:** Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)
1975: Remodel. Cost: $30,000.

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Lorand West b. Builder: Feldman Const.

*** B10. Significance:** Theme Commercial Development Area Pico Rivera

Period of Significance 1965 Property Type Commercial Applicable Criteria N/A

The 1965 building permit indicates that Ronald Binder was the original owner. The architect was Lorand West. The builder was Feldman Const.

The building is a direct product of a major expansion of suburban development throughout the region and the resultant exploding demand for products and services by Southern California consumers during the 1950's and 1960's. However, the area's development history does not differ substantially from that of other Southern California industrial and commercial areas that responded similarly to the wave of rapid suburban growth during this period.

The subject property, containing a two-story office building in the mid-century Modern style, exhibits a high level of integrity, it does not meet the criteria for significance required for federal, state or local designation. It does not appear to be associated with events, activities, or developments that were important in the past (Criterion A, NRHP); does not appear to be associated with the lives of people important in the past, including Ronald Binder, the original owner (Criterion B, NRHP); is not associated with significant architectural history, a master architect or builder including subject property architect Lorand West and builder Feldman Construction, landscape history, or engineering achievement (Criterion C, NRHP). While a sound example of the Modernist architectural style, it lacks the overall architectural quality, distinction, and rarity required for significance under this criterion. Therefore, due to a lack of sufficient historical and architectural merit, this property does not appear to be eligible for individual listing in the National Register of Historic Places, the California Register of Historical Resources, or for local designation.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

(Sketch map with north arrow required)

*** B14. Evaluator:** David Greenwood, B. Lamprecht, ICF International
Date of Evaluation: 8/16/2010

(This space reserved for official comments.)

19-191494

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HR #
Trinomial
NRHP Status Code 6Y
Other Listings
Review Code Reviewer Date

Page 1 of 2

* Resource Name or #: 9049 Washington Blvd
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad Date T ; R ; 1/4 of 1/4 of Sec ; B.M.
c. Address 9049 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone , mE/ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6378019053

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

This Vernacular Modern south-facing commercial building has two heights, one-story and one story. It is wood frame construction with a rectangular shape plan with five bays. The four on the east are evenly spaced and separated by stone veneer pilasters, and the fifth defining the entrance on the west, is marked by projecting, flanking piers clad in stone veneer. The taller portion is located at rear of the building at the north end. The roofs are flat composition with a surrounding parapet. The recessed entrance is slightly elevated with concrete steps and characterized by aluminum frame windows and entry doors, while the eastern bays are fronted by a continuous planter. There are glass-block windows which run atop of the main window openings, but appear to have been in-filled. The exterior wall surfaces are stucco, with stone veneer used for the walls, planters, and square posts supporting the entry porch roof overhang. The property exhibits a moderate level of integrity.

* P3b. Resource Attributes: (List attributes and codes) HP06 1-3 Story Commercial Building
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
South elev, lkg north 7/22/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1965 (Factual) Building Permit

* P7. Owner and Address:
Shneidman, Harriet M Co Trust

* P8. Recorded by: (Name, affiliation, address)
David Greenwood, B. Lamprecht
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 8/16/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

DPR 523A (1/95)

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 **of** 2 *** NRHP Status Code** 6Y

*** Resource Name or #:** 9049 Washington Blvd

B1. Historic Name: None

B2. Common Name None

B3. Original Use: Commercial Retail Building B4. Present Use: Commercial Retail Building

*** B5. Architectural Style:** Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)
Construction Date: 1965

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Daniel L. Dworsky b. Builder: Unknown

*** B10. Significance:** Theme Commercial Development Area Pico Rivera

Period of Significance 1965 Property Type Commercial Applicable Criteria N/A

The name of the original owner found on the 1965 building permit was Illegible. The architect was Daniel L. Dworsky. The builder was not listed.

The building is a direct product of a major expansion of suburban development throughout the region and the resultant exploding demand for products and services by Southern California consumers during the 1950's and 1960's. However, the area's development history does not differ substantially from that of other Southern California industrial and commercial areas that responded similarly to the wave of rapid suburban growth during this period.

The subject property exhibits a moderate level of integrity based on some alterations to the façade over time. Although designed by a master architect, Dan Dworsky, FAIA, it is not one of his important designs, and does not meet the criteria for significance required for federal, state or local designation. It does not appear to be associated with events, activities, or developments that were important in the past (Criterion A, NRHP); does not appear to be associated with the lives of people important in the past (Criterion B, NRHP); is not associated with significant architectural history, landscape history, or engineering achievement (Criterion C, NRHP). While the property was designed by an architect of note, it is not one of his distinguished designs, and lacks the overall architectural quality and distinction required of a good example of the Modern architectural style or of Mr. Dworsky's work . Therefore, due to a lack of sufficient historical and architectural merit, this property does not appear to be eligible for individual listing in the National Register of Historic Places, the California Register of Historical Resources, or for local designation.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

*** B14. Evaluator:** David Greenwood, B. Lamprecht, ICF International

Date of Evaluation: 8/16/2010

(This space reserved for official comments.)

(Sketch map with north arrow required)

19-191495

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HR # _____
Trinomial _____
NRHP Status Code 6Y
Other Listings _____
Review Code _____ Reviewer _____ Date _____

* Resource Name or #: 9055 Washington Blvd
P1. Other Identifier: _____
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ____ 1/4 of ____1/4 of Sec____; _____ B.M.
c. Address 9055 Washington Blvd City Pico Rivera Zip 90660
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6378019037

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

This south-facing Modern commercial building is one story in height and is set deeply into its corner lot. It has a rectangular plan and appears to be brick construction. The roof is a folded-plate pattern and is covered with composition shingles. The primary south elevation has aluminum store front windows and doors for two commercial businesses. A projecting upward angled porch roof extension, part of the folding-plate roof pattern, extends over the store entries on the west side of the façade, and is supported by six round steel column posts. A large metal sign is located in the parking lot in front of the primary elevation. The property exhibits a high level of integrity.

* P3b. Resource Attributes: (List attributes and codes) HP06 1-3 Story Commercial Building
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (View, date, etc.)
South elev, lkg north 7/22/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1958 (Factual) Building Permit

* P7. Owner and Address:
Torbati, Daniel & Talia

* P8. Recorded by: (Name, affiliation, address)
David Greenwood, B. Lamprecht
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 8/16/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
EIS/EIR. Metropolitan Transportation Authority. Eastside Phase 2. September, 2010

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

* Required Information

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HR # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 **of** 2 *** NRHP Status Code** 6Y

*** Resource Name or #:** 9055 Washington Blvd

B1. Historic Name: None

B2. Common Name None

B3. Original Use: Commercial Retail Building B4. Present Use: Commercial Retail Building

*** B5. Architectural Style:** Modern

*** B6. Construction History:** (Construction date, alterations, and date of alterations.)
Construction Date: 1958

*** B7. Moved?** ☑ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*** B8. Related Features:**

B9a. Architect: Mackintosh And Mackintosh b. Builder: Robert Chuckrow Const. Co.

*** B10. Significance:** Theme Commercial Development Area Pico Rivera

Period of Significance 1954 Property Type Commercial Applicable Criteria N/A

The 1958 building permit indicates that G. R. Kinney Corporation was the original owner. The architect was Mackintosh and Mackintosh. The builder was Robert Chuckrow Const. Co.

The building is a direct product of a major expansion of suburban development throughout the region and the resultant exploding demand for products and services by Southern California consumers during the 1950's and 1960's. However, the area's development history does not differ substantially from that of other Southern California industrial and commercial areas that responded similarly to the wave of rapid suburban growth during this period.

Although the subject property, containing a one-story commercial building unusual in its folded roof pattern, exhibits a high level of integrity, it does not meet the criteria for significance required for federal, state or local designation. It does not appear to be associated with events, activities, or developments that were important in the past (Criterion A, NRHP); does not appear to be associated with the lives of people important in the past (Criterion B, NRHP); is not associated with significant architectural history, a master architect or builder including subject property architect Mackintosh & Mackintosh and builder Robert Chuckrow Construction Co., landscape history, or engineering achievement (Criterion C, NRHP); and lacks the overall architectural quality and distinction required of a good example of the Modern architectural style. Therefore, due to a lack of sufficient historical and architectural merit, this property does not appear to be eligible for individual listing in the National Register of Historic Places, the California Register of Historical Resources, or for local designation.

B11. Additional Resource Attributes: (List attributes and codes): _____

*** B12. References:**

County Tax Assessor, Tract Maps, Sanborn Maps, Los Angeles Times

B13. Remarks:

*** B14. Evaluator:** David Greenwood, B. Lamprecht, ICF International

Date of Evaluation: 8/16/2010

(This space reserved for official comments.)

(Sketch map with north arrow required)

Attachment B: Cultural Resources Records Search Results for the 0.5-Mile Buffer

Resource List for 0.5-mile Buffer

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-178665		OHP Property Number - 029345; Resource Name - Rivera First Bapist Church; Other - PHI LAN-008; OHP Property Number - 090775	Building	Historic	HP16	1969	
P-19-186753		OHP Property Number - 173064; Resource Name - CRM Tech 789-1H; Other - CRM Tech 789-1H	Building	Historic	HP02	2002 (B. Tang, CRM Tech); 2008 (Bai "Tom" Tang)	LA-07871, LA-08158, LA-09444, LA-12321
P-19-186754		OHP Property Number - 173065; Resource Name - CRM Tech 789-H2; Other - CRM Tech 789-H2	Building	Historic	HP02	2002 (B. Tang, CRM Tech); 2008 (Bai "Tom" Tang)	LA-07871, LA-08158, LA-09444, LA-12321
P-19-186755		OHP Property Number - 173066; Resource Name - CRM Tech 789-3H; Other - CRM Tech 789-3H	Building	Historic	HP02	2002 (B. Tang, CRM Tech); 2008 (Bai "Tom" Tang)	LA-07871, LA-08158, LA-09444, LA-12321
P-19-186804		OHP Property Number - 173074; Resource Name - Burlington Northern & Santa Fe Railroad, Atchison Topeka & Santa Fe RR; Other - BNSF Formerly Atchison, Topeka; Other - Atchison, Topeka and Santa Fe; Other - CRM Tech 789-50H, 2334-1H; Other - Atchison Topeka & Santa Fe Railroad	Structure, Site	Historic	HP11; HP19; HP37; HP39	2002 (Daniel Ballester and Bail "Tom" Tang, CRM Tech); 2002 (Daniel Ballester and Bail "Tom" Tang, CMR Tech); 2007 (Steven McCormick); 2007 (Francesca G. Smith and Caprice D. Harper, Parsons); 2011 (Pam Daly, Cogstone); 2016 (Chandra Miller, AECOM); 2018 (Jessica B. Feldman, ICF); 2019 (Jenna Kachour, GPA)	LA-07871, LA-08158, LA-09117, LA-09119, LA-09444, LA-09938, LA-10189, LA-10391, LA-10452, LA-10638, LA-10996, LA-11054, LA-11549, LA-11642, LA-12349, LA-12488, LA-13430
P-19-188231		OHP Property Number - 139438	Building	Historic	HP02	2003	
P-19-188233		OHP Property Number - 142443	Building	Historic	HP02	2003	LA-12321
P-19-188234		OHP Property Number - 146017	Building	Historic	HP02	2004	LA-12321
P-19-188239		OHP Property Number - 150597	Building	Historic	HP02	2004	
P-19-188240		OHP Property Number - 153228	Building	Historic	HP02	2005	
P-19-188243		OHP Property Number - 161659	Building	Historic	HP02	2006	
P-19-188244		OHP Property Number - 162522	Building	Historic	HP02	2006	
P-19-188254		OHP Property Number - 168043	Building	Historic	HP02	2007	
P-19-188259		Other - CRM TECH 2234-5	Building	Historic	HP06	2008 (J. Smallwood, CRM Tech)	LA-09446

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-188774		Resource Name - Atchison Topeka & Santa Fe Rio Hondo Bridge	Structure	Historic	HP19	1994 (Dana Slawson, Greenwood & Associates)	
P-19-190007		Resource Name - Pico Rivera United Methodist Church	Building	Historic	HP16	2012	LA-11715
P-19-191098		Resource Name - 6751 Lindsey Ave	Building	Historic	HP02	2010 (Colleen Davis, ICF International)	LA-12894
P-19-191105		Resource Name - Pico Rivera Historical Museum; Resource Name - Atchison, Topeka & Santa Fe Railroad Station	Building	Historic	HP17	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191160		Resource Name - 1016 S 4th St	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191161		Resource Name - 1017 S 4th St	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191333		Resource Name - 123 Washington Blvd	Building	Historic	HP06	2010 (Carson Anderson, ICF International)	LA-12894
P-19-191335		Resource Name - 405 Washington Blvd	Building	Historic	HP06	2010 (Carson Anderson, ICF International)	LA-12894
P-19-191336		Resource Name - 410 Washington Blvd	Building	Historic	HP13	2010 (Carson Anderson, ICF International)	LA-12894
P-19-191337		Resource Name - 420 Washington Blvd	Building	Historic	HP08	2010 (Carson Anderson, ICF International)	LA-12894
P-19-191338		Resource Name - 500 Washington Blvd	Building	Historic	HP06	2010 (Carson Anderson, ICF International)	LA-12894
P-19-191378		Resource Name - 6719 Bollenbacher Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191379		Resource Name - 6722 Bollenbacher Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191380		Resource Name - 6728 Bollenbacher Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191381		Resource Name - 6732 Bollenbacher Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191382		Resource Name - 6738 Bollenbacher Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-191383		Resource Name - 7001 Bonnie Vale Pl	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191384		Resource Name - 7007 Bonnie Vale Pl	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191385		Resource Name - 7010 Bonnie Vale Pl	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191386		Resource Name - 7011 Bonnie Vale Pl	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191387		Resource Name - 6727 Candace Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191388		Resource Name - 6733 Candace Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191391		Resource Name - 6739 Candace Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191392		Resource Name - 6767 Citronell Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191393		Resource Name - 6768 Citronell Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191394		Resource Name - 6772 Citronell Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191395		Resource Name - 6773 Citronell Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191396		Resource Name - 6762 Cord Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191397		Resource Name - 6765 Cord Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191398		Resource Name - 6768 Cord Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191399		Resource Name - 6769 Cord Ave	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191400		Resource Name - 6719 Crossway Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191401		Resource Name - 6723 Crossway Dr	Building	Historic	HP02	2010 (Elizabeth Hilton, ICF International)	LA-12894
P-19-191404		Resource Name - 6722 Keltonview Dr	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-191405		Resource Name - 6723 Keltonview Dr	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191406		Resource Name - 6729 Keltonview Dr	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191407		Resource Name - 6735 Keltonview Dr	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191408		Resource Name - 6739 Keltonview Dr	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191409		Resource Name - 7007 Kilgarry Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191410		Resource Name - 7010 Kilgarry Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191411		Resource Name - 6767 Lemoran Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191412		Resource Name - 6773 Lemoran Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191413		Resource Name - 6744 Lindsey Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191414		Resource Name - 6745 Lindsey Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191415		Resource Name - 6752 Lindsey Ave	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191416		Resource Name - 6738 Loch Alene Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191417		Resource Name - 6739 Loch Alene Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191418		Resource Name - 6744 Loch Alene Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191419		Resource Name - 6745 Loch Alene Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191420		Resource Name - 7003 Loch Alene Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191421		Resource Name - 7011 Loch Alene Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191422		Resource Name - 9203 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-191423		Resource Name - 9211 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191424		Resource Name - 9219 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191425		Resource Name - 9225 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191426		Resource Name - 9229 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191427		Resource Name - 9241 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191428		Resource Name - 9249 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191429		Resource Name - 9255 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191430		Resource Name - 9261 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191431		Resource Name - 9265 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191432		Resource Name - 9275 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191433		Resource Name - 9433 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191434		Resource Name - 9439 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191435		Resource Name - 9445 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191436		Resource Name - 9503 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191437		Resource Name - 9507 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191439		Resource Name - 9519 Lochinvar Dr	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191467		Resource Name - 6765 Millux Ave	Building	Historic	HP02	2010 (Portia Lee, ICF International)	LA-12894
P-19-191473		Resource Name - Rio Hondo Bridge 53C0156	Structure	Historic	HP11; HP19	2010 (Barbara Lamprecht, ICF International)	LA-12894

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-191496		Resource Name - 9107 Washington Blvd	Building	Historic	HP06	2010 (David Greenwood, ICF International)	LA-12894
P-19-191497		Resource Name - 9214 Washington Blvd	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191498		Resource Name - 9220 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191499		Resource Name - 9228 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191500		Resource Name - 9236 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191501		Resource Name - 9244 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191502		Resource Name - 9252 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191503		Resource Name - 9260 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191504		Resource Name - 9266 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191505		Resource Name - 9274 Washington Blvd	Building	Historic	HP02	2015 (Meghan Potter, ICF International)	LA-12894
P-19-191506		Resource Name - 9300 Washington Blvd	Building	Historic	HP06	2010 (David Greenwood, ICF International)	LA-12894
P-19-191507		Resource Name - 9316 Washington Blvd	Building	Historic	HP06	2010 (David Greenwood, ICF International)	LA-12894
P-19-191509		Resource Name - 9434 Washington Blvd	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191510		Resource Name - 9437 Washington Blvd	Building	Historic	HP06	2010 (David Greenwood, ICF International)	LA-12894
P-19-191512		Resource Name - 9444 Washington Blvd	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191514		Resource Name - 9454 Washington Blvd	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191515		Resource Name - 9502 Washington Blvd	Building	Historic	HP02	2010 (Meghan Potter, ICF International)	LA-12894
P-19-191389		6734 Candace Ave	Historic	Building			
P-19-191390		6738 Candace Ave	Historic	Building			
P-19-191402		8730 Goodbee St	Historic	Building			
P-19-191403		8744 Goodbee St	Historic	Building			

Report List for 0.5-mile Buffer

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-00358	Paleo -	1976	Stickel, Gary E.	An Archaeological and Paleontological Resource Survey of the Los Angeles River, Rio Hondo River and the Whittier Narrows Flood Control Basin, Los Angeles, California	Environmental Research Archaeologists	19-000858, 19-001009, 19-001311
LA-02882		1993	McKenna, Jeanette A.	Cultural Resources Investigations, Site Inventory, and Evaluations, the Cajon Pieline Project Corridor, Los Angeles and San Bernadino Counties, California	Mc Kenna et al.	19-000967, 19-001046
LA-02970		1992	Chamberlaine, Pat and Jean Rivers-Council	Cajon Pipeline Project Draft Environmental Impact Statement Environmental Impact Report	City of Adelanto, and Bureau of Land Management	19-000059, 19-000060, 19-000067, 19-000077, 19-000194, 19-000213, 19-000216, 19-000248, 19-000441, 19-000444, 19-000823, 19-000903, 19-000925, 19-000926, 19-000927, 19-000962, 19-001015, 19-001046, 19-001134, 19-001354, 19-001595, 56-000027, 56-000062, 56-000141, 56-000240, 56-000241, 56-000644, 56-000842, 56-000916, 56-000917
LA-03102		1994	McCawley, William, John Romani, and Dana Slawson	The Los Angeles County Drainage Area Subsequent Environmental Impact Report	Greenwood and Associates	19-000693, 19-000696
LA-03408		1994	Stickel, Gary E.	Draft Report: a Cultural Resources Literature Search for the Rio Hondo Water Reclamation Program	Environmental Research Archaeologists	
LA-05713		2002	Wlodarski, Robert J.	A Phase I Archaeological Study for Telacu Housing-pico Rivera, Inc., 9020-9054 Washington Boulevard Pico Rivera, Los Angeles County, California	Historical, Environmental, Archaeological, Research, Team	
LA-06933		2001	Mason, Roger D.	Cultural Resources Records Search and Literature Review Report for an American Tower Corporation Telecommunications Facility: Number La_510_m2 Matchless Parking Lot in the City of Pico Rivera, Los Angeles, California	Chambers Group, Inc.	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-07871		2003	Tang, Bai "Tom" and Teresa Woodard	Historical Resource Compliance Report - Third Main Track and Grade Seperation Project Hobart (mp 148.9) to Basta (mp 163.3), Bnsf/metrolink East-west Main Line Railroad Track, Vernon to Fullerton, Los Angeles and Orange Counties, California	CRM Tech	19-186753, 19-186754, 19-186755, 19-186756, 19-186757, 19-186758, 19-186759, 19-186760, 19-186761, 19-186762, 19-186763, 19-186764, 19-186765, 19-186766, 19-186767, 19-186768, 19-186769, 19-186770, 19-186771, 19-186772, 19-186773, 19-186774, 19-186775, 19-186776, 19-186777, 19-186778, 19-186779, 19-186780, 19-186781, 19-186782, 19-186783, 19-186784, 19-186785, 19-186786, 19-186787, 19-186788, 19-186789, 19-186790, 19-186791, 19-186792, 19-186793, 19-186794, 19-186795, 19-186796, 19-186797, 19-186798, 19-186799, 19-186800, 19-186801, 19-186804, 30-176663
LA-08158		2006	Tang, Bai "Tom", Michael Hogan, and Deirdre Encarnacion	Archaeological Survey Report/historical Resources Evaluation Report: Passons Boulevard Grade Separation Project Bnsf/metrolink East-west Main Line Railroad Track (mp 151.45) City of Pico Rivera, Los Angeles County, California 07-la-0-prv	CRM Tech	19-186753, 19-186754, 19-186755, 19-186756, 19-186757, 19-186758, 19-186759, 19-186760, 19-186761, 19-186762, 19-186804, 30-176663
LA-10391		2009	Tang, Bai and Smallwood, Josh	Historical Resources Evaluation Report, Third Main Track Project, Segments 6, 7, and 8. Pico Rivera (MP) 150. to La Mirada (MP) 158.8, BNSF/Metrolink East- West Mainline Los Angeles County, California Caltrans District 7	CRM Tech	19-000182, 19-186804
LA-10440		2010	Maki, Mary	Phase I Archaeological Survey Report of Approximately 1.5 Acres for the Pico Rivera Library Project, Pico Rivera, Los Angeles County, California	Conejo Archaeological Consultants	
LA-11715		2012	Martorana, Dean	Verizon Wireless - Guild. 6440 Paramount Boulevard, Pico Rivera, Ca 90660	URS	19-000383, 19-190007

APPENDIX C – MOBILITY ASSESSMENT

MOBILITY ASSESSMENT

Pico Rivera Transit Oriented Development

PREPARED FOR:

CITY OF PICO RIVERA

NOVEMBER 2024 | DRAFT FINAL

Prepared By:

Kimley»Horn

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TABLES

FIGURES

1. INTRODUCTION

The following mobility assessment has been prepared to determine potential Level of Service (LOS) deficiencies associated with the proposed Washington and Rosemead TOD Specific Plan ("Project") in the City of Pico Rivera, CA. It is the intent for the mobility assessment, as part of this project, to provide an existing conditions analysis and future full buildout of the traffic operations at and near the Specific Plan area.

Figure 1 illustrates the location of the project site in relation to the adjacent roadway network. The Project site plan is presented in **Figure 2**.

This mobility assessment was prepared to address the Project's LOS effects in order to assist the City of Pico Rivera ("City") with planning and the identification of conditions of approval and to improve identified LOS deficiencies, if necessary. Since there are no planned projects within the Specific Plan at this time, a more detailed transportation operations analysis will be completed as each individual project is proposed.

The following discusses the methodology, analysis, and results of the traffic assessment.

STUDY METHODOLOGY

TRAFFIC OPERATIONS ANALYSIS

A transportation impact analysis was conducted to evaluate the Project's effect on LOS operations at nine (9) intersections within the project site and adjacent to the project site.

Study Area

The proposed project will generate new vehicular trips that may increase traffic volumes on the nearby street network. To assess changes in traffic conditions associated with the proposed project, the following intersections listed below were evaluated and are shown in **Figure 1**. The study intersections were selected based on the estimated vehicle trips generated by the project and the distribution of the trips to the roadway network.

1. Washington Boulevard/Paramount Boulevard
2. Washington Boulevard/Crossway Drive
3. Washington Boulevard/Rosemead Boulevard
4. Washington Boulevard/Passons Boulevard
5. Mercury Lane/Paramount Boulevard
6. Rex Road/Paramount Boulevard
7. The Marketplace/Rosemead Boulevard
8. Rex Road/Rosemead Boulevard
9. Slauson Avenue/Rosemead Boulevard

Analysis Scenarios

This traffic analysis evaluated the following four (4) scenarios:

- **Existing conditions** – Based on existing traffic counts collected in 2023 and adjusted for pre-Covid conditions and existing roadway geometry and traffic control.

- **Existing plus project traffic conditions** – Based on existing volumes and existing roadway geometry and traffic control plus the traffic generated by the Project.

- **Future conditions** – Based growth rates from the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) travel demand model and future roadway geometry and traffic control.

- **Future plus project traffic conditions** – Based on future volumes and future roadway geometry and traffic control plus the traffic generated by the Project.

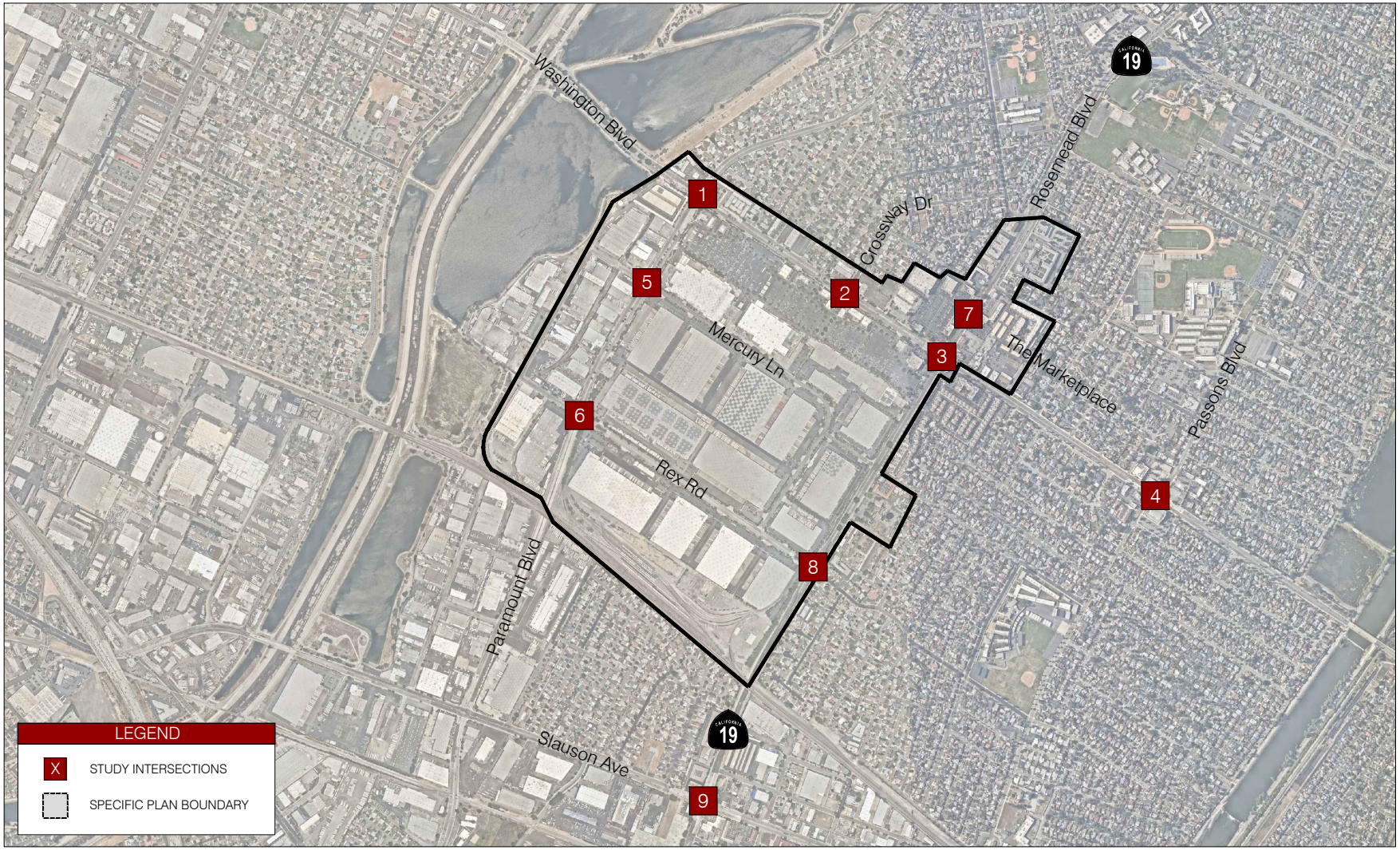

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FIGURE 1

PROJECT LOCATION AND STUDY INTERSECTIONS

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WASHINGTON/ROSEMEAD TOD SPECIFIC PLAN - CITY OF PICO RIVERA

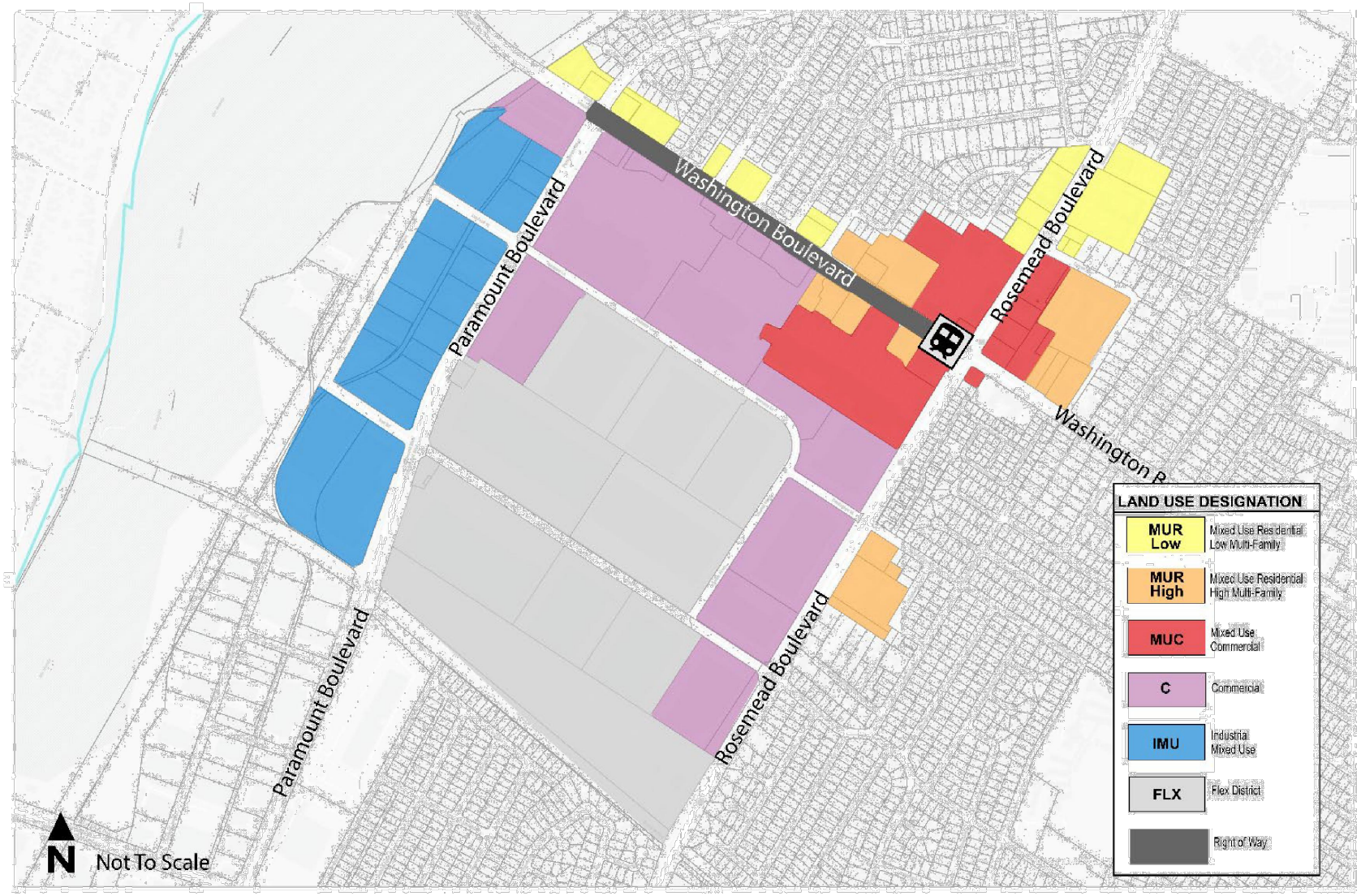

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FIGURE 2

SITE PLAN

Level of Service Standards

Analysis of the study intersections and roadways were based on the concept of Level of Service (LOS), a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Levels of service for this study were determined using methods defined in the *City of Pico Rivera Vehicle Miles Traveled (VMT) Transportation Study Guidelines*[1]. For intersections, this methodology uses intersection capacity utilization (ICU) methodology, which is based on volume to capacity (v/c), to determine intersection LOS. For the roadway segments, the LOS was also determined based on a volume to capacity (v/c) analysis**. Table 1** relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections.

Table 1 – Intersection Level of Service Definitions

Level of Service	Description	v/c Ratio
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	x ≤ 0.60
B	Stable traffic. Traffic flows smoothly with few delays.	0.61 ≤ x ≤ 0.70
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	0.71 ≤ x ≤ 0.80
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	0.81 ≤ x ≤ 0.90
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	0.91 ≤ x ≤ 1.00
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	x ≥ 1.00

The v/c ratios for each study intersection were determined based on the *Highway Capacity Manual, 2000* (HCM 2000) outputs within Synchro analysis software. The v/c ratios for roadway segments were determined based on an assumed capacity of 1,400 passenger cars per hour per lane (pcphpl).

It should be noted that recent changes to the California Environmental Quality Act (CEQA) now recognizes vehicle miles traveled (VMT) as the primary standard of review for project impacts and is no longer based on intersection delay and LOS. Therefore, the LOS evaluation is provided for informational purposes only and to document the operational changes as a result of the project. The VMT evaluation has been provided in Chapter 4.

Operational deficiencies are outlined in **Table 3** of the *City of Pico Rivera Vehicle Miles Traveled (VMT) Transportation Study Guidelines.* **Table 2** summarizes the operational deficiencies for the City of Pico Rivera.

[1] City of Pico Rivera, *City of Pico Rivera Vehicle Miles Traveled (VMT) Transportation Study Guidelines*, November 2022.

Table 2 – Operational Deficiency Thresholds

Pre-Project Operations		Project v/c Increase
LOS	v/c	
C	0.71 ≤ x ≤ 0.80	0.04 or more
D	0.81 ≤ x ≤ 0.90	0.02 or more
E	0.91 ≤ x ≤ 1.00	0.01 or more
F	x ≥ 1.00	0.01 or more

Source: *City of Pico Rivera Vehicle Miles Traveled (VMT) Transportation Study Guidelines, City of Pico Rivera, November 2022.*

REPORT ORGANIZATION

The remainder of the report is divided into the following chapters:

- Chapter 2: Existing Conditions – describes existing conditions on the roadway network.
- Chapter 3: Project Description – describes the project including project trip generation, distribution, and assignment.
- Chapter 4: Vehicles Miles Traveled – describes the Project's Vehicle Miles Traveled (VMT) methodology, analysis, and results.
- Chapter 5: Traffic Operations Analysis – describes intersection level of service analysis and roadway level of service
- Chapter 6: Roadway Segment Operations Analysis – describes roadway segment analysis, related to roadway level of service.
- Chapter 7: Site Pedestrian, Bicycle, and Transit Circulation – describes site circulation for the site related to pedestrian, bicycle, and transit users.
- Chapter 8: Conclusion – summarizes potential deficiencies and improvements of the proposed project, if necessary.

2. EXISTING CONDITIONS

This chapter describes the existing conditions of the roadway network within the vicinity of the project site. The chapter also presents existing turning movement volumes and intersection levels of service.

EXISTING ROADWAY NETWORK

WASHINGTON BOULEVARD

Washington Boulevard is a 6-lane, east-west arterial that connects to Paramount Boulevard on the west end and to State Route 19 (SR-19) / Rosemead Boulevard on the east end. The roadway within the study area is three lanes in each direction with a raised center median. The land use along the corridor consists of mainly commercial. Within the study area, the speed limit on Washington Boulevard is 40 miles per hour.

PARAMOUNT BOULEVARD

Paramount Boulevard is a north-south arterial. It connects to Washington Boulevard to the north and Rex Road to the south. The roadway within the study area is two lanes in each direction and has a center raised median. It serves mainly industrial and commercial uses along the corridor. Within the study area, the speed limit on Paramount Boulevard is 45 miles per hour.

MERCURY LANE

Mercury Lane is a two-lane east-west collector between Paramount Boulevard and Rosemead Boulevard with a center two-way left-turn lane (TWLTL). The roadway continues as ‘Stealth Parkway’ past the stop controlled intersection at Danbridge Street and connects to Rex Road. The adjacent land use is mainly industrial. Within the study area, the speed limit on Mercury Lane is 35 miles per hour.

REX ROAD

Rex Road is a two-lane east-west collector between Paramount Boulevard and Rosemead Boulevard with a center two-way left-turn lane (TWLTL) that is not striped on the pavement. The land use along the corridor consists of mainly industrial. Within the study area, the speed limit on Rex Road is 35 miles per hour.

ROSEMEAD BOULEVARD

Rosemead Boulevard, also referred to as SR-19, is a four- to six-lane arterial with a raised center median within the project area. The land use along the corridor consists of commercial, industrial, and non-fronting residentials. Within the study area, the speed limit on Rosemead Boulevard is 40 miles per hour.

PASSONS BOULEVARD

Passons Boulevard is a four-lane, north-south arterial that runs parallel to Rosemead Boulevard. It connects to Washington Boulevard to the north and Slauson Avenue to the south. The roadway within the study area is two lanes in each direction and the adjacent land use along the corridor consists of commercial, industrial, residential, and a middle school. Within the study area, the speed limit on Passons Boulevard is 25 miles per hour.

SLAUSON AVENUE

Slauson Avenue is a six-lane arterial that runs parallel to Washington Blvd and crosses Paramount Boulevard and Rosemead Boulevard. The roadway within the study area is three lanes in each direction and the adjacent land use along the corridor consists of mainly commercial. Within the study area, the speed limit on Slauson Avenue is 40 miles per hour.

EXISTING TRANSIT FACILITIES

LA Metro and Montebello are two bus agencies that provide transit service to the project area. Only routes that service the nearby area of the project are described in this section. **Figure 3** shows the transit facilities in the project area. Schedules for each route are current as of November 2023, but may change due to COVID-19 or other external factors.

LA Metro - Line 265 is a bus route that operates between the Pico Rivera Plaza and the Lakewood Center Mall. In the vicinity of the project site, Line 265 operates on Paramount Boulevard. On weekdays, Line 265 operates between 5:04 AM and 8:59 PM in the northbound direction and between 5:35 AM and 9:33 PM in the southbound direction with 60-minute headways in both directions. On weekends and holidays, Line 265 operates between 7:25 AM and 8:21 PM in the northbound direction and between 7:52 AM and 8:52 PM in the southbound direction with 60-minute headways in both directions. The closest bus stop is on the intersection of Paramount Boulevard and Washington Boulevard.

LA Metro - Line 266 is a bus route that operates between Lakewood Center Mall and Sierra Madre Villa Station. In the vicinity of the project site, Line 265 operates on Rosemead Boulevard. On weekdays, Line 266 operates between 4:18 AM and 11:01 PM in the southbound direction and operates between 5:09 AM and 11:34 PM in the southbound direction with 20-minute headways in both directions. On weekends and holidays, Line 266 operates between 5:23 AM and 11:01 PM in the southbound direction and between 5:33 AM and 11:49 PM in the northbound direction with 30-minute headways in both directions. The closest bus stop to the project area is on Rosemead Boulevard and Whittier Boulevard.

Montebello – Line 50 is a bus route that operate between Downtown Los Angeles and the Whittier and La Mirada Theatre Center in La Mirada, California. Line 50 operates on Washington Boulevard and runs in the eastbound and westbound directions. Line 50's services on Washington Boulevard pertaining only to the project area, operates between 6:44 AM and 9:42 PM in the westbound direction and between 4:51 AM and 7:47 PM in the eastbound direction with approximately 45-minute headways in both directions. On the weekends, Line 50 operated between 6:13 AM and 9:12 PM in the westbound direction and between 4:26 AM and 6:45 PM in the eastbound direction with 60-minute headways in both directions. The closest bus stop area is at the intersections along Washington Boulevard at Rosemead Boulevard.

Montebello – Line 60 is a bus route that operate between the intersection of Telegraph Road and Arrington Avenue and San Gabriel Parkway. Line 60 operates on Passons Boulevard and runs in the northbound and southbound directions. Line 60's services on Passons Boulevard pertaining only to the project area, operates between 6:55 AM and 4:05 PM in the southbound direction and between 7:20 AM and 3:35 PM in the northbound direction with approximately 40-minute headways in both directions. Line 60 does not operate on weekends. The closest bus stop area is at the intersection of Rosemead Boulevard and Whittier Boulevard.

EXISTING PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project area include sidewalks on both sides along Washington Boulevard, Paramount Boulevard, Rosemead Boulevard, and Rex Road. Sidewalks also exist on south side of Rex Road. No sidewalks currently exist along the project frontage near the train tracks.

EXISTING BICYCLE FACILITIES

Bicycle facilities are divided into four classes. Class I bike paths are physically separated from motor vehicle lanes and are further divided into Class IA Multi-use Paths and Class IB Sidepaths. Class II bike lanes on roadways are marked by signage and pavement striping. Painted buffers may separate the vehicle travel lanes from the bike lane and green bike lane pavement coloring are used to highlight potential conflict zones between vehicles and cyclists. Class III bike routes share the travel lane with motor vehicles and have signs and sharrow striping to guide bicyclists on paved routes. Class IV bike facilities are protected cycle tracks that provide a physical barrier between motor vehicles and cyclists. **Figure 4** shows the bicycle facilities in the project area.

Direct access to bicycle facilities is proposed to the project site including Class II bike lanes along Rosemead Boulevard and Class III bike routes along Washington Boulevard, Paramount Boulevard, Passons Boulevard, and Slauson Avenue.

EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

Existing intersection lane configuration and traffic controls are illustrated in **Figure 5**.

EXISTING PEAK-HOUR TURNING MOVEMENT VOLUMES

Volumes are based on traffic counts collected in October 2023 during a typical weekday while local schools were in session and outside of any holidays. The traffic counts were compared to historical volumes provided by the City from 2019 and 2021. Volumes from 2021 were determined to be lower than the 2023 counts collected. However, 2019 volumes were determined to generally be greater than then 2023 counts collected. This is likely due to 2019 volumes being prior to COVID-19, which have generally been higher than current volumes. Therefore, the 2023 volumes were adjusted based on the percent difference between 2019 and 2023 volumes and are summarized in **Table 6**. No adjustments were made for roadways with volumes higher in 2023 than 2019. Existing peak hour turning movement volumes are shown in **Figure 6.**

Table 3 – Existing Volume Adjustment Factors

Roadway	AM Adjustment Factor	PM Adjustment Factor
Washington Boulevard *between east of Paramount Blvd & Rosemead Rd*	1.27	1.07
Paramount Boulevard *between Slauson Ave & Washington Blvd*	1.19	1.22
Passons Boulevard *between Slauson Ave & north of Washington Blvd*	Volumes higher in 2023, no adjustment.	Volumes higher in 2023, no adjustment.
Rosemead Boulevard *between south of Slauson Ave & Washington Blvd*	1.08	Volumes higher in 2023, no adjustment.
Rex Road *between Rosemead Blvd & Paramount Blvd*	1.56	1.48
Slauson Avenue *between Paramount Blvd & Rosemead Blvd*	1.01	Volumes higher in 2023, no adjustment.

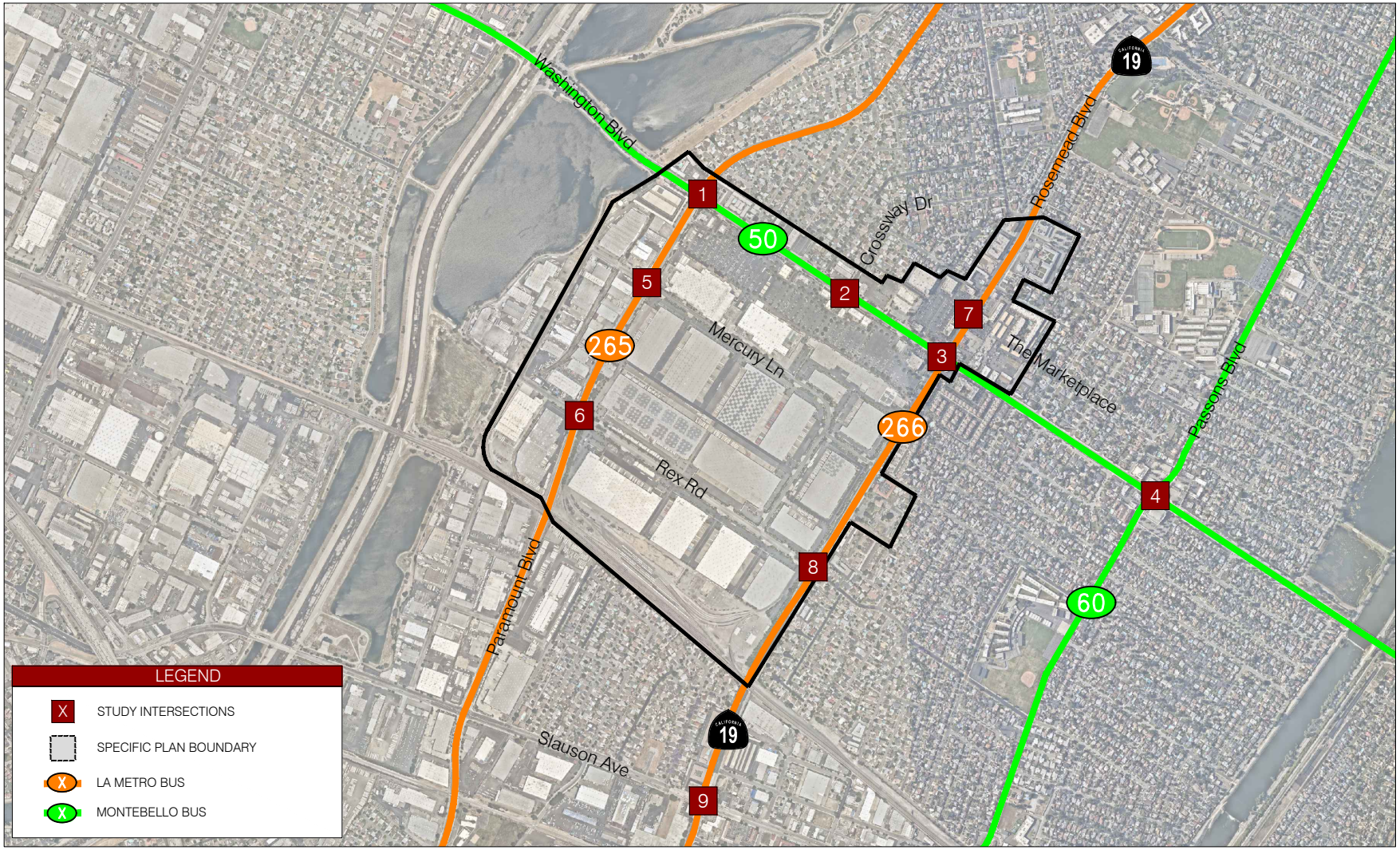

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FIGURE 3

EXISTING TRANSIT FACILTIES

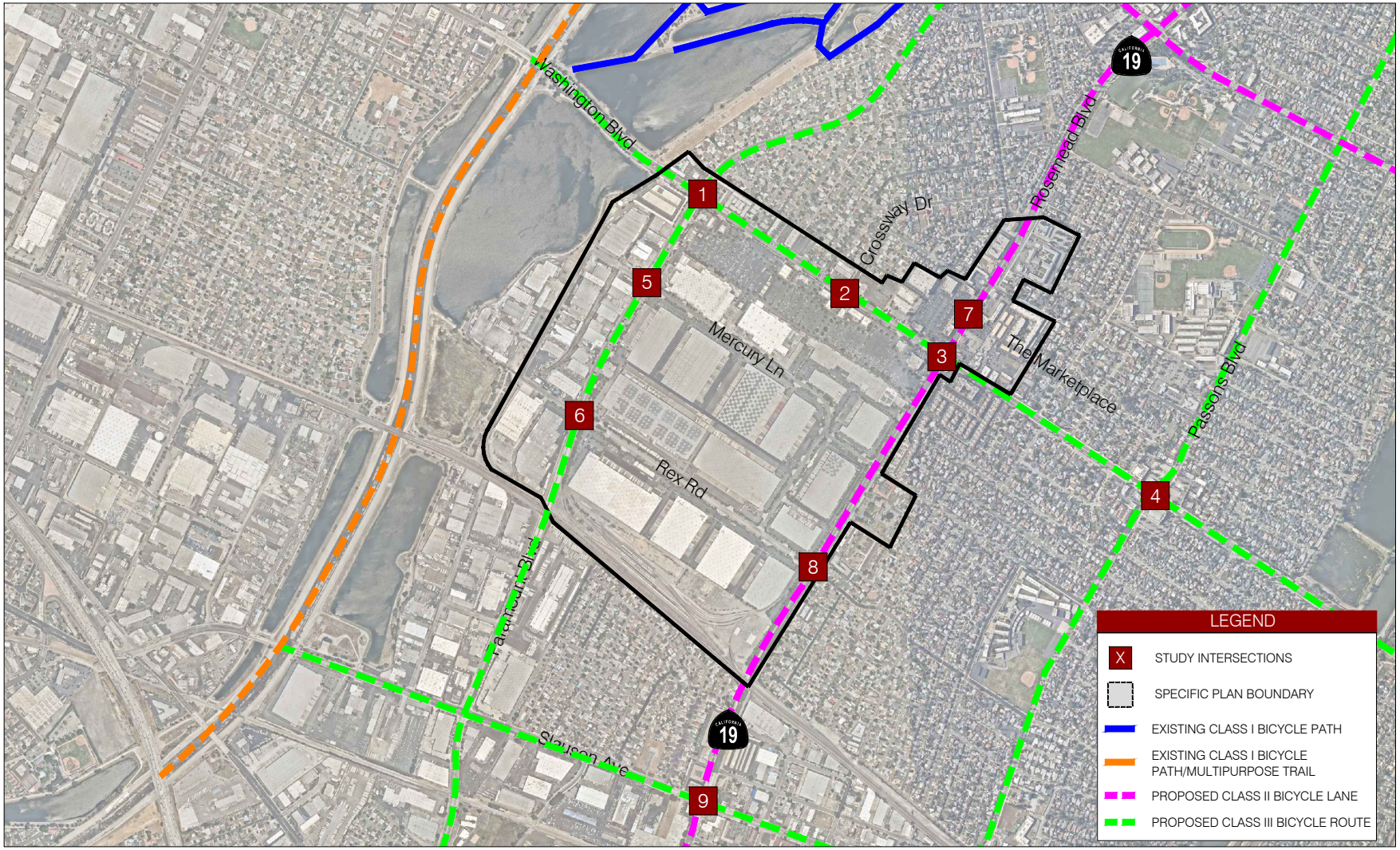

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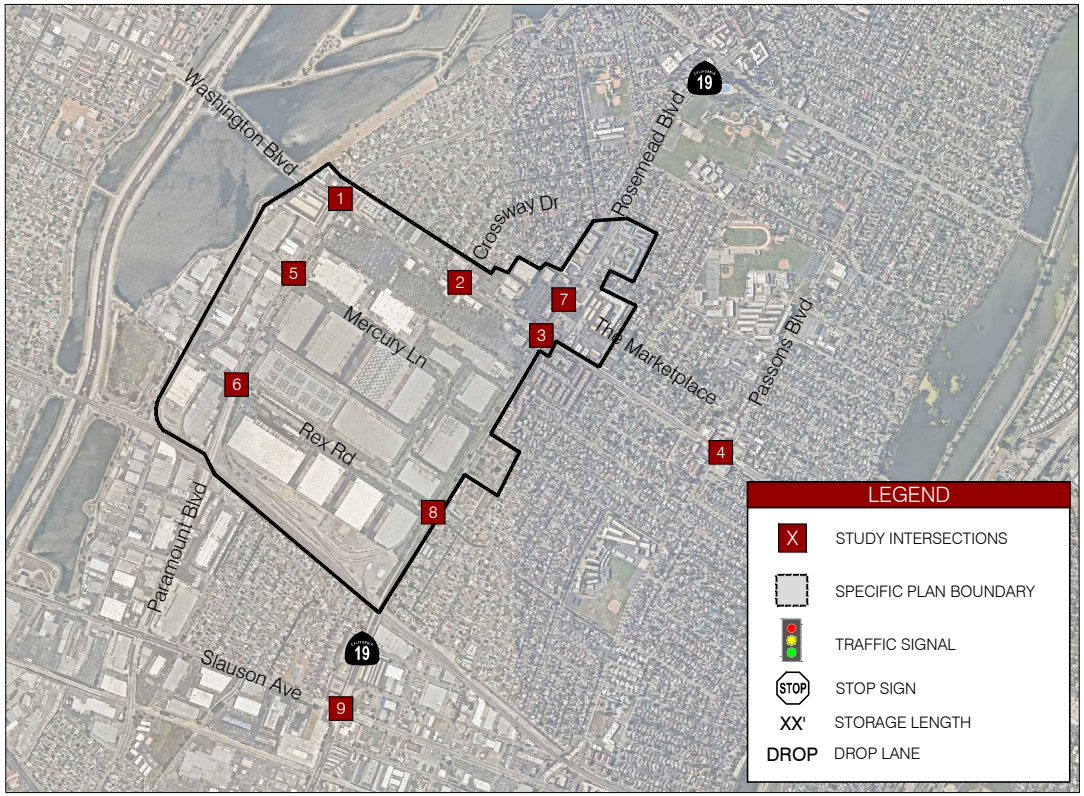
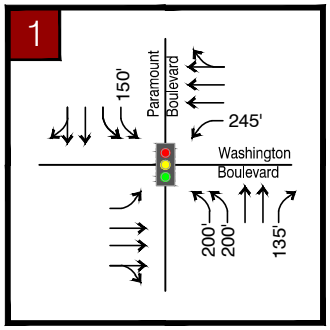
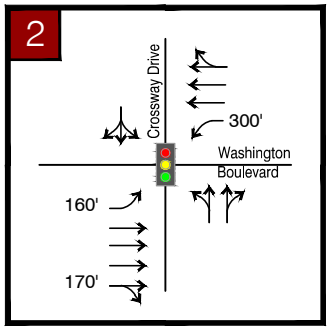
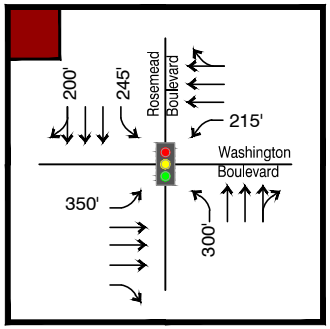
FIGURE 4

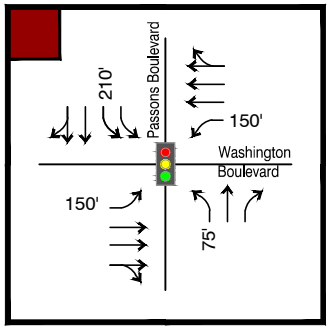
EXISTING BICYCLE FACILITIES

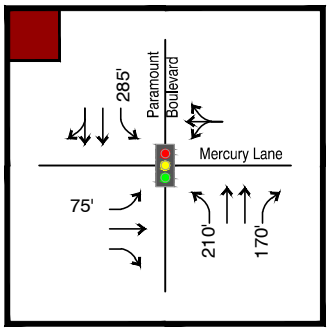


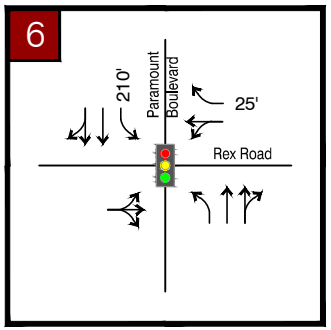


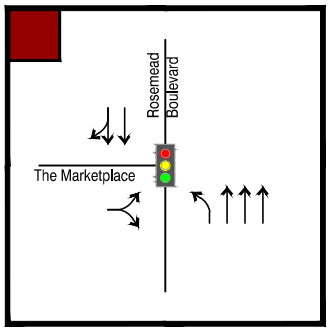


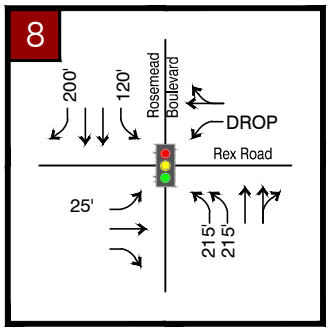












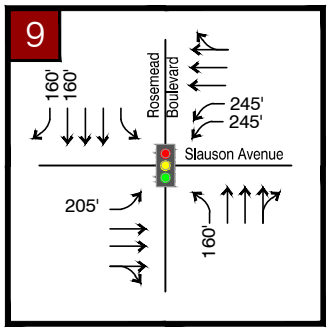


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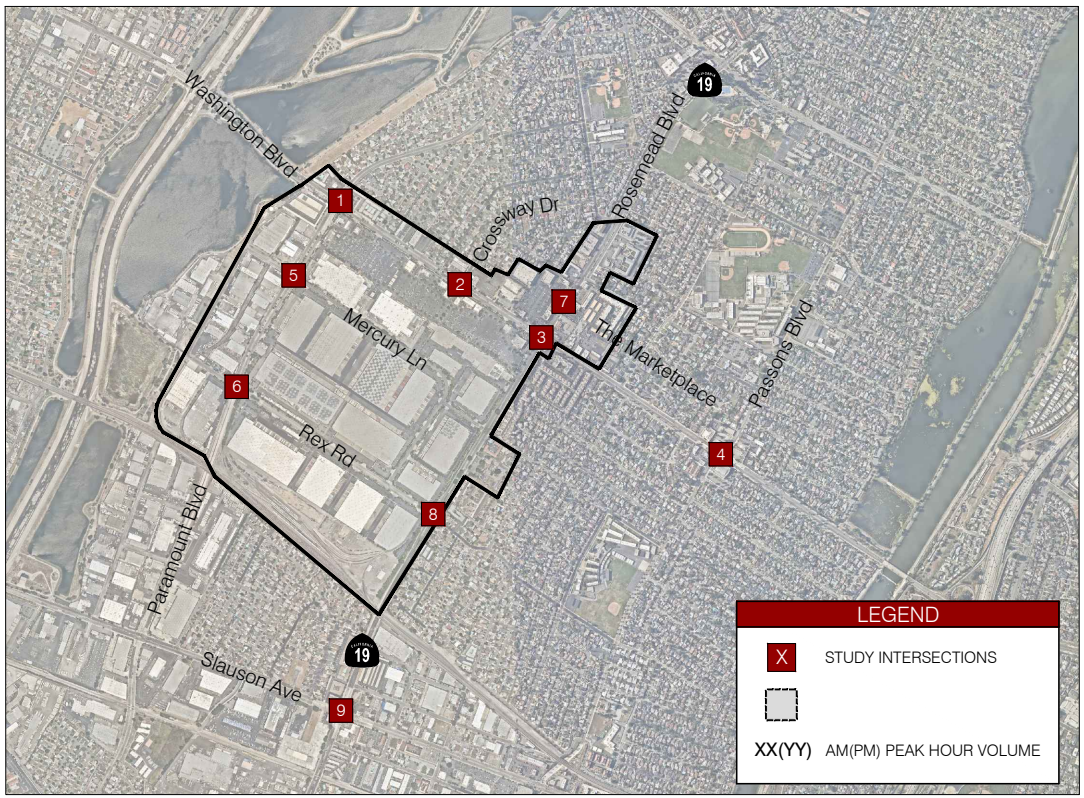
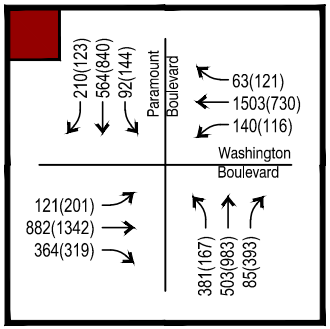
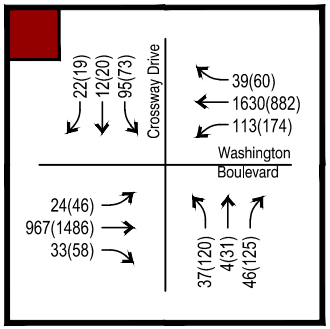
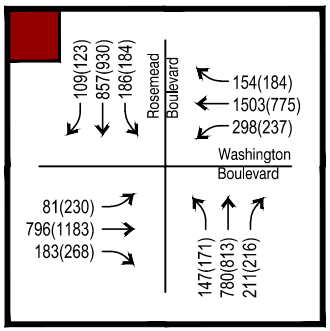
FIGURE 5

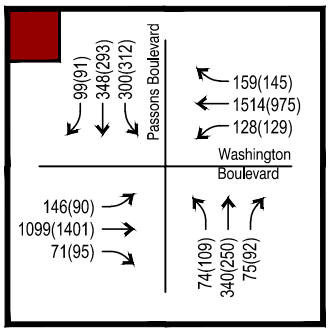
EXISTING CONDITION LANE GEOMETRY AND TRAFFIC CONTROL

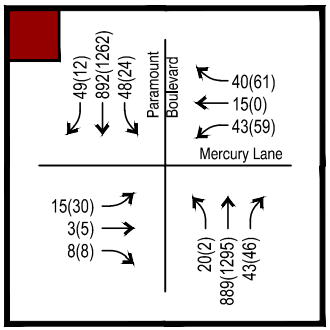


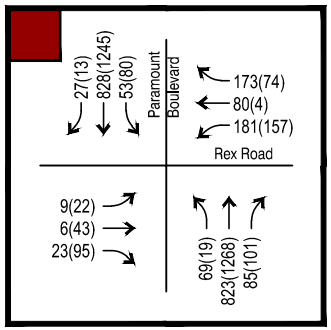


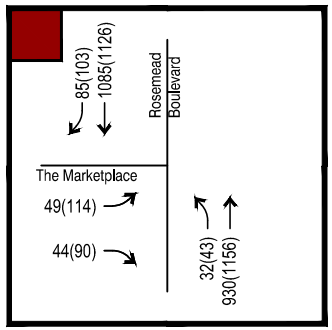


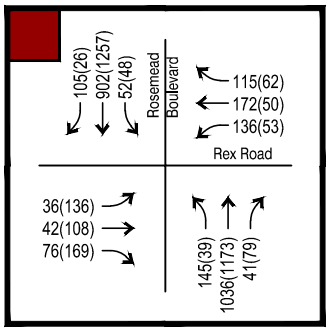












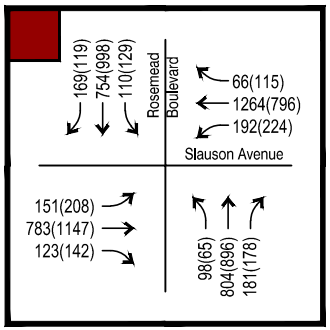


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FIGURE 6

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES

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3. PROJECT DESCRIPTION

This chapter presents a description of the proposed site use, trip generation, trip distribution, and trip assignment for the proposed project on the transportation system.

PROPOSED SITE USE

The Washington and Rosemead TOD Specific Plan is defined by the general area of Crider Avenue, Rosemead Boulevard, BNSF railroad, and Washington Boulevard. There are portions of the Specific Plan Area that extend to the north of Washington Boulevard and east of Rosemead Boulevard. **Figure 2** shows the Specific Plan Area.

The existing land uses within the Specific Plan Area would potentially be redeveloped with the following land uses, separated into three blocks, as shown in **Figure 7**.

The existing land uses for each block are summarized in **Table 4** and proposed land uses for each block are summarized in **Table 5**. **Table 6** shows the difference in land use sizes between existing and proposed conditions.

Figure 7 – Proposed Land Uses and Blocks

Revised WBTODSP LU Table					
	Acres	Density	Dwelling Units	FAR	SQFT
MURL	16.8	25.0	420	0.30	219,542.40
MURH	19.6	40.0	784	0.30	256,132.80
MUC	28.3	40.0	1132	0.30	369,824.40
C	75.9	--	--	0.50	1,653,102.00
IMU	39.5	--	--	0.50	860,310.00
FLX	116.2	--	--	0.50	2,530,836.00
Washington Boulevard	8.81	--	--	--	--
Total	305.11	--	2336	--	5,889,747.60

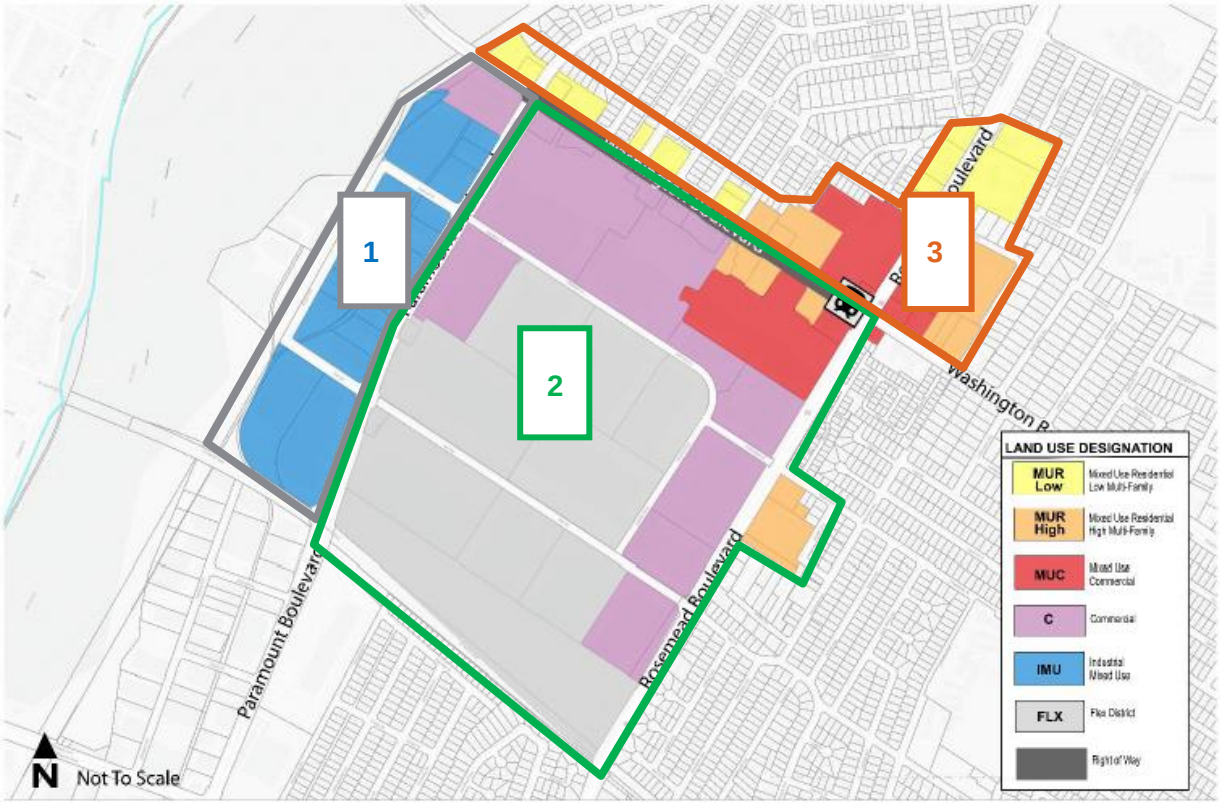

Table 4 – Existing Land Uses

Land Use	Units	Square Footage (KSF)
Block 1		
General Light Industrial	-	65.016
Manufacturing	-	773.314
Warehousing	-	362.523
Mini-Warehouse	-	137.974
Block 2		
Manufacturing	-	392.404
Warehousing	-	2,438.016
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	7	-
Motel	49	-
Nursing Home	10	-
Shopping Center (>150k)	-	977.656
Walk-in Bank	-	2.85
Block 3		
Multi-Family Housing (Low-Rise) (Not Close to Rail Transit)	323	-
Assisted Living	61	-
Motel	150	-
General Office Building	-	76.013
Shopping Center (>150k)	-	315.389
Strip Retail Plaza (<40k)	-	60.554
Liquor Store	-	1.854
Drive-in Bank	-	6.67
Fast Casual Restaurant	-	4.266
Fine Dining Restaurant	-	7.954
High-Turnover (Sit-Down) Restaurant	-	8.534
Fast-Food Restaurant with Drive-Through Window	-	3.012
Convenience Store/Gas Station	12	-

Table 5 – Proposed Land Uses

Land Use		Units	Square Footage (KSF)
Block 1			
Commercial	Employment	--	24.206
	Commercial	--	62.457
Industrial Mixed Use	Commercial	---	258.093
	Industrial	--	602.217
Block 2			
Commercial	Employment	--	437.530
	Commercial		1,128.909
Flex District	Employment	--	506.167
	Industrial	--	2,024.669
Mixed Use Residential High Multi-family		312	101.805
Mixed Use Commercial		588	192,202
Block 3			
Mixed Use Residential Low Multi-family		420	219.542
Mixed Use Residential High Multi-family		472	154.328
Mixed Use Commercial		544	177.622

Table 6 – Differences in Land Use Between Existing and Proposed Conditions

Land Use	Δ Units (Proposed – Existing)	Δ Square Footage (KSF) (Proposed – Existing)
Gas Station	-12 pumps	-
Motel	-199 rooms	
Residential	+1,935 dwelling units	-
Retail/Commercial	-	+906.219
Office	-	+891.890
General Light Industrial	-	+1959.653
General Industrial[1]	-	-3,502.014

[1]Includes Manufacturing, Warehousing, and Industrial Mixed Use.

TRIP GENERATION

Trip generation for developments is typically calculated based on data from the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 11th Edition*[2]. This is the standard reference for determining trip

[2] *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, Washington D.C., 2022.

generation for potential projects. Trip generation estimates for each land use listed for existing conditions and the proposed project were calculated. It should be noted that the trip generation rates and equations for each land use were determined from surveys collected at standalone projects and not within a shopping center or any other multi-use development. For some land uses an average rate and a fitted curve equation are provided for the sample data. The average rate was used to develop the existing and proposed trip generation for all uses.

Table 7 shows the trip generation rates to be used for the existing land uses in the weekday daily, weekday AM peak, and weekday PM peak. **Table 8** shows the trip generation rates to be used for the proposed land uses in the weekday daily, weekday AM peak, and weekday PM peak.

Table 7 – Existing Trip Generation Rates

Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
General Light Industrial	110	KSF	4.87	0.74	88%	12%	0.65	14%	86%
Manufacturing	140	KSF	4.75	0.68	76%	24%	0.74	31%	69%
Warehousing	150	KSF	1.71	0.17	77%	23%	0.18	28%	72%
Mini-Warehouse	151	KSF	1.45	0.09	59%	41%	0.15	47%	53%
Single-Family Detached Housing	210	DU	9.43	0.7	25%	75%	0.94	63%	37%
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	DU	6.74	0.4	24%	76%	0.51	63%	37%
Assisted Living	254	Beds	2.6	0.18	60%	10%	0.24	39%	61%
Motel	320	Rooms	3.35	0.35	37%	63%	0.36	54%	46%
Nursing Home	620	Beds	3.06	0.14	72%	28%	0.14	33%	67%
General Office Building	710	KSF	10.84	1.52	88%	12%	1.44	17%	83%
Building Materials and Lumber Store	812	KSF	17.05	1.59	62%	38%	2.25	46%	54%
Shopping Center (>150k)	820	KSF	37.01	0.84	62%	38%	3.4	48%	52%
Strip Retail Plaza (<40k)	822	KSF	54.45	2.36	60%	40%	6.59	50%	50%
Liquor Store	899	KSF	107.21	0.59	79%	21%	16.62	50%	50%
Walk-in Bank	911	KSF	100.35	9.95	58%	42%	12.13	44%	56%
Drive-in Bank	912	KSF	100.35	9.95	58%	42%	21.01	50%	50%
Fast Casual Restaurant	930	KSF	97.14	1.43	50%	50%	12.55	55%	75%
Fine Dining Restaurant	931	KSF	83.84	0.73	50%	50%	7.8	67%	33%
High-Turnover (Sit-Down) Restaurant	932	KSF	107.21	9.57	55%	45%	9.05	61%	39%
Fast-Food Restaurant with Drive-Through Window	934	KSF	467.48	44.61	51%	49%	33.03	52%	48%
Convenience Store/Gas Station	945	VFP	265.12	16.06	50%	50%	18.42	50%	50%

Table 8 – Proposed Use Trip Generation Rates

Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Multifamily Housing (Mid-Rise) Not Close to Transit	221	DU	4.54	0.37	23%	77%	0.39	61%	39%
Shopping Center (>150k)	820	KSF	37.01	0.84	62%	38%	3.4	48%	52%
General Office Building	710	KSF	10.84	1.52	88%	12%	1.44	17%	83%
General Light Industrial	110	KSF	4.87	0.74	88%	12%	0.65	14%	86%
Industrial Park	130	KSF	3.37	0.34	81%	19%	0.34	22%	78%
Strip Retail Plaza (<40k)	822	KSF	54.45	2.36	60%	40%	6.59	50%	50%

INTERNAL CAPTURE

With multi-use development there is potential for interaction among uses within the site. These types of trips are considered internal to the site and are "captured" within the site. The standard engineering reference for determining internal capture reductions for the proposed land uses is the ITE *Trip Generation Handbook, 3rd Edition*[3]. The following site specific characteristics of the proposed project as outlined in the ITE *Trip Generation Handbook, 3rd Edition* make it a good candidate for internal capture trip reductions:

- Internal street network and pedestrian connectivity: The proposed project is a mixed-use development with a well-integrated internal street network providing pedestrian and vehicle connectivity for easy access between land uses. Motorists will be able to travel between the land uses without leaving the project site and thereby creating external trips.
- Project size: The proposed project is also a prime candidate for internal capture reductions because the project size is between the 100,000 square feet to 2 million square feet of building space that ITE recommends. The data in the *Trip Generation Handbook, 3rd Edition* corresponds to this range in building size.
- Complimentary land uses: The land uses also include a combination of residential, retail, office, and industrial. The complimentary land uses allow for a believable interaction between the proposed land uses.
- No competing markets: The proposed project location is secluded from any adjacent competing markets, making the likelihood higher for capturing trips internally within the mixed-use development site.

Internal capture reductions within the blocks and between the blocks were included. For existing trips, internal capture reductions result in 21 percent reduction in daily trips, 24 percent reduction in AM peak hour trips, and 17 percent reduction in PM peak hour trips. For proposed trips, internal capture reductions result in 12 percent reduction in daily trips, 8 percent reduction in AM peak hour trips, and 14 percent reduction in PM peak hour trips.

[3] *Trip Generation Handbook, 3rd Edition*, Institute of Transportation Engineers, Washington D.C., August 2014.

TRANSIT REDUCTION

As part of the proposed project, the Gold Line Eastside Rail will be extended along Washington Boulevard to Whittier Boulevard. Since it can be assumed that the rail extension would result in a higher transit mode, a transit reduction was applied to the proposed project trip generation. The guidelines for determining the transit reduction percentage were taken from the City of Los Angeles Transportation Assessment Guidelines, which state that development adjacent to a dedicated transit line station with convenient pedestrian access to the station may qualify for a maximum 25 percent trip generation adjustment. Therefore, a 25 percent transit reduction was applied to the proposed trip generation. For the existing trip generation, a 10% transit reduction was taken since the project is within 1/4 mile of a public bus stop.

PASS-BY TRIPS

Due to the nature of the proposed uses, there will be pass-by trips to the project. Pass-by trips represent trips already on the road which stop as they pass by the site as a matter of convenience on their path to another destination. These trips enter and exit the site at the driveways but are not new trips on the external street and roadway network.

The most complete source of data regarding average pass-by rates for various land uses is found in *Trip Generation Handbook*. The rates published by ITE are based on numerous studies by professional transportation engineers throughout the country. ITE methodology states that when determining the pass-by rate to use for each land use, one should begin by using the fitted curve equation for each land use in Appendix F. However, there is no fitted curve equation on any of the land use data plots because there are either less than 10 data points available or the R^2 value is less than 0.5. If there is no fitted curve equation, then the average rate is the next best starting point, if the sample consists of at least three data points and the size of the study is within the range of data points provided.

Pass-by reductions were applied to the restaurant and retail uses. For existing trips, pass-by reductions result in 14 percent reduction in daily trips, 7 percent reduction in AM peak hour trips, and 20 percent reduction in PM peak hour trips. For proposed trips, pass-by reductions result in 8 percent reduction in daily trips, no reduction in AM peak hour trips, and 15 percent reduction in PM peak hour trips. There is no pass-by percentage stated for the residential, office, or industrial uses. Therefore, no pass-by reductions will be assumed in the analysis for these uses.

NET TRIP GENERATION

For existing trips, the internal capture, transit, and pass-by reductions result in a total of 39 percent reduction in daily trips, 36 percent reduction in AM peak hour trips, and 40 percent reduction in PM peak hour trips. This results in a total of 29,904 daily trips, 1,849 AM peak hour trips, and 3,010 PM peak hour trips.

For proposed trips, the internal capture, transit, and pass-by reductions result in a total of 40 percent reduction in daily trips, 31 percent reduction in AM peak hour trips, and 46 percent reduction in PM peak hour trips. Note that the sum of the individual percent reductions from each type of reduction does not equal the total percent reduction since the reductions are based on the number of trips after the previous reduction has been applied. This results in a total of 71,294 daily trips, 4,105 AM peak hour trips, and 6,330 PM peak hour trips. A full summary of the existing trip generation can be found in **Appendix A** and the proposed trip generation can be found in **Appendix B**.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The Project's trip distribution was estimated based on the project access locations, freeway access, and roadway network within the study area. The following provides the trip distribution assumptions used for this project:

- 25% to/from the east along Washington Boulevard
- 15% to/from the west along Washington Boulevard
- 5% to/from the north along Paramount Boulevard
- 15% to/from the south along Paramount Boulevard
- 5% to/from the north along Rosemead Boulevard
- 15% to/from the south along Rosemead Boulevard
- 5% to/from the north along Passons Boulevard
- 5% to/from the south along Passons Boulevard
- 5% to/from the east along Slauson Avenue
- 5% to/from the west along Slauson Avenue

Figure 8 presents the trip distribution assumed for the project.

Based on the assumed trip distribution, the volumes generated by the project were assigned to the roadway network. Trip assignment to the project driveways was based on the on-site circulation and available movements for each driveway. **Figure 9** presents the project's AM and PM peak hour trip assignment.

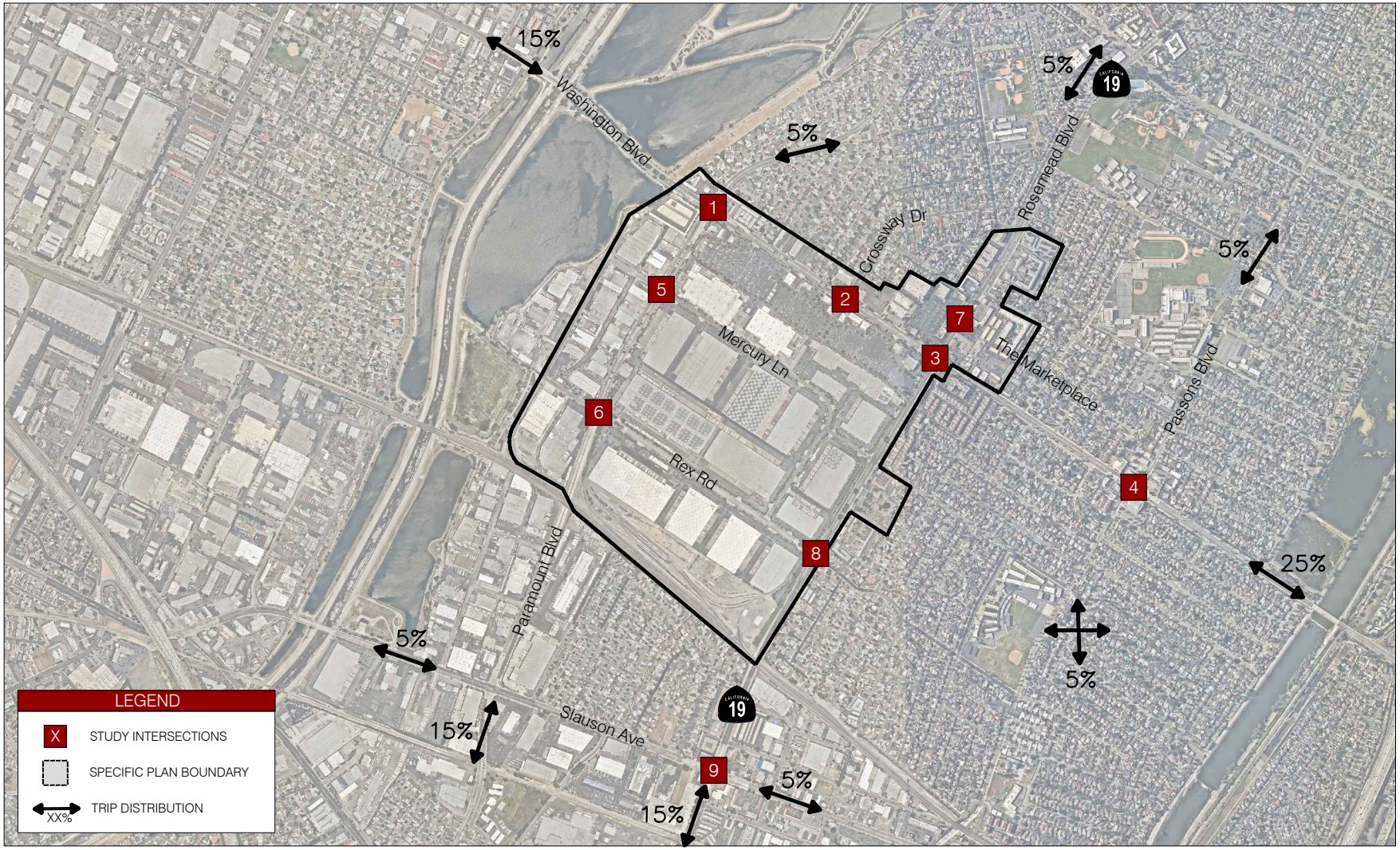

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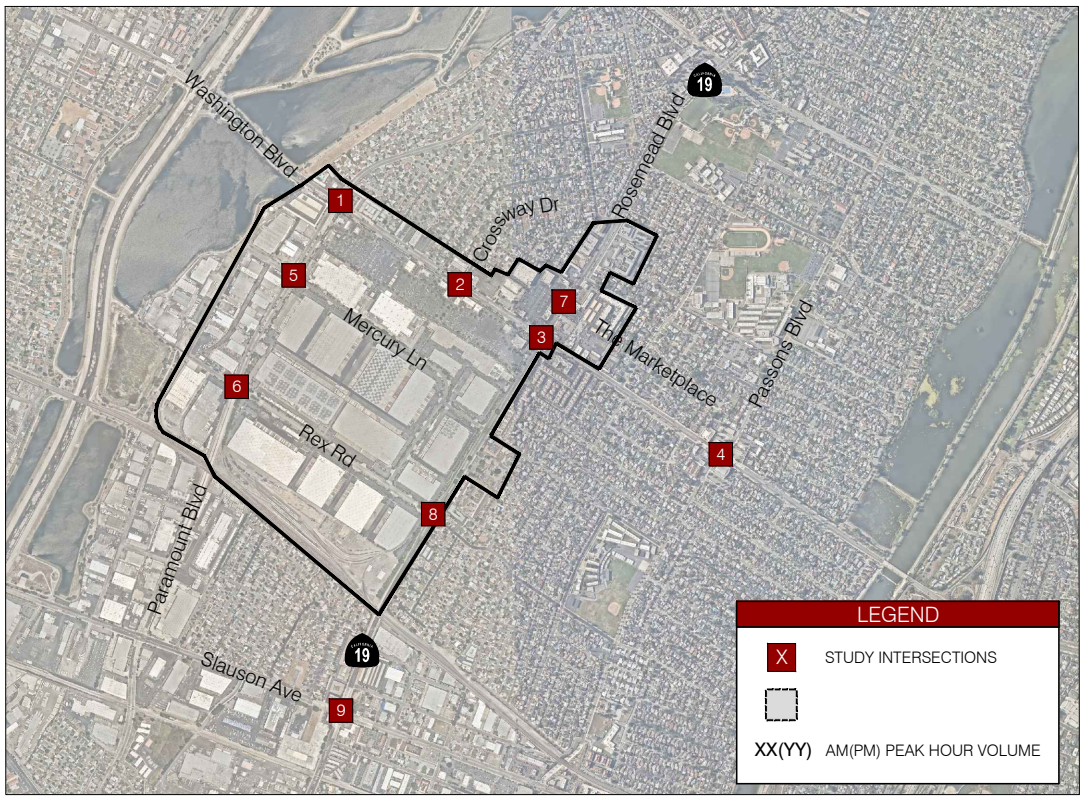
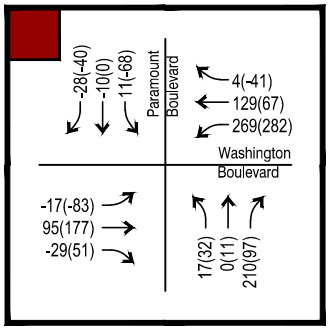
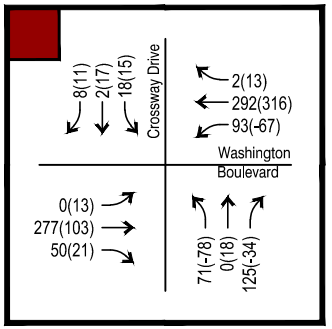
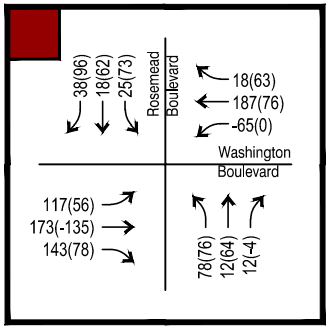
FIGURE 8

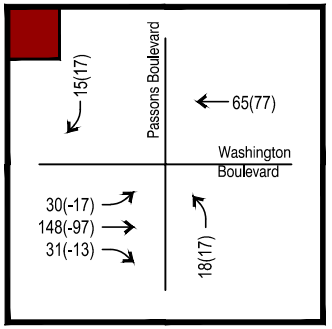
PROJECT TRIP DISTRIBUTION

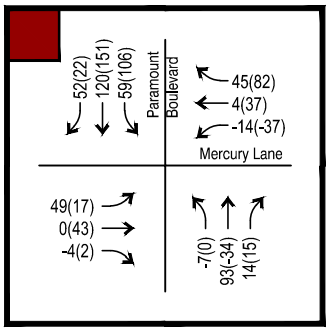


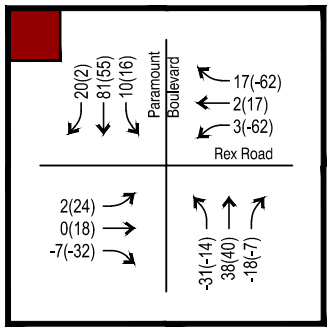


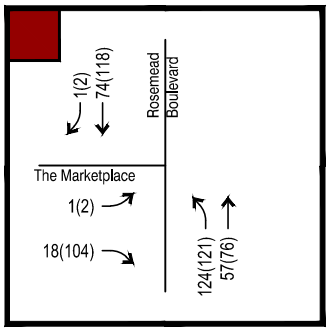


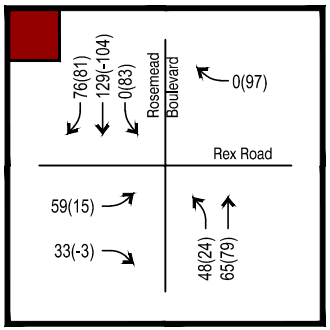












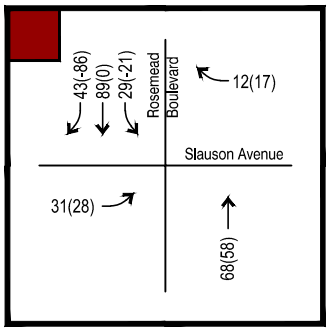


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FIGURE 9

PROJECT PEAK HOUR TURNING MOVEMENT VOLUMES

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4. VEHICLE MILES TRAVELED (VMT)

This chapter summarizes the Project's Vehicle Miles Traveled (VMT) methodology, analysis, and results.

VMT METHODOLOGY

The City has adopted VMT guidelines and a methodology for determining VMT impacts in the City of Pico Rivera *Vehicles Miles Traveled (VMT) Transportation Study Guidelines*. These guidelines are based on the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA[4] to determine potential impacts under Senate Bill (SB) 743. The VMT guidelines describe VMT screening criteria, which if met, the project would be exempt from further VMT analysis. It should be noted that only one screening criteria needs to be met to be then exempt from further VMT analysis.

VMT SCREENING ANALYSIS

Of the screening categories described in the City's Transportation Study Guidelines, the Project would meet the transit proximity criteria:

For existing baseline projects that are located within a ½-mile of where two or more 15-minute (during commute hours) bus routes intersect or within a ½-mile of a corridor served by 15-minute (during commute hours) bus service may be eligible. Future baseline conditions would also include the area located within a ½-mile of the Eastside Transit Corridor Phase 2 Project. In addition, the project should meet the following criteria:

- A Floor Area Ratio (FAR) of 0.75 or greater
- Is consistent with the applicable SCAG Sustainable Community Strategy (SCS) (as determined by the City)
- Does not provide more parking than required by the City
- Does not replace affordable housing units

The proposed Project is to be located within a ½-mile of the future Eastside Transit Corridor Phase 2 Project. Since the project is planned to be transit-oriented development that is centered around the future Rosemead transit station along the Eastside Transit Corridor, this project satisfies the initial transit proximity criteria. In addition, the project will have a FAR of 0.75 or greater, will be consistent with the SCS, provide less than or equal to the required City parking, and does not replace affordable housing. Therefore, the proposed project will meet the VMT screening criteria and have a **less than significant impact** for transportation.

[4] Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

5. TRAFFIC OPERATIONS ANALYSIS

This chapter will discuss the traffic operations analysis that was conducted to determine the effect of the proposed project on the transportation system. The operations analysis includes intersection level of service.

EXISTING CONDITIONS

Existing conditions represent operations based on the existing roadway configuration (**Figure 5**) and existing volumes (**Figure 6**).

INTERSECTION LEVEL OF SERVICE

Traffic operations were evaluated at the study intersections under existing traffic conditions. Results of the analysis are presented in **Table 9**. Analysis sheets are provided in **Appendix C**.

EXISTING PLUS PROJECT CONDITIONS

LANE GEOMETRY AND CONTROL

The project is not proposing any roadway improvements at any study intersection and therefore Existing Plus Project conditions assumed existing lane geometry as illustrated in **Figure 5**.

TRAFFIC VOLUMES

As described in Chapter 3, the Project trip generation includes existing trip credits and proposed trips. For existing trip credits, the project will have a total of 29,904 daily trips, 1,849 AM peak hour trips, and 3,010 PM peak hour trips removed from the baseline scenarios. For proposed trips, the project will generate 71,294 daily trips, 2,944 AM peak hour trips, and 2,414 PM peak hour trips. After combining the existing trip credits and the proposed trip generation, the project is estimated to generate a net +41,390 daily trips, +2,256 AM peak hour trips, and +3,320 PM peak hour trips.

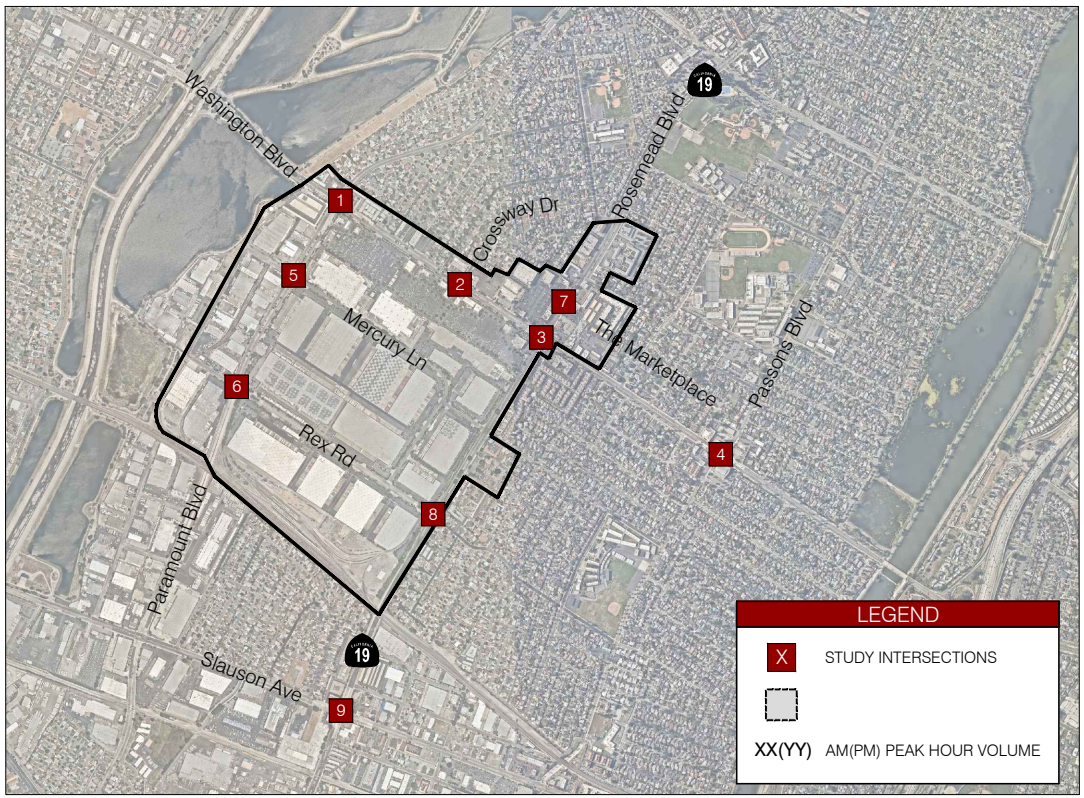
Existing Plus Project volumes were determined by adding the total project traffic, **Figure 9**, to the Existing conditions volumes, **Figure 6**. Existing Plus Project peak hour volumes are shown in **Figure 10**.

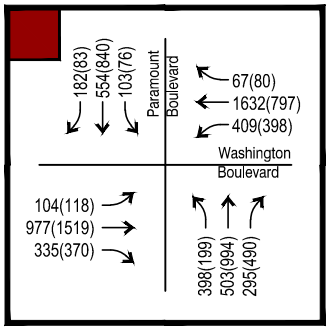
INTERSECTION LEVEL OF SERVICE

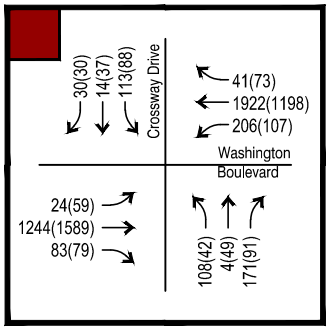
Existing Plus Project traffic conditions were evaluated at the study intersections. Results are presented in **Table 9**. All study intersections function within acceptable LOS standards under this analysis scenario except for the following intersections:

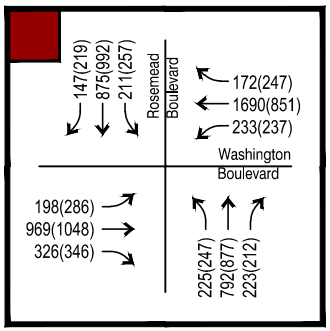
- Intersection #1 – Paramount Boulevard / Washington Boulevard (AM and PM Peak Hours)
- Intersection #3 – Rosemead Boulevard / Washington Boulevard (AM and PM Peak Hours)
- Intersection #4 – Passons Boulevard / Washington Boulevard (AM Peak Hour)
- Intersection #9 – Rosemead Boulevard / Slauson Avenue (AM Peak Hour)

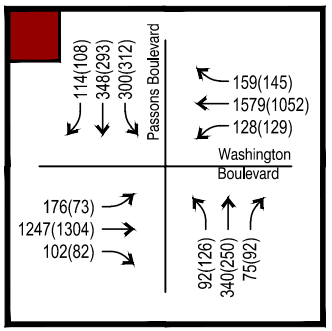
These are considered intersection deficiencies because the Project V/C increase exceeds the threshold listed in **Table 2**. Analysis sheets are provided in **Appendix C**.

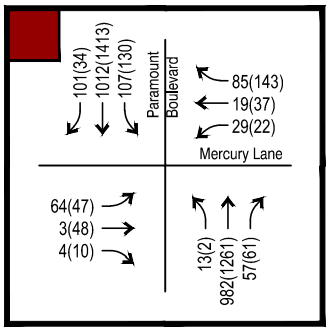


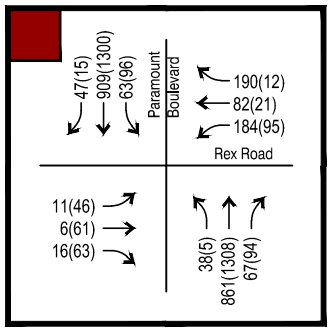


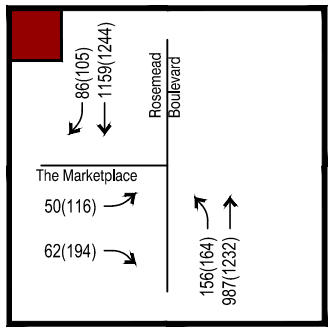


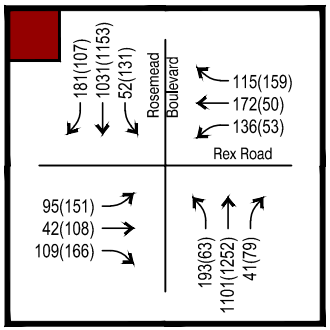












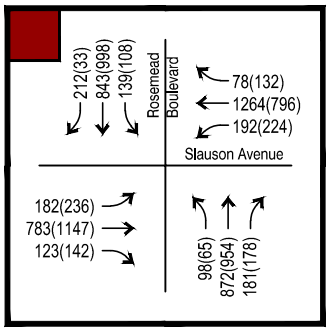


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FIGURE 10

EXISTING PLUS PROJECT PEAK HOUR TURNING MOVEMENT VOLUMES

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Table 9 – Existing and Existing Plus Project Peak Hour LOS Summary

#	Intersection	Jurisdiction	Control	Existing				Existing Plus Project					
				AM Peak		PM Peak		AM Peak			PM Peak		
				LOS	v/c	LOS	v/c	LOS	v/c	Var	LOS	v/c	Var
1	Paramount Boulevard / Washington Boulevard	City	Signal	E	0.98	E	0.95	**F**	**1.14**	**0.16**	**F**	**1.19**	**0.24**
2	Crossway Drive / Washington Boulevard	City	Signal	B	0.64	A	0.58	C	0.80	0.16	A	0.57	-0.01
3	Rosemead Boulevard / Washington Boulevard	City	Signal	E	0.98	D	0.87	**F**	**1.17**	**0.19**	**E**	**0.98**	**0.11**
4	Passons Boulevard / Washington Boulevard	City	Signal	E	0.95	C	0.75	**E**	**0.98**	**0.03**	C	0.72	-0.03
5	Paramount Boulevard / Mercury Lane	City	Signal	A	0.51	A	0.60	B	0.64	0.13	D	0.82	0.22
6	Paramount Boulevard / Rex Road	City	Signal	B	0.67	D	0.83	B	0.67	0.00	C	0.78	-0.05
7	Rosemead Boulevard / The Marketplace	City	Signal	B	0.61	B	0.65	C	0.72	0.11	C	0.80	0.15
8	Rosemead Boulevard / Rex Road	City	Signal	B	0.66	B	0.70	C	0.77	0.11	D	0.82	0.12
9	Rosemead Boulevard / Slauson Avenue	City	Signal	D	0.86	D	0.83	**E**	**0.93**	**0.07**	D	0.84	0.01

Note: Project deficiencies are **BOLD and shaded**.

CUMULATIVE CONDITIONS

LANE GEOMETRY

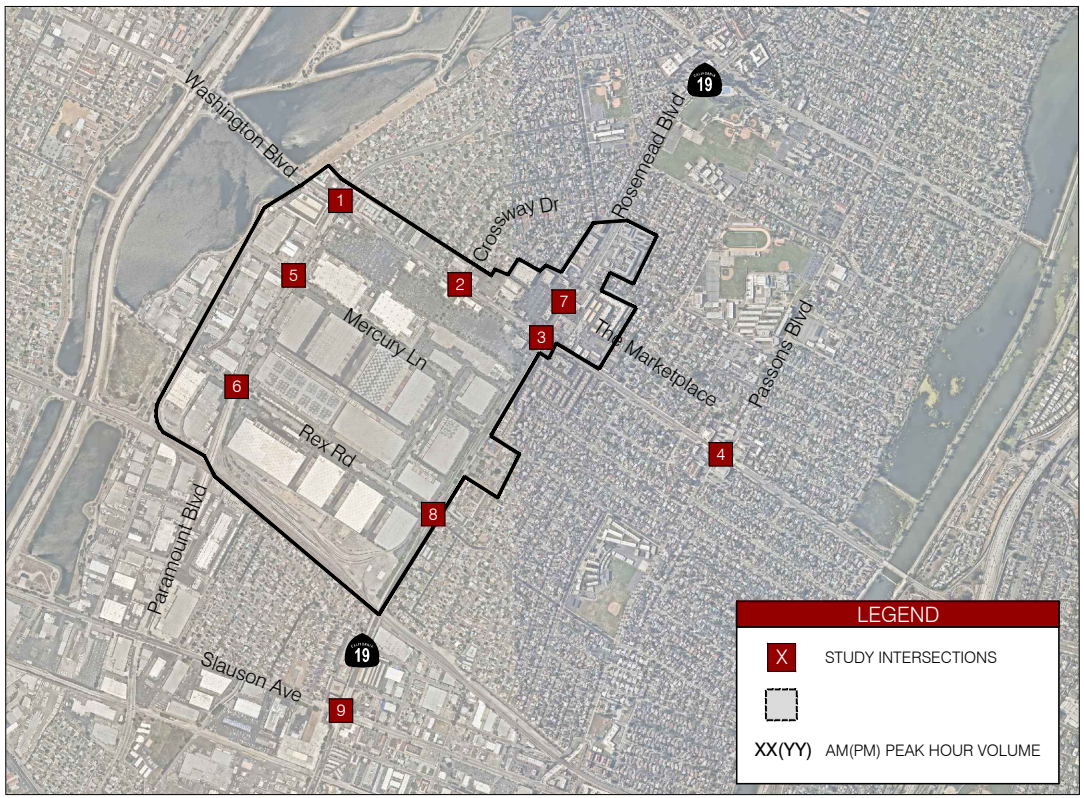
Under Cumulative conditions, no roadway improvements were assumed, therefore existing lane geometry was assumed as shown in **Figure 5**.

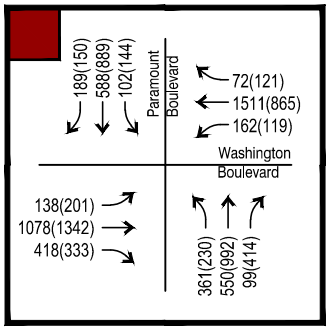
TRAFFIC VOLUMES

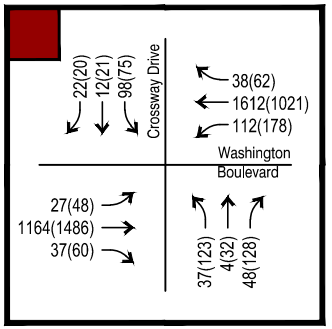
To account for future development and growth within the study area and the City, the Cumulative traffic volumes were developed by determining volume growth between the base year and future year models from the Southern California Association of Governments (SCAG) travel demand model. Existing and future year model outputs were acquired for the roadway links in the study area. These link volumes were then used to calculate the link volume difference between the base year and future year. Future intersection turning movement volumes were then calculated using the Furnessing method, which is an iterative process to determine future intersection turning movement volumes based on existing intersection turning movements and future link volumes. The volumes were reviewed to ensure that there would be no decrease in volumes from Existing to the Cumulative year. There were exceptions, which included rerouting of future volumes on new roadways (e.g., Serapis Avenue connects across the railroad tracks just north of Perkins Street), which would account for a decrease in volumes on adjacent roadways. Except for those locations, volumes that should not decrease were conservatively assumed to equal the Existing volume. Cumulative peak hour volumes are presented in **Figure 11.**

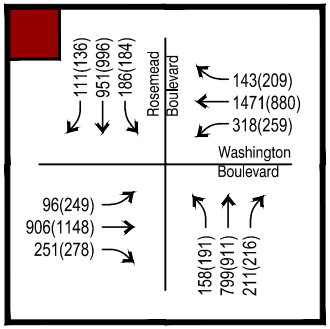
INTERSECTION LEVEL OF SERVICE

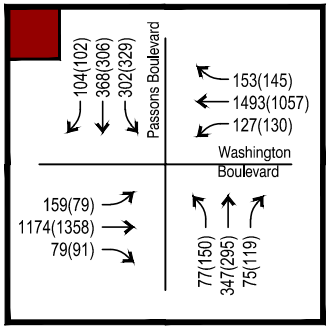
Cumulative volumes were evaluated at the study intersections. Results are presented in **Table 10**. Analysis sheets are provided in **Appendix C.**

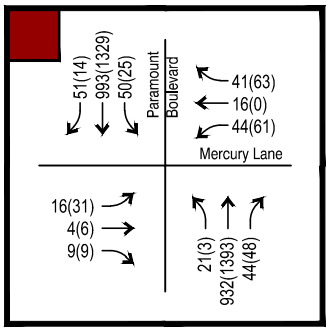


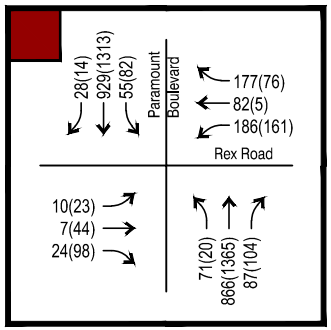


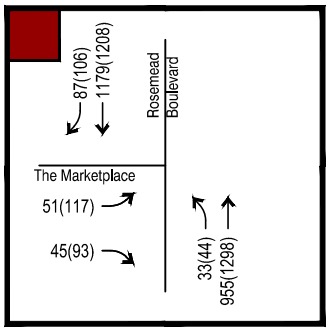


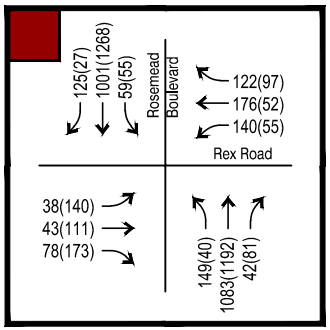












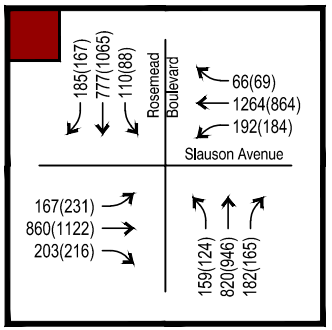


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FIGURE 11

CUMULATIVE PEAK HOUR TURNING MOVEMENT VOLUMES

P C C PLA B DARY

Table 10 – Cumulative and Cumulative Plus Project Peak Hour LOS Summary

#	Intersection	Jurisdiction	Control	Cumulative				Cumulative Plus Project					
				AM Peak		PM Peak		AM Peak			PM Peak		
				LOS	v/c	LOS	v/c	LOS	v/c	Var	LOS	v/c	Var
1	Paramount Boulevard / Washington Boulevard	City	Signal	E	0.98	F	1.00	**F**	**1.13**	**0.15**	**F**	**1.23**	**0.23**
2	Crossway Drive / Washington Boulevard	City	Signal	A	0.60	A	0.56	C	0.76	0.16	A	0.58	0.02
3	Rosemead Boulevard / Washington Boulevard	City	Signal	E	0.97	D	0.87	**F**	**1.06**	**0.09**	**F**	**1.01**	**0.14**
4	Passons Boulevard / Washington Boulevard	City	Signal	D	0.87	C	0.76	**E**	**0.91**	**0.04**	C	0.73	-0.03
5	Paramount Boulevard / Mercury Lane	City	Signal	A	0.49	A	0.57	A	0.60	0.11	B	0.67	0.10
6	Paramount Boulevard / Rex Road	City	Signal	B	0.66	C	0.79	B	0.68	0.02	C	0.75	-0.04
7	Rosemead Boulevard / The Marketplace	City	Signal	A	0.60	B	0.68	B	0.70	0.1	D	0.83	0.15
8	Rosemead Boulevard / Rex Road	City	Signal	B	0.68	B	0.66	C	0.77	0.09	C	0.78	0.12
9	Rosemead Boulevard / Slauson Avenue	City	Signal	D	0.85	D	0.87	D	0.90	0.05	D	0.89	0.02

Note: Project deficiencies are **BOLD and shaded**.

CUMULATIVE PLUS PROJECT

LANE GEOMETRY AND CONTROL

The project is not proposing any roadway improvements at any study intersection and therefore Cumulative Plus Project conditions assumed existing lane geometry as illustrated in **Figure 5**.

TRAFFIC VOLUMES

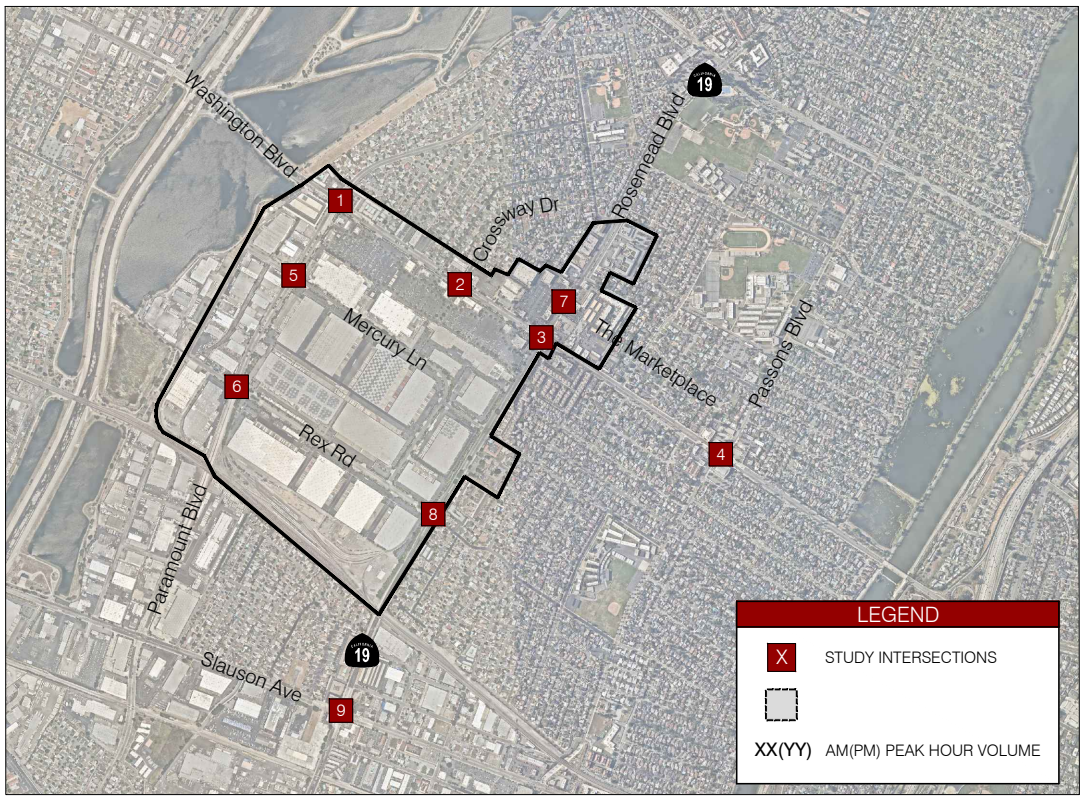
Similar to the Project trips in Existing plus Project, the project is estimated to generate a net +41.390 daily trips, +2,256 AM peak hour trips, and +3,320 PM peak hour trips. Cumulative Plus Project volumes were determined by adding the net project traffic, **Figure 9**, to the Cumulative conditions volume, **Figure 11**. Cumulative Plus Project peak hour volumes are shown in **Figure 12**.

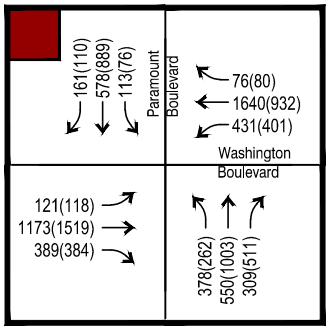
INTERSECTION LEVEL OF SERVICE

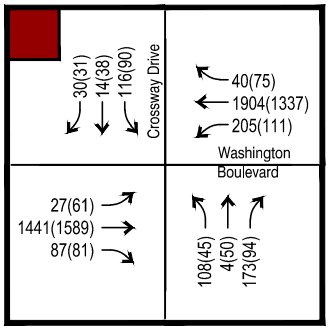
Cumulative Plus Project traffic conditions were evaluated at the study intersections. Results are presented in **Table 10**. All study intersections function within acceptable LOS standards under this analysis scenario except for the following intersections:

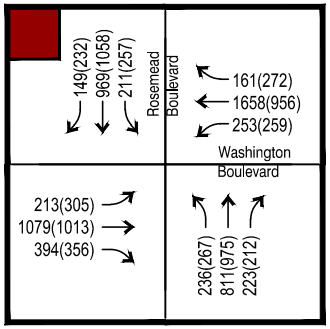
- Intersection #1 – Paramount Boulevard / Washington Boulevard (AM and PM Peak Hours)
- Intersection #3 – Rosemead Boulevard / Washington Boulevard (AM and PM Peak Hours)
- Intersection #4 – Passons Boulevard / Washington Boulevard (AM Peak Hour)
- Intersection #9 – Rosemead Boulevard / Slauson Avenue (AM Peak Hour)

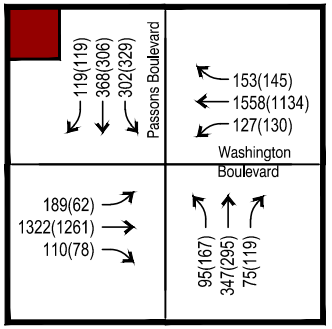
These are considered intersection deficiencies because the Project V/C increase exceeds the threshold listed in **Table 2**. Analysis sheets are provided in **Appendix C**.

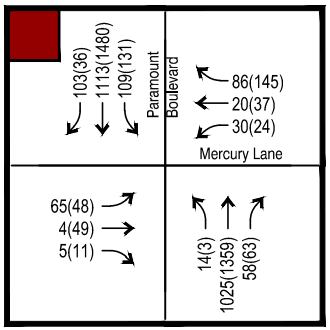


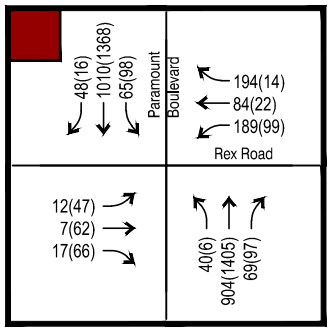


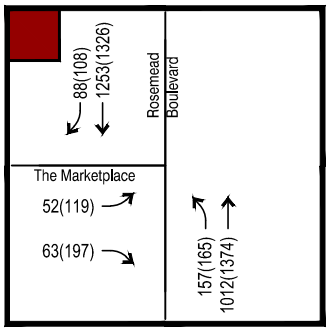


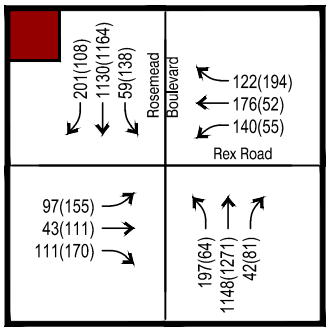












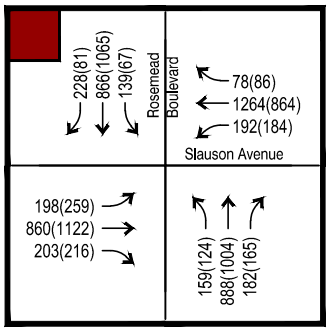


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FIGURE 12

CUMULATIVE PLUS PROJECT PEAK HOUR TURNING MOVEMENT VOLUMES

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6. ROADWAY SEGMENT OPERATIONS ANALYSIS

This chapter presents the results of the roadway analysis under Existing and Cumulative Conditions, with and without the Project, in the peak hours. The following roadway segments were analyzed:

1. Washington Boulevard between Paramount Boulevard and Rosemead Boulevard
2. Washington Boulevard between Rosemead Boulevard and Passons Boulevard
3. Rosemead Boulevard between Washington Boulevard and Balfour Street
4. Rosemead Boulevard between Washington Boulevard and Rex Road

Traffic volumes and the number of lanes in each direction were used to determine the segment v/c ratio. It is assumed that the capacity of the roadway segment is 1,400 vphpl. This assumption was based on the total capacity of a 50/50 directional split two-lane roadway, 2,800 passenger cars per hour, as specified in the *City of Pico Rivera Vehicle Miles Traveled (VMT) Transportation Study Guidelines.*

Table 11 and **Table 12** summarizes the Existing and Existing Plus Project roadway segment analysis in the AM and PM peak hours, respectively.

Table 13 and **Table 14** summarizes the Cumulative and Cumulative Plus Project roadway segment analysis in the AM and PM peak hours, respectively.

Based on the analysis, all roadway segments operate at an acceptable LOS.

Table 11 – Existing and Existing Plus Project AM Peak Hour Roadway Segment Summary

Location	Limits	# of Lanes	Capacity (vph)	Existing AM Peak Hour			Existing plus Project AM Peak Hour				
				Volume (vph)	LOS	V/C	Project Generated Trips	Volume (vph)	LOS	V/C	Δ V/C
Arterial Segment											
EB Washington Boulevard	Paramount Blvd to Rosemead Blvd	3	4,200	1,108	A	0.264	327	1,435	A	0.342	0.078
	Rosemead Blvd to Passons Blvd	3	4,200	1,316	A	0.313	210	1,526	A	0.363	0.050
WB Washington Boulevard	Rosemead Blvd to Passons Blvd	3	4,200	1,955	A	0.465	140	2,095	A	0.499	0.033
	Paramount Blvd to Rosemead Blvd	3	4,200	1,782	A	0.424	402	2,184	A	0.520	0.096
NB Rosemead Boulevard	Rex Rd to Washington Blvd	2	2,800	1,187	A	0.424	124	1,311	A	0.468	0.044
	Washington Blvd to Balfour St	2	2,800	1,015	A	0.363	181	1,196	A	0.427	0.065
SB Rosemead Boulevard	Washington Blvd to Balfour St	2	2,800	1,170	A	0.418	92	1,262	A	0.451	0.033
	Rex Rd to Washington Blvd	2	2,800	1,338	A	0.478	205	1,543	A	0.551	0.073

Note: Assumed capacity of 1,400 vehicle per hour per lane

Table 12 – Existing and Existing Plus Project PM Peak Hour Roadway Segment Summary

Location	Limits	# of Lanes	Capacity (vph)	Existing PM Peak Hour			Existing plus Project PM Peak Hour				
				Volume (vph)	LOS	V/C	Project Generated Trips	Volume (vph)	LOS	V/C	Δ V/C
Arterial Segment											
EB Washington Boulevard	Paramount Blvd to Rosemead Blvd	3	4,200	1,879	A	0.447	206	2,085	A	0.496	0.049
	Rosemead Blvd to Passons Blvd	3	4,200	1,586	A	0.378	-66	1,520	A	0.362	-0.016
WB Washington Boulevard	Rosemead Blvd to Passons Blvd	3	4,200	1,196	A	0.285	139	1,335	A	0.318	0.033
	Paramount Blvd to Rosemead Blvd	3	4,200	1,116	A	0.266	32	1,148	A	0.273	0.008
NB Rosemead Boulevard	Rex Rd to Washington Blvd	2	2,800	1,371	A	0.490	21	1,392	A	0.497	0.008
	Washington Blvd to Balfour St	2	2,800	1,270	A	0.454	197	1,467	A	0.524	0.070
SB Rosemead Boulevard	Washington Blvd to Balfour St	2	2,800	1,237	A	0.442	231	1,468	A	0.524	0.083
	Rex Rd to Washington Blvd	2	2,800	1,435	A	0.513	140	1,575	A	0.563	0.050

Note: Assumed capacity of 1,400 vehicle per hour per lane

Table 13 – Cumulative and Cumulative Plus Project AM Peak Hour Roadway Segment Summary

Location	Limits	# of Lanes	Capacity (vph)	Cumulative AM Peak Hour			Cumulative plus Project AM Peak Hour				
				Volume (vph)	LOS	V/C	Project Generated Trips	Volume (vph)	LOS	V/C	Δ V/C
Arterial Segment											
EB Washington Boulevard	Paramount Blvd to Rosemead Blvd	3	4,200	1,279	A	0.305	327	1,606	A	0.382	0.078
	Rosemead Blvd to Passons Blvd	3	4,200	1,412	A	0.336	210	1,622	A	0.386	0.050
WB Washington Boulevard	Rosemead Blvd to Passons Blvd	3	4,200	1,932	A	0.460	140	2,072	A	0.493	0.033
	Paramount Blvd to Rosemead Blvd	3	4,200	1,758	A	0.419	402	2,160	A	0.514	0.096
NB Rosemead Boulevard	Rex Rd to Washington Blvd	2	2,800	1,239	A	0.443	124	1,363	A	0.487	0.044
	Washington Blvd to Balfour St	2	2,800	1,038	A	0.371	181	1,219	A	0.435	0.065
SB Rosemead Boulevard	Washington Blvd to Balfour St	2	2,800	1,264	A	0.451	92	1,356	A	0.484	0.033
	Rex Rd to Washington Blvd	2	2,800	1,520	A	0.543	205	1,725	B	0.616	0.073

Note: Assumed capacity of 1,400 vehicle per hour per lane

Table 14 – Cumulative and Cumulative Plus Project PM Peak Hour Roadway Segment Summary

Location	Limits	# of Lanes	Capacity (vph)	Cumulative AM Peak Hour			Cumulative plus Project AM Peak Hour				
				Volume (vph)	LOS	V/C	Project Generated Trips	Volume (vph)	LOS	V/C	Δ V/C
Arterial Segment											
EB Washington Boulevard	Paramount Blvd to Rosemead Blvd	3	4,200	1,900	A	0.452	206	2,106	A	0.501	0.049
	Rosemead Blvd to Passons Blvd	3	4,200	1,548	A	0.369	-66	1,482	A	0.353	-0.016
WB Washington Boulevard	Rosemead Blvd to Passons Blvd	3	4,200	1,348	A	0.321	139	1,487	A	0.354	0.033
	Paramount Blvd to Rosemead Blvd	3	4,200	1,255	A	0.299	32	1,287	A	0.306	0.008
NB Rosemead Boulevard	Rex Rd to Washington Blvd	2	2,800	1,422	A	0.508	21	1,443	A	0.515	0.007
	Washington Blvd to Balfour St	2	2,800	1,412	A	0.504	197	1,609	A	0.575	0.070
SB Rosemead Boulevard	Washington Blvd to Balfour St	2	2,800	1,316	A	0.470	231	1,547	A	0.553	0.083
	Rex Rd to Washington Blvd	2	2,800	1,533	A	0.548	140	1,673	A	0.598	0.050

Note: Assumed capacity of 1,400 vehicle per hour per lane

7. SITE PEDESTRIAN, BICYCLE, AND TRANSIT CIRCULATION

This section discusses pedestrian facilities, bicycle facilities, and transit recommendations for the project. At this time, the Washington and Rosemead TOD Specific Plan is a preliminary plan and therefore many of the project components are undefined. Therefore, this chapter will make recommendations for pedestrian, bicycle, and transit circulation.

PEDESTRIAN FACILITIES

The Project should construct sidewalks within the Specific Plan and along its border to ensure there are no gaps in the pedestrian network. New sidewalks should connect and conform to existing sidewalks and crosswalks adjacent the site to allow residents, employees, and patrons access to nearby transit facilities, as well as residential and commercial uses surrounding the project site. In addition, the project should not conflict with City and other local plans, ordinances, or policies as it relates to pedestrian facilities that would result in a significant impact.

BICYCLE FACILITIES

The Project should provide bicycle connectivity within the Specific Plan and along its border to ensure there are no gaps in the bicycle network. New bicycle facilities should connect and conform to existing bicycle facilities adjacent the site to allow residents, employees, and patrons access to nearby transit facilities, as well as residential and commercial uses surrounding the project site. In addition, the project should not conflict with City and other local plans, ordinances, or policies as it relates to bicycle facilities that would result in a significant impact.

TRANSIT

The Project should provide transit connectivity between the Specific Plan and the adjacent transit network. This project will be planned around the future Rosemead transit station. The project should provide pedestrian and bicycle connectivity to this future transit station. In addition, the project should not conflict with City and other local plans, ordinances, or policies as it relates to transit facilities that would result in a significant impact.

8. CONCLUSION

This section summarizes the results and recommendations of this TIA.

PROJECT IMPACTS AND MITIGATIONS

As discussed previously in Chapter 4, the proposed Project is to be located within a ½-mile of the future Eastside Transit Corridor Phase 2 Project. Since the project is planned to be transit-oriented development that is centered around the future Rosemead transit station along the Eastside Transit Corridor, this project satisfies the initial transit proximity criteria. In addition, the project will have a FAR of 0.75 or greater, will be consistent with the SCS, provide less than or equal to the required City parking, and does not replace affordable housing. Therefore, the proposed project will meet the VMT screening criteria and have a **less than significant impact** for transportation. No mitigation is required.

PROJECT DEFICIENCIES

LOS DEFICIENCIES

In cases when the project traffic increases the intersection v/c by the operational deficiency thresholds identified in **Table 2**, this is considered a project deficiency. Based on the results of the traffic analysis, the following intersection project deficiencies are noted:

Project LOS Deficiency: Paramount Boulevard/Washington Boulevard (intersection #1)

The intersection of Paramount Boulevard and Washington Boulevard will have an LOS deficiency in the Existing Plus Project and Cumulative Plus Project for the AM and PM peak hours.

Existing Plus Project

In the Existing Plus Project conditions, the intersection of Paramount Boulevard and Washington Boulevard will operate at an unacceptable LOS F with a v/c ratio of 1.14 in the AM peak hour. The intersection operates at an unacceptable LOS E with a v/c ratio of 0.98 without the project in the AM peak hour, and the project increases the v/c ratio by 0.16. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

In addition, the intersection operates at an unacceptable LOS F with v/c ratio of 1.19 in the PM peak hour. The intersection operates at an unacceptable LOS E with a v/c ratio of 0.95 without the project in the PM peak hour, and the project increases the v/c ratio by 0.24. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

Deficiency Improvement. Adding an additional westbound left-turn lane, adding an exclusive eastbound right-turn lane, and optimizing signal timings would improve the v/c ratio to 0.95 for the AM peak hour and 0.95 for the PM peak hour in the Existing Plus Project condition. With the current roadway width of approximately 88 feet, the proposed configuration of three eastbound through lanes, two westbound left-turn lanes, two westbound through lanes, and one westbound shared through-right-turn lane would require additional roadway width. Assuming 12-foot lanes because Washington Boulevard is classified as a Primary Roadway, which according to the Pico Rivera Muni Code, has a minimum lane width of 12 feet, a total roadway width of 100 feet would be required (including a 4-foot median). In addition, significant traffic improvements are anticipated with the E-Line extension. The design of the E-Line extension is uncertain at this point and therefore if ROW were needed, coordination with Metro is required. This project should

work with the E-Line extension to determine the ultimate roadway width needed to accommodate all improvements.

Analysis sheets can be found in **Appendix C.**

Cumulative Plus Project

In the Cumulative Plus Project conditions, the intersection of Paramount Boulevard and Washington Boulevard will operate at an unacceptable LOS F with a v/c ratio of 1.13 in the AM peak hour. The intersection operates at an unacceptable LOS E with a v/c ratio of 0.98 without the project in the AM peak hour, and the project increases the v/c ratio by 0.15. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

In addition, the intersection operates at an unacceptable LOS F with v/c ratio of 1.23 in the PM peak hour. The intersection operates at an unacceptable LOS F with a v/c ratio of 1.00 without the project in the PM peak hour, and the project increases the v/c ratio by 0.23. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

Deficiency Improvement. Adding an additional westbound left-turn lane would improve the v/c ratio to 0.98 for the AM peak hour and 0.98 for the PM peak hour in the Cumulative Plus Project condition. Similar to the Existing plus Project improvement, this project should work with the E-Line extension to determine the ultimate roadway width needed to accommodate all improvements. Analysis sheets can be found in **Appendix C.**

Project LOS Deficiency: Rosemead Boulevard/Washington Boulevard (intersection #3)

The intersection of Rosemead Boulevard and Washington Boulevard will have an LOS deficiency in the Existing Plus Project and Cumulative Plus Project for the AM and PM peak hours.

Existing Plus Project

In the Existing Plus Project conditions, the intersection of Paramount Boulevard and Washington Boulevard will operate at an unacceptable LOS F with a v/c ratio of 1.17 in the AM peak hour. The intersection operates at an unacceptable LOS E with a v/c ratio of 0.98 without the project in the AM peak hour, and the project increases the v/c ratio by 0.19. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

In addition, the intersection operates at an unacceptable LOS E with v/c ratio of 0.98 in the PM peak hour. The intersection operates at an acceptable LOS D with a v/c ratio of 0.87 without the project in the PM peak hour, and the project increases the v/c ratio by 0.11. Since the v/c ratio increase is equal to or more than 0.02, this is a project deficiency.

Deficiency Improvement. Because the cycle length cannot be greater than 130 seconds, adding an additional southbound left-turn lane, eastbound left turn lane, and westbound left-turn lane, as well as exclusive right-turn lanes for all approaches would improve the v/c ratio to 0.96 for the AM peak hour and 0.78 for the PM peak in the Existing Plus Project condition.

With the current roadway width of approximately 91 feet for the eastbound and westbound approaches, the proposed configuration of three opposing through lanes, two approach left-turn lanes, three approach through lanes, and one approach right-turn lane would require additional roadway width. Assuming 12-foot lanes because Washington Boulevard is classified as a Primary Roadway, which according to the Pico

Rivera Muni Code, has a minimum lane width of 12 feet, a total roadway width of 112 feet would be required (including a 4-foot median). In addition, significant traffic improvements are anticipated with the E-Line extension. The design of the E-Line extension is uncertain at this point and therefore if ROW were needed, coordination with Metro is required. This project should work with the E-Line extension to determine the ultimate roadway width needed to accommodate all improvements.

For the southbound and northbound approaches, the current roadway width is approximately 85 feet. The proposed configuration of three opposing through lanes, two approach left-turn lanes, three approach through lanes, and one approach right-turn lane would require additional roadway width. Assuming 12-foot lanes, a total roadway width of 112 feet would be required (including a 4-foot median). This project should work with the City to determine the ultimate roadway width needed to accommodate all improvements.

Analysis sheets can be found in **Appendix C.**

Cumulative Plus Project

In the Cumulative Plus Project conditions, the intersection of Paramount Boulevard and Washington Boulevard will operate at an unacceptable LOS F with a v/c ratio of 1.06 in the AM peak hour. The intersection operates at an unacceptable LOS E with a v/c ratio of 0.97 without the project in the AM peak hour, and the project increases the v/c ratio by 0.09. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

In addition, the intersection operates at an unacceptable LOS F with v/c ratio of 1.01 in the PM peak hour. The intersection operates at an acceptable LOS D with a v/c ratio of 0.87 without the project in the PM peak hour, and the project increases the v/c ratio by 0.14. Since the v/c ratio increase is equal to or more than 0.02, this is a project deficiency.

Deficiency Improvement. Because the cycle length cannot be greater than 130 seconds, adding an additional southbound left-turn lane, eastbound left turn lane, and westbound left-turn lane, as well as exclusive right-turn lanes for all approaches would improve the v/c ratio to 0.91 for the AM peak hour and 0.80 for the PM peak hour in the Cumulative Plus Project condition. Similar to the Existing plus Project improvement, this project should work with the City to determine the ultimate roadway width needed to accommodate all improvements. Analysis sheets can be found in **Appendix C.**

Project LOS Deficiency: Passons Boulevard/Washington Boulevard (intersection #4)

The intersection of Passons Boulevard and Washington Boulevard will have an LOS deficiency in the Existing Plus Project and Cumulative Plus Project for the AM peak hour.

Existing Plus Project

In the Existing Plus Project conditions, the intersection of Passons Boulevard and Washington Boulevard will operate at an unacceptable LOS E with a v/c ratio of 0.98 in the AM peak hour. The intersection operates at an unacceptable LOS E with a v/c ratio of 0.95 without the project in the AM peak hour, and the project increases the v/c ratio by 0.03. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

Deficiency Improvement. Adding exclusive eastbound and westbound right-turn lanes would improve the v/c ratio to 0.93 for the AM peak hour in the Existing Plus Project condition. With the current roadway width of approximately 78 feet, the proposed configuration of three opposing through lanes, one approaching left-

turn lane, three approach through lanes, and one approach right-turn lane would require additional roadway width. Assuming 12-foot lanes because Washington Boulevard is classified as a Primary Roadway, which according to the Pico Rivera Muni Code, has a minimum lane width of 12 feet, a total roadway width of 100 feet would be required (including a 4-foot median). Note this improvement may be excessive since the roadway would need to be significantly widened with a minor increase in v/c. In addition, the project is a transit-oriented development, and therefore, roadway improvements should prioritize multi-modal improvements, rather than vehicle throughput. Therefore, this intersection should be monitored and if the intersection is over capacity, the project should consider transportation demand management measures to reduce the traffic added by the project. Analysis sheets can be found in **Appendix C.**

Cumulative Plus Project

In the Cumulative Plus Project conditions, the intersection of Paramount Boulevard and Washington Boulevard will operate at an unacceptable LOS E with a v/c ratio of 0.91 in the AM peak hour. The intersection operates at an acceptable LOS D with a v/c ratio of 0.87 without the project in the AM peak hour, and the project increases the v/c ratio by 0.04. Since the v/c ratio increase is equal to or more than 0.01, this is a project deficiency.

Deficiency Improvement. Adding exclusive eastbound and westbound right-turn lanes would improve the v/c ratio to 0.87 for the AM peak hour in the Cumulative Plus Project condition. Similar to the Existing plus Project improvement, improvement may be excessive. Therefore, this intersection should be monitored and if the intersection is over capacity, the project should consider transportation demand management measures to reduce the traffic added by the project. Analysis sheets can be found in **Appendix C.**

Project LOS Deficiency: Rosemead Boulevard / Slauson Avenue (intersection #9)

The intersection of Rosemead Boulevard and Slauson Avenue will have an LOS deficiency in the Existing Plus Project and Cumulative Plus Project for the AM peak hour.

Existing Plus Project

In the Existing Plus Project conditions, the intersection of Rosemead Boulevard and Slauson Avenue will operate at an unacceptable LOS E with a v/c ratio of 0.93 in the AM peak hour. The intersection operates at an acceptable LOS D with a v/c ratio of 0.86 without the project in the AM peak hour, and the project increases the v/c ratio by 0.07. Since the v/c ratio increase is equal to or more than 0.02, this is a project deficiency.

Deficiency Improvement. No improvement is recommended as any recommended improvement would result in widening Rosemead Boulevard or Slauson Avenue. Widening the roadway may be excessive since the project is a transit-oriented development, and therefore, roadway improvements should prioritize multi-modal improvements, rather than vehicle throughput. Therefore, this intersection should be monitored and if the intersection is over capacity, the project should consider transportation demand management measures to reduce the traffic added by the project. In addition, the analysis shown that in the Cumulative plus Project condition the intersection operates at an acceptable LOS D.

Cumulative Plus Project

In the Cumulative Plus Project conditions, the intersection of Rosemead Boulevard and Slauson Avenue will operate at an acceptable LOS D with a v/c ratio of 0.90 in the AM peak hour. The intersection operates at an acceptable LOS D with a v/c ratio of 0.85 without the project in the AM peak hour, and the project

increases the v/c ratio by 0.05. Since the v/c ratio increase is equal to or more than 0.02, this is a project deficiency.

Deficiency Improvement. Similar to the Existing plus Project improvement, no improvements were recommended as any recommended improvement would result in widening Rosemead Boulevard or Slauson Avenue and may be excessive since the intersection operates at an acceptable LOS D with the addition of Project traffic.

ROADWAY SEGMENT DEFICIENCIES

In cases when the addition of project trips causes an acceptably operating roadway segment to operate at an unacceptable LOS F, a roadway segment project deficiency was identified. Based on the results of the traffic analysis, no roadway segment project deficiencies are noted.

APPENDIX

A – EXISTING TRIP GENERATION

B – PROPOSED TRIP GENERATION

C – SYNCHRO OUTPUTS

A – EXISTING TRIP GENERATION

Appendix A - Existing Trip Generation

Land Use	ITE Code	Size	Unit	Rate/Eqn?	Daily	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
Trip Generation											
Trip Generation Before Reductions											
General Light Industrial	110	28.274	KSF	Rate	138	21	18	3	18	3	15
Manufacturing	140	934.968	KSF	Rate	4,441	636	484	152	692	215	477
Warehousing	150	2672.937	KSF	Rate	4,571	454	349	105	481	134	347
Mini-Warehouse	151	58.916	KSF	Rate	85	5	3	2	9	4	5
Single-Family Detached Housing	210	1	DU	Rate	9	1	0	1	1	1	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	330	DU	Rate	2,224	132	32	100	169	107	62
Assisted Living	254	61	Beds	Rate	159	11	7	4	15	6	9
Motel	320	199	Rooms	Rate	667	70	26	44	72	39	33
Nursing Home	620	10.331	Beds	Rate	32	1	1	0	1	0	1
General Office Building	710	35.825	KSF	Rate	388	54	48	6	52	9	43
Building Materials and Lumber Store	812	169.166	KSF	Rate	2,884	269	167	102	381	175	206
Shopping Center (>150k)	820	577.663	KSF	Rate	21,379	485	301	184	1,964	942	1,022
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	2,951	128	77	51	357	179	178
Liquor Store	899	1.854	KSF	Rate	199	1	1	0	31	16	15
Walk-in Bank	911	2.85	KSF	Rate	286	28	16	12	35	15	20
Drive-in Bank	912	7.81	KSF	Rate	784	78	45	33	164	82	82
Fast Casual Restaurant	930	4.634	KSF	Rate	450	7	4	3	58	32	26
Fine Dining Restaurant	931	9.448	KSF	Rate	792	7	4	3	74	50	24
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	1,119	100	55	45	94	57	37
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	2,034	194	99	95	144	75	69
Convenience Store/Gas Station	945	12	VFP	Rate	3,181	193	97	96	221	111	110
Total Gross Trips					48,773	2,875	1,834	1,041	5,033	2,252	2,781
Trip Generation for Block 1											
General Light Industrial	110	28.274	KSF	Rate	138	21	18	3	18	3	15
Manufacturing	140	560.565	KSF	Rate	2,663	381	290	91	415	129	286
Warehousing	150	220.353	KSF	Rate	377	37	28	9	40	11	29
Mini-Warehouse	151	58.916	KSF	Rate	85	5	3	2	9	4	5
Total Block 1					3,263	444	339	105	482	147	335
Trip Generation for Block 2											
Manufacturing	140	374.403	KSF	Rate	1,778	255	194	61	277	86	191
Warehousing	150	2452.584	KSF	Rate	4,194	417	321	96	441	123	318
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	7	DU	Rate	47	3	1	2	4	3	1
Motel	320	49	Rooms	Rate	164	17	6	11	18	10	8
Nursing Home	620	10.331	Beds	Rate	32	1	1	0	1	0	1
Building Materials and Lumber Store	812	169.166	KSF	Rate	2,884	269	167	102	381	175	206
Shopping Center (>150k)	820	486.205	KSF	Rate	17,994	408	253	155	1,653	793	860
Walk-in Bank	911	2.85	KSF	Rate	286	28	16	12	35	15	20
Total Block 2					27,379	1,398	959	439	2,810	1,205	1,605
Trip Generation for Block 3											
Single-Family Detached Housing	210	1	DU	Rate	9	1	0	1	1	1	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	323	DU	Rate	2,177	129	31	98	165	104	61
Assisted Living	254	61	Beds	Rate	159	11	7	4	15	6	9
Motel	320	150	Rooms	Rate	503	53	20	33	54	29	25
General Office Building	710	35.825	KSF	Rate	388	54	48	6	52	9	43
Building Materials and Lumber Store	812	0	KSF	Rate	0	0	0	0	0	0	0
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	2,951	128	77	51	357	179	178
Liquor Store	899	1.854	KSF	Rate	199	1	1	0	31	16	15
Drive-in Bank	912	7.81	KSF	Rate	784	78	45	33	164	82	82
Fast Casual Restaurant	930	4.634	KSF	Rate	450	7	4	3	58	32	26
Fine Dining Restaurant	931	9.448	KSF	Rate	792	7	4	3	74	50	24
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	1,119	100	55	45	94	57	37
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	2,034	194	99	95	144	75	69
Convenience Store/Gas Station	945	12	VFP	Rate	3,181	193	97	96	221	111	110
Total Block 3					18,131	1,033	536	497	1,741	900	841
Trip Generation for All Blocks					**48,773**	**2,875**	**1,834**	**1,041**	**5,033**	**2,252**	**2,781**

Trips Subject to Internal Capture (All Blocks)											
Office					9,623	1,170	902	268	1,252	365	887
Retail					31,664	1,182	704	478	3,153	1,520	1,633
Restaurant					4,395	308	162	146	370	214	156
Cinema/Entertainment					0	0	0	0	0	0	0
Residential					2,233	133	32	101	170	108	62
Hotel					667	70	26	44	72	39	33
Office Internal Trip Reductions					1,925	222	110	112	170	40	130
Retail Internal Trip Reductions					4,591	201	102	99	369	217	152
Restaurant Internal Trip Reductions					2,494	191	123	68	187	90	97
Cinema/Entertainment Internal Trip Reductions					0	0	0	0	0	0	0
Residential Internal Trip Reductions					815	26	3	23	114	71	43
Hotel Internal Trip Reductions					302	38	1	37	36	20	16
Total Internal Capture Reductions					**10,127**	**678**	**339**	**339**	**876**	**438**	**438**
Total Internal Capture by ITE LUC											
General Light Industrial	110	28.274	KSF	Rate	28	3	2	1	2	0	2
Manufacturing	140	934.968	KSF	Rate	888	123	59	64	94	24	70
Warehousing	150	2672.937	KSF	Rate	914	87	43	44	66	15	51
Mini-Warehouse	151	58.916	KSF	Rate	17	1	0	1	1	0	1
Single-Family Detached Housing	210	1	DU	Rate	3	0	0	0	1	1	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	330	DU	Rate	812	26	3	23	113	70	43
Assisted Living	254	61	Beds	Rate	0	0	0	0	0	0	0
Motel	320	199	Rooms	Rate	302	38	1	37	36	20	16
Nursing Home	620	10.331	Beds	Rate	0	0	0	0	0	0	0
General Office Building	710	35.825	KSF	Rate	78	9	6	3	7	1	6
Building Materials and Lumber Store	812	169.166	KSF	Rate	418	45	24	21	44	25	19
Shopping Center (>150k)	820	577.663	KSF	Rate	3,100	82	44	38	229	134	95
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	428	22	11	11	43	26	17
Liquor Store	899	1.854	KSF	Rate	29	0	0	0	3	2	1
Walk-in Bank	911	2.85	KSF	Rate	41	4	2	2	4	2	2
Drive-in Bank	912	7.81	KSF	Rate	114	14	7	7	20	12	8
Fast Casual Restaurant	930	4.634	KSF	Rate	255	4	3	1	29	13	16
Fine Dining Restaurant	931	9.448	KSF	Rate	449	4	3	1	36	21	15
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	635	63	42	21	47	24	23
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	1,155	119	75	44	75	32	43
Convenience Store/Gas Station	945	12	VFP	Rate	461	34	14	20	26	16	10
Total					10,127	678	339	339	876	438	438
Trip Generation after Internal Capture for Block 1											
General Light Industrial	110	28.274	KSF	Rate	110	18	16	2	16	3	13
Manufacturing	140	28.274	KSF	Rate	2,131	308	255	53	359	115	244
Warehousing	150	560.565	KSF	Rate	302	29	24	5	35	10	25
Mini-Warehouse	151	220.353	KSF	Rate	68	4	3	1	8	4	4
Single-Family Detached Housing	210	58.916	DU	Rate	0	0	0	0	0	0	0
Total Block 1					2,611	359	298	61	418	132	286
Trip Generation after Internal Capture for Block 2											
Manufacturing	140	374.403	KSF	Rate	1,422	205	170	35	239	76	163
Warehousing	150	2452.584	KSF	Rate	3,355	338	282	56	380	109	271
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	7	DU	Rate	30	3	1	2	2	2	0
Motel	320	49	Rooms	Rate	90	8	6	2	9	5	4
Nursing Home	620	10.331	Beds	Rate	32	1	1	0	1	0	1
Building Materials and Lumber Store	812	169.166	KSF	Rate	2,466	224	143	81	337	150	187
Shopping Center (>150k)	820	486.205	KSF	Rate	15,385	339	216	123	1,460	680	780
Walk-in Bank	911	2.85	KSF	Rate	245	24	14	10	31	13	18
Total Block 2					23,025	1,142	833	309	2,459	1,035	1,424
Trip Generation after Internal Capture for Block 3											
Single-Family Detached Housing	210	1	DU	Rate	6	1	0	1	0	0	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	323	DU	Rate	1,382	103	28	75	54	35	19
Assisted Living	254	61	Beds	Rate	159	11	7	4	15	6	9
Motel	320	150	Rooms	Rate	275	24	19	5	27	14	13
Nursing Home	620	0	Beds	Rate	0	0	0	0	0	0	0
General Office Building	710	35.825	KSF	Rate	310	45	42	3	45	8	37
Shopping Center (>150k)	820	91.458	KSF	Rate	2,894	64	41	23	275	128	147
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	2,523	106	66	40	314	153	161
Liquor Store	899	1.854	KSF	Rate	170	1	1	0	28	14	14
Drive-in Bank	912	7.81	KSF	Rate	670	64	38	26	144	70	74
Fast Casual Restaurant	930	4.634	KSF	Rate	195	3	1	2	29	19	10
Fine Dining Restaurant	931	9.448	KSF	Rate	343	3	1	2	38	29	9
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	484	37	13	24	47	33	14
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	879	75	24	51	69	43	26
Convenience Store/Gas Station	945	12	VFP	Rate	2,720	159	83	76	195	95	100
Total Block 3					13,010	696	364	332	1,280	647	633
Trip Generation for All Blocks after Internal Capture					**38,646**	**2,197**	**1,495**	**702**	**4,157**	**1,814**	**2,343**
Percent Reductions due to Internal Capture					**21%**	**24%**	**18%**	**33%**	**17%**	**19%**	**16%**

Transit Reduction											
Trip Generation for Block 1 after Transit Reduction											
General Light Industrial	110	28.274	KSF	Rate	99	16	14	2	15	3	12
Manufacturing	140	560.565	KSF	Rate	1,918	278	230	48	324	104	220
Warehousing	150	220.353	KSF	Rate	272	27	22	5	32	9	23
Mini-Warehouse	151	58.916	KSF	Rate	61	4	3	1	8	4	4
Total Block 1					2,350	325	269	56	379	120	259
Trip Generation for Block 2 after Transit Reduction											
Manufacturing	140	374.403	KSF	Rate	1,280	185	153	32	215	68	147
Single-Family Detached Housing	210	0	DU	Rate	0	0	0	0	0	0	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	7	DU	Rate	27	3	1	2	2	2	0
Motel	320	49	Rooms	Rate	81	7	5	2	9	5	4
Nursing Home	620	10.331	Beds	Rate	29	1	1	0	1	0	1
Building Materials and Lumber Store	812	169.166	KSF	Rate	2,219	202	129	73	303	135	168
Shopping Center (>150k)	820	486.205	KSF	Rate	13,847	305	194	111	1,314	612	702
Walk-in Bank	911	2.85	KSF	Rate	221	22	13	9	28	12	16
Total Block 2					20,724	1,029	750	279	2,214	932	1,282
Trip Generation for Block 3 after Transit Reduction											
Single-Family Detached Housing	210	1	DU	Rate	5	1	0	1	0	0	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	323	DU	Rate	1,244	93	25	68	49	32	17
Assisted Living	254	61	Beds	Rate	143	10	6	4	13	5	8
Motel	320	150	Rooms	Rate	248	22	17	5	25	13	12
General Office Building	710	35.825	KSF	Rate	279	41	38	3	40	7	33
Building Materials and Lumber Store	812	0	KSF	Rate	0	0	0	0	0	0	0
Shopping Center (>150k)	820	91.458	KSF	Rate	2,605	58	37	21	247	115	132
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	2,271	95	59	36	283	138	145
Liquor Store	899	1.854	KSF	Rate	153	1	1	0	26	13	13
Drive-in Bank	912	7.81	KSF	Rate	603	57	34	23	130	63	67
Fast Casual Restaurant	930	4.634	KSF	Rate	176	3	1	2	26	17	9
Fine Dining Restaurant	931	9.448	KSF	Rate	309	3	1	2	34	26	8
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	436	34	12	22	43	30	13
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	791	68	22	46	62	39	23
Convenience Store/Gas Station	945	12	VFP	Rate	2,448	143	75	68	176	86	90
Total Block 3					11,711	629	328	301	1,154	584	570
Trip Generation for All Blocks after Transit Reduction					**34,785**	**1,983**	**1,347**	**636**	**3,747**	**1,636**	**2,111**
Percent Reductions due to Transit Reduction					**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**
Pass-By Reduction											
Trip Generation for Block 1 after Pass-By Reduction											
General Light Industrial	110	28.274	KSF	Rate	99	16	14	2	15	3	12
Manufacturing	140	560.565	KSF	Rate	1,918	278	230	48	324	104	220
Warehousing	150	220.353	KSF	Rate	272	27	22	5	32	9	23
Mini-Warehouse	151	58.916	KSF	Rate	61	4	3	1	8	4	4
Total Block 1					2,350	325	269	56	379	120	259
Trip Generation for Block 2 after Pass-By Reduction											
Manufacturing	140	374.403	KSF	Rate	1,280	185	153	32	215	68	147
Warehousing	150	2452.584	KSF	Rate	3,020	304	254	50	342	98	244
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	7	DU	Rate	27	3	1	2	2	2	0
Motel	320	49	Rooms	Rate	81	7	5	2	9	5	4
Nursing Home	620	10.331	Beds	Rate	29	1	1	0	1	0	1
Building Materials and Lumber Store	812	169.166	KSF	Rate	1,931	202	129	73	224	100	124
Shopping Center (>150k)	820	486.205	KSF	Rate	12,324	305	194	111	1,025	477	548
Walk-in Bank	911	2.85	KSF	Rate	221	22	13	9	28	12	16
Total Block 2					18,913	1,029	750	279	1,846	762	1,084
Trip Generation for Block 3 after Pass-By Reduction											
Single-Family Detached Housing	210	1	DU	Rate	5	1	0	1	0	0	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	323	DU	Rate	1,244	93	25	68	49	32	17
Assisted Living	254	61	Beds	Rate	143	10	6	4	13	5	8
Motel	320	150	Rooms	Rate	248	22	17	5	25	13	12
General Office Building	710	35.825	KSF	Rate	279	41	38	3	40	7	33
Shopping Center (>150k)	820	91.458	KSF	Rate	2,318	58	37	21	193	90	103
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	1,817	95	59	36	170	83	87
Liquor Store	899	1.854	KSF	Rate	153	1	1	0	26	13	13
Drive-in Bank	912	7.81	KSF	Rate	603	57	34	23	130	63	67
Fast Casual Restaurant	930	4.634	KSF	Rate	138	3	1	2	15	10	5
Fine Dining Restaurant	931	9.448	KSF	Rate	241	3	1	2	19	15	4
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	342	34	12	22	24	17	7
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	376	34	11	23	28	18	10
Convenience Store/Gas Station	945	12	VFP	Rate	734	43	23	20	53	26	27
Total Block 3					8,641	495	265	230	785	392	393
Trip Generation for All Blocks after Pass-by Reduction					**29,904**	**1,849**	**1,284**	**565**	**3,010**	**1,274**	**1,736**
Percent Reductions due to Pass-by Reduction					**14%**	**7%**	**5%**	**11%**	**20%**	**22%**	**18%**

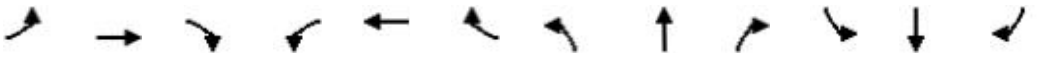
Net New Trip Generation After Reductions											
Trip Generation for Block 1											
General Light Industrial	110	28.274	KSF	Rate	99	16	14	2	15	3	12
Manufacturing	140	560.565	KSF	Rate	1,918	278	230	48	324	104	220
Warehousing	150	220.353	KSF	Rate	272	27	22	5	32	9	23
Mini-Warehouse	151	58.916	KSF	Rate	61	4	3	1	8	4	4
Single-Family Detached Housing	210	0	DU	Rate	0	0	0	0	0	0	0
Total Block 1					2,350	325	269	56	379	120	259
Trip Generation for Block 2											
Manufacturing	140	374.403	KSF	Rate	1,280	185	153	32	215	68	147
Warehousing	150	2452.584	KSF	Rate	3,020	304	254	50	342	98	244
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	7	DU	Rate	27	3	1	2	2	2	0
Motel	320	49	Rooms	Rate	81	7	5	2	9	5	4
Nursing Home	620	10.331	Beds	Rate	29	1	1	0	1	0	1
Building Materials and Lumber Store	812	169.166	KSF	Rate	1,931	202	129	73	224	100	124
Shopping Center (>150k)	820	486.205	KSF	Rate	12,324	305	194	111	1,025	477	548
Walk-in Bank	911	2.85	KSF	Rate	221	22	13	9	28	12	16
Total Block 2					18,913	1,029	750	279	1,846	762	1,084
Trip Generation for Block 3											
Single-Family Detached Housing	210	1	DU	Rate	5	1	0	1	0	0	0
Multi-Family Housing (Low-Rise)(Not Close to Rail Transit)	220	323	DU	Rate	1,244	93	25	68	49	32	17
Assisted Living	254	61	Beds	Rate	143	10	6	4	13	5	8
Motel	320	150	Rooms	Rate	248	22	17	5	25	13	12
General Office Building	710	35.825	KSF	Rate	279	41	38	3	40	7	33
Shopping Center (>150k)	820	91.458	KSF	Rate	2,318	58	37	21	193	90	103
Strip Retail Plaza (<40k)	822	54.192	KSF	Rate	1,817	95	59	36	170	83	87
Liquor Store	899	1.854	KSF	Rate	153	1	1	0	26	13	13
Drive-in Bank	912	7.81	KSF	Rate	603	57	34	23	130	63	67
Fast Casual Restaurant	930	4.634	KSF	Rate	138	3	1	2	15	10	5
Fine Dining Restaurant	931	9.448	KSF	Rate	241	3	1	2	19	15	4
High-Turnover (Sit-Down) Restaurant	932	10.44	KSF	Rate	342	34	12	22	24	17	7
Fast-Food Restaurant with Drive-Through Window	934	4.351	KSF	Rate	376	34	11	23	28	18	10
Convenience Store/Gas Station	945	12	VFP	Rate	734	43	23	20	53	26	27
Total Block 3					8,641	495	265	230	785	392	393
Trip Generation for All Blocks After Reductions					**29,904**	**1,849**	**1,284**	**565**	**3,010**	**1,274**	**1,736**
Percent Reductions					**39%**	**36%**	**30%**	**46%**	**40%**	**43%**	**38%**

B – PROPOSED TRIP GENERATION

Land Use	ITE Code	Size	Unit	Rate/Eqn?	Daily	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
Trip Generation											
Trip Generation Before Reductions											
Multifamily Residential (Not Close to Transit)	221	2,336	DU	Rate	10,605	864	199	665	911	556	355
Retail (Shopping Center >150k)	820	2,294.96	KSF	Rate	84,936	1,928	1,195	733	7,802	3,745	4,057
Office	710	967.90	KSF	Rate	10,492	1,471	1,294	177	1,394	237	1,157
General Light Industrial	110	2,024.67	KSF	Rate	9,860	1,498	1,318	180	1,316	184	1,132
General Industrial	130	602.22	KSF	Rate	2,029	205	166	39	205	45	160
Total Gross Trips					117,922	5,966	4,172	1,794	11,628	4,767	6,861
Trip Generation for Block 1											
Retail (Shopping Center >150k)	820	320.55	KSF	Rate	11,864	269	167	102	1,090	523	567
Office	710	24.21	KSF	Rate	262	37	33	4	35	6	29
Industrial	130	602.22	KSF	Rate	2,029	205	166	39	205	45	160
Total Block 1					14,155	511	366	145	1,330	574	756
Trip Generation for Block 2											
Multifamily Residential	221	900	DU	Rate	4,086	333	77	256	351	214	137
Retail (Shopping Center >150k)	820	1,422.92	KSF	Rate	52,662	1,195	741	454	4,838	2,322	2,516
Office	710	943.70	KSF	Rate	10,230	1,434	1,262	172	1,359	231	1,128
General Light Industrial	110	2,024.67	KSF	Rate	9,860	1,498	1,318	180	1,316	184	1,132
Total Block 2					76,838	4,460	3,398	1,062	7,864	2,951	4,913
Trip Generation for Block 3											
Multifamily Residential	221	1,436	DU	Rate	6,519	531	122	409	560	342	218
Retail (Shopping Center >150k)	820	551.49	KSF	Rate	20,411	463	287	176	1,875	900	975
Total Block 3					26,930	994	409	585	2,435	1,242	1,193
Trip Generation for All Blocks					117,923	5,965	4,173	1,792	11,629	4,767	6,862
Trips Subject to Internal Capture (All Blocks)											
Residential					10,605	864	199	665	911	556	355
Retail					84,937	1,927	1,195	732	7,803	3,745	4,058
Office					22,381	3,174	2,779	395	2,915	466	2,449
Residential Internal Trip Reductions					2,714	24	4	20	441	278	163
Retail Internal Trip Reductions					9,413	233	118	115	786	449	337
Office Internal Trip Reductions					2,429	235	124	111	417	95	322
Total Internal Capture					14,556	492	246	246	1,644	822	822
Trips Subject to Internal Capture (Block 1)											
Retail					11,864	269	167	102	1,090	523	567
Office					2,291	242	199	43	240	51	189
Retail Internal Trip Reductions					-534	-20	-12	-8	-17	-6	-11
Office Internal Trip Reductions					-176	-20	-8	-12	-17	-11	-6
Trips Subject to Internal Capture (Block 2)											
Residential					4,086	333	77	256	351	214	137
Retail					52,662	1,195	741	454	4,838	2,322	2,516
Office					20,090	2,932	2,580	352	2,675	415	2,260
Residential Internal Trip Reductions					-1,051	-10	-2	-8	-170	-107	-63
Retail Internal Trip Reductions					-6,695	-207	-102	-105	-392	-244	-148
Office Internal Trip Reductions					-1,648	-207	-108	-99	-250	-55	-195
Trips Subject to Internal Capture (Block 3)											
Residential					6,519	531	122	409	560	342	218
Retail					20,411	463	287	176	1,875	900	975
Residential Internal Trip Reductions					-1,475	-6	-2	-4	-247	-157	-90
Retail Internal Trip Reductions					-1,477	-6	-4	-2	-247	-90	-157
Total Internal Capture within Blocks					-13,056	-476	-238	-238	-1,340	-670	-670
Trips Subject to Internal Capture (Block 1 and 2)											
Residential					3,035	323	75	248	181	107	74
Retail					57,297	1,237	794	443	5,519	2,595	2,924
Office					20,557	2,947	2,663	284	2,648	400	2,248
Residential Internal Trip Reductions					-56	-2	0	-2	-4	-3	-2
Retail Internal Trip Reductions					-221	0	0	0	-46	-40	-6
Office Internal Trip Reductions					-157	-4	-4	0	-64	-12	-52
Trips Subject to Internal Capture (Block 1 and 3)											
Residential					5,044	525	120	405	313	185	128
Retail					30,264	706	438	268	2,701	1,327	1,374
Office					2,115	222	191	31	223	40	183
Residential Internal Trip Reductions					-36	-2	0	-2	-7	-4	-3
Retail Internal Trip Reductions					-144	0	0	0	-20	-15	-5
Office Internal Trip Reductions					-154	0	0	0	-13	-3	-10
Trips Subject to Internal Capture (Block 2 and 3)											
Residential					8,079	848	195	653	494	292	202
Retail					64,901	1,445	922	523	6,074	2,888	3,186
Office					18,442	2,725	2,472	253	2,425	360	2,065
Residential Internal Trip Reductions					-95	-4	0	-4	-12	-7	-5
Retail Internal Trip Reductions					-342	0	0	0	-64	-53	-10
Office Internal Trip Reductions					-294	-4	-4	0	-73	-14	-59
Total Internal Capture between Blocks					-1,500	-16	-8	-8	-304	-152	-152

Trip Generation for Block 1 after Internal Capture											
Retail (Shopping Center >150k)		320.55	KSF		11,236	249	155	94	1,057	504	553
Office		24.21	KSF		248	36	33	4	33	5	28
Industrial		602.22	KSF		1,685	185	157	27	165	29	136
Total Block 1					13,170	470	345	125	1,256	539	717
Trip Generation for Block 2 after Internal Capture											
Multifamily Residential		900	DU		2,942	320	75	245	172	102	70
Retail (Shopping Center >150k)		1,422.92	KSF		45,540	988	639	349	4,363	2,007	2,356
Office		943.70	KSF		9,571	1,366	1,225	141	1,240	206	1,034
General Light Industrial		2,024.67	KSF		8,447	1,352	1,240	112	1,060	130	929
Total Block 2					66,500	4,026	3,179	847	6,834	2,445	4,389
Trip Generation for Block 3 after Internal Capture											
Multifamily Residential		1,436	DU		4,949	520	120	400	298	176	122
Retail (Shopping Center >150k)		551.49	KSF		18,748	457	283	174	1,597	785	812
Total Block 3					23,697	977	403	574	1,895	962	934
Trip Generation for All Blocks after Internal Capture					103,367	5,473	3,927	1,546	9,985	3,945	6,040
Percent Reductions due to Internal Capture					12%	8%	6%	14%	14%	17%	12%
Transit Reduction											
Trip Generation for Block 1 after Transit Reduction											
Retail (Strip Retail Plaza <40k)	822	0.00	KSF	Rate	8,427	187	116	71	793	378	415
Office	710	0.00	KSF	Rate	186	27	24	3	25	4	21
Industrial	130	0.00	KSF	Rate	1,264	139	118	21	124	22	102
Total Block 1					9,877	353	258	95	942	404	538
Trip Generation for Block 2 after Transit Reduction											
Multifamily Residential	221	0	DU	Rate	2,206	240	56	184	129	76	53
Retail (Shopping Center >150k)	820	0.00	KSF	Rate	34,155	741	479	262	3,272	1,505	1,767
Office	710	0.00	KSF	Rate	7,179	1,024	919	105	929	154	775
General Light Industrial	110	0.00	KSF	Rate	6,335	1,014	930	84	795	98	697
Total Block 2					49,875	3,019	2,384	635	5,125	1,833	3,292
Trip Generation for Block 3 after Transit Reduction											
Multifamily Residential	221	0	DU	Rate	3,712	390	90	300	223	132	91
Retail (>150k)	820	0.00	KSF	Rate	14,061	343	212	131	1,198	589	609
Total Block 3					17,773	733	302	431	1,421	721	700
Trip Generation for All Blocks after Transit Reduction					77,525	4,105	2,944	1,161	7,488	2,958	4,530
Percent Reductions due to Transit Reduction					25%	25%	25%	25%	25%	25%	25%
Pass-By Reduction											
Trip Generation for Block 1 after Pass-By Reduction											
Retail (Strip Retail Plaza <40k)	822	0.00	KSF	Rate	7,500	187	116	71	619	295	324
Office	710	0.00	KSF	Rate	186	27	24	3	25	4	21
Industrial	130	0.00	KSF	Rate	1,264	139	118	21	124	22	102
Total Block 1					8,950	353	258	95	768	321	447
Trip Generation for Block 2 after Pass-By Reduction											
Multifamily Residential	221	0	DU	Rate	2,206	240	56	184	129	76	53
Retail (Shopping Center >150k)	820	0.00	KSF	Rate	30,398	741	479	262	2,552	1,174	1,378
Office	710	0.00	KSF	Rate	7,179	1,024	919	105	929	154	775
General Light Industrial	110	0.00	KSF	Rate	6,335	1,014	930	84	795	98	697
Total Block 2					46,118	3,019	2,384	635	4,405	1,502	2,903
Trip Generation for Block 3 after Pass-By Reduction											
Multifamily Residential	221	0	DU	Rate	3,712	390	90	300	223	132	91
Retail (>150k)	820	0.00	KSF	Rate	12,514	343	212	131	934	459	475
Total Block 3					16,226	733	302	431	1,157	591	566
Trip Generation for All Blocks after Pass-by Reduction					71,294	4,105	2,944	1,161	6,330	2,414	3,916
Percent Reductions due to Transit Reduction					8%	0%	0%	0%	15%	18%	14%
Net New Trip Generation After Reductions											
Trip Generation for Block 1											
Retail (Strip Retail Plaza <40k)	822	0.00	KSF	Rate	7,500	187	116	71	619	295	324
Office	710	0.00	KSF	Rate	186	27	24	3	25	4	21
Industrial	130	0.00	KSF	Rate	1,264	139	118	21	124	22	102
Total Block 1					8,950	353	258	95	768	321	447
Trip Generation for Block 2											
Multifamily Residential	221	0	DU	Rate	2,206	240	56	184	129	76	53
Retail (Shopping Center >150k)	820	0.00	KSF	Rate	30,398	741	479	262	2,552	1,174	1,378
Office	710	0.00	KSF	Rate	7,179	1,024	919	105	929	154	775
General Light Industrial	110	0.00	KSF	Rate	6,335	1,014	930	84	795	98	697
Total Block 2					46,118	3,019	2,384	635	4,405	1,502	2,903
Trip Generation for Block 3											
Multifamily Residential	221	0	DU	Rate	3,712	390	90	300	223	132	91
Retail (>150k)	820	0.00	KSF	Rate	12,514	343	212	131	934	459	475
Total Block 3					16,226	733	302	431	1,157	591	566
Trip Generation for All Blocks After Reductions					71,294	4,105	2,944	1,161	6,330	2,414	3,916
Percent Reductions					40%	31%	29%	35%	46%	49%	43%

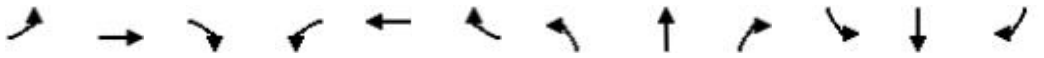
C – SYNCHRO OUTPUTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	882	364	140	1503	63	381	503	85	92	564	210
Future Volume (vph)	121	882	364	140	1503	63	381	503	85	92	564	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4514		1671	4866		3303	3406	1351	3433	3282	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4514		1671	4866		3303	3406	1351	3433	3282	
Peak-hour factor, PHF	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	141	1026	423	149	1599	67	448	592	100	100	613	228
RTOR Reduction (vph)	0	46	0	0	3	0	0	0	67	0	24	0
Lane Group Flow (vph)	141	1403	0	149	1663	0	448	592	33	100	817	0
Confl. Peds. (#/hr)	9		9	9		9	3		14	14		3
Heavy Vehicles (%)	10%	10%	7%	8%	6%	2%	6%	6%	16%	2%	4%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	17.3	50.1		17.3	50.1		20.0	49.0	49.0	11.0	40.0	
Effective Green, g (s)	17.3	50.1		17.3	50.1		20.0	49.0	49.0	11.0	40.0	
Actuated g/C Ratio	0.12	0.34		0.12	0.34		0.13	0.33	0.33	0.07	0.27	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	190	1518		194	1637		443	1120	444	253	881	
v/s Ratio Prot	0.09	c0.31		0.09	c0.34		c0.14	0.17		0.03	c0.25	
v/s Ratio Perm									0.02			
v/c Ratio	0.74	0.92		0.77	1.02		1.01	0.53	0.07	0.40	0.93	
Uniform Delay, d1	63.6	47.6		63.9	49.4		64.5	40.6	34.4	65.8	53.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.8	10.1		15.0	26.3		45.6	0.7	0.1	0.4	15.9	
Delay (s)	76.4	57.6		78.9	75.7		110.1	41.3	34.5	66.1	68.9	
Level of Service	E	E		E	E		F	D	C	E	E	
Approach Delay (s/veh)		59.3			76.0			67.7			68.6	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	68.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	148.9	Sum of lost time (s)	21.5
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	967	33	113	1630	39	37	4	46	95	12	22
Future Volume (vph)	24	967	33	113	1630	39	37	4	46	95	12	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.92			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.96	
Satd. Flow (prot)	1805	5920		1752	4877			3147			1782	
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.71	
Satd. Flow (perm)	1805	5920		1752	4877			2599			1320	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.84	0.84	0.84	0.72	0.72	0.72
Adj. Flow (vph)	25	1007	34	118	1698	41	44	5	55	132	17	31
RTOR Reduction (vph)	0	3	0	0	1	0	0	42	0	0	6	0
Lane Group Flow (vph)	25	1038	0	118	1738	0	0	62	0	0	174	0
Confl. Peds. (#/hr)	12		8	8		12	4		5	5		4
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	10%	2%	3%	6%	2%	1%	0%	4%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	3.1	36.0		12.0	44.9			19.4			19.4	
Effective Green, g (s)	3.1	36.0		12.0	44.9			19.4			19.4	
Actuated g/C Ratio	0.04	0.43		0.14	0.54			0.23			0.23	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	67	2570		253	2641			608			308	
v/s Ratio Prot	0.01	0.18		c0.07	c0.36							
v/s Ratio Perm								0.02			c0.13	
v/c Ratio	0.37	0.40		0.47	0.66			0.10			0.56	
Uniform Delay, d1	39.0	16.1		32.5	13.5			24.9			28.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	0.2		0.5	0.7			0.1			2.4	
Delay (s)	40.2	16.3		33.0	14.3			25.0			30.4	
Level of Service	D	B		C	B			C			C	
Approach Delay (s/veh)		16.8			15.5			25.0			30.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	82.9	Sum of lost time (s)	15.5
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	796	183	298	1503	154	147	780	211	186	857	109
Future Volume (vph)	81	796	183	298	1503	154	147	780	211	186	857	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1527	1736	4822		1787	4830		1770	4814	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1527	1736	4822		1787	4830		1770	4814	
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.84	0.84	0.84	0.87	0.87	0.87
Adj. Flow (vph)	95	936	215	320	1616	166	175	929	251	214	985	125
RTOR Reduction (vph)	0	0	27	0	7	0	0	29	0	0	9	0
Lane Group Flow (vph)	95	936	188	320	1775	0	175	1151	0	214	1101	0
Confl. Peds. (#/hr)	9		9	9		9	13		2	2		13
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	10%	10%	4%	4%	6%	4%	1%	3%	6%	2%	5%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.5	40.5	58.9	25.2	51.7		18.4	44.0		21.5	46.6	
Effective Green, g (s)	13.5	40.5	58.9	25.2	51.7		18.4	44.0		21.5	46.6	
Actuated g/C Ratio	0.09	0.27	0.39	0.17	0.34		0.12	0.29		0.14	0.31	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	146	1262	594	289	1648		217	1405		251	1483	
v/s Ratio Prot	0.06	0.20	0.04	c0.18	c0.37		0.10	c0.24		c0.12	c0.23	
v/s Ratio Perm			0.08									
v/c Ratio	0.65	0.74	0.32	1.11	1.08		0.81	0.82		0.85	0.74	
Uniform Delay, d1	66.6	50.6	32.1	63.0	49.7		64.7	49.9		63.3	46.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.7	2.5	0.1	84.8	46.2		18.3	4.1		22.6	2.2	
Delay (s)	74.2	53.1	32.2	147.8	96.0		82.9	54.0		85.9	49.1	
Level of Service	E	D	C	F	F		F	D		F	D	
Approach Delay (s/veh)		51.1			103.9			57.7			55.0	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	71.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	151.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	1099	71	128	1514	159	74	340	75	300	348	99
Future Volume (vph)	146	1099	71	128	1514	159	74	340	75	300	348	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	4706		1770	4791		1770	1863	1520	3467	3402	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	4706		1770	4791		1770	1863	1520	3467	3402	
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.90	0.90	0.90	0.83	0.83	0.83
Adj. Flow (vph)	166	1249	81	147	1740	183	82	378	83	361	419	119
RTOR Reduction (vph)	0	5	0	0	9	0	0	0	0	0	23	0
Lane Group Flow (vph)	166	1325	0	147	1914	0	82	378	83	361	515	0
Confl. Peds. (#/hr)	6		12	12		6	37		14	14		37
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	9%	9%	2%	7%	0%	2%	2%	3%	1%	1%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	14.5	42.1		12.7	40.3		8.1	31.2	31.2	16.0	39.1	
Effective Green, g (s)	14.5	42.1		12.7	40.3		8.1	31.2	31.2	16.0	39.1	
Actuated g/C Ratio	0.12	0.35		0.11	0.34		0.07	0.26	0.26	0.13	0.33	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	215	1651		187	1608		119	484	395	462	1108	
v/s Ratio Prot	0.09	c0.28		0.08	c0.40		0.05	c0.20		c0.10	0.15	
v/s Ratio Perm									0.05			
v/c Ratio	0.77	0.80		0.79	1.19		0.69	0.78	0.21	0.78	0.46	
Uniform Delay, d1	51.1	35.2		52.3	39.9		54.7	41.2	34.8	50.3	32.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.4	4.2		17.9	92.1		12.4	8.5	0.4	7.7	0.4	
Delay (s)	65.6	39.4		70.2	131.9		67.2	49.7	35.1	58.1	32.6	
Level of Service	E	D		E	F		E	D	D	E	C	
Approach Delay (s/veh)		42.3			127.5			50.1			42.8	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	78.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	3	8	43	15	40	20	889	43	48	892	49
Future Volume (vph)	15	3	8	43	15	40	20	889	43	48	892	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.94		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1236	1900	1216		1514		1641	3438	1459	1626	3421	
Flt Permitted	0.66	1.00	1.00		0.88		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	854	1900	1216		1365		1641	3438	1459	1626	3421	
Peak-hour factor, PHF	0.81	0.81	0.81	0.74	0.74	0.74	0.96	0.96	0.96	0.86	0.86	0.86
Adj. Flow (vph)	19	4	10	58	20	54	21	926	45	56	1037	57
RTOR Reduction (vph)	0	0	8	0	25	0	0	0	19	0	2	0
Lane Group Flow (vph)	19	4	2	0	107	0	21	926	26	56	1092	0
Confl. Peds. (#/hr)	1		2	2		1	1		9	9		1
Heavy Vehicles (%)	46%	0%	31%	8%	5%	27%	10%	5%	7%	11%	4%	15%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	11.9	11.9	11.9		11.9		1.9	33.4	33.4	4.1	35.6	
Effective Green, g (s)	11.9	11.9	11.9		11.9		1.9	33.4	33.4	4.1	35.6	
Actuated g/C Ratio	0.20	0.20	0.20		0.20		0.03	0.55	0.55	0.07	0.59	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	168	374	239		268		51	1901	806	110	2016	
v/s Ratio Prot		0.00					0.01	0.27		c0.03	c0.32	
v/s Ratio Perm	0.02		0.00		c0.08				0.02			
v/c Ratio	0.11	0.01	0.01		0.40		0.41	0.49	0.03	0.51	0.54	
Uniform Delay, d1	19.9	19.5	19.5		21.1		28.7	8.3	6.1	27.2	7.5	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.0	0.0		1.0		2.0	0.3	0.0	1.3	0.5	
Delay (s)	20.2	19.5	19.5		22.1		30.7	8.6	6.2	28.5	7.9	
Level of Service	C	B	B		C		C	A	A	C	A	
Approach Delay (s/veh)		19.9			22.1			9.0			8.9	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	6	23	181	80	173	69	823	85	53	828	27
Future Volume (vph)	9	6	23	181	80	173	69	823	85	53	828	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1274			1734	1515	1556	3387		1736	3408	
Flt Permitted		0.91			0.76	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1172			1368	1515	1556	3387		1736	3408	
Peak-hour factor, PHF	0.78	0.78	0.78	0.86	0.86	0.86	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	12	8	29	210	93	201	73	876	90	56	881	29
RTOR Reduction (vph)	0	20	0	0	0	33	0	5	0	0	2	0
Lane Group Flow (vph)	0	29	0	0	303	168	73	961	0	56	908	0
Confl. Peds. (#/hr)	5		5	5		5	4		5	5		4
Heavy Vehicles (%)	23%	30%	40%	6%	5%	5%	16%	4%	13%	4%	5%	16%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		26.1			26.1	26.1	8.1	34.3		7.6	33.8	
Effective Green, g (s)		26.1			26.1	26.1	8.1	34.3		7.6	33.8	
Actuated g/C Ratio		0.32			0.32	0.32	0.10	0.42		0.09	0.41	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		370			432	479	152	1408		159	1396	
v/s Ratio Prot							c0.05	c0.28		0.03	0.27	
v/s Ratio Perm		0.02			c0.22	0.11						
v/c Ratio		0.08			0.70	0.35	0.48	0.68		0.35	0.65	
Uniform Delay, d1		19.8			24.8	21.7	35.2	19.7		35.1	19.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			5.1	0.4	0.9	1.5		0.5	1.2	
Delay (s)		19.9			29.9	22.1	36.1	21.2		35.6	20.8	
Level of Service		B			C	C	D	C		D	C	
Approach Delay (s/veh)		19.9			26.8			22.2			21.7	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	82.5	Sum of lost time (s)	14.5
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	49	44	32	930	1085	85
Future Volume (vph)	49	44	32	930	1085	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1708		1770	4940	3433	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1708		1770	4940	3433	
Peak-hour factor, PHF	0.83	0.83	0.88	0.88	0.87	0.87
Adj. Flow (vph)	59	53	36	1057	1247	98
RTOR Reduction (vph)	44	0	0	0	5	0
Lane Group Flow (vph)	68	0	36	1057	1340	0
Confl. Peds. (#/hr)	2		1			1
Heavy Vehicles (%)	1%	2%	2%	5%	4%	2%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.3		1.4	32.8	27.4	
Effective Green, g (s)	8.3		1.4	32.8	27.4	
Actuated g/C Ratio	0.17		0.03	0.65	0.55	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	282		49	3227	1873	
v/s Ratio Prot	c0.04		c0.02	0.21	c0.39	
v/s Ratio Perm						
v/c Ratio	0.24		0.73	0.33	0.72	
Uniform Delay, d1	18.2		24.2	3.8	8.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.6		38.5	0.0	1.1	
Delay (s)	18.8		62.7	3.9	9.6	
Level of Service	B		E	A	A	
Approach Delay (s/veh)	18.8			5.8	9.6	
Approach LOS	B			A	A	

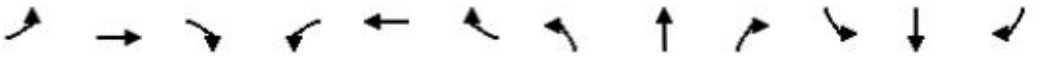
Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	13.1
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	42	76	136	172	115	145	1036	41	52	902	105
Future Volume (vph)	36	42	76	136	172	115	145	1036	41	52	902	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1467	1863	1346	1787	1754		3367	3477		1805	3471	1496
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1467	1863	1346	1787	1754		3367	3477		1805	3471	1496
Peak-hour factor, PHF	0.80	0.80	0.80	0.87	0.87	0.87	0.99	0.99	0.99	0.87	0.87	0.87
Adj. Flow (vph)	45	52	95	156	198	132	146	1046	41	60	1037	121
RTOR Reduction (vph)	0	0	77	0	21	0	0	1	0	0	0	46
Lane Group Flow (vph)	45	53	18	156	309	0	146	1086	0	60	1037	75
Confl. Peds. (#/hr)	6					6	3		2	2		3
Heavy Vehicles (%)	23%	2%	20%	1%	1%	1%	4%	3%	7%	0%	4%	5%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.1	9.1	22.7	24.0	24.0		9.1	60.9		7.0	58.8	58.8
Effective Green, g (s)	9.1	9.1	22.7	24.0	24.0		9.1	60.9		7.0	58.8	58.8
Actuated g/C Ratio	0.08	0.08	0.19	0.20	0.20		0.08	0.51		0.06	0.49	0.49
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	111	141	254	357	350		255	1764		105	1700	733
v/s Ratio Prot	c0.03	0.03	0.01	0.09	c0.18		c0.04	c0.31		0.03	0.30	
v/s Ratio Perm												0.05
v/c Ratio	0.41	0.38	0.07	0.44	0.88		0.57	0.62		0.57	0.61	0.10
Uniform Delay, d1	52.9	52.7	40.0	42.1	46.6		53.6	21.2		55.0	22.3	16.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.38	0.68		1.00	1.00	1.00
Incremental Delay, d2	2.4	1.7	0.1	0.9	22.1		1.5	1.3		4.6	1.6	0.3
Delay (s)	55.3	54.4	40.1	42.9	68.8		75.4	15.8		59.6	23.9	16.7
Level of Service	E	D	D	D	E		E	B		E	C	B
Approach Delay (s/veh)		47.6			60.5			22.8			24.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



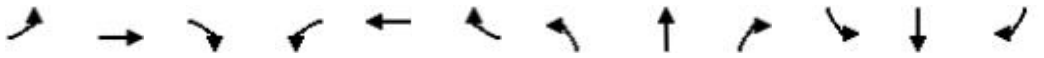
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	783	123	192	1264	66	98	804	181	110	754	169
Future Volume (vph)	151	783	123	192	1264	66	98	804	181	110	754	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	4540		3213	4706		1656	4822		1626	4940	1477
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	4540		3213	4706		1656	4822		1626	4940	1477
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.95	0.95	0.95	0.88	0.88	0.88
Adj. Flow (vph)	161	833	131	226	1487	78	103	846	191	125	857	192
RTOR Reduction (vph)	0	17	0	0	5	0	0	31	0	0	0	51
Lane Group Flow (vph)	161	947	0	226	1560	0	103	1006	0	125	857	141
Confl. Peds. (#/hr)	5		1	1		5	2		12	12		2
Heavy Vehicles (%)	9%	12%	10%	9%	9%	15%	9%	4%	4%	11%	5%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	8.5	31.7		12.3	35.0		9.6	48.0		8.5	46.9	55.4
Effective Green, g (s)	8.5	31.7		12.3	35.0		9.6	48.0		8.5	46.9	55.4
Actuated g/C Ratio	0.07	0.26		0.10	0.29		0.08	0.40		0.07	0.39	0.46
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	117	1199		329	1372		132	1928		115	1930	681
v/s Ratio Prot	c0.10	0.21		0.07	c0.33		0.06	c0.21		c0.08	0.17	0.01
v/s Ratio Perm												0.08
v/c Ratio	1.38	0.79		0.69	1.14		0.78	0.52		1.09	0.44	0.21
Uniform Delay, d1	55.8	41.1		52.0	42.5		54.2	27.3		55.8	26.9	19.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.01	0.60	0.85
Incremental Delay, d2	213.8	3.8		4.7	71.1		23.5	1.0		102.0	0.6	0.0
Delay (s)	269.5	44.8		56.7	113.6		77.6	28.3		158.3	16.8	16.3
Level of Service	F	D		E	F		E	C		F	B	B
Approach Delay (s/veh)		77.0			106.4			32.8			31.8	
Approach LOS		E			F			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	67.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	1342	319	116	730	121	167	983	393	144	840	123
Future Volume (vph)	201	1342	319	116	730	121	167	983	393	144	840	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	4807		1687	4721		3367	3539	1524	3433	3397	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	4807		1687	4721		3367	3539	1524	3433	3397	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	216	1443	343	123	777	129	174	1024	409	150	875	128
RTOR Reduction (vph)	0	24	0	0	16	0	0	0	106	0	7	0
Lane Group Flow (vph)	216	1762	0	123	890	0	174	1024	303	150	996	0
Confl. Peds. (#/hr)	9		7	7		9	3		13	13		3
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	6%	4%	6%	7%	8%	2%	4%	2%	3%	2%	3%	11%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	29.7	50.1		14.5	34.9		12.1	40.7	40.7	11.5	40.1	
Effective Green, g (s)	29.7	50.1		14.5	34.9		12.1	40.7	40.7	11.5	40.1	
Actuated g/C Ratio	0.21	0.36		0.10	0.25		0.09	0.29	0.29	0.08	0.29	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	365	1741		176	1191		294	1041	448	285	984	
v/s Ratio Prot	0.13	c0.37		0.07	c0.19		c0.05	0.29		0.04	c0.29	
v/s Ratio Perm									0.20			
v/c Ratio	0.59	1.01		0.70	0.75		0.59	0.98	0.68	0.53	1.01	
Uniform Delay, d1	48.8	44.1		59.8	47.6		60.7	48.5	43.0	60.8	49.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	24.6		9.4	2.9		2.1	23.9	4.8	0.8	31.7	
Delay (s)	50.6	68.7		69.2	50.6		62.8	72.4	47.8	61.6	80.8	
Level of Service	D	E		E	D		E	E	D	E	F	
Approach Delay (s/veh)		66.8			52.8			65.1			78.3	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	66.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	138.3	Sum of lost time (s)	21.5
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



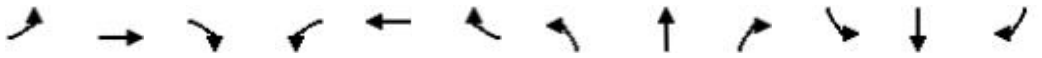
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	1486	58	174	882	60	120	31	125	73	20	19
Future Volume (vph)	46	1486	58	174	882	60	120	31	125	73	20	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1805	6309		1787	4805			3242			1774	
Flt Permitted	0.95	1.00		0.95	1.00			0.77			0.56	
Satd. Flow (perm)	1805	6309		1787	4805			2562			1023	
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	49	1598	62	183	928	63	140	36	145	83	23	22
RTOR Reduction (vph)	0	4	0	0	4	0	0	112	0	0	6	0
Lane Group Flow (vph)	49	1656	0	183	987	0	0	209	0	0	122	0
Confl. Peds. (#/hr)	9		7	7		9	7		14	14		7
Heavy Vehicles (%)	0%	3%	0%	1%	7%	3%	1%	0%	0%	1%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	5.4	43.3		15.2	53.1			22.1			22.1	
Effective Green, g (s)	5.4	43.3		15.2	53.1			22.1			22.1	
Actuated g/C Ratio	0.06	0.45		0.16	0.55			0.23			0.23	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	101	2842		282	2655			589			235	
v/s Ratio Prot	0.03	c0.26		c0.10	0.21							
v/s Ratio Perm								0.08			c0.12	
v/c Ratio	0.49	0.58		0.65	0.37			0.36			0.52	
Uniform Delay, d1	44.0	19.7		37.9	12.1			31.0			32.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	0.4		3.8	0.2			0.4			1.9	
Delay (s)	45.3	20.1		41.8	12.3			31.4			34.3	
Level of Service	D	C		D	B			C			C	
Approach Delay (s/veh)		20.8			16.9			31.4			34.3	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1183	268	237	775	184	171	813	216	184	930	123
Future Volume (vph)	230	1183	268	237	775	184	171	813	216	184	930	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	5036	1543	1736	4757		1787	4899		1770	4815	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	5036	1543	1736	4757		1787	4899		1770	4815	
Peak-hour factor, PHF	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96	0.93	0.93	0.93
Adj. Flow (vph)	247	1272	288	276	901	214	178	847	225	198	1000	132
RTOR Reduction (vph)	0	0	26	0	23	0	0	29	0	0	10	0
Lane Group Flow (vph)	247	1272	262	276	1092	0	178	1043	0	198	1122	0
Confl. Peds. (#/hr)	21		18	18		21	26		14	14		26
Confl. Bikes (#/hr)						1						4
Heavy Vehicles (%)	1%	3%	2%	4%	6%	1%	1%	2%	1%	2%	5%	7%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	24.1	46.6	65.7	25.3	47.3		19.1	43.3		20.7	44.4	
Effective Green, g (s)	24.1	46.6	65.7	25.3	47.3		19.1	43.3		20.7	44.4	
Actuated g/C Ratio	0.15	0.30	0.42	0.16	0.30		0.12	0.28		0.13	0.28	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	276	1505	650	281	1443		218	1360		235	1371	
v/s Ratio Prot	0.14	c0.25	0.05	c0.16	0.23		0.10	0.21		c0.11	c0.23	
v/s Ratio Perm			0.12									
v/c Ratio	0.89	0.85	0.40	0.98	0.76		0.82	0.77		0.84	0.82	
Uniform Delay, d1	64.7	51.3	31.4	65.1	49.1		66.7	51.7		66.0	52.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.0	4.7	0.1	48.4	2.5		19.5	2.8		22.2	4.1	
Delay (s)	92.6	56.0	31.6	113.5	51.6		86.2	54.5		88.2	56.1	
Level of Service	F	E	C	F	D		F	D		F	E	
Approach Delay (s/veh)		57.1			63.8			59.0			60.9	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	60.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	155.9	Sum of lost time (s)	21.0
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1401	95	129	975	145	109	250	92	312	293	91
Future Volume (vph)	90	1401	95	129	975	145	109	250	92	312	293	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4947		1805	4808		1805	1881	1574	3502	3455	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4947		1805	4808		1805	1881	1574	3502	3455	
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	94	1459	99	143	1083	161	122	281	103	339	318	99
RTOR Reduction (vph)	0	5	0	0	16	0	0	0	0	0	25	0
Lane Group Flow (vph)	94	1553	0	143	1228	0	122	281	103	339	392	0
Confl. Peds. (#/hr)	7		2	2		7			3	3		
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	4%	0%	0%	6%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	14.5	60.1		13.4	59.0		10.7	16.5	16.5	12.0	17.8	
Effective Green, g (s)	14.5	60.1		13.4	59.0		10.7	16.5	16.5	12.0	17.8	
Actuated g/C Ratio	0.12	0.50		0.11	0.49		0.09	0.14	0.14	0.10	0.15	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	218	2477		201	2363		160	258	216	350	512	
v/s Ratio Prot	0.05	c0.31		c0.08	0.26		0.07	c0.15		c0.10	0.11	
v/s Ratio Perm									0.07			
v/c Ratio	0.43	0.63		0.71	0.52		0.76	1.09	0.48	0.97	0.77	
Uniform Delay, d1	48.9	21.8		51.4	20.8		53.4	51.8	47.8	53.8	49.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	1.2		9.5	0.8		17.4	81.9	2.3	39.1	7.2	
Delay (s)	49.4	23.0		60.9	21.6		70.8	133.6	50.0	92.9	56.3	
Level of Service	D	C		E	C		E	F	D	F	E	
Approach Delay (s/veh)		24.5			25.7			101.5			72.7	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	8	59	0	61	2	1295	46	24	1262	12
Future Volume (vph)	30	5	8	59	0	61	2	1295	46	24	1262	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1429	1436		1644		1805	3539	1435	1612	3483	
Flt Permitted	0.58	1.00	1.00		0.85		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1056	1429	1436		1431		1805	3539	1435	1612	3483	
Peak-hour factor, PHF	0.41	0.41	0.41	0.64	0.64	0.64	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	73	12	20	92	0	95	2	1363	48	26	1357	13
RTOR Reduction (vph)	0	0	16	0	39	0	0	0	12	0	0	0
Lane Group Flow (vph)	73	12	4	0	148	0	2	1363	36	26	1370	0
Confl. Peds. (#/hr)			1	1					7	7		
Heavy Vehicles (%)	5%	33%	11%	2%	25%	8%	0%	2%	9%	12%	3%	57%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	13.5	13.5	13.5		13.5		0.7	42.2	42.2	2.1	43.6	
Effective Green, g (s)	13.5	13.5	13.5		13.5		0.7	42.2	42.2	2.1	43.6	
Actuated g/C Ratio	0.20	0.20	0.20		0.20		0.01	0.61	0.61	0.03	0.63	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	207	280	281		280		18	2170	880	49	2207	
v/s Ratio Prot		0.01					0.00	0.39		c0.02	c0.39	
v/s Ratio Perm	0.07		0.00		c0.10				0.03			
v/c Ratio	0.35	0.04	0.01		0.53		0.11	0.63	0.04	0.53	0.62	
Uniform Delay, d1	23.9	22.4	22.3		24.8		33.7	8.4	5.3	32.9	7.6	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1	0.0		1.8		1.0	0.7	0.0	5.4	0.7	
Delay (s)	24.9	22.5	22.3		26.6		34.7	9.1	5.3	38.3	8.3	
Level of Service	C	C	C		C		C	A	A	D	A	
Approach Delay (s/veh)		24.1			26.6			9.0			8.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	43	95	157	4	74	19	1268	101	80	1245	13
Future Volume (vph)	22	43	95	157	4	74	19	1268	101	80	1245	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1691			1716	1447	1399	3485		1703	3493	
Flt Permitted		0.94			0.48	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1593			872	1447	1399	3485		1703	3493	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	29	57	127	209	5	99	21	1393	111	84	1311	14
RTOR Reduction (vph)	0	38	0	0	0	35	0	3	0	0	0	0
Lane Group Flow (vph)	0	175	0	0	214	64	21	1501	0	84	1325	0
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	2%	2%	3%	5%	29%	10%	29%	2%	8%	6%	3%	21%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		33.7			33.7	33.7	3.6	62.8		8.9	68.1	
Effective Green, g (s)		33.7			33.7	33.7	3.6	62.8		8.9	68.1	
Actuated g/C Ratio		0.28			0.28	0.28	0.03	0.52		0.07	0.57	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		447			245	406	42	1825		126	1983	
v/s Ratio Prot							0.02	c0.43		c0.05	0.38	
v/s Ratio Perm		0.11			c0.25	0.04						
v/c Ratio		0.39			0.87	0.16	0.50	0.82		0.67	0.67	
Uniform Delay, d1		34.8			41.1	32.4	57.3	23.9		54.1	18.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6			27.2	0.2	3.4	3.3		9.9	1.0	
Delay (s)		35.4			68.3	32.6	60.6	27.2		63.9	19.0	
Level of Service		D			E	C	E	C		E	B	
Approach Delay (s/veh)		35.4			57.0			27.6			21.7	
Approach LOS		D			E			C			C	

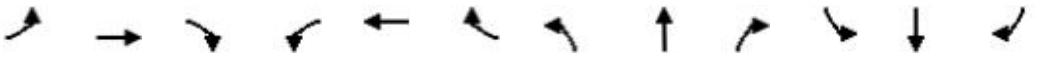
Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	119.9	Sum of lost time (s)	14.5
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	90	43	1156	1126	103
Future Volume (vph)	114	90	43	1156	1126	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1738		1787	5085	3461	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1738		1787	5085	3461	
Peak-hour factor, PHF	0.94	0.94	0.95	0.95	0.96	0.96
Adj. Flow (vph)	121	96	45	1217	1173	107
RTOR Reduction (vph)	37	0	0	0	7	0
Lane Group Flow (vph)	180	0	45	1217	1273	0
Confl. Peds. (#/hr)	9		5			5
Heavy Vehicles (%)	0%	0%	1%	2%	3%	0%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	13.9		2.4	32.9	26.5	
Effective Green, g (s)	13.9		2.4	32.9	26.5	
Actuated g/C Ratio	0.25		0.04	0.59	0.47	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	432		76	2992	1640	
v/s Ratio Prot	c0.10		0.03	c0.24	c0.37	
v/s Ratio Perm						
v/c Ratio	0.42		0.59	0.41	0.78	
Uniform Delay, d1	17.6		26.3	6.2	12.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		8.0	0.0	2.2	
Delay (s)	18.5		34.2	6.3	14.4	
Level of Service	B		C	A	B	
Approach Delay (s/veh)	18.5			7.3	14.4	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	13.1
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	108	169	53	50	62	39	1173	79	48	1257	26
Future Volume (vph)	136	108	169	53	50	62	39	1173	79	48	1257	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1881	1509	1805	1705		3367	3505		1805	3539	1378
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1881	1509	1805	1705		3367	3505		1805	3539	1378
Peak-hour factor, PHF	0.68	0.68	0.68	0.88	0.88	0.88	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	200	159	249	60	57	70	41	1248	84	53	1397	29
RTOR Reduction (vph)	0	0	121	0	42	0	0	2	0	0	0	14
Lane Group Flow (vph)	200	159	128	60	85	0	41	1330	0	53	1397	15
Confl. Peds. (#/hr)	8					8	3		4	4		3
Heavy Vehicles (%)	2%	1%	7%	0%	2%	0%	4%	2%	0%	0%	2%	14%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	19.9	19.9	29.8	12.8	12.8		5.4	61.7		6.6	62.9	62.9
Effective Green, g (s)	19.9	19.9	29.8	12.8	12.8		5.4	61.7		6.6	62.9	62.9
Actuated g/C Ratio	0.17	0.17	0.25	0.11	0.11		0.05	0.51		0.06	0.52	0.52
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	293	311	374	192	181		151	1802		99	1855	722
v/s Ratio Prot	c0.11	0.08	0.08	0.03	c0.05		0.01	0.38		c0.03	c0.39	
v/s Ratio Perm												0.01
v/c Ratio	0.68	0.51	0.34	0.31	0.47		0.27	0.74		0.54	0.75	0.02
Uniform Delay, d1	47.1	45.6	37.0	49.5	50.4		55.4	22.8		55.2	22.4	13.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.33	0.52		1.00	1.00	1.00
Incremental Delay, d2	6.4	1.4	0.5	0.9	1.9		0.2	1.9		2.8	2.9	0.1
Delay (s)	53.5	47.0	37.6	50.5	52.3		73.8	13.8		58.0	25.3	13.8
Level of Service	D	D	D	D	D		E	B		E	C	B
Approach Delay (s/veh)		45.3			51.7			15.6			26.3	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	1147	142	224	796	115	65	896	178	129	998	119
Future Volume (vph)	208	1147	142	224	796	115	65	896	178	129	998	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	4893		3367	4824		1671	4953		1626	5085	1514
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1719	4893		3367	4824		1671	4953		1626	5085	1514
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	219	1207	149	246	875	126	68	933	185	140	1085	129
RTOR Reduction (vph)	0	13	0	0	16	0	0	24	0	0	0	55
Lane Group Flow (vph)	219	1343	0	246	985	0	68	1094	0	140	1085	74
Confl. Peds. (#/hr)	4		7	7		4	7		3	3		7
Heavy Vehicles (%)	5%	4%	4%	4%	6%	0%	8%	2%	1%	11%	2%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.5	38.9		11.2	35.1		7.4	38.5		11.9	43.0	57.5
Effective Green, g (s)	14.5	38.9		11.2	35.1		7.4	38.5		11.9	43.0	57.5
Actuated g/C Ratio	0.12	0.32		0.09	0.29		0.06	0.32		0.10	0.36	0.48
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	207	1586		314	1411		103	1589		161	1822	725
v/s Ratio Prot	c0.13	c0.27		0.07	0.20		0.04	c0.22		c0.09	0.21	0.01
v/s Ratio Perm												0.04
v/c Ratio	1.06	0.85		0.78	0.70		0.66	0.69		0.87	0.60	0.10
Uniform Delay, d1	52.8	37.8		53.2	37.7		55.1	35.5		53.3	31.4	17.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.11	0.51	0.54
Incremental Delay, d2	78.7	4.6		11.2	1.7		11.6	2.5		27.4	1.0	0.0
Delay (s)	131.4	42.3		64.4	39.4		66.7	38.0		86.7	17.1	9.2
Level of Service	F	D		E	D		E	D		F	B	A
Approach Delay (s/veh)		54.7			44.3			39.6			23.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

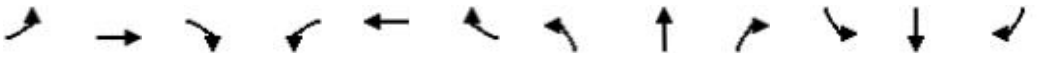
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	977	335	409	1632	67	398	503	295	103	554	182
Future Volume (vph)	104	977	335	409	1632	67	398	503	295	103	554	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4538		1671	4867		3303	3406	1350	3433	3298	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4538		1671	4867		3303	3406	1350	3433	3298	
Peak-hour factor, PHF	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	121	1136	390	435	1736	71	468	592	347	112	602	198
RTOR Reduction (vph)	0	39	0	0	3	0	0	0	152	0	20	0
Lane Group Flow (vph)	121	1487	0	435	1804	0	468	592	195	112	780	0
Confl. Peds. (#/hr)	9		9	9		9	3		14	14		3
Heavy Vehicles (%)	10%	10%	7%	8%	6%	2%	6%	6%	16%	2%	4%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	25.0	50.0		25.0	50.0		20.0	48.2	48.2	11.2	39.4	
Effective Green, g (s)	25.0	50.0		25.0	50.0		20.0	48.2	48.2	11.2	39.4	
Actuated g/C Ratio	0.16	0.32		0.16	0.32		0.13	0.31	0.31	0.07	0.25	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	263	1455		267	1560		423	1053	417	246	833	
v/s Ratio Prot	0.07	c0.33		c0.26	c0.37		c0.14	0.17		0.03	c0.24	
v/s Ratio Perm									0.14			
v/c Ratio	0.46	1.02		1.63	1.16		1.11	0.56	0.47	0.46	0.94	
Uniform Delay, d1	59.3	53.0		65.5	53.0		68.0	45.0	43.5	69.4	57.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	29.2		299.6	78.2		75.8	1.0	1.4	0.5	17.9	
Delay (s)	59.8	82.2		365.1	131.1		143.8	46.0	44.9	69.9	74.9	
Level of Service	E	F		F	F		F	D	D	E	E	
Approach Delay (s/veh)		80.5			176.5			78.3			74.3	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	113.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	155.9	Sum of lost time (s)	21.5
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1244	83	206	1922	41	108	4	171	113	14	30
Future Volume (vph)	24	1244	83	206	1922	41	108	4	171	113	14	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.91			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1805	5900		1752	4879			3102			1778	
Flt Permitted	0.95	1.00		0.95	1.00			0.76			0.52	
Satd. Flow (perm)	1805	5900		1752	4879			2396			952	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.84	0.84	0.84	0.72	0.72	0.72
Adj. Flow (vph)	25	1296	86	215	2002	43	129	5	204	157	19	42
RTOR Reduction (vph)	0	7	0	0	1	0	0	149	0	0	7	0
Lane Group Flow (vph)	25	1375	0	215	2044	0	0	189	0	0	211	0
Confl. Peds. (#/hr)	12		8	8		12	4		5	5		4
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	10%	2%	3%	6%	2%	1%	0%	4%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	3.3	42.4		16.8	55.9			27.9			27.9	
Effective Green, g (s)	3.3	42.4		16.8	55.9			27.9			27.9	
Actuated g/C Ratio	0.03	0.41		0.16	0.54			0.27			0.27	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	58	2438		286	2658			651			258	
v/s Ratio Prot	0.01	0.23		c0.12	c0.42							
v/s Ratio Perm								0.08			c0.22	
v/c Ratio	0.43	0.56		0.75	0.77			0.29			0.82	
Uniform Delay, d1	48.7	23.0		40.9	18.3			29.5			35.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.9	0.4		9.5	1.6			0.2			18.0	
Delay (s)	50.6	23.5		50.4	19.9			29.8			53.0	
Level of Service	D	C		D	B			C			D	
Approach Delay (s/veh)		23.9			22.8			29.8			53.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	102.6	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	969	326	233	1690	172	225	792	223	211	875	147
Future Volume (vph)	198	969	326	233	1690	172	225	792	223	211	875	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1526	1736	4824		1787	4824		1770	4782	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1526	1736	4824		1787	4824		1770	4782	
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.84	0.84	0.84	0.87	0.87	0.87
Adj. Flow (vph)	233	1140	384	251	1817	185	268	943	265	243	1006	169
RTOR Reduction (vph)	0	0	86	0	9	0	0	39	0	0	18	0
Lane Group Flow (vph)	233	1140	298	251	1993	0	268	1169	0	243	1157	0
Confl. Peds. (#/hr)	9		9	9		9	13		2	2		13
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	10%	10%	4%	4%	6%	4%	1%	3%	6%	2%	5%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.0	37.7	48.7	21.3	45.5		11.0	32.5		18.5	39.5	
Effective Green, g (s)	13.0	37.7	48.7	21.3	45.5		11.0	32.5		18.5	39.5	
Actuated g/C Ratio	0.10	0.29	0.37	0.16	0.35		0.08	0.25		0.14	0.30	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	164	1367	571	284	1688		151	1206		251	1452	
v/s Ratio Prot	c0.14	0.24	0.04	0.14	c0.41		c0.15	c0.24		c0.14	0.24	
v/s Ratio Perm			0.15									
v/c Ratio	1.42	0.83	0.52	0.88	1.18		1.77	0.97		0.97	0.80	
Uniform Delay, d1	58.5	43.2	31.6	53.1	42.3		59.5	48.3		55.5	41.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	221.1	4.7	0.4	25.4	87.7		374.1	18.8		47.1	3.3	
Delay (s)	279.6	48.0	32.0	78.6	130.0		433.6	67.1		102.6	44.9	
Level of Service	F	D	C	E	F		F	E		F	D	
Approach Delay (s/veh)		75.2			124.3			133.6			54.8	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	99.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1247	102	128	1579	159	92	340	75	300	348	114
Future Volume (vph)	176	1247	102	128	1579	159	92	340	75	300	348	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	4693		1770	4793		1770	1863	1520	3467	3383	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	4693		1770	4793		1770	1863	1520	3467	3383	
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.90	0.90	0.90	0.83	0.83	0.83
Adj. Flow (vph)	200	1417	116	147	1815	183	102	378	83	361	419	137
RTOR Reduction (vph)	0	7	0	0	9	0	0	0	0	0	28	0
Lane Group Flow (vph)	200	1526	0	147	1989	0	102	378	83	361	528	0
Confl. Peds. (#/hr)	6		12	12		6	37		14	14		37
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	9%	9%	2%	7%	0%	2%	2%	3%	1%	1%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	14.5	42.8		12.7	41.0		9.9	30.5	30.5	16.0	36.6	
Effective Green, g (s)	14.5	42.8		12.7	41.0		9.9	30.5	30.5	16.0	36.6	
Actuated g/C Ratio	0.12	0.36		0.11	0.34		0.08	0.25	0.25	0.13	0.31	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	215	1673		187	1637		146	473	386	462	1031	
v/s Ratio Prot	c0.11	0.33		0.08	c0.41		0.06	c0.20		c0.10	0.16	
v/s Ratio Perm									0.05			
v/c Ratio	0.93	0.91		0.79	1.21		0.70	0.80	0.22	0.78	0.51	
Uniform Delay, d1	52.2	36.8		52.3	39.5		53.6	41.9	35.3	50.3	34.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	41.8	9.1		17.9	102.6		11.1	9.7	0.4	7.7	0.6	
Delay (s)	94.1	45.9		70.2	142.1		64.7	51.5	35.7	58.1	34.9	
Level of Service	F	D		E	F		E	D	D	E	C	
Approach Delay (s/veh)		51.4			137.1			51.6			44.0	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	84.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	3	4	29	19	85	13	982	57	107	1012	101
Future Volume (vph)	64	3	4	29	19	85	13	982	57	107	1012	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		0.99		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.91		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1236	1900	1216		1423		1640	3438	1456	1626	3385	
Flt Permitted	0.49	1.00	1.00		0.94		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	644	1900	1216		1357		1640	3438	1456	1626	3385	
Peak-hour factor, PHF	0.81	0.81	0.81	0.74	0.74	0.74	0.96	0.96	0.96	0.86	0.86	0.86
Adj. Flow (vph)	79	4	5	39	26	115	14	1023	59	124	1177	117
RTOR Reduction (vph)	0	0	4	0	64	0	0	0	23	0	4	0
Lane Group Flow (vph)	79	4	1	0	116	0	14	1023	36	124	1290	0
Confl. Peds. (#/hr)	1		2	2		1	1		9	9		1
Heavy Vehicles (%)	46%	0%	31%	8%	5%	27%	10%	5%	7%	11%	4%	15%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	13.2	13.2	13.2		13.2		0.9	36.9	36.9	8.3	44.3	
Effective Green, g (s)	13.2	13.2	13.2		13.2		0.9	36.9	36.9	8.3	44.3	
Actuated g/C Ratio	0.19	0.19	0.19		0.19		0.01	0.53	0.53	0.12	0.64	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	122	361	231		258		21	1827	774	194	2160	
v/s Ratio Prot		0.00					0.01	0.30		c0.08	c0.38	
v/s Ratio Perm	c0.12		0.00		0.09				0.02			
v/c Ratio	0.65	0.01	0.00		0.45		0.67	0.56	0.05	0.64	0.60	
Uniform Delay, d1	26.0	22.8	22.8		24.9		34.1	10.8	7.8	29.1	7.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.2	0.0	0.0		1.2		47.8	0.6	0.0	5.0	0.6	
Delay (s)	37.2	22.8	22.8		26.1		81.9	11.4	7.8	34.1	7.9	
Level of Service	D	C	C		C		F	B	A	C	A	
Approach Delay (s/veh)		35.7			26.1			12.1			10.2	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	11.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	6	16	184	82	190	38	861	67	63	909	47
Future Volume (vph)	11	6	16	184	82	190	38	861	67	63	909	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1305			1734	1515	1556	3406		1736	3391	
Flt Permitted		0.88			0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1167			1375	1515	1556	3406		1736	3391	
Peak-hour factor, PHF	0.78	0.78	0.78	0.86	0.86	0.86	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	8	21	214	95	221	40	916	71	67	967	50
RTOR Reduction (vph)	0	14	0	0	0	35	0	4	0	0	2	0
Lane Group Flow (vph)	0	29	0	0	309	186	40	983	0	67	1015	0
Confl. Peds. (#/hr)	5		5	5		5	4		5	5		4
Heavy Vehicles (%)	23%	30%	40%	6%	5%	5%	16%	4%	13%	4%	5%	16%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		27.8			27.8	27.8	5.2	37.1		7.8	39.7	
Effective Green, g (s)		27.8			27.8	27.8	5.2	37.1		7.8	39.7	
Actuated g/C Ratio		0.32			0.32	0.32	0.06	0.43		0.09	0.46	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		372			438	482	92	1449		155	1543	
v/s Ratio Prot							0.03	0.29		c0.04	c0.30	
v/s Ratio Perm		0.02			c0.22	0.12						
v/c Ratio		0.08			0.71	0.39	0.43	0.68		0.43	0.66	
Uniform Delay, d1		20.7			26.1	23.1	39.6	20.2		37.6	18.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			5.1	0.5	1.2	1.4		0.7	1.1	
Delay (s)		20.8			31.2	23.6	40.8	21.6		38.3	19.6	
Level of Service		C			C	C	D	C		D	B	
Approach Delay (s/veh)		20.8			28.0			22.4			20.8	
Approach LOS		C			C			C			C	

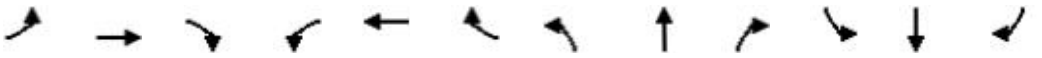
Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	14.5
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	62	156	987	1159	86
Future Volume (vph)	50	62	156	987	1159	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.93		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1693		1770	4940	3435	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1693		1770	4940	3435	
Peak-hour factor, PHF	0.83	0.83	0.88	0.88	0.87	0.87
Adj. Flow (vph)	60	75	177	1122	1332	99
RTOR Reduction (vph)	64	0	0	0	5	0
Lane Group Flow (vph)	71	0	177	1122	1426	0
Confl. Peds. (#/hr)	2		1			1
Heavy Vehicles (%)	1%	2%	2%	5%	4%	2%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.7		5.6	40.7	31.1	
Effective Green, g (s)	8.7		5.6	40.7	31.1	
Actuated g/C Ratio	0.15		0.10	0.70	0.53	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	251		169	3436	1826	
v/s Ratio Prot	c0.04		c0.10	0.23	c0.42	
v/s Ratio Perm						
v/c Ratio	0.28		1.05	0.33	0.78	
Uniform Delay, d1	22.1		26.5	3.5	11.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.8		82.3	0.0	2.1	
Delay (s)	23.0		108.7	3.5	13.0	
Level of Service	C		F	A	B	
Approach Delay (s/veh)	23.0			17.9	13.0	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	13.1
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

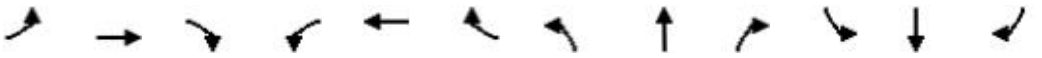
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	42	109	136	172	115	193	1101	41	52	1031	181
Future Volume (vph)	95	42	109	136	172	115	193	1101	41	52	1031	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1467	1863	1346	1787	1754		3367	3479		1805	3471	1496
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1467	1863	1346	1787	1754		3367	3479		1805	3471	1496
Peak-hour factor, PHF	0.80	0.80	0.80	0.87	0.87	0.87	0.99	0.99	0.99	0.87	0.87	0.87
Adj. Flow (vph)	119	52	136	156	198	132	195	1112	41	60	1185	208
RTOR Reduction (vph)	0	0	101	0	21	0	0	2	0	0	0	68
Lane Group Flow (vph)	119	53	35	156	309	0	195	1151	0	60	1185	140
Confl. Peds. (#/hr)	6					6	3		2	2		3
Heavy Vehicles (%)	23%	2%	20%	1%	1%	1%	4%	3%	7%	0%	4%	5%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	15.2	15.2	30.5	24.0	24.0		10.8	54.8		7.0	51.0	51.0
Effective Green, g (s)	15.2	15.2	30.5	24.0	24.0		10.8	54.8		7.0	51.0	51.0
Actuated g/C Ratio	0.13	0.13	0.25	0.20	0.20		0.09	0.46		0.06	0.43	0.43
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	185	235	342	357	350		303	1588		105	1475	635
v/s Ratio Prot	c0.08	0.03	0.03	0.09	c0.18		c0.06	c0.33		0.03	c0.34	
v/s Ratio Perm												0.09
v/c Ratio	0.64	0.23	0.10	0.44	0.88		0.64	0.73		0.57	0.80	0.22
Uniform Delay, d1	49.8	47.1	34.3	42.1	46.6		52.7	26.5		55.0	30.1	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.37	0.75		1.00	1.00	1.00
Incremental Delay, d2	7.4	0.5	0.1	0.9	22.1		2.4	2.1		4.6	4.7	0.8
Delay (s)	57.3	47.6	34.4	42.9	68.8		75.0	22.0		59.6	34.9	22.7
Level of Service	E	D	C	D	E		E	C		E	C	C
Approach Delay (s/veh)		45.5			60.5			29.7			34.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	783	123	192	1264	78	98	872	181	139	843	212
Future Volume (vph)	182	783	123	192	1264	78	98	872	181	139	843	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	4540		3213	4697		1656	4833		1626	4940	1477
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	4540		3213	4697		1656	4833		1626	4940	1477
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.95	0.95	0.95	0.88	0.88	0.88
Adj. Flow (vph)	194	833	131	226	1487	92	103	918	191	158	958	241
RTOR Reduction (vph)	0	17	0	0	6	0	0	26	0	0	0	51
Lane Group Flow (vph)	194	947	0	226	1573	0	103	1083	0	158	958	190
Confl. Peds. (#/hr)	5		1	1		5	2		12	12		2
Heavy Vehicles (%)	9%	12%	10%	9%	9%	15%	9%	4%	4%	11%	5%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	8.5	31.7		12.3	35.0		9.6	48.0		8.5	46.9	55.4
Effective Green, g (s)	8.5	31.7		12.3	35.0		9.6	48.0		8.5	46.9	55.4
Actuated g/C Ratio	0.07	0.26		0.10	0.29		0.08	0.40		0.07	0.39	0.46
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	117	1199		329	1369		132	1933		115	1930	681
v/s Ratio Prot	c0.12	0.21		0.07	c0.33		0.06	c0.22		c0.10	0.19	0.02
v/s Ratio Perm												0.11
v/c Ratio	1.66	0.79		0.69	1.15		0.78	0.56		1.37	0.50	0.28
Uniform Delay, d1	55.8	41.1		52.0	42.5		54.2	27.8		55.8	27.6	20.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.25	0.42	0.37
Incremental Delay, d2	330.9	3.8		4.7	76.1		23.5	1.2		201.2	0.6	0.1
Delay (s)	386.6	44.8		56.7	118.6		77.6	29.0		270.8	12.1	7.5
Level of Service	F	D		E	F		E	C		F	B	A
Approach Delay (s/veh)		102.1			110.8			33.1			41.4	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	75.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

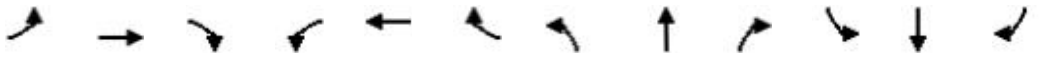
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	1519	370	398	797	80	199	994	490	76	840	83
Future Volume (vph)	118	1519	370	398	797	80	199	994	490	76	840	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	4802		1687	4750		3367	3539	1522	3433	3429	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	4802		1687	4750		3367	3539	1522	3433	3429	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	127	1633	398	423	848	85	207	1035	510	79	875	86
RTOR Reduction (vph)	0	26	0	0	8	0	0	0	133	0	4	0
Lane Group Flow (vph)	127	2005	0	423	925	0	207	1035	377	79	957	0
Confl. Peds. (#/hr)	9		7	7		9	3		13	13		3
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	6%	4%	6%	7%	8%	2%	4%	2%	3%	2%	3%	11%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	36.5	50.1		25.0	38.6		13.5	42.5	42.5	11.0	40.0	
Effective Green, g (s)	36.5	50.1		25.0	38.6		13.5	42.5	42.5	11.0	40.0	
Actuated g/C Ratio	0.24	0.33		0.17	0.26		0.09	0.28	0.28	0.07	0.27	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	414	1602		280	1221		302	1002	430	251	913	
v/s Ratio Prot	0.07	c0.42		c0.25	0.19		c0.06	c0.29		0.02	0.28	
v/s Ratio Perm									0.25			
v/c Ratio	0.31	1.25		1.51	0.76		0.69	1.03	0.88	0.31	1.05	
Uniform Delay, d1	46.5	50.0		62.6	51.4		66.2	53.8	51.3	66.0	55.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	118.5		247.5	3.1		5.1	37.2	18.9	0.3	43.1	
Delay (s)	46.6	168.5		310.0	54.5		71.3	91.0	70.2	66.2	98.1	
Level of Service	D	F		F	D		E	F	E	E	F	
Approach Delay (s/veh)		161.4			134.2			82.6			95.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	122.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	150.1	Sum of lost time (s)	21.5
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1589	79	107	1198	73	42	49	91	88	37	30
Future Volume (vph)	59	1589	79	107	1198	73	42	49	91	88	37	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	
Satd. Flow (prot)	1805	6299		1787	4809			3256			1776	
Flt Permitted	0.95	1.00		0.95	1.00			0.85			0.70	
Satd. Flow (perm)	1805	6299		1787	4809			2797			1286	
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	63	1709	85	113	1261	77	49	57	106	100	42	34
RTOR Reduction (vph)	0	5	0	0	5	0	0	80	0	0	8	0
Lane Group Flow (vph)	63	1789	0	113	1334	0	0	132	0	0	168	0
Confl. Peds. (#/hr)	9		7	7		9	7		14	14		7
Heavy Vehicles (%)	0%	3%	0%	1%	7%	3%	1%	0%	0%	1%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	8.1	42.6		12.2	46.7			23.1			23.1	
Effective Green, g (s)	8.1	42.6		12.2	46.7			23.1			23.1	
Actuated g/C Ratio	0.09	0.46		0.13	0.50			0.25			0.25	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	156	2872		233	2404			691			318	
v/s Ratio Prot	0.03	c0.28		c0.06	c0.28							
v/s Ratio Perm								0.05			c0.13	
v/c Ratio	0.40	0.62		0.48	0.55			0.19			0.53	
Uniform Delay, d1	40.4	19.3		37.7	16.2			27.8			30.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.6	0.5		0.6	0.4			0.1			1.6	
Delay (s)	41.0	19.8		38.3	16.6			27.9			32.0	
Level of Service	D	B		D	B			C			C	
Approach Delay (s/veh)		20.6			18.3			27.9			32.0	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	1048	346	237	851	247	247	877	212	257	992	219
Future Volume (vph)	286	1048	346	237	851	247	247	877	212	257	992	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	5036	1543	1736	4730		1787	4911		1770	4744	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	5036	1543	1736	4730		1787	4911		1770	4744	
Peak-hour factor, PHF	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96	0.93	0.93	0.93
Adj. Flow (vph)	308	1127	372	276	990	287	257	914	221	276	1067	235
RTOR Reduction (vph)	0	0	25	0	31	0	0	24	0	0	21	0
Lane Group Flow (vph)	308	1127	347	276	1246	0	257	1111	0	276	1281	0
Confl. Peds. (#/hr)	21		18	18		21	26		14	14		26
Confl. Bikes (#/hr)						1						4
Heavy Vehicles (%)	1%	3%	2%	4%	6%	1%	1%	2%	1%	2%	5%	7%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	25.0	49.5	74.5	25.0	49.0		25.0	49.8		25.0	49.3	
Effective Green, g (s)	25.0	49.5	74.5	25.0	49.0		25.0	49.8		25.0	49.3	
Actuated g/C Ratio	0.15	0.29	0.44	0.15	0.29		0.15	0.29		0.15	0.29	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	263	1472	678	256	1368		263	1444		261	1381	
v/s Ratio Prot	c0.17	0.22	0.08	0.16	c0.26		0.14	0.23		c0.16	c0.27	
v/s Ratio Perm			0.15									
v/c Ratio	1.17	0.77	0.51	1.08	0.91		0.98	0.77		1.06	0.93	
Uniform Delay, d1	72.2	54.6	34.3	72.2	58.0		71.9	54.5		72.2	58.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	109.8	2.6	0.3	78.6	9.5		48.5	2.7		71.7	11.1	
Delay (s)	182.0	57.2	34.5	150.7	67.6		120.3	57.2		143.8	69.4	
Level of Service	F	E	C	F	E		F	E		F	E	
Approach Delay (s/veh)		73.8			82.4			68.9			82.4	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	77.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	169.3	Sum of lost time (s)	21.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1304	82	129	1052	145	126	250	92	312	293	108
Future Volume (vph)	73	1304	82	129	1052	145	126	250	92	312	293	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4950		1805	4814		1805	1881	1574	3502	3439	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4950		1805	4814		1805	1881	1574	3502	3439	
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	76	1358	85	143	1169	161	142	281	103	339	318	117
RTOR Reduction (vph)	0	5	0	0	14	0	0	0	0	0	31	0
Lane Group Flow (vph)	76	1438	0	143	1316	0	142	281	103	339	404	0
Confl. Peds. (#/hr)	7		2	2		7			3	3		
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	4%	0%	0%	6%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	11.6	60.1		13.4	61.9		11.3	16.5	16.5	12.0	17.2	
Effective Green, g (s)	11.6	60.1		13.4	61.9		11.3	16.5	16.5	12.0	17.2	
Actuated g/C Ratio	0.10	0.50		0.11	0.52		0.09	0.14	0.14	0.10	0.14	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	174	2479		201	2483		169	258	216	350	492	
v/s Ratio Prot	0.04	c0.29		c0.08	0.27		0.08	c0.15		c0.10	0.12	
v/s Ratio Perm									0.07			
v/c Ratio	0.44	0.58		0.71	0.53		0.84	1.09	0.48	0.97	0.82	
Uniform Delay, d1	51.1	21.1		51.4	19.4		53.5	51.8	47.8	53.8	49.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	1.0		9.5	0.8		28.5	81.9	2.3	39.1	11.1	
Delay (s)	51.8	22.1		60.9	20.2		82.0	133.6	50.0	92.9	61.0	
Level of Service	D	C		E	C		F	F	D	F	E	
Approach Delay (s/veh)		23.6			24.1			103.3			75.0	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	48	10	22	37	143	2	1261	61	130	1413	34
Future Volume (vph)	47	48	10	22	37	143	2	1261	61	130	1413	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.90		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1429	1436		1547		1805	3539	1429	1612	3449	
Flt Permitted	0.25	1.00	1.00		0.96		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	461	1429	1436		1494		1805	3539	1429	1612	3449	
Peak-hour factor, PHF	0.41	0.41	0.41	0.64	0.64	0.64	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	115	117	24	34	58	223	2	1327	64	140	1519	37
RTOR Reduction (vph)	0	0	19	0	85	0	0	0	20	0	1	0
Lane Group Flow (vph)	115	117	5	0	230	0	2	1327	44	140	1555	0
Confl. Peds. (#/hr)			1	1					7	7		
Heavy Vehicles (%)	5%	33%	11%	2%	25%	8%	0%	2%	9%	12%	3%	57%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	19.1	19.1	19.1		19.1		0.8	48.2	48.2	12.0	59.4	
Effective Green, g (s)	19.1	19.1	19.1		19.1		0.8	48.2	48.2	12.0	59.4	
Actuated g/C Ratio	0.21	0.21	0.21		0.21		0.01	0.53	0.53	0.13	0.66	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	97	302	303		316		15	1889	762	214	2268	
v/s Ratio Prot		0.08					0.00	0.37		c0.09	c0.45	
v/s Ratio Perm	c0.25		0.00		0.15				0.03			
v/c Ratio	1.19	0.39	0.02		0.73		0.13	0.70	0.06	0.65	0.69	
Uniform Delay, d1	35.6	30.6	28.2		33.2		44.4	15.7	10.1	37.2	9.6	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	149.7	0.8	0.0		8.1		1.5	1.4	0.1	5.4	1.0	
Delay (s)	185.3	31.4	28.2		41.3		45.9	17.1	10.2	42.6	10.7	
Level of Service	F	C	C		D		D	B	B	D	B	
Approach Delay (s/veh)		100.2			41.3			16.8			13.3	
Approach LOS		F			D			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	61	63	95	21	12	5	1308	94	96	1300	15
Future Volume (vph)	46	61	63	95	21	12	5	1308	94	96	1300	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1738			1669	1447	1399	3490		1703	3492	
Flt Permitted		0.79			0.49	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1397			846	1447	1399	3490		1703	3492	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	61	81	84	127	28	16	5	1437	103	101	1368	16
RTOR Reduction (vph)	0	17	0	0	0	13	0	3	0	0	0	0
Lane Group Flow (vph)	0	209	0	0	155	3	5	1537	0	101	1384	0
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	2%	2%	3%	5%	29%	10%	29%	2%	8%	6%	3%	21%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		23.9			23.9	23.9	1.7	64.1		11.8	74.2	
Effective Green, g (s)		23.9			23.9	23.9	1.7	64.1		11.8	74.2	
Actuated g/C Ratio		0.21			0.21	0.21	0.01	0.56		0.10	0.65	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		292			176	302	20	1957		175	2266	
v/s Ratio Prot							0.00	c0.44		c0.06	0.40	
v/s Ratio Perm		0.15			c0.18	0.00						
v/c Ratio		0.72			0.88	0.01	0.25	0.79		0.58	0.61	
Uniform Delay, d1		42.1			43.8	35.8	55.7	19.7		48.9	11.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.1			36.4	0.0	2.4	2.3		2.8	0.6	
Delay (s)		50.2			80.2	35.8	58.1	22.0		51.7	12.2	
Level of Service		D			F	D	E	C		D	B	
Approach Delay (s/veh)		50.2			76.0			22.1			14.9	
Approach LOS		D			E			C			B	

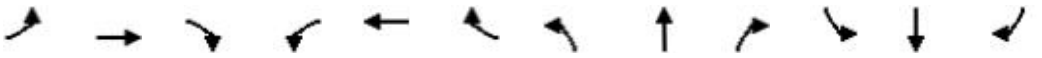
Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	114.3	Sum of lost time (s)	14.5
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	116	194	164	1232	1244	105
Future Volume (vph)	116	194	164	1232	1244	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.92		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1707		1787	5085	3464	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1707		1787	5085	3464	
Peak-hour factor, PHF	0.94	0.94	0.95	0.95	0.96	0.96
Adj. Flow (vph)	123	206	173	1297	1296	109
RTOR Reduction (vph)	79	0	0	0	7	0
Lane Group Flow (vph)	250	0	173	1297	1398	0
Confl. Peds. (#/hr)	9		5			5
Heavy Vehicles (%)	0%	0%	1%	2%	3%	0%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	16.1		5.2	42.1	32.9	
Effective Green, g (s)	16.1		5.2	42.1	32.9	
Actuated g/C Ratio	0.24		0.08	0.63	0.49	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	408		138	3180	1693	
v/s Ratio Prot	c0.15		c0.10	0.26	c0.40	
v/s Ratio Perm						
v/c Ratio	0.61		1.25	0.41	0.83	
Uniform Delay, d1	22.8		31.1	6.3	14.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.1		160.1	0.0	3.3	
Delay (s)	25.9		191.1	6.4	18.0	
Level of Service	C		F	A	B	
Approach Delay (s/veh)	25.9			28.1	18.0	
Approach LOS	C			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	67.3	Sum of lost time (s)	13.1
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

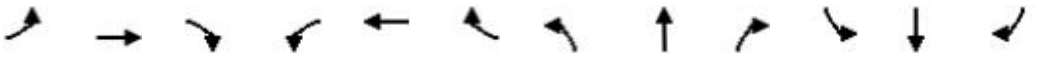
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	108	166	53	50	159	63	1252	79	131	1153	107
Future Volume (vph)	151	108	166	53	50	159	63	1252	79	131	1153	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.89		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1881	1509	1805	1646		3367	3507		1805	3539	1378
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1881	1509	1805	1646		3367	3507		1805	3539	1378
Peak-hour factor, PHF	0.68	0.68	0.68	0.88	0.88	0.88	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	222	159	244	60	57	181	67	1332	84	146	1281	119
RTOR Reduction (vph)	0	0	116	0	107	0	0	3	0	0	0	47
Lane Group Flow (vph)	222	159	128	60	131	0	67	1413	0	146	1281	72
Confl. Peds. (#/hr)	8					8	3		4	4		3
Heavy Vehicles (%)	2%	1%	7%	0%	2%	0%	4%	2%	0%	0%	2%	14%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	21.3	21.3	32.1	14.9	14.9		6.3	51.4		13.4	58.5	58.5
Effective Green, g (s)	21.3	21.3	32.1	14.9	14.9		6.3	51.4		13.4	58.5	58.5
Actuated g/C Ratio	0.18	0.18	0.27	0.12	0.12		0.05	0.43		0.11	0.49	0.49
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	314	333	403	224	204		176	1502		201	1725	671
v/s Ratio Prot	c0.13	0.08	0.08	0.03	c0.08		0.02	c0.40		c0.08	0.36	
v/s Ratio Perm												0.05
v/c Ratio	0.71	0.48	0.32	0.27	0.64		0.38	0.94		0.73	0.74	0.11
Uniform Delay, d1	46.4	44.3	35.2	47.6	50.0		55.0	32.8		51.5	24.7	16.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.35	0.58		1.00	1.00	1.00
Incremental Delay, d2	7.1	1.1	0.5	0.6	6.8		0.3	9.1		10.5	2.9	0.3
Delay (s)	53.5	45.4	35.6	48.3	56.8		74.3	28.0		62.0	27.6	17.0
Level of Service	D	D	D	D	E		E	C		E	C	B
Approach Delay (s/veh)		44.5			55.1			30.1			30.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

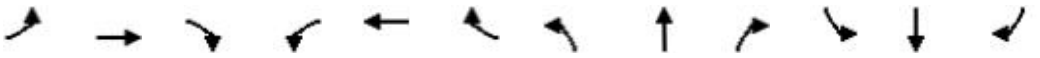
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	1147	142	224	796	132	65	954	178	108	998	33
Future Volume (vph)	236	1147	142	224	796	132	65	954	178	108	998	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	4893		3367	4815		1671	4960		1626	5085	1514
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1719	4893		3367	4815		1671	4960		1626	5085	1514
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	248	1207	149	246	875	145	68	994	185	117	1085	36
RTOR Reduction (vph)	0	13	0	0	19	0	0	22	0	0	0	19
Lane Group Flow (vph)	248	1343	0	246	1001	0	68	1157	0	117	1085	17
Confl. Peds. (#/hr)	4		7	7		4	7		3	3		7
Heavy Vehicles (%)	5%	4%	4%	4%	6%	0%	8%	2%	1%	11%	2%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.5	38.9		11.2	35.1		7.4	39.3		11.1	43.0	57.5
Effective Green, g (s)	14.5	38.9		11.2	35.1		7.4	39.3		11.1	43.0	57.5
Actuated g/C Ratio	0.12	0.32		0.09	0.29		0.06	0.33		0.09	0.36	0.48
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	207	1586		314	1408		103	1624		150	1822	725
v/s Ratio Prot	c0.14	c0.27		0.07	0.21		0.04	c0.23		c0.07	c0.21	0.00
v/s Ratio Perm												0.01
v/c Ratio	1.20	0.85		0.78	0.71		0.66	0.71		0.78	0.60	0.02
Uniform Delay, d1	52.8	37.8		53.2	37.9		55.1	35.4		53.3	31.4	16.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.21	0.46	0.29
Incremental Delay, d2	126.3	4.6		11.2	1.8		11.6	2.7		16.2	1.1	0.0
Delay (s)	179.0	42.3		64.4	39.8		66.7	38.1		80.5	15.6	4.7
Level of Service	F	D		E	D		E	D		F	B	A
Approach Delay (s/veh)		63.5			44.5			39.7			21.4	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

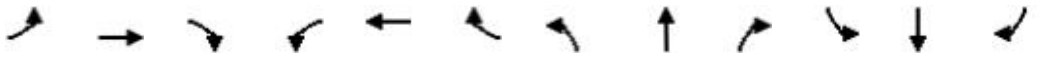
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1078	418	162	1511	72	361	550	99	102	588	189
Future Volume (vph)	138	1078	418	162	1511	72	361	550	99	102	588	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4523		1671	4863		3303	3406	1351	3433	3301	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4523		1671	4863		3303	3406	1351	3433	3301	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	1135	440	171	1591	76	380	579	104	107	619	199
RTOR Reduction (vph)	0	44	0	0	3	0	0	0	71	0	20	0
Lane Group Flow (vph)	145	1531	0	171	1664	0	380	579	33	107	798	0
Confl. Peds. (#/hr)	9		9	9		9	3		14	14		3
Heavy Vehicles (%)	10%	10%	7%	8%	6%	2%	6%	6%	16%	2%	4%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	18.6	50.2		18.6	50.2		19.2	47.0	47.0	11.2	39.0	
Effective Green, g (s)	18.6	50.2		18.6	50.2		19.2	47.0	47.0	11.2	39.0	
Actuated g/C Ratio	0.13	0.34		0.13	0.34		0.13	0.32	0.32	0.08	0.26	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	205	1528		209	1643		427	1077	427	258	866	
v/s Ratio Prot	0.09	c0.34		0.10	c0.34		c0.12	0.17		0.03	c0.24	
v/s Ratio Perm									0.02			
v/c Ratio	0.71	1.00		0.82	1.01		0.89	0.54	0.08	0.41	0.92	
Uniform Delay, d1	62.3	49.2		63.3	49.2		63.6	41.8	35.6	65.5	53.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.8	23.5		20.4	25.4		19.2	0.8	0.1	0.4	15.4	
Delay (s)	71.1	72.7		83.7	74.5		82.9	42.6	35.7	65.9	68.6	
Level of Service	E	E		F	E		F	D	D	E	E	
Approach Delay (s/veh)		72.6			75.4			56.3			68.3	
Approach LOS		E			E			E			E	

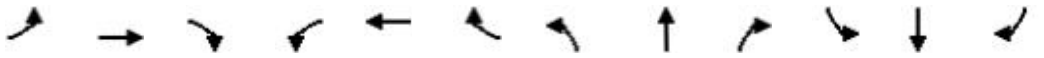
Intersection Summary			
HCM 2000 Control Delay (s/veh)	69.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	148.5	Sum of lost time (s)	21.5
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



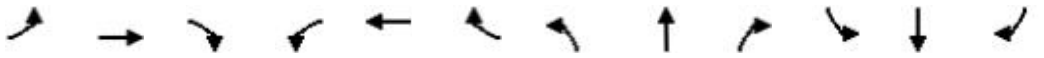
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1164	37	112	1612	38	37	4	48	98	12	22
Future Volume (vph)	27	1164	37	112	1612	38	37	4	48	98	12	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.92			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.96	
Satd. Flow (prot)	1805	5921		1752	4878			3139			1783	
Flt Permitted	0.95	1.00		0.95	1.00			0.83			0.72	
Satd. Flow (perm)	1805	5921		1752	4878			2661			1329	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1225	39	118	1697	40	39	4	51	103	13	23
RTOR Reduction (vph)	0	3	0	0	1	0	0	40	0	0	6	0
Lane Group Flow (vph)	28	1261	0	118	1736	0	0	54	0	0	133	0
Confl. Peds. (#/hr)	12		8	8		12	4		5	5		4
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	10%	2%	3%	6%	2%	1%	0%	4%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	3.1	37.3		11.9	46.1			17.5			17.5	
Effective Green, g (s)	3.1	37.3		11.9	46.1			17.5			17.5	
Actuated g/C Ratio	0.04	0.45		0.14	0.56			0.21			0.21	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	68	2686		253	2735			566			282	
v/s Ratio Prot	0.02	0.21		c0.07	c0.36							
v/s Ratio Perm								0.02			c0.10	
v/c Ratio	0.41	0.47		0.47	0.63			0.10			0.47	
Uniform Delay, d1	38.7	15.6		32.2	12.3			26.0			28.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.5	0.2		0.5	0.6			0.1			1.2	
Delay (s)	40.1	15.8		32.7	12.9			26.1			29.5	
Level of Service	D	B		C	B			C			C	
Approach Delay (s/veh)		16.3			14.2			26.1			29.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	15.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	906	251	318	1471	143	158	799	211	186	951	111
Future Volume (vph)	96	906	251	318	1471	143	158	799	211	186	951	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1527	1736	4826		1787	4833		1770	4824	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1527	1736	4826		1787	4833		1770	4824	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	954	264	335	1548	151	166	841	222	196	1001	117
RTOR Reduction (vph)	0	0	27	0	6	0	0	28	0	0	9	0
Lane Group Flow (vph)	101	954	237	335	1693	0	166	1035	0	196	1109	0
Confl. Peds. (#/hr)	9		9	9		9	13		2	2		13
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	10%	10%	4%	4%	6%	4%	1%	3%	6%	2%	5%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.9	40.8	58.3	25.3	51.7		17.5	40.4		19.9	42.3	
Effective Green, g (s)	13.9	40.8	58.3	25.3	51.7		17.5	40.4		19.9	42.3	
Actuated g/C Ratio	0.09	0.28	0.40	0.17	0.35		0.12	0.28		0.14	0.29	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	155	1314	608	300	1704		213	1333		240	1393	
v/s Ratio Prot	0.06	0.20	0.05	c0.19	c0.35		0.09	0.21		c0.11	c0.23	
v/s Ratio Perm			0.11									
v/c Ratio	0.65	0.73	0.39	1.12	0.99		0.78	0.78		0.82	0.80	
Uniform Delay, d1	63.9	47.7	31.4	60.6	47.2		62.6	48.8		61.5	48.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.3	2.2	0.2	87.1	20.1		15.0	3.1		18.0	3.4	
Delay (s)	71.2	49.9	31.5	147.7	67.3		77.6	51.9		79.5	51.5	
Level of Service	E	D	C	F	E		E	D		E	D	
Approach Delay (s/veh)		47.9			80.5			55.4			55.7	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	146.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	1174	79	127	1493	153	77	347	75	302	368	104
Future Volume (vph)	159	1174	79	127	1493	153	77	347	75	302	368	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	4704		1770	4793		1770	1863	1520	3467	3403	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	4704		1770	4793		1770	1863	1520	3467	3403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	1236	83	134	1572	161	81	365	79	318	387	109
RTOR Reduction (vph)	0	6	0	0	9	0	0	0	0	0	23	0
Lane Group Flow (vph)	167	1313	0	134	1724	0	81	365	79	318	473	0
Confl. Peds. (#/hr)	6		12	12		6	37		14	14		37
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	9%	9%	2%	7%	0%	2%	2%	3%	1%	1%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	14.6	44.5		12.2	42.1		8.0	30.5	30.5	14.8	37.3	
Effective Green, g (s)	14.6	44.5		12.2	42.1		8.0	30.5	30.5	14.8	37.3	
Actuated g/C Ratio	0.12	0.37		0.10	0.35		0.07	0.25	0.25	0.12	0.31	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	217	1744		179	1681		118	473	386	427	1057	
v/s Ratio Prot	c0.09	0.28		0.08	c0.36		0.05	c0.20		c0.09	0.14	
v/s Ratio Perm									0.05			
v/c Ratio	0.77	0.75		0.75	1.03		0.69	0.77	0.20	0.74	0.45	
Uniform Delay, d1	51.1	33.0		52.4	39.0		54.8	41.5	35.2	50.8	33.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.7	3.1		13.9	28.7		12.4	8.1	0.4	6.1	0.4	
Delay (s)	64.8	36.0		66.3	67.7		67.2	49.6	35.6	56.9	33.5	
Level of Service	E	D		E	E		E	D	D	E	C	
Approach Delay (s/veh)		39.2			67.6			50.2			42.6	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	52.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	4	9	44	16	41	21	932	44	50	993	51
Future Volume (vph)	16	4	9	44	16	41	21	932	44	50	993	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		0.99		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1236	1900	1216		1517		1641	3438	1459	1626	3424	
Flt Permitted	0.69	1.00	1.00		0.88		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	903	1900	1216		1364		1641	3438	1459	1626	3424	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	4	9	46	17	43	22	981	46	53	1045	54
RTOR Reduction (vph)	0	0	8	0	25	0	0	0	17	0	2	0
Lane Group Flow (vph)	17	4	1	0	81	0	22	981	29	53	1097	0
Confl. Peds. (#/hr)	1		2	2		1	1		9	9		1
Heavy Vehicles (%)	46%	0%	31%	8%	5%	27%	10%	5%	7%	11%	4%	15%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	9.1	9.1	9.1		9.1		1.9	35.5	35.5	4.0	37.6	
Effective Green, g (s)	9.1	9.1	9.1		9.1		1.9	35.5	35.5	4.0	37.6	
Actuated g/C Ratio	0.15	0.15	0.15		0.15		0.03	0.60	0.60	0.07	0.63	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	137	290	185		208		52	2047	869	109	2160	
v/s Ratio Prot		0.00					0.01	0.29		c0.03	c0.32	
v/s Ratio Perm	0.02		0.00		c0.06				0.02			
v/c Ratio	0.12	0.01	0.01		0.39		0.42	0.48	0.03	0.49	0.51	
Uniform Delay, d1	21.8	21.4	21.4		22.7		28.3	6.8	5.0	26.8	6.0	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.0	0.0		1.2		2.0	0.3	0.0	1.2	0.3	
Delay (s)	22.2	21.5	21.4		23.9		30.3	7.1	5.0	28.1	6.3	
Level of Service	C	C	C		C		C	A	A	C	A	
Approach Delay (s/veh)		21.9			23.9			7.5			7.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	7	24	186	82	177	71	866	87	55	929	28
Future Volume (vph)	10	7	24	186	82	177	71	866	87	55	929	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1277			1734	1515	1556	3388		1736	3410	
Flt Permitted		0.91			0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1177			1374	1515	1556	3388		1736	3410	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	7	25	196	86	186	75	912	92	58	978	29
RTOR Reduction (vph)	0	17	0	0	0	34	0	5	0	0	1	0
Lane Group Flow (vph)	0	26	0	0	282	152	75	999	0	58	1006	0
Confl. Peds. (#/hr)	5		5	5		5	4		5	5		4
Heavy Vehicles (%)	23%	30%	40%	6%	5%	5%	16%	4%	13%	4%	5%	16%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.6			25.6	25.6	8.3	36.6		7.7	36.0	
Effective Green, g (s)		25.6			25.6	25.6	8.3	36.6		7.7	36.0	
Actuated g/C Ratio		0.30			0.30	0.30	0.10	0.43		0.09	0.43	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		357			416	459	153	1469		158	1454	
v/s Ratio Prot							c0.05	0.29		0.03	c0.29	
v/s Ratio Perm		0.02			c0.21	0.10						
v/c Ratio		0.07			0.68	0.33	0.49	0.68		0.37	0.69	
Uniform Delay, d1		20.9			25.8	22.8	36.0	19.2		36.1	19.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			4.3	0.4	0.9	1.4		0.5	1.6	
Delay (s)		21.0			30.1	23.2	36.9	20.6		36.6	21.2	
Level of Service		C			C	C	D	C		D	C	
Approach Delay (s/veh)		21.0			27.4			21.7			22.1	
Approach LOS		C			C			C			C	

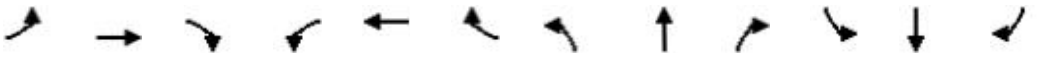
Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	84.4	Sum of lost time (s)	14.5
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	51	45	33	955	1179	87
Future Volume (vph)	51	45	33	955	1179	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1709		1770	4940	3435	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1709		1770	4940	3435	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	47	35	1005	1241	92
RTOR Reduction (vph)	39	0	0	0	5	0
Lane Group Flow (vph)	62	0	35	1005	1328	0
Confl. Peds. (#/hr)	2		1			1
Heavy Vehicles (%)	1%	2%	2%	5%	4%	2%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.1		1.4	32.4	27.0	
Effective Green, g (s)	8.1		1.4	32.4	27.0	
Actuated g/C Ratio	0.16		0.03	0.65	0.54	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	279		49	3226	1869	
v/s Ratio Prot	c0.04		c0.02	0.20	c0.39	
v/s Ratio Perm						
v/c Ratio	0.22		0.71	0.31	0.71	
Uniform Delay, d1	18.0		23.9	3.7	8.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.5		33.5	0.0	1.1	
Delay (s)	18.6		57.4	3.8	9.5	
Level of Service	B		E	A	A	
Approach Delay (s/veh)	18.6			5.6	9.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	49.6	Sum of lost time (s)	13.1
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

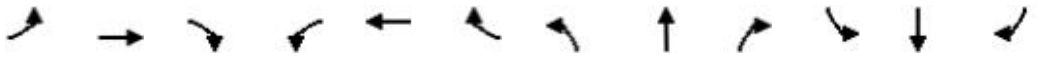
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	43	78	140	176	122	149	1083	42	59	1001	125
Future Volume (vph)	38	43	78	140	176	122	149	1083	42	59	1001	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1467	1863	1346	1787	1751		3367	3477		1805	3471	1496
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1467	1863	1346	1787	1751		3367	3477		1805	3471	1496
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	45	82	147	185	128	157	1140	44	62	1054	132
RTOR Reduction (vph)	0	0	67	0	21	0	0	1	0	0	0	45
Lane Group Flow (vph)	40	45	15	147	292	0	157	1183	0	62	1054	87
Confl. Peds. (#/hr)	6					6	3		2	2		3
Heavy Vehicles (%)	23%	2%	20%	1%	1%	1%	4%	3%	7%	0%	4%	5%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.6	7.6	21.6	23.5	23.5		9.5	62.8		7.1	60.4	60.4
Effective Green, g (s)	7.6	7.6	21.6	23.5	23.5		9.5	62.8		7.1	60.4	60.4
Actuated g/C Ratio	0.06	0.06	0.18	0.20	0.20		0.08	0.52		0.06	0.50	0.50
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	92	117	242	349	342		266	1819		106	1747	752
v/s Ratio Prot	c0.03	0.02	0.01	0.08	c0.17		c0.05	c0.34		0.03	0.30	
v/s Ratio Perm												0.06
v/c Ratio	0.43	0.38	0.06	0.42	0.85		0.59	0.65		0.58	0.60	0.12
Uniform Delay, d1	54.1	54.0	40.8	42.3	46.6		53.4	20.7		55.0	21.3	15.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.34	0.72		1.00	1.00	1.00
Incremental Delay, d2	3.3	2.1	0.1	0.8	18.3		1.9	1.5		5.2	1.6	0.3
Delay (s)	57.4	56.1	40.9	43.1	64.9		73.5	16.4		60.2	22.8	16.0
Level of Service	E	E	D	D	E		E	B		E	C	B
Approach Delay (s/veh)		48.9			57.9			23.1			24.0	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

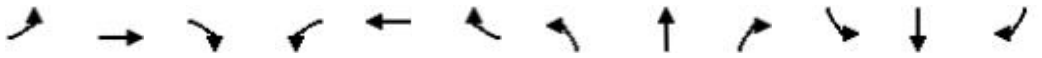
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	860	203	192	1264	66	159	820	182	110	777	185
Future Volume (vph)	167	860	203	192	1264	66	159	820	182	110	777	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	4502		3213	4706		1656	4824		1626	4940	1477
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	4502		3213	4706		1656	4824		1626	4940	1477
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	176	905	214	202	1331	69	167	863	192	116	818	195
RTOR Reduction (vph)	0	31	0	0	5	0	0	29	0	0	0	52
Lane Group Flow (vph)	176	1088	0	202	1395	0	167	1026	0	116	818	143
Confl. Peds. (#/hr)	5		1	1		5	2		12	12		2
Heavy Vehicles (%)	9%	12%	10%	9%	9%	15%	9%	4%	4%	11%	5%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	8.5	32.6		11.4	35.0		10.5	48.0		8.5	46.0	54.5
Effective Green, g (s)	8.5	32.6		11.4	35.0		10.5	48.0		8.5	46.0	54.5
Actuated g/C Ratio	0.07	0.27		0.10	0.29		0.09	0.40		0.07	0.38	0.45
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	117	1223		305	1372		144	1929		115	1893	670
v/s Ratio Prot	c0.11	0.24		0.06	c0.30		c0.10	c0.21		0.07	0.17	0.02
v/s Ratio Perm												0.08
v/c Ratio	1.50	0.89		0.66	1.02		1.16	0.53		1.01	0.43	0.21
Uniform Delay, d1	55.8	42.0		52.4	42.5		54.8	27.4		55.8	27.3	19.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.03	0.61	0.89
Incremental Delay, d2	266.1	8.4		4.1	28.6		124.3	1.1		79.6	0.6	0.0
Delay (s)	321.8	50.4		56.6	71.1		179.1	28.5		136.9	17.3	17.6
Level of Service	F	D		E	E		F	C		F	B	B
Approach Delay (s/veh)		87.3			69.2			49.1			29.7	
Approach LOS		F			E			D			C	

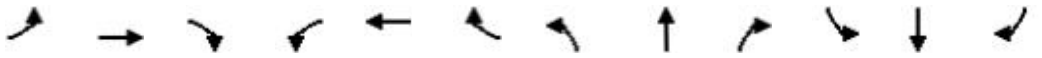
Intersection Summary			
HCM 2000 Control Delay (s/veh)	60.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	1342	333	119	865	121	230	992	414	144	889	150
Future Volume (vph)	201	1342	333	119	865	121	230	992	414	144	889	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	4800		1687	4732		3367	3539	1524	3433	3383	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	4800		1687	4732		3367	3539	1524	3433	3383	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	212	1413	351	125	911	127	242	1044	436	152	936	158
RTOR Reduction (vph)	0	26	0	0	12	0	0	0	110	0	9	0
Lane Group Flow (vph)	212	1738	0	125	1026	0	242	1044	326	152	1085	0
Confl. Peds. (#/hr)	9		7	7		9	3		13	13		3
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	6%	4%	6%	7%	8%	2%	4%	2%	3%	2%	3%	11%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	26.0	51.3		15.1	40.4		14.4	42.8	42.8	11.8	40.2	
Effective Green, g (s)	26.0	51.3		15.1	40.4		14.4	42.8	42.8	11.8	40.2	
Actuated g/C Ratio	0.18	0.36		0.11	0.28		0.10	0.30	0.30	0.08	0.28	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	310	1728		178	1341		340	1062	457	284	954	
v/s Ratio Prot	0.12	c0.36		0.07	c0.22		c0.07	c0.29		0.04	c0.32	
v/s Ratio Perm									0.21			
v/c Ratio	0.68	1.01		0.70	0.76		0.71	0.98	0.71	0.54	1.14	
Uniform Delay, d1	54.4	45.6		61.5	46.7		62.0	49.5	44.4	62.7	51.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.9	23.1		9.8	3.0		5.8	23.5	5.9	1.0	74.9	
Delay (s)	59.3	68.7		71.3	49.7		67.8	73.0	50.3	63.7	126.0	
Level of Service	E	E		E	D		E	E	D	E	F	
Approach Delay (s/veh)		67.7			52.0			66.5			118.4	
Approach LOS		E			D			E			F	

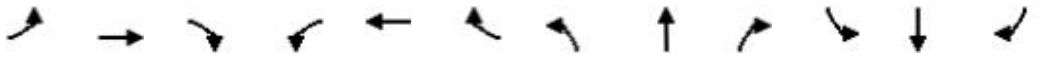
Intersection Summary			
HCM 2000 Control Delay (s/veh)	74.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	142.5	Sum of lost time (s)	21.5
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	1486	60	178	1021	62	123	32	128	75	21	20
Future Volume (vph)	48	1486	60	178	1021	62	123	32	128	75	21	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1805	6308		1787	4810			3242			1774	
Flt Permitted	0.95	1.00		0.95	1.00			0.78			0.60	
Satd. Flow (perm)	1805	6308		1787	4810			2578			1090	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	1564	63	187	1075	65	129	34	135	79	22	21
RTOR Reduction (vph)	0	4	0	0	4	0	0	104	0	0	6	0
Lane Group Flow (vph)	51	1623	0	187	1136	0	0	194	0	0	116	0
Confl. Peds. (#/hr)	9		7	7		9	7		14	14		7
Heavy Vehicles (%)	0%	3%	0%	1%	7%	3%	1%	0%	0%	1%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	5.5	42.8		15.3	52.6			21.7			21.7	
Effective Green, g (s)	5.5	42.8		15.3	52.6			21.7			21.7	
Actuated g/C Ratio	0.06	0.45		0.16	0.55			0.23			0.23	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	104	2832		286	2654			587			248	
v/s Ratio Prot	0.03	c0.26		c0.10	0.24							
v/s Ratio Perm								0.08			c0.11	
v/c Ratio	0.49	0.57		0.65	0.43			0.33			0.47	
Uniform Delay, d1	43.5	19.5		37.5	12.5			30.7			31.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	0.4		4.1	0.2			0.3			1.4	
Delay (s)	44.9	19.9		41.6	12.7			31.1			33.2	
Level of Service	D	B		D	B			C			C	
Approach Delay (s/veh)		20.6			16.8			31.1			33.2	
Approach LOS		C			B			C			C	

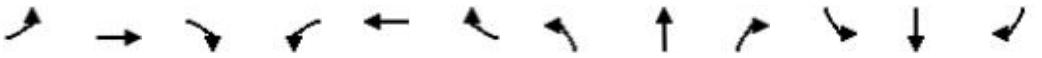
Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	95.3	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	249	1148	278	259	880	209	191	911	216	184	996	136
Future Volume (vph)	249	1148	278	259	880	209	191	911	216	184	996	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	5036	1544	1736	4756		1787	4915		1770	4811	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	5036	1544	1736	4756		1787	4915		1770	4811	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	262	1208	293	273	926	220	201	959	227	194	1048	143
RTOR Reduction (vph)	0	0	26	0	24	0	0	23	0	0	11	0
Lane Group Flow (vph)	262	1208	267	273	1122	0	201	1163	0	194	1180	0
Confl. Peds. (#/hr)	21		18	18		21	26		14	14		26
Confl. Bikes (#/hr)						1						4
Heavy Vehicles (%)	1%	3%	2%	4%	6%	1%	1%	2%	1%	2%	5%	7%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	25.3	45.7	66.7	25.3	45.2		21.0	46.7		20.6	45.8	
Effective Green, g (s)	25.3	45.7	66.7	25.3	45.2		21.0	46.7		20.6	45.8	
Actuated g/C Ratio	0.16	0.29	0.42	0.16	0.29		0.13	0.30		0.13	0.29	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	285	1453	650	277	1357		237	1449		230	1391	
v/s Ratio Prot	0.15	c0.24	0.05	c0.16	0.24		c0.11	0.24		0.11	c0.25	
v/s Ratio Perm			0.12									
v/c Ratio	0.92	0.83	0.41	0.99	0.83		0.85	0.80		0.84	0.85	
Uniform Delay, d1	65.5	52.7	32.0	66.3	52.9		67.1	51.5		67.3	53.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.0	4.4	0.2	49.6	4.5		22.7	3.5		22.7	5.2	
Delay (s)	97.5	57.1	32.2	115.9	57.4		89.8	55.0		90.0	58.2	
Level of Service	F	E	C	F	E		F	E		F	E	
Approach Delay (s/veh)		59.0			68.6			60.1			62.7	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	158.3	Sum of lost time (s)	21.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	1358	91	130	1057	145	150	295	119	329	306	102
Future Volume (vph)	79	1358	91	130	1057	145	150	295	119	329	306	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4948		1805	4814		1805	1881	1574	3502	3449	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4948		1805	4814		1805	1881	1574	3502	3449	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	1429	96	137	1113	153	158	311	125	346	322	107
RTOR Reduction (vph)	0	5	0	0	14	0	0	0	0	0	27	0
Lane Group Flow (vph)	83	1520	0	137	1252	0	158	311	125	346	402	0
Confl. Peds. (#/hr)	7		2	2		7			3	3		
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	4%	0%	0%	6%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	11.6	60.5		13.0	61.9		11.7	16.5	16.5	12.0	16.8	
Effective Green, g (s)	11.6	60.5		13.0	61.9		11.7	16.5	16.5	12.0	16.8	
Actuated g/C Ratio	0.10	0.50		0.11	0.52		0.10	0.14	0.14	0.10	0.14	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	174	2494		195	2483		175	258	216	350	482	
v/s Ratio Prot	0.05	c0.31		c0.08	0.26		0.09	c0.17		c0.10	0.12	
v/s Ratio Perm									0.08			
v/c Ratio	0.48	0.61		0.70	0.50		0.90	1.21	0.58	0.99	0.83	
Uniform Delay, d1	51.3	21.3		51.6	19.0		53.6	51.8	48.5	53.9	50.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	1.1		9.0	0.7		40.6	123.2	4.5	44.5	12.3	
Delay (s)	52.1	22.4		60.6	19.7		94.2	174.9	52.9	98.4	62.6	
Level of Service	D	C		E	B		F	F	D	F	E	
Approach Delay (s/veh)		23.9			23.7			127.8			78.6	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	6	9	61	0	63	3	1393	48	25	1329	14
Future Volume (vph)	31	6	9	61	0	63	3	1393	48	25	1329	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.93		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1429	1436		1644		1805	3539	1434	1612	3480	
Flt Permitted	0.63	1.00	1.00		0.86		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1140	1429	1436		1443		1805	3539	1434	1612	3480	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	33	6	9	64	0	66	3	1466	51	26	1399	15
RTOR Reduction (vph)	0	0	8	0	41	0	0	0	10	0	0	0
Lane Group Flow (vph)	33	6	1	0	89	0	3	1466	41	26	1414	0
Confl. Peds. (#/hr)			1	1					7	7		
Heavy Vehicles (%)	5%	33%	11%	2%	25%	8%	0%	2%	9%	12%	3%	57%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	11.0	11.0	11.0		11.0		0.7	46.5	46.5	2.1	47.9	
Effective Green, g (s)	11.0	11.0	11.0		11.0		0.7	46.5	46.5	2.1	47.9	
Actuated g/C Ratio	0.16	0.16	0.16		0.16		0.01	0.66	0.66	0.03	0.68	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	177	222	223		224		17	2330	944	47	2361	
v/s Ratio Prot		0.00					0.00	c0.41		c0.02	0.41	
v/s Ratio Perm	0.03		0.00		c0.06				0.03			
v/c Ratio	0.19	0.03	0.01		0.40		0.18	0.63	0.04	0.55	0.60	
Uniform Delay, d1	25.9	25.3	25.2		26.8		34.7	7.0	4.2	33.8	6.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.0	0.0		1.2		1.8	0.7	0.0	7.8	0.6	
Delay (s)	26.4	25.3	25.2		28.0		36.5	7.7	4.3	41.5	6.7	
Level of Service	C	C	C		C		D	A	A	D	A	
Approach Delay (s/veh)		26.1			28.0			7.6			7.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	44	98	161	5	76	20	1365	104	82	1313	14
Future Volume (vph)	23	44	98	161	5	76	20	1365	104	82	1313	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1691			1714	1447	1399	3487		1703	3493	
Flt Permitted		0.94			0.51	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1602			912	1447	1399	3487		1703	3493	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	46	103	169	5	80	21	1437	109	86	1382	15
RTOR Reduction (vph)	0	41	0	0	0	38	0	3	0	0	0	0
Lane Group Flow (vph)	0	132	0	0	174	42	21	1543	0	86	1397	0
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	2%	2%	3%	5%	29%	10%	29%	2%	8%	6%	3%	21%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.2			25.2	25.2	3.5	62.8		8.8	68.1	
Effective Green, g (s)		25.2			25.2	25.2	3.5	62.8		8.8	68.1	
Actuated g/C Ratio		0.23			0.23	0.23	0.03	0.56		0.08	0.61	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		362			206	327	43	1967		134	2137	
v/s Ratio Prot							0.02	c0.44		c0.05	0.40	
v/s Ratio Perm		0.08			c0.19	0.03						
v/c Ratio		0.36			0.84	0.13	0.49	0.78		0.64	0.65	
Uniform Delay, d1		36.3			41.2	34.3	53.0	19.0		49.7	14.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6			25.8	0.2	3.2	2.3		7.6	0.8	
Delay (s)		36.9			67.0	34.5	56.2	21.2		57.4	14.8	
Level of Service		D			E	C	E	C		E	B	
Approach Delay (s/veh)		36.9			56.8			21.7			17.2	
Approach LOS		D			E			C			B	

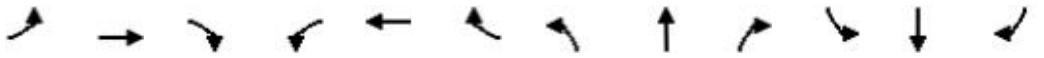
Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	111.3	Sum of lost time (s)	14.5
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	117	93	44	1298	1208	106
Future Volume (vph)	117	93	44	1298	1208	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1738		1787	5085	3462	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1738		1787	5085	3462	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	98	46	1366	1272	112
RTOR Reduction (vph)	37	0	0	0	7	0
Lane Group Flow (vph)	184	0	46	1366	1377	0
Confl. Peds. (#/hr)	9		5			5
Heavy Vehicles (%)	0%	0%	1%	2%	3%	0%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	14.2		2.4	36.1	29.7	
Effective Green, g (s)	14.2		2.4	36.1	29.7	
Actuated g/C Ratio	0.24		0.04	0.61	0.50	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	415		72	3090	1731	
v/s Ratio Prot	c0.11		0.03	c0.27	c0.40	
v/s Ratio Perm						
v/c Ratio	0.44		0.64	0.44	0.80	
Uniform Delay, d1	19.2		28.1	6.2	12.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.0		12.9	0.0	2.4	
Delay (s)	20.3		40.9	6.3	14.8	
Level of Service	C		D	A	B	
Approach Delay (s/veh)	20.3			7.4	14.8	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	13.1
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

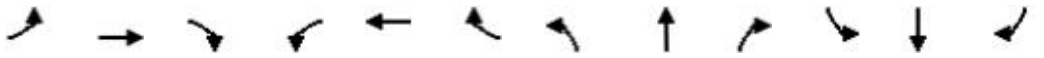
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	111	173	55	52	97	40	1192	81	55	1268	27
Future Volume (vph)	140	111	173	55	52	97	40	1192	81	55	1268	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1881	1509	1805	1677		3367	3505		1805	3539	1378
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1881	1509	1805	1677		3367	3505		1805	3539	1378
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	117	182	58	55	102	42	1255	85	58	1335	28
RTOR Reduction (vph)	0	0	126	0	63	0	0	2	0	0	0	12
Lane Group Flow (vph)	147	117	56	58	94	0	42	1338	0	58	1335	16
Confl. Peds. (#/hr)	8					8	3		4	4		3
Heavy Vehicles (%)	2%	1%	7%	0%	2%	0%	4%	2%	0%	0%	2%	14%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	15.8	15.8	25.8	13.2	13.2		5.5	65.1		6.9	66.5	66.5
Effective Green, g (s)	15.8	15.8	25.8	13.2	13.2		5.5	65.1		6.9	66.5	66.5
Actuated g/C Ratio	0.13	0.13	0.22	0.11	0.11		0.05	0.54		0.06	0.55	0.55
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	233	247	324	198	184		154	1901		103	1961	763
v/s Ratio Prot	c0.08	0.06	0.04	0.03	c0.06		0.01	c0.38		c0.03	0.38	
v/s Ratio Perm												0.01
v/c Ratio	0.63	0.47	0.17	0.29	0.51		0.27	0.70		0.56	0.68	0.02
Uniform Delay, d1	49.3	48.2	38.4	49.1	50.3		55.3	20.3		55.1	19.2	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.40	0.43		1.00	1.00	1.00
Incremental Delay, d2	5.5	1.4	0.3	0.8	2.2		0.2	1.5		4.1	1.9	0.0
Delay (s)	54.8	49.7	38.7	49.9	52.6		77.9	10.3		59.2	21.1	12.1
Level of Service	D	D	D	D	D		E	B		E	C	B
Approach Delay (s/veh)		46.9			51.9			12.3			22.5	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	1122	216	184	864	69	124	946	165	88	1065	167
Future Volume (vph)	231	1122	216	184	864	69	124	946	165	88	1065	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	4849		3367	4853		1671	4967		1626	5085	1515
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1719	4849		3367	4853		1671	4967		1626	5085	1515
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	243	1181	227	194	909	73	131	996	174	93	1121	176
RTOR Reduction (vph)	0	23	0	0	8	0	0	20	0	0	0	32
Lane Group Flow (vph)	243	1385	0	194	974	0	131	1150	0	93	1121	144
Confl. Peds. (#/hr)	4		7	7		4	7		3	3		7
Heavy Vehicles (%)	5%	4%	4%	4%	6%	0%	8%	2%	1%	11%	2%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.5	39.8		10.3	35.1		10.4	40.4		10.0	40.0	54.5
Effective Green, g (s)	14.5	39.8		10.3	35.1		10.4	40.4		10.0	40.0	54.5
Actuated g/C Ratio	0.12	0.33		0.09	0.29		0.09	0.34		0.08	0.33	0.45
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	207	1608		289	1419		144	1672		135	1695	688
v/s Ratio Prot	c0.14	c0.29		0.06	0.20		c0.08	c0.23		0.06	0.22	0.03
v/s Ratio Perm												0.07
v/c Ratio	1.17	0.86		0.67	0.69		0.91	0.69		0.69	0.66	0.21
Uniform Delay, d1	52.8	37.5		53.2	37.6		54.3	34.4		53.5	34.2	19.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.09	0.58	0.62
Incremental Delay, d2	117.4	5.2		4.8	1.5		47.6	2.3		8.8	1.6	0.0
Delay (s)	170.1	42.7		58.0	39.1		101.9	36.7		67.1	21.4	12.2
Level of Service	F	D		E	D		F	D		E	C	B
Approach Delay (s/veh)		61.4			42.2			43.3			23.3	
Approach LOS		E			D			D			C	

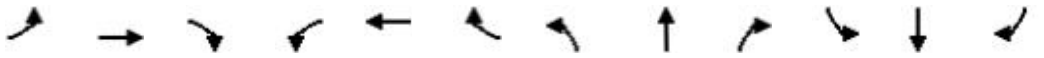
Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	1173	389	431	1640	76	378	550	309	113	578	161
Future Volume (vph)	121	1173	389	431	1640	76	378	550	309	113	578	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4543		1671	4863		3303	3406	1350	3433	3319	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4543		1671	4863		3303	3406	1350	3433	3319	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	127	1235	409	454	1726	80	398	579	325	119	608	169
RTOR Reduction (vph)	0	38	0	0	3	0	0	0	147	0	16	0
Lane Group Flow (vph)	127	1606	0	454	1803	0	398	579	178	119	761	0
Confl. Peds. (#/hr)	9		9	9		9	3		14	14		3
Heavy Vehicles (%)	10%	10%	7%	8%	6%	2%	6%	6%	16%	2%	4%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	25.0	50.0		25.0	50.0		19.7	47.4	47.4	11.3	39.0	
Effective Green, g (s)	25.0	50.0		25.0	50.0		19.7	47.4	47.4	11.3	39.0	
Actuated g/C Ratio	0.16	0.32		0.16	0.32		0.13	0.31	0.31	0.07	0.25	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	264	1463		269	1566		419	1040	412	249	834	
v/s Ratio Prot	0.08	c0.35		c0.27	c0.37		c0.12	0.17		0.03	c0.23	
v/s Ratio Perm									0.13			
v/c Ratio	0.48	1.10		1.69	1.15		0.95	0.56	0.43	0.48	0.91	
Uniform Delay, d1	59.2	52.6		65.1	52.6		67.3	45.1	43.1	69.1	56.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	55.0		325.1	75.8		30.7	1.0	1.3	0.5	14.6	
Delay (s)	59.7	107.6		390.2	128.4		98.0	46.1	44.4	69.6	71.0	
Level of Service	E	F		F	F		F	D	D	E	E	
Approach Delay (s/veh)		104.2			181.0			61.5			70.8	
Approach LOS		F			F			E			E	

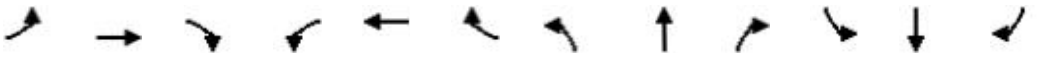
Intersection Summary			
HCM 2000 Control Delay (s/veh)	118.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	155.2	Sum of lost time (s)	21.5
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



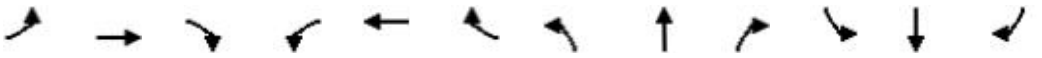
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1441	87	205	1904	40	108	4	173	116	14	30
Future Volume (vph)	27	1441	87	205	1904	40	108	4	173	116	14	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.91			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1805	5903		1752	4879			3100			1779	
Flt Permitted	0.95	1.00		0.95	1.00			0.78			0.54	
Satd. Flow (perm)	1805	5903		1752	4879			2456			997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1517	92	216	2004	42	114	4	182	122	15	32
RTOR Reduction (vph)	0	6	0	0	1	0	0	140	0	0	7	0
Lane Group Flow (vph)	28	1603	0	216	2045	0	0	160	0	0	162	0
Confl. Peds. (#/hr)	12		8	8		12	4		5	5		4
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	10%	2%	3%	6%	2%	1%	0%	4%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	5.2	43.8		16.7	55.3			22.5			22.5	
Effective Green, g (s)	5.2	43.8		16.7	55.3			22.5			22.5	
Actuated g/C Ratio	0.05	0.44		0.17	0.56			0.23			0.23	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	95	2624		297	2739			561			227	
v/s Ratio Prot	0.02	0.27		c0.12	c0.42							
v/s Ratio Perm								0.06			c0.16	
v/c Ratio	0.29	0.61		0.73	0.75			0.28			0.71	
Uniform Delay, d1	44.9	20.9		38.7	16.3			31.4			35.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.6	0.5		7.3	1.3			0.3			10.2	
Delay (s)	45.5	21.4		46.1	17.6			31.6			45.2	
Level of Service	D	C		D	B			C			D	
Approach Delay (s/veh)		21.8			20.3			31.6			45.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	98.5	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	1079	394	253	1658	161	236	811	223	211	969	149
Future Volume (vph)	213	1079	394	253	1658	161	236	811	223	211	969	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1526	1736	4825		1787	4826		1770	4790	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1526	1736	4825		1787	4826		1770	4790	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	224	1136	415	266	1745	169	248	854	235	222	1020	157
RTOR Reduction (vph)	0	0	25	0	6	0	0	29	0	0	12	0
Lane Group Flow (vph)	224	1136	390	266	1908	0	248	1060	0	222	1165	0
Confl. Peds. (#/hr)	9		9	9		9	13		2	2		13
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	10%	10%	4%	4%	6%	4%	1%	3%	6%	2%	5%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	24.1	49.7	74.0	25.0	50.1		24.3	48.9		23.0	47.1	
Effective Green, g (s)	24.1	49.7	74.0	25.0	50.1		24.3	48.9		23.0	47.1	
Actuated g/C Ratio	0.14	0.30	0.44	0.15	0.30		0.15	0.29		0.14	0.28	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	237	1406	677	260	1450		260	1416		244	1354	
v/s Ratio Prot	0.14	0.24	0.08	c0.15	c0.40		c0.14	0.22		0.13	c0.24	
v/s Ratio Perm			0.17									
v/c Ratio	0.95	0.81	0.58	1.02	1.32		0.95	0.75		0.91	0.86	
Uniform Delay, d1	70.6	54.0	34.6	70.8	58.2		70.6	53.3		70.8	56.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	42.7	3.7	0.7	61.9	147.0		42.6	2.4		33.5	6.0	
Delay (s)	113.3	57.8	35.3	132.7	205.3		113.2	55.6		104.2	62.6	
Level of Service	F	E	D	F	F		F	E		F	E	
Approach Delay (s/veh)		59.5			196.4			66.3			69.2	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	107.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	166.6	Sum of lost time (s)	21.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	1322	110	127	1558	153	95	347	75	302	368	119
Future Volume (vph)	189	1322	110	127	1558	153	95	347	75	302	368	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	4692		1770	4795		1770	1863	1520	3467	3384	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	4692		1770	4795		1770	1863	1520	3467	3384	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	199	1392	116	134	1640	161	100	365	79	318	387	125
RTOR Reduction (vph)	0	7	0	0	8	0	0	0	0	0	29	0
Lane Group Flow (vph)	199	1501	0	134	1793	0	100	365	79	318	483	0
Confl. Peds. (#/hr)	6		12	12		6	37		14	14		37
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	9%	9%	2%	7%	0%	2%	2%	3%	1%	1%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	14.6	45.2		12.2	42.8		9.9	29.8	29.8	14.8	34.7	
Effective Green, g (s)	14.6	45.2		12.2	42.8		9.9	29.8	29.8	14.8	34.7	
Actuated g/C Ratio	0.12	0.38		0.10	0.36		0.08	0.25	0.25	0.12	0.29	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	217	1767		179	1710		146	462	377	427	978	
v/s Ratio Prot	c0.11	0.32		0.08	c0.37		0.06	c0.20		c0.09	0.14	
v/s Ratio Perm									0.05			
v/c Ratio	0.92	0.85		0.75	1.05		0.68	0.79	0.21	0.74	0.49	
Uniform Delay, d1	52.1	34.3		52.4	38.6		53.5	42.2	35.8	50.8	35.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	38.1	5.3		13.9	35.7		10.1	9.4	0.4	6.1	0.5	
Delay (s)	90.2	39.6		66.3	74.3		63.6	51.6	36.1	56.9	35.9	
Level of Service	F	D		E	E		E	D	D	E	D	
Approach Delay (s/veh)		45.5			73.7			51.6			43.9	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	56.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	4	5	30	20	86	14	1025	58	109	1113	103
Future Volume (vph)	65	4	5	30	20	86	14	1025	58	109	1113	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		0.99		1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.91		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1236	1900	1216		1425		1640	3438	1456	1626	3391	
Flt Permitted	0.55	1.00	1.00		0.94		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	721	1900	1216		1361		1640	3438	1456	1626	3391	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	4	5	32	21	91	15	1079	61	115	1172	108
RTOR Reduction (vph)	0	0	4	0	62	0	0	0	22	0	4	0
Lane Group Flow (vph)	68	4	1	0	82	0	15	1079	39	115	1276	0
Confl. Peds. (#/hr)	1		2	2		1	1		9	9		1
Heavy Vehicles (%)	46%	0%	31%	8%	5%	27%	10%	5%	7%	11%	4%	15%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	12.5	12.5	12.5		12.5		0.9	38.7	38.7	8.1	45.9	
Effective Green, g (s)	12.5	12.5	12.5		12.5		0.9	38.7	38.7	8.1	45.9	
Actuated g/C Ratio	0.18	0.18	0.18		0.18		0.01	0.55	0.55	0.12	0.65	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	128	337	216		241		20	1892	801	187	2214	
v/s Ratio Prot		0.00					0.01	0.31		c0.07	c0.38	
v/s Ratio Perm	c0.09		0.00		0.06				0.03			
v/c Ratio	0.53	0.01	0.00		0.34		0.75	0.57	0.05	0.61	0.58	
Uniform Delay, d1	26.2	23.8	23.8		25.3		34.6	10.4	7.3	29.6	6.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	0.0	0.0		0.8		83.6	0.6	0.0	4.2	0.5	
Delay (s)	30.4	23.8	23.8		26.1		118.2	10.9	7.3	33.8	7.3	
Level of Service	C	C	C		C		F	B	A	C	A	
Approach Delay (s/veh)		29.7			26.1			12.1			9.5	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	7	17	189	84	194	40	904	69	65	1010	48
Future Volume (vph)	12	7	17	189	84	194	40	904	69	65	1010	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1310			1734	1515	1556	3407		1736	3394	
Flt Permitted		0.88			0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1172			1380	1515	1556	3407		1736	3394	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	7	18	199	88	204	42	952	73	68	1063	51
RTOR Reduction (vph)	0	13	0	0	0	36	0	4	0	0	2	0
Lane Group Flow (vph)	0	25	0	0	287	168	42	1021	0	68	1112	0
Confl. Peds. (#/hr)	5		5	5		5	4		5	5		4
Heavy Vehicles (%)	23%	30%	40%	6%	5%	5%	16%	4%	13%	4%	5%	16%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		27.1			27.1	27.1	5.2	40.4		7.9	43.1	
Effective Green, g (s)		27.1			27.1	27.1	5.2	40.4		7.9	43.1	
Actuated g/C Ratio		0.30			0.30	0.30	0.06	0.45		0.09	0.48	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		353			415	456	90	1531		152	1627	
v/s Ratio Prot							0.03	0.30		c0.04	c0.33	
v/s Ratio Perm		0.02			c0.21	0.11						
v/c Ratio		0.07			0.69	0.37	0.47	0.67		0.45	0.68	
Uniform Delay, d1		22.4			27.7	24.7	41.0	19.5		38.9	18.1	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			4.9	0.5	1.4	1.2		0.8	1.3	
Delay (s)		22.5			32.6	25.2	42.4	20.7		39.7	19.4	
Level of Service		C			C	C	D	C		D	B	
Approach Delay (s/veh)		22.5			29.5			21.5			20.6	
Approach LOS		C			C			C			C	

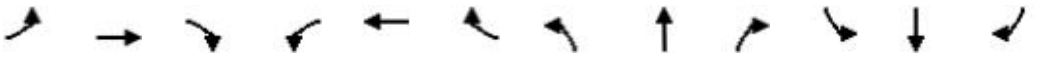
Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	14.5
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	52	63	157	1012	1253	88
Future Volume (vph)	52	63	157	1012	1253	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.93		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1695		1770	4940	3436	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1695		1770	4940	3436	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	66	165	1065	1319	93
RTOR Reduction (vph)	56	0	0	0	5	0
Lane Group Flow (vph)	65	0	165	1065	1407	0
Confl. Peds. (#/hr)	2		1			1
Heavy Vehicles (%)	1%	2%	2%	5%	4%	2%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.5		5.6	39.9	30.3	
Effective Green, g (s)	8.5		5.6	39.9	30.3	
Actuated g/C Ratio	0.15		0.10	0.69	0.53	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	250		172	3427	1810	
v/s Ratio Prot	c0.04		c0.09	0.22	c0.41	
v/s Ratio Perm						
v/c Ratio	0.26		0.96	0.31	0.78	
Uniform Delay, d1	21.7		25.8	3.4	10.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.8		55.6	0.0	2.0	
Delay (s)	22.5		81.4	3.5	12.9	
Level of Service	C		F	A	B	
Approach Delay (s/veh)	22.5			13.9	12.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	13.1
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

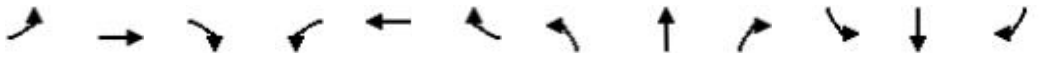
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	43	111	140	176	122	197	1148	42	59	1130	201
Future Volume (vph)	97	43	111	140	176	122	197	1148	42	59	1130	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1467	1863	1346	1787	1751		3367	3479		1805	3471	1496
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1467	1863	1346	1787	1751		3367	3479		1805	3471	1496
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	45	117	147	185	128	207	1208	44	62	1189	212
RTOR Reduction (vph)	0	0	88	0	21	0	0	2	0	0	0	68
Lane Group Flow (vph)	102	45	29	147	292	0	207	1250	0	62	1189	144
Confl. Peds. (#/hr)	6					6	3		2	2		3
Heavy Vehicles (%)	23%	2%	20%	1%	1%	1%	4%	3%	7%	0%	4%	5%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	13.7	13.7	29.5	23.5	23.5		11.3	56.7		7.1	52.5	52.5
Effective Green, g (s)	13.7	13.7	29.5	23.5	23.5		11.3	56.7		7.1	52.5	52.5
Actuated g/C Ratio	0.11	0.11	0.25	0.20	0.20		0.09	0.47		0.06	0.44	0.44
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	167	212	330	349	342		317	1643		106	1518	654
v/s Ratio Prot	c0.07	0.02	0.02	0.08	c0.17		c0.06	c0.36		0.03	0.34	
v/s Ratio Perm												0.10
v/c Ratio	0.61	0.21	0.09	0.42	0.85		0.65	0.76		0.58	0.78	0.22
Uniform Delay, d1	50.6	48.3	34.9	42.3	46.6		52.5	26.1		55.0	28.9	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.38	0.77		1.00	1.00	1.00
Incremental Delay, d2	6.5	0.5	0.1	0.8	18.3		2.7	2.5		5.2	4.1	0.8
Delay (s)	57.1	48.8	35.0	43.1	64.9		74.8	22.6		60.2	33.0	21.8
Level of Service	E	D	C	D	E		E	C		E	C	C
Approach Delay (s/veh)		45.9			57.9			30.0			32.5	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

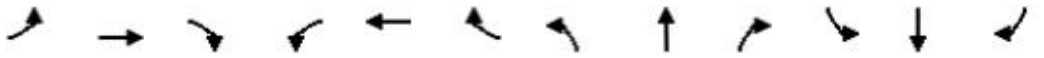
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	860	203	192	1264	78	159	888	182	139	866	228
Future Volume (vph)	198	860	203	192	1264	78	159	888	182	139	866	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	4502		3213	4697		1656	4834		1626	4940	1477
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	4502		3213	4697		1656	4834		1626	4940	1477
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	208	905	214	202	1331	82	167	935	192	146	912	240
RTOR Reduction (vph)	0	31	0	0	6	0	0	26	0	0	0	52
Lane Group Flow (vph)	208	1088	0	202	1407	0	167	1101	0	146	912	188
Confl. Peds. (#/hr)	5		1	1		5	2		12	12		2
Heavy Vehicles (%)	9%	12%	10%	9%	9%	15%	9%	4%	4%	11%	5%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	8.5	32.6		11.4	35.0		10.5	48.0		8.5	46.0	54.5
Effective Green, g (s)	8.5	32.6		11.4	35.0		10.5	48.0		8.5	46.0	54.5
Actuated g/C Ratio	0.07	0.27		0.10	0.29		0.09	0.40		0.07	0.38	0.45
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	117	1223		305	1369		144	1933		115	1893	670
v/s Ratio Prot	c0.13	0.24		0.06	c0.30		c0.10	c0.23		0.09	0.18	0.02
v/s Ratio Perm												0.11
v/c Ratio	1.78	0.89		0.66	1.03		1.16	0.57		1.27	0.48	0.28
Uniform Delay, d1	55.8	42.0		52.4	42.5		54.8	28.0		55.8	28.0	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.22	0.43	0.45
Incremental Delay, d2	382.2	8.4		4.1	31.8		124.3	1.2		160.5	0.6	0.1
Delay (s)	438.0	50.4		56.6	74.3		179.1	29.2		228.2	12.7	9.4
Level of Service	F	D		E	E		F	C		F	B	A
Approach Delay (s/veh)		111.1			72.0			48.5			36.3	
Approach LOS		F			E			D			D	

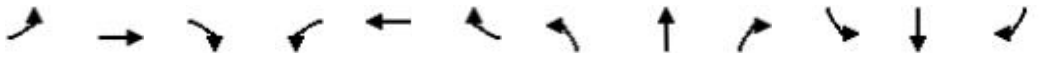
Intersection Summary			
HCM 2000 Control Delay (s/veh)	67.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	1519	384	401	932	80	262	1003	511	76	889	110
Future Volume (vph)	118	1519	384	401	932	80	262	1003	511	76	889	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	4797		1687	4757		3367	3539	1522	3433	3411	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	4797		1687	4757		3367	3539	1522	3433	3411	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	124	1599	404	422	981	84	276	1056	538	80	936	116
RTOR Reduction (vph)	0	28	0	0	6	0	0	0	135	0	6	0
Lane Group Flow (vph)	124	1975	0	422	1059	0	276	1056	403	80	1046	0
Confl. Peds. (#/hr)	9		7	7		9	3		13	13		3
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	6%	4%	6%	7%	8%	2%	4%	2%	3%	2%	3%	11%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			
Actuated Green, G (s)	31.6	50.1		25.0	43.5		16.1	45.1	45.1	11.0	40.0	
Effective Green, g (s)	31.6	50.1		25.0	43.5		16.1	45.1	45.1	11.0	40.0	
Actuated g/C Ratio	0.21	0.33		0.16	0.28		0.11	0.30	0.30	0.07	0.26	
Clearance Time (s)	4.5	6.0		4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	352	1573		276	1355		355	1045	449	247	893	
v/s Ratio Prot	0.07	c0.41		c0.25	0.22		c0.08	c0.30		0.02	c0.31	
v/s Ratio Perm									0.27			
v/c Ratio	0.35	1.26		1.53	0.78		0.78	1.01	0.90	0.32	1.17	
Uniform Delay, d1	51.8	51.3		63.9	50.2		66.6	53.8	51.6	67.3	56.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	120.5		255.6	3.4		9.4	30.5	21.1	0.3	89.1	
Delay (s)	52.0	171.8		319.4	53.6		75.9	84.3	72.7	67.6	145.4	
Level of Service	D	F		F	D		E	F	E	E	F	
Approach Delay (s/veh)		164.8			129.0			79.7			139.9	
Approach LOS		F			F			E			F	

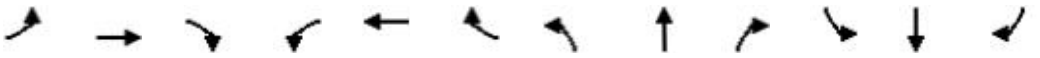
Intersection Summary			
HCM 2000 Control Delay (s/veh)	128.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	152.7	Sum of lost time (s)	21.5
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1589	81	111	1337	75	45	50	94	90	38	31
Future Volume (vph)	61	1589	81	111	1337	75	45	50	94	90	38	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.86		1.00	0.91			0.95			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	
Satd. Flow (prot)	1805	6298		1787	4812			3256			1775	
Flt Permitted	0.95	1.00		0.95	1.00			0.85			0.71	
Satd. Flow (perm)	1805	6298		1787	4812			2809			1300	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1673	85	117	1407	79	47	53	99	95	40	33
RTOR Reduction (vph)	0	5	0	0	4	0	0	75	0	0	8	0
Lane Group Flow (vph)	64	1753	0	117	1482	0	0	124	0	0	160	0
Confl. Peds. (#/hr)	9		7	7		9	7		14	14		7
Heavy Vehicles (%)	0%	3%	0%	1%	7%	3%	1%	0%	0%	1%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	8.3	43.0		12.2	46.9			22.7			22.7	
Effective Green, g (s)	8.3	43.0		12.2	46.9			22.7			22.7	
Actuated g/C Ratio	0.09	0.46		0.13	0.50			0.24			0.24	
Clearance Time (s)	4.5	6.0		4.5	6.0			5.0			5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5			3.0			3.0	
Lane Grp Cap (vph)	160	2899		233	2416			682			315	
v/s Ratio Prot	0.04	0.28		c0.07	c0.31							
v/s Ratio Perm								0.04			c0.12	
v/c Ratio	0.40	0.60		0.50	0.61			0.18			0.51	
Uniform Delay, d1	40.2	18.8		37.8	16.7			28.0			30.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.6	0.5		0.6	0.6			0.1			1.3	
Delay (s)	40.8	19.3		38.4	17.3			28.1			31.8	
Level of Service	D	B		D	B			C			C	
Approach Delay (s/veh)		20.1			18.9			28.1			31.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	305	1013	356	259	956	272	267	975	212	257	1058	232
Future Volume (vph)	305	1013	356	259	956	272	267	975	212	257	1058	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	5036	1543	1736	4733		1787	4925		1770	4745	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	5036	1543	1736	4733		1787	4925		1770	4745	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	321	1066	375	273	1006	286	281	1026	223	271	1114	244
RTOR Reduction (vph)	0	0	25	0	30	0	0	20	0	0	20	0
Lane Group Flow (vph)	321	1066	350	273	1262	0	281	1229	0	271	1338	0
Confl. Peds. (#/hr)	21		18	18		21	26		14	14		26
Confl. Bikes (#/hr)						1						4
Heavy Vehicles (%)	1%	3%	2%	4%	6%	1%	1%	2%	1%	2%	5%	7%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	25.0	49.8	74.8	25.0	49.3		25.0	50.5		25.0	50.0	
Effective Green, g (s)	25.0	49.8	74.8	25.0	49.3		25.0	50.5		25.0	50.0	
Actuated g/C Ratio	0.15	0.29	0.44	0.15	0.29		0.15	0.30		0.15	0.29	
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5		5.0	5.5		4.5	5.5	
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)	262	1472	677	254	1370		262	1460		259	1393	
v/s Ratio Prot	c0.18	0.21	0.08	0.16	c0.27		c0.16	0.25		0.15	c0.28	
v/s Ratio Perm			0.15									
v/c Ratio	1.23	0.72	0.52	1.07	0.92		1.07	0.84		1.05	0.96	
Uniform Delay, d1	72.7	54.1	34.6	72.7	58.6		72.7	56.2		72.7	59.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	130.4	1.9	0.3	77.7	10.5		76.2	4.8		68.6	15.7	
Delay (s)	203.0	56.0	34.9	150.4	69.1		148.8	60.9		141.2	74.9	
Level of Service	F	E	C	F	E		F	E		F	E	
Approach Delay (s/veh)		78.3			83.3			77.1			85.9	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	81.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	170.3	Sum of lost time (s)	21.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1261	78	130	1134	145	167	295	119	329	306	119
Future Volume (vph)	62	1261	78	130	1134	145	167	295	119	329	306	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4951		1805	4818		1805	1881	1574	3502	3434	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4951		1805	4818		1805	1881	1574	3502	3434	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	1327	82	137	1194	153	176	311	125	346	322	125
RTOR Reduction (vph)	0	5	0	0	13	0	0	0	0	0	35	0
Lane Group Flow (vph)	65	1404	0	137	1334	0	176	311	125	346	413	0
Confl. Peds. (#/hr)	7		2	2		7			3	3		
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	4%	0%	0%	6%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			
Actuated Green, G (s)	11.6	60.5		13.0	61.9		12.0	16.5	16.5	12.0	16.5	
Effective Green, g (s)	11.6	60.5		13.0	61.9		12.0	16.5	16.5	12.0	16.5	
Actuated g/C Ratio	0.10	0.50		0.11	0.52		0.10	0.14	0.14	0.10	0.14	
Clearance Time (s)	3.5	6.0		3.5	6.0		3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5		1.5	4.5		1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	174	2496		195	2485		180	258	216	350	472	
v/s Ratio Prot	0.04	c0.28		c0.08	0.28		0.10	c0.17		c0.10	0.12	
v/s Ratio Perm									0.08			
v/c Ratio	0.37	0.56		0.70	0.54		0.98	1.21	0.58	0.99	0.87	
Uniform Delay, d1	50.8	20.6		51.6	19.5		53.9	51.8	48.5	53.9	50.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.9		9.0	0.8		59.7	123.2	4.5	44.5	16.7	
Delay (s)	51.3	21.5		60.6	20.3		113.6	174.9	52.9	98.4	67.4	
Level of Service	D	C		E	C		F	F	D	F	E	
Approach Delay (s/veh)		22.8			24.0			132.4			80.9	
Approach LOS		C			C			F			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	49	11	24	37	145	3	1359	63	131	1480	36
Future Volume (vph)	48	49	11	24	37	145	3	1359	63	131	1480	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85		0.90		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1429	1436		1549		1805	3539	1430	1612	3449	
Flt Permitted	0.31	1.00	1.00		0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	570	1429	1436		1504		1805	3539	1430	1612	3449	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	52	12	25	39	153	3	1431	66	138	1558	38
RTOR Reduction (vph)	0	0	10	0	90	0	0	0	16	0	1	0
Lane Group Flow (vph)	51	52	2	0	127	0	3	1431	50	138	1595	0
Confl. Peds. (#/hr)			1	1					7	7		
Heavy Vehicles (%)	5%	33%	11%	2%	25%	8%	0%	2%	9%	12%	3%	57%
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4					6			
Actuated Green, G (s)	12.7	12.7	12.7		12.7		0.8	49.8	49.8	11.2	60.2	
Effective Green, g (s)	12.7	12.7	12.7		12.7		0.8	49.8	49.8	11.2	60.2	
Actuated g/C Ratio	0.15	0.15	0.15		0.15		0.01	0.59	0.59	0.13	0.71	
Clearance Time (s)	3.0	3.0	3.0		3.0		3.0	5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	85	214	215		225		17	2080	840	213	2451	
v/s Ratio Prot		0.04					0.00	c0.40		c0.09	0.46	
v/s Ratio Perm	c0.09		0.00		0.08				0.03			
v/c Ratio	0.60	0.24	0.01		0.56		0.18	0.69	0.06	0.65	0.65	
Uniform Delay, d1	33.6	31.8	30.6		33.4		41.6	12.1	7.4	34.9	6.6	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.4	0.6	0.0		3.2		1.8	1.1	0.1	5.0	0.8	
Delay (s)	45.0	32.4	30.7		36.6		43.4	13.2	7.5	39.9	7.4	
Level of Service	D	C	C		D		D	B	A	D	A	
Approach Delay (s/veh)		37.8			36.6			13.0			9.9	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	84.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	62	66	99	22	14	6	1405	97	98	1368	16
Future Volume (vph)	47	62	66	99	22	14	6	1405	97	98	1368	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1737			1669	1447	1399	3492		1703	3492	
Flt Permitted		0.87			0.52	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1527			902	1447	1399	3492		1703	3492	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	49	65	69	104	23	15	6	1479	102	103	1440	17
RTOR Reduction (vph)	0	18	0	0	0	12	0	3	0	0	0	0
Lane Group Flow (vph)	0	165	0	0	127	3	6	1578	0	103	1457	0
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	2%	2%	3%	5%	29%	10%	29%	2%	8%	6%	3%	21%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		20.2			20.2	20.2	1.6	64.2		11.8	74.4	
Effective Green, g (s)		20.2			20.2	20.2	1.6	64.2		11.8	74.4	
Actuated g/C Ratio		0.18			0.18	0.18	0.01	0.58		0.11	0.67	
Clearance Time (s)		5.0			5.0	5.0	4.0	5.5		4.0	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	1.5	4.0		1.5	4.0	
Lane Grp Cap (vph)		278			164	264	20	2025		181	2346	
v/s Ratio Prot							0.00	c0.45		c0.06	0.42	
v/s Ratio Perm		0.11			c0.14	0.00						
v/c Ratio		0.59			0.77	0.01	0.30	0.78		0.57	0.62	
Uniform Delay, d1		41.5			43.1	37.1	54.0	17.8		47.0	10.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4			20.1	0.0	3.1	2.1		2.4	0.6	
Delay (s)		44.9			63.1	37.1	57.1	19.9		49.5	10.8	
Level of Service		D			E	D	E	B		D	B	
Approach Delay (s/veh)		44.9			60.4			20.1			13.4	
Approach LOS		D			E			C			B	

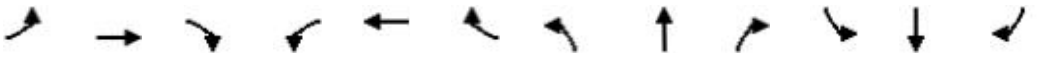
Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.7	Sum of lost time (s)	14.5
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	119	197	165	1374	1326	108
Future Volume (vph)	119	197	165	1374	1326	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.0	4.6	4.6	
Lane Util. Factor	1.00		1.00	0.91	0.95	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.92		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1708		1787	5085	3465	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1708		1787	5085	3465	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	125	207	174	1446	1396	114
RTOR Reduction (vph)	79	0	0	0	6	0
Lane Group Flow (vph)	253	0	174	1446	1504	0
Confl. Peds. (#/hr)	9		5			5
Heavy Vehicles (%)	0%	0%	1%	2%	3%	0%
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	16.5		5.1	45.9	36.8	
Effective Green, g (s)	16.5		5.1	45.9	36.8	
Actuated g/C Ratio	0.23		0.07	0.64	0.51	
Clearance Time (s)	4.5		4.0	4.6	4.6	
Vehicle Extension (s)	4.0		0.2	2.0	2.0	
Lane Grp Cap (vph)	394		127	3264	1783	
v/s Ratio Prot	c0.15		c0.10	0.28	c0.43	
v/s Ratio Perm						
v/c Ratio	0.64		1.37	0.44	0.84	
Uniform Delay, d1	24.8		33.2	6.4	14.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.0		208.5	0.0	3.7	
Delay (s)	28.8		241.7	6.4	18.6	
Level of Service	C		F	A	B	
Approach Delay (s/veh)	28.8			31.7	18.6	
Approach LOS	C			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	13.1
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

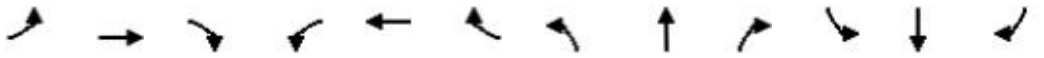
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	111	170	55	52	194	64	1271	81	138	1164	108
Future Volume (vph)	155	111	170	55	52	194	64	1271	81	138	1164	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.88		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1881	1509	1805	1638		3367	3507		1805	3539	1378
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1881	1509	1805	1638		3367	3507		1805	3539	1378
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	117	179	58	55	204	67	1338	85	145	1225	114
RTOR Reduction (vph)	0	0	121	0	124	0	0	3	0	0	0	43
Lane Group Flow (vph)	163	117	58	58	135	0	67	1420	0	145	1225	71
Confl. Peds. (#/hr)	8					8	3		4	4		3
Heavy Vehicles (%)	2%	1%	7%	0%	2%	0%	4%	2%	0%	0%	2%	14%
Turn Type	Split	NA	custom	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4	4 5	3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	16.9	16.9	27.7	15.0	15.0		6.3	55.5		13.6	62.8	62.8
Effective Green, g (s)	16.9	16.9	27.7	15.0	15.0		6.3	55.5		13.6	62.8	62.8
Actuated g/C Ratio	0.14	0.14	0.23	0.13	0.13		0.05	0.46		0.11	0.52	0.52
Clearance Time (s)	4.5	4.5		4.5	4.5		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	4.0		1.5	4.0	4.0
Lane Grp Cap (vph)	249	264	348	225	204		176	1621		204	1852	721
v/s Ratio Prot	c0.09	0.06	0.04	0.03	c0.08		0.02	c0.41		c0.08	0.35	
v/s Ratio Perm												0.05
v/c Ratio	0.65	0.44	0.17	0.26	0.66		0.38	0.88		0.71	0.66	0.10
Uniform Delay, d1	48.8	47.2	36.9	47.5	50.1		55.0	29.1		51.3	20.9	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.42	0.51		1.00	1.00	1.00
Incremental Delay, d2	6.1	1.2	0.2	0.6	7.8		0.3	4.5		9.3	1.9	0.3
Delay (s)	54.9	48.4	37.2	48.1	57.8		78.2	19.3		60.6	22.7	14.6
Level of Service	D	D	D	D	E		E	B		E	C	B
Approach Delay (s/veh)		46.3			56.1			22.0			25.8	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	259	1122	216	184	864	86	124	1004	165	67	1065	81
Future Volume (vph)	259	1122	216	184	864	86	124	1004	165	67	1065	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Lane Util. Factor	1.00	0.91		0.97	0.91		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	4849		3367	4844		1671	4973		1626	5085	1515
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1719	4849		3367	4844		1671	4973		1626	5085	1515
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	273	1181	227	194	909	91	131	1057	174	71	1121	85
RTOR Reduction (vph)	0	23	0	0	10	0	0	17	0	0	0	32
Lane Group Flow (vph)	273	1385	0	194	990	0	131	1214	0	71	1121	53
Confl. Peds. (#/hr)	4		7	7		4	7		3	3		7
Heavy Vehicles (%)	5%	4%	4%	4%	6%	0%	8%	2%	1%	11%	2%	5%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.5	39.8		10.3	35.1		10.4	42.4		8.0	40.0	54.5
Effective Green, g (s)	14.5	39.8		10.3	35.1		10.4	42.4		8.0	40.0	54.5
Actuated g/C Ratio	0.12	0.33		0.09	0.29		0.09	0.35		0.07	0.33	0.45
Clearance Time (s)	4.5	5.5		4.0	5.5		4.0	6.0		4.0	6.0	4.5
Vehicle Extension (s)	1.5	4.0		1.5	4.0		1.5	4.0		1.5	4.0	1.5
Lane Grp Cap (vph)	207	1608		289	1416		144	1757		108	1695	688
v/s Ratio Prot	c0.16	c0.29		0.06	0.20		c0.08	c0.24		0.04	0.22	0.01
v/s Ratio Perm												0.03
v/c Ratio	1.32	0.86		0.67	0.70		0.91	0.69		0.66	0.66	0.08
Uniform Delay, d1	52.8	37.5		53.2	37.8		54.3	33.2		54.7	34.2	18.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.20	0.54	0.48
Incremental Delay, d2	173.3	5.2		4.8	1.7		47.6	2.3		8.5	1.6	0.0
Delay (s)	226.0	42.7		58.0	39.4		101.9	35.4		74.0	20.2	8.9
Level of Service	F	D		E	D		F	D		E	C	A
Approach Delay (s/veh)		72.4			42.4			41.8			22.4	
Approach LOS		E			D			D			C	

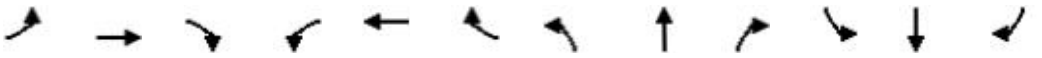
Intersection Summary			
HCM 2000 Control Delay (s/veh)	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	977	335	409	1632	67	398	503	295	103	554	182
Future Volume (vph)	104	977	335	409	1632	67	398	503	295	103	554	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4715	1473	3242	4867		3303	3406	1350	3433	3298	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4715	1473	3242	4867		3303	3406	1350	3433	3298	
Peak-hour factor, PHF	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	121	1136	390	435	1736	71	468	592	347	112	602	198
RTOR Reduction (vph)	0	0	144	0	3	0	0	0	163	0	21	0
Lane Group Flow (vph)	121	1136	246	435	1804	0	468	592	184	112	779	0
Confl. Peds. (#/hr)	9		9	9		9	3		14	14		3
Heavy Vehicles (%)	10%	10%	7%	8%	6%	2%	6%	6%	16%	2%	4%	8%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	12.7	51.3	51.3	23.4	62.0		22.9	48.9	48.9	11.0	37.0	
Effective Green, g (s)	12.7	51.3	51.3	23.4	62.0		22.9	48.9	48.9	11.0	37.0	
Actuated g/C Ratio	0.08	0.33	0.33	0.15	0.40		0.15	0.31	0.31	0.07	0.24	
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	133	1549	484	485	1933		484	1066	422	241	781	
v/s Ratio Prot	c0.07	0.24		0.13	c0.37		c0.14	0.17		0.03	c0.24	
v/s Ratio Perm			0.17						0.14			
v/c Ratio	0.91	0.73	0.51	0.90	0.93		0.97	0.56	0.43	0.46	1.00	
Uniform Delay, d1	71.1	46.4	42.2	65.2	45.1		66.2	44.6	42.6	69.7	59.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	50.1	2.1	1.4	18.5	9.1		32.0	0.9	1.2	0.5	31.5	
Delay (s)	121.2	48.4	43.7	83.7	54.2		98.2	45.5	43.9	70.2	91.0	
Level of Service	F	D	D	F	D		F	D	D	E	F	
Approach Delay (s/veh)		52.7			59.9			62.6			88.5	
Approach LOS		D			E			E			F	

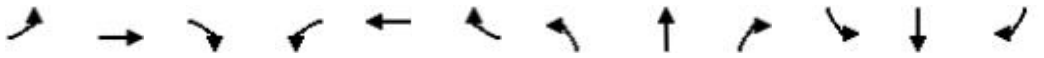
Intersection Summary			
HCM 2000 Control Delay (s/veh)	62.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	156.1	Sum of lost time (s)	21.5
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



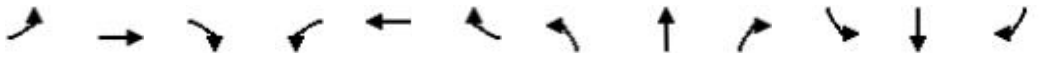
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	969	326	233	1690	172	225	792	223	211	875	147
Future Volume (vph)	198	969	326	233	1690	172	225	792	223	211	875	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1525	3367	4893	1517	1787	5036	1501	3433	4940	1429
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1525	3367	4893	1517	1787	5036	1501	3433	4940	1429
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.84	0.84	0.84	0.87	0.87	0.87
Adj. Flow (vph)	233	1140	384	251	1817	185	268	943	265	243	1006	169
RTOR Reduction (vph)	0	0	76	0	0	90	0	0	195	0	0	119
Lane Group Flow (vph)	233	1140	308	251	1817	95	268	943	70	243	1006	50
Confl. Peds. (#/hr)	9		9	9		9	13		2	2		13
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	10%	10%	4%	4%	6%	4%	1%	3%	6%	2%	5%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.0	44.8	55.8	13.4	45.7	45.7	11.0	32.5	32.5	13.0	34.0	34.0
Effective Green, g (s)	12.0	44.8	55.8	13.4	45.7	45.7	11.0	32.5	32.5	13.0	34.0	34.0
Actuated g/C Ratio	0.10	0.36	0.45	0.11	0.37	0.37	0.09	0.26	0.26	0.11	0.27	0.27
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	308	1707	687	364	1807	560	158	1323	394	360	1357	392
v/s Ratio Prot	0.07	0.24	0.04	c0.07	c0.37		c0.15	0.19		0.07	c0.20	
v/s Ratio Perm			0.16			0.06			0.05			0.04
v/c Ratio	0.76	0.67	0.45	0.69	1.01	0.17	1.70	0.71	0.18	0.68	0.74	0.13
Uniform Delay, d1	54.4	33.2	23.4	53.1	39.0	26.2	56.4	41.4	35.3	53.3	40.8	33.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.1	1.1	0.2	4.3	22.5	0.2	338.9	2.0	0.3	3.9	2.4	0.2
Delay (s)	63.5	34.3	23.5	57.5	61.5	26.4	395.3	43.3	35.6	57.2	43.2	33.9
Level of Service	E	C	C	E	E	C	F	D	D	E	D	C
Approach Delay (s/veh)		35.8			58.2			105.8			44.5	
Approach LOS		D			E			F			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	59.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	123.7	Sum of lost time (s)	21.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



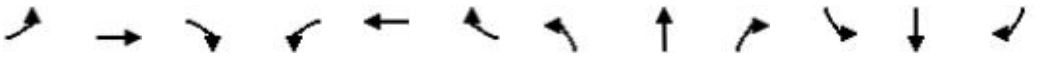
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1247	102	128	1579	159	92	340	75	300	348	114
Future Volume (vph)	176	1247	102	128	1579	159	92	340	75	300	348	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	4759	1432	1770	4848	1554	1770	1863	1520	3467	3383	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	4759	1432	1770	4848	1554	1770	1863	1520	3467	3383	
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.90	0.90	0.90	0.83	0.83	0.83
Adj. Flow (vph)	200	1417	116	147	1815	183	102	378	83	361	419	137
RTOR Reduction (vph)	0	0	73	0	0	90	0	0	0	0	28	0
Lane Group Flow (vph)	200	1417	43	147	1815	93	102	378	83	361	528	0
Confl. Peds. (#/hr)	6		12	12		6	37		14	14		37
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	9%	9%	2%	7%	0%	2%	2%	3%	1%	1%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			
Actuated Green, G (s)	14.5	42.8	42.8	12.7	41.0	41.0	9.9	30.5	30.5	16.0	36.6	
Effective Green, g (s)	14.5	42.8	42.8	12.7	41.0	41.0	9.9	30.5	30.5	16.0	36.6	
Actuated g/C Ratio	0.12	0.36	0.36	0.11	0.34	0.34	0.08	0.25	0.25	0.13	0.31	
Clearance Time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5	4.5	1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	215	1697	510	187	1656	530	146	473	386	462	1031	
v/s Ratio Prot	c0.11	0.30		0.08	c0.37		0.06	c0.20		c0.10	0.16	
v/s Ratio Perm			0.03			0.06			0.05			
v/c Ratio	0.93	0.84	0.08	0.79	1.10	0.18	0.70	0.80	0.22	0.78	0.51	
Uniform Delay, d1	52.2	35.4	25.6	52.3	39.5	27.7	53.6	41.9	35.3	50.3	34.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	41.8	5.0	0.3	17.9	53.3	0.7	11.1	9.7	0.4	7.7	0.6	
Delay (s)	94.1	40.4	25.9	70.2	92.8	28.4	64.7	51.5	35.7	58.1	34.9	
Level of Service	F	D	C	E	F	C	E	D	D	E	C	
Approach Delay (s/veh)		45.6			85.7			51.6			44.0	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	62.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	1519	370	398	797	80	199	994	490	76	840	83
Future Volume (vph)	118	1519	370	398	797	80	199	994	490	76	840	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	4988	1491	3273	4750		3367	3539	1523	3433	3429	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	4988	1491	3273	4750		3367	3539	1523	3433	3429	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	127	1633	398	423	848	85	207	1035	510	79	875	86
RTOR Reduction (vph)	0	0	101	0	8	0	0	0	132	0	4	0
Lane Group Flow (vph)	127	1633	297	423	925	0	207	1035	378	79	957	0
Confl. Peds. (#/hr)	9		7	7		9	3		13	13		3
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	6%	4%	6%	7%	8%	2%	4%	2%	3%	2%	3%	11%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	34.1	50.1	50.1	22.0	38.0		13.4	42.5	42.5	11.0	40.1	
Effective Green, g (s)	34.1	50.1	50.1	22.0	38.0		13.4	42.5	42.5	11.0	40.1	
Actuated g/C Ratio	0.23	0.34	0.34	0.15	0.26		0.09	0.29	0.29	0.07	0.27	
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	394	1698	507	489	1227		306	1022	440	256	934	
v/s Ratio Prot	0.07	c0.33		c0.13	0.19		c0.06	c0.29		0.02	0.28	
v/s Ratio Perm			0.20						0.25			
v/c Ratio	0.32	0.96	0.59	0.87	0.75		0.68	1.01	0.86	0.31	1.02	
Uniform Delay, d1	46.9	47.6	40.0	61.1	50.2		64.8	52.3	49.5	64.4	53.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	14.0	2.4	14.3	3.0		4.6	31.3	16.6	0.3	35.8	
Delay (s)	47.1	61.6	42.3	75.4	53.3		69.4	83.6	66.1	64.7	89.3	
Level of Service	D	E	D	E	D		E	F	E	E	F	
Approach Delay (s/veh)		57.2			60.2			76.8			87.4	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	68.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	147.1	Sum of lost time (s)	21.5
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

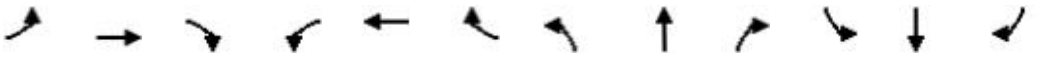


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	1048	346	237	851	247	247	877	212	257	992	219
Future Volume (vph)	286	1048	346	237	851	247	247	877	212	257	992	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5036	1549	3367	4893	1533	1787	5085	1545	3433	4940	1437
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5036	1549	3367	4893	1533	1787	5085	1545	3433	4940	1437
Peak-hour factor, PHF	0.93	0.93	0.93	0.86	0.86	0.86	0.96	0.96	0.96	0.93	0.93	0.93
Adj. Flow (vph)	308	1127	372	276	990	287	257	914	221	276	1067	235
RTOR Reduction (vph)	0	0	24	0	0	153	0	0	130	0	0	115
Lane Group Flow (vph)	308	1127	348	276	990	134	257	914	91	276	1067	120
Confl. Peds. (#/hr)	21		18	18		21	26		14	14		26
Confl. Bikes (#/hr)						1						4
Heavy Vehicles (%)	1%	3%	2%	4%	6%	1%	1%	2%	1%	2%	5%	7%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.4	42.3	67.3	16.4	40.8	40.8	25.0	51.7	51.7	16.1	42.3	42.3
Effective Green, g (s)	17.4	42.3	67.3	16.4	40.8	40.8	25.0	51.7	51.7	16.1	42.3	42.3
Actuated g/C Ratio	0.12	0.29	0.46	0.11	0.28	0.28	0.17	0.35	0.35	0.11	0.29	0.29
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	411	1454	711	376	1362	426	304	1794	545	377	1426	414
v/s Ratio Prot	c0.09	c0.22	0.08	0.08	0.20		c0.14	0.18		0.08	c0.22	
v/s Ratio Perm			0.14			0.09			0.06			0.08
v/c Ratio	0.75	0.78	0.49	0.73	0.73	0.31	0.85	0.51	0.17	0.73	0.75	0.29
Uniform Delay, d1	62.4	47.7	27.6	62.9	47.8	41.8	58.9	37.4	32.6	63.1	47.3	40.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4	2.8	0.2	6.3	2.1	0.6	18.3	0.3	0.2	6.2	2.3	0.5
Delay (s)	68.9	50.6	27.8	69.2	49.9	42.4	77.1	37.7	32.8	69.3	49.6	41.0
Level of Service	E	D	C	E	D	D	E	D	C	E	D	D
Approach Delay (s/veh)		49.0			51.9			44.2			51.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	49.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	146.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

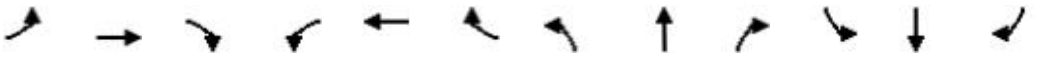
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	1304	82	129	1052	145	126	250	92	312	293	108
Future Volume (vph)	73	1304	82	129	1052	145	126	250	92	312	293	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4988	1590	1805	4893	1548	1805	1881	1574	3502	3439	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4988	1590	1805	4893	1548	1805	1881	1574	3502	3439	
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	76	1358	85	143	1169	161	142	281	103	339	318	117
RTOR Reduction (vph)	0	0	41	0	0	75	0	0	0	0	31	0
Lane Group Flow (vph)	76	1358	44	143	1169	86	142	281	103	339	404	0
Confl. Peds. (#/hr)	7		2	2		7			3	3		
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	4%	0%	0%	6%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			
Actuated Green, G (s)	11.6	60.1	60.1	13.4	61.9	61.9	11.3	16.5	16.5	12.0	17.2	
Effective Green, g (s)	11.6	60.1	60.1	13.4	61.9	61.9	11.3	16.5	16.5	12.0	17.2	
Actuated g/C Ratio	0.10	0.50	0.50	0.11	0.52	0.52	0.09	0.14	0.14	0.10	0.14	
Clearance Time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5	4.5	1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	174	2498	796	201	2523	798	169	258	216	350	492	
v/s Ratio Prot	0.04	c0.27		c0.08	0.24		0.08	c0.15		c0.10	0.12	
v/s Ratio Perm			0.03			0.06			0.07			
v/c Ratio	0.44	0.54	0.06	0.71	0.46	0.11	0.84	1.09	0.48	0.97	0.82	
Uniform Delay, d1	51.1	20.5	15.4	51.4	18.5	14.9	53.5	51.8	47.8	53.8	49.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.9	0.1	9.5	0.6	0.3	28.5	81.9	2.3	39.1	11.1	
Delay (s)	51.8	21.4	15.5	60.9	19.1	15.2	82.0	133.6	50.0	92.9	61.0	
Level of Service	D	C	B	E	B	B	F	F	D	F	E	
Approach Delay (s/veh)		22.6			22.7			103.3			75.0	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



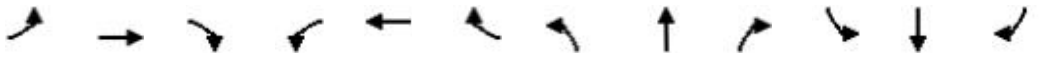
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	1079	394	253	1658	161	236	811	223	211	969	149
Future Volume (vph)	213	1079	394	253	1658	161	236	811	223	211	969	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1527	3367	4893	1514	1787	5036	1500	3433	4940	1424
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1527	3367	4893	1514	1787	5036	1500	3433	4940	1424
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	224	1136	415	266	1745	169	248	854	235	222	1020	157
RTOR Reduction (vph)	0	0	23	0	0	48	0	0	151	0	0	82
Lane Group Flow (vph)	224	1136	392	266	1745	121	248	854	84	222	1020	75
Confl. Peds. (#/hr)	9		9	9		9	13		2	2		13
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	10%	10%	4%	4%	6%	4%	1%	3%	6%	2%	5%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.7	50.0	74.0	16.0	50.8	50.8	24.0	51.2	51.2	14.0	40.7	40.7
Effective Green, g (s)	14.7	50.0	74.0	16.0	50.8	50.8	24.0	51.2	51.2	14.0	40.7	40.7
Actuated g/C Ratio	0.10	0.33	0.49	0.11	0.34	0.34	0.16	0.34	0.34	0.09	0.27	0.27
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	309	1559	747	356	1643	508	283	1705	507	317	1329	383
v/s Ratio Prot	0.07	0.24	0.08	c0.08	c0.36		c0.14	0.17		0.06	c0.21	
v/s Ratio Perm			0.17			0.08			0.06			0.05
v/c Ratio	0.72	0.73	0.52	0.75	1.06	0.24	0.88	0.50	0.16	0.70	0.77	0.20
Uniform Delay, d1	66.3	44.6	26.5	65.6	50.2	36.2	62.1	39.8	35.0	66.6	50.9	42.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.0	1.9	0.3	7.3	40.8	0.3	24.1	0.3	0.2	5.6	2.9	0.3
Delay (s)	73.3	46.5	26.8	72.9	91.0	36.6	86.2	40.1	35.2	72.2	53.8	43.0
Level of Service	E	D	C	E	F	D	F	D	D	E	D	D
Approach Delay (s/veh)		45.3			84.6			47.8			55.5	
Approach LOS		D			F			D			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	60.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	151.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



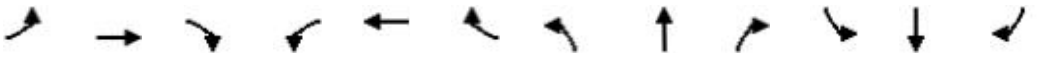
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	1322	110	127	1558	153	95	347	75	302	368	119
Future Volume (vph)	189	1322	110	127	1558	153	95	347	75	302	368	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	4759	1432	1770	4848	1554	1770	1863	1520	3467	3384	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	4759	1432	1770	4848	1554	1770	1863	1520	3467	3384	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	199	1392	116	134	1640	161	100	365	79	318	387	125
RTOR Reduction (vph)	0	0	71	0	0	87	0	0	0	0	29	0
Lane Group Flow (vph)	199	1392	45	134	1640	74	100	365	79	318	483	0
Confl. Peds. (#/hr)	6		12	12		6	37		14	14		37
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	9%	9%	2%	7%	0%	2%	2%	3%	1%	1%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			
Actuated Green, G (s)	14.6	45.2	45.2	12.2	42.8	42.8	9.9	29.8	29.8	14.8	34.7	
Effective Green, g (s)	14.6	45.2	45.2	12.2	42.8	42.8	9.9	29.8	29.8	14.8	34.7	
Actuated g/C Ratio	0.12	0.38	0.38	0.10	0.36	0.36	0.08	0.25	0.25	0.12	0.29	
Clearance Time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5	4.5	1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	217	1792	539	179	1729	554	146	462	377	427	978	
v/s Ratio Prot	c0.11	0.29		0.08	c0.34		0.06	c0.20		c0.09	0.14	
v/s Ratio Perm			0.03			0.05			0.05			
v/c Ratio	0.92	0.78	0.08	0.75	0.95	0.13	0.68	0.79	0.21	0.74	0.49	
Uniform Delay, d1	52.1	33.0	24.1	52.4	37.5	26.1	53.5	42.2	35.8	50.8	35.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	38.1	3.4	0.3	13.9	12.5	0.5	10.1	9.4	0.4	6.1	0.5	
Delay (s)	90.2	36.3	24.4	66.3	50.0	26.6	63.6	51.6	36.1	56.9	35.9	
Level of Service	F	D	C	E	D	C	E	D	D	E	D	
Approach Delay (s/veh)		41.8			49.2			51.6			43.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



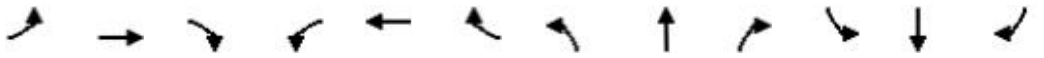
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	1519	384	401	932	80	262	1003	511	76	889	110
Future Volume (vph)	118	1519	384	401	932	80	262	1003	511	76	889	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	4988	1491	3273	4757		3367	3539	1522	3433	3411	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	4988	1491	3273	4757		3367	3539	1522	3433	3411	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	124	1599	404	422	981	84	276	1056	538	80	936	116
RTOR Reduction (vph)	0	0	105	0	6	0	0	0	134	0	6	0
Lane Group Flow (vph)	124	1599	299	422	1059	0	276	1056	404	80	1046	0
Confl. Peds. (#/hr)	9		7	7		9	3		13	13		3
Confl. Bikes (#/hr)			1						1			1
Heavy Vehicles (%)	6%	4%	6%	7%	8%	2%	4%	2%	3%	2%	3%	11%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	29.4	50.1	50.1	22.1	42.8		15.9	45.0	45.0	11.0	40.1	
Effective Green, g (s)	29.4	50.1	50.1	22.1	42.8		15.9	45.0	45.0	11.0	40.1	
Actuated g/C Ratio	0.20	0.33	0.33	0.15	0.29		0.11	0.30	0.30	0.07	0.27	
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0		5.0	6.0	6.0	5.0	6.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5		1.5	4.5	4.5	1.5	4.5	
Lane Grp Cap (vph)	334	1669	498	483	1360		357	1063	457	252	913	
v/s Ratio Prot	0.07	c0.32		c0.13	0.22		c0.08	c0.30		0.02	c0.31	
v/s Ratio Perm			0.20						0.27			
v/c Ratio	0.37	0.96	0.60	0.87	0.78		0.77	0.99	0.88	0.32	1.15	
Uniform Delay, d1	52.1	48.8	41.5	62.4	49.1		65.1	52.2	49.9	65.8	54.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	13.5	2.7	15.5	3.2		9.1	25.9	19.0	0.3	78.6	
Delay (s)	52.4	62.3	44.1	77.9	52.3		74.3	78.1	68.9	66.1	133.4	
Level of Service	D	E	D	E	D		E	E	E	E	F	
Approach Delay (s/veh)		58.3			59.6			74.9			128.6	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	75.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	149.7	Sum of lost time (s)	21.5
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	305	1013	356	259	956	272	267	975	212	257	1058	232
Future Volume (vph)	305	1013	356	259	956	272	267	975	212	257	1058	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	5036	1548	3367	4893	1533	1787	5085	1545	3433	4940	1436
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	5036	1548	3367	4893	1533	1787	5085	1545	3433	4940	1436
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	321	1066	375	273	1006	286	281	1026	223	271	1114	244
RTOR Reduction (vph)	0	0	24	0	0	151	0	0	116	0	0	113
Lane Group Flow (vph)	321	1066	351	273	1006	135	281	1026	107	271	1114	131
Confl. Peds. (#/hr)	21		18	18		21	26		14	14		26
Confl. Bikes (#/hr)						1						4
Heavy Vehicles (%)	1%	3%	2%	4%	6%	1%	1%	2%	1%	2%	5%	7%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	18.1	43.4	68.8	16.4	41.2	41.2	25.4	53.3	53.3	16.1	43.5	43.5
Effective Green, g (s)	18.1	43.4	68.8	16.4	41.2	41.2	25.4	53.3	53.3	16.1	43.5	43.5
Actuated g/C Ratio	0.12	0.29	0.46	0.11	0.28	0.28	0.17	0.36	0.36	0.11	0.29	0.29
Clearance Time (s)	5.0	5.5	5.0	4.5	5.5	5.5	5.0	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	420	1464	713	370	1351	423	304	1816	551	370	1440	418
v/s Ratio Prot	c0.09	c0.21	0.08	0.08	0.21		c0.16	0.20		0.08	c0.23	
v/s Ratio Perm			0.14			0.09			0.07			0.09
v/c Ratio	0.76	0.73	0.49	0.74	0.74	0.32	0.92	0.56	0.19	0.73	0.77	0.31
Uniform Delay, d1	63.5	47.6	28.0	64.3	49.2	42.9	61.0	38.6	33.1	64.5	48.3	41.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.3	2.0	0.2	6.5	2.4	0.6	31.9	0.5	0.2	6.3	2.8	0.6
Delay (s)	70.8	49.6	28.2	70.8	51.6	43.5	92.9	39.1	33.3	70.8	51.2	41.8
Level of Service	E	D	C	E	D	D	F	D	C	E	D	D
Approach Delay (s/veh)		48.9			53.5			48.1			53.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	50.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	149.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1261	78	130	1134	145	167	295	119	329	306	119
Future Volume (vph)	62	1261	78	130	1134	145	167	295	119	329	306	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.97	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	4988	1590	1805	4893	1548	1805	1881	1574	3502	3434	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1805	4988	1590	1805	4893	1548	1805	1881	1574	3502	3434	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	1327	82	137	1194	153	176	311	125	346	322	125
RTOR Reduction (vph)	0	0	41	0	0	70	0	0	0	0	35	0
Lane Group Flow (vph)	65	1327	41	137	1194	83	176	311	125	346	413	0
Confl. Peds. (#/hr)	7		2	2		7			3	3		
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	4%	0%	0%	6%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			
Actuated Green, G (s)	11.6	60.5	60.5	13.0	61.9	61.9	12.0	16.5	16.5	12.0	16.5	
Effective Green, g (s)	11.6	60.5	60.5	13.0	61.9	61.9	12.0	16.5	16.5	12.0	16.5	
Actuated g/C Ratio	0.10	0.50	0.50	0.11	0.52	0.52	0.10	0.14	0.14	0.10	0.14	
Clearance Time (s)	3.5	6.0	6.0	3.5	6.0	6.0	3.5	5.0	5.0	3.5	5.0	
Vehicle Extension (s)	1.5	4.5	4.5	1.5	4.5	4.5	1.5	4.0	4.0	1.5	4.0	
Lane Grp Cap (vph)	174	2514	801	195	2523	798	180	258	216	350	472	
v/s Ratio Prot	0.04	c0.27		c0.08	0.24		0.10	c0.17		c0.10	0.12	
v/s Ratio Perm			0.03			0.05			0.08			
v/c Ratio	0.37	0.53	0.05	0.70	0.47	0.10	0.98	1.21	0.58	0.99	0.87	
Uniform Delay, d1	50.8	20.1	15.1	51.6	18.6	14.9	53.9	51.8	48.5	53.9	50.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.8	0.1	9.0	0.6	0.3	59.7	123.2	4.5	44.5	16.7	
Delay (s)	51.3	20.9	15.3	60.6	19.2	15.1	113.6	174.9	52.9	98.4	67.4	
Level of Service	D	C	B	E	B	B	F	F	D	F	E	
Approach Delay (s/veh)		21.9			22.6			132.4			80.9	
Approach LOS		C			C			F			F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX D – NOP AND SCOPING MEETING MATERIALS

Notice of Preparation and Public Scoping Meeting Notice of a Draft Environmental Impact Report

Date: September 21, 2023

To: Interested Parties

Subject: **Notice of Preparation of a Draft Environmental Impact Report and Scoping Meeting for the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan**

Review Period: September 25, 2023 – October 25, 2023

The City of Pico Rivera (City) will be the lead agency and will prepare an Environmental Impact Report (EIR) for the proposed Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan (Project). This Notice of Preparation (NOP) initiates the environmental scoping process in accordance with CEQA Guidelines (14 California Code of Regulations [CCR] Section 15082). The purpose of an NOP is to provide sufficient information about the proposed project and its potential environmental effects to allow public agencies, organizations, tribes, and interested members of the public the opportunity to provide a meaningful response related to the scope and content of the EIR, including feasible mitigation measures and project alternatives that should be considered in the EIR (CEQA Guidelines, 14 CCR Section 15082[b]). The proposed project and location are briefly described below.

Providing Comments

The City of Pico Rivera is soliciting written comments from public agencies, organizations, tribes, and interested members of the public regarding the scope and content of the EIR. Because of time limits mandated by State law, comments should be provided as soon as possible, but no later than 5:00 p.m. on Wednesday, October 25, 2023. Please send all comments to:

Jazmin Faccuseh, Senior Analyst
City of Pico Rivera
6615 Passons Boulevard
Pico Rivera, CA 90660
Email: communitydevelopment@pico-rivera.org

Project Location

The Project area is generally located in the southern portion of the City of Pico Rivera within the southwest portion of the County of Los Angeles. The Project area is generally bounded by Washington Boulevard to the north, railway to the South, Rosemead Boulevard to the east and Crider Avenue to the west. The Project area includes approximately 90 legal parcels with commercial uses and existing residential neighborhoods to the north, light industrial facilities and railways to the south, existing residential neighborhoods to the east and light industrial facilities to the west. Figure 1, Project Area and Regional Location.

Cortese List Notice: Pursuant to Public Resources Code 21092.6(a), the Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (California Department of Toxic Substances Control list of various hazardous sites).[1]

Existing Setting

The Project area is completely developed except for one vacant parcel located on the northeast boundary. The northern portion includes retail commercial services, restaurants, lodging and residential uses. The northern and eastern portion are primarily developed with single-family residential uses. The southern portion includes business parks and light industrial uses. The southern and western portion consists primarily of warehouse and light industrial uses. The western portion includes open space and trail amenities adjacent to the Rio Hondo River. The current zoning for the Project area includes General Industrial (I-G), Specific Plan (SP), General Commercial (C-G), Community Commercial (C-C), and Multiple-Family Residential (R-M). The current uses for the Project area includes approximately 254,968 SF of residential (R-M) uses, approximately 282,653 SF of commercial (C-G and C-C) uses, approximately 79,292 SF of Professional and Administrative (P-A) uses, approximately 926,127 SF of General Industrial (G-I) uses, and approximately 5,959 SF of Public Facilities (P-F) uses. The Project area also includes a 76-acre portion of the Rancho De Bartolo Specific Plan (SP-400).

[1] DTSC. 2022. EnviroStor Hazardous Waste and Substances Site List (Cortese). https://dtsc.ca.gov/dtscs-cortese-list/ (Accessed August 09, 2023)

Project Description

The Project is the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan (Specific Plan). The Specific Plan encompasses approximately 327 acres, with the primary goal of promoting the future revitalization and reuse the Specific Plan area into a vibrant, multi-modal, mixed use, commercial, residential, and open space attraction in the City of Pico Rivera. The Specific Plan will be used as a policy and regulatory guide for subsequent Project-specific reviews and approvals when Project-level proposals within the Specific Plan area are submitted to the City. The Specific Plan assumes a maximum buildout of approximately 31,589 SF of new mixed use residential development and approximately 1,743,685 SF of new non-residential (mixed-use commercial, among other uses).

Additionally, the Specific Plan includes regulations to encourage improvements that update and improve facilities for pedestrians, bicyclists, transit riders, and drivers. The Specific Plan considers pedestrian circulation and amenities to improve access to/from the Specific Plan area. This may include a combination of multi-use pathways, separated bike lanes, and sidewalk and crosswalk enhancements. In addition, new landscaping, pedestrian amenities, and other public improvements are envisioned under the Specific Plan.

EIR Scope

The following issues are anticipated to be addressed in the EIR (note that some issues, following EIR research and in light of responses to this NOP, may be screened out from detailed analysis and instead discussed in the Effects Found Not to be Significant (EFNTBS) section of the EIR, pursuant to CEQA Guidelines Section 15128):

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Scoping Meeting

In accordance with Section 21083.9(a)(2) of the Public Resources Code and CEQA guidelines Section 15082(c), the City will hold a public scoping meeting where agencies, organizations, and members of the public will receive a brief presentation on the Project. Although the primary purpose of the scoping meeting is to meet with representatives of involved agencies to assist the lead agency in determining the scope and content of the environmental information that responsible or trustee agencies may require, members of the public will be provided with an opportunity to submit brief oral comments at this scoping meeting not exceeding three minutes. However, members of the public and relevant agencies are requested to provide their comments in writing, via email or mail, to the contact address shown above. The scoping meeting will be held:

October 25, 2023 at **5:00 PM**
Pico Rivera City Council Chambers
6615 Passons Blvd., Pico Rivera, CA 90660

Upon request and in compliance with the Americans with Disabilities Act of 1990, any person with a disability who requires a modification or accommodation to participate in a meeting should direct such request to (562) 801-4389 at least 72 hours before the meeting. The 72-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

The NOP is available for public review at Pico Rivera City Hall and on the City's website at:
https://www.pico-rivera.org/index.php/notice-of-preparation/

Attachments:

Figure 1 – Project Area and Regional Location

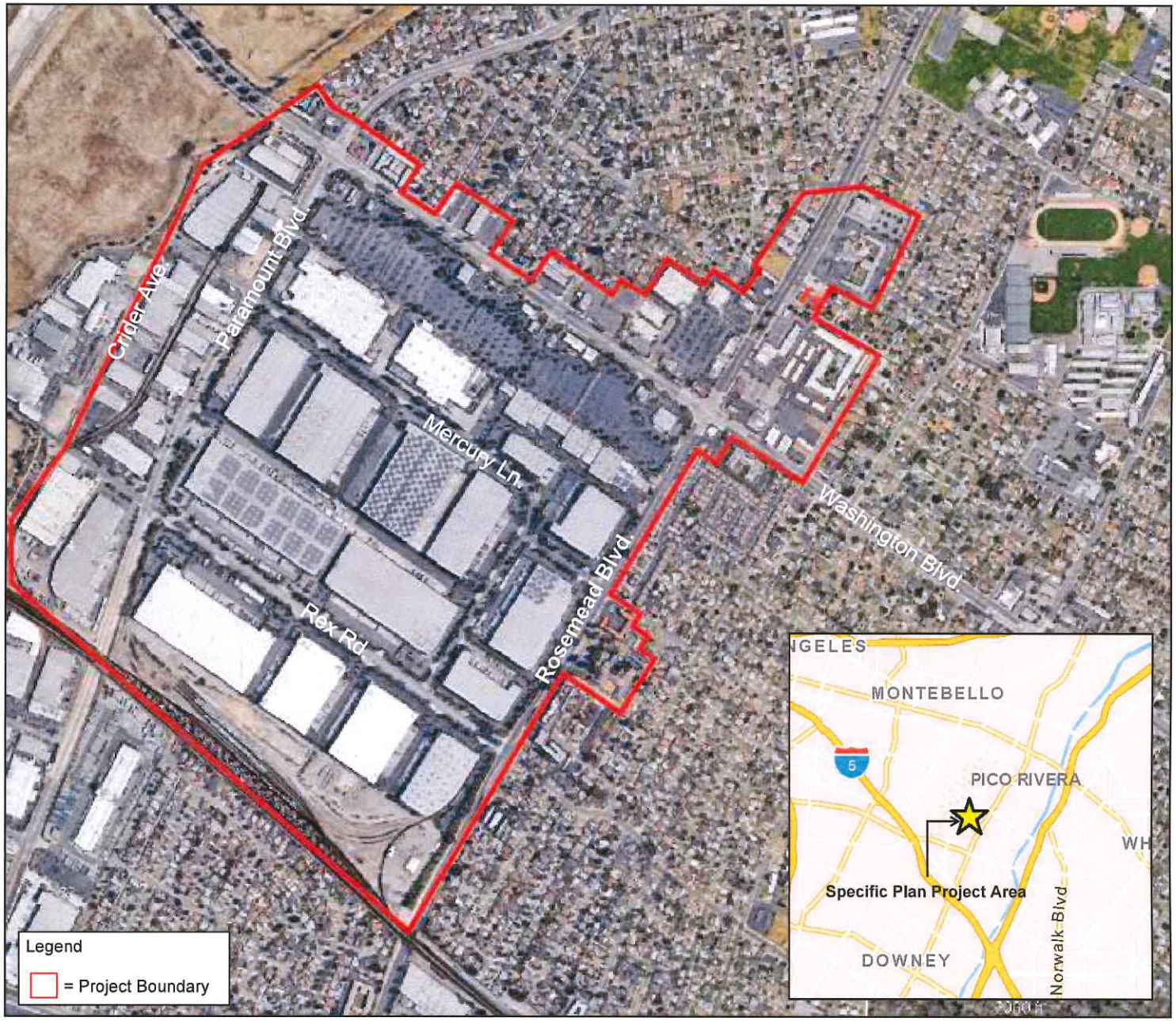


FIGURE 1: Project Area and Regional Location

Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan, City of Pico Rivera

Not to scale

Kimley»Horn

Dean C. Logan
Los Angeles County Registrar / Recorder
12400 Imperial Highway, Norwalk, CA
(800)201-8999

BUSINESS FILINGS REGISTRATION

NORWALK DEPARTMENT HEADQUARTER

Cashier: T. MORILLO

20230922122000 1

Friday, September 22, 2023 8:23 AM

Item(s)

Fee	Qty	Total
NoP - County Posting Fee 2023208354	1	$0.00
Total		**$0.00**

Total Documents: 1

Customer payment(s):

October 11, 2023

Ms. Jazmin Faccuseh, Senior Analyst
City of Pico Rivera
6615 Passons Boulevard
Pico Rivera, CA 90660
Email: communitydevelopment@pico-rivera.org

Dear Ms. Faccuseh:

Subject: City of Pico Rivera – Notice of Preparation of a Draft Environmental Impact Report and Scoping Meeting for the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan

The Los Angeles Department of Water and Power (LADWP) is in receipt of City of Pico Rivera's Notice of Preparation of a Draft Environmental Impact Report and Scoping Meeting dated September 21, 2023, and appreciates the opportunity to provide comments on the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan (Project). The mission of LADWP is to provide clean, reliable water and power to the City of Los Angeles. Based on our review of the Project we respectfully submit the below comments.

City of Pico Rivera shall provide additional information before any developments are authorized adjacent and/or within LADWP's Transmission Line Rights-of-Way (TLRW) and are subject to the following comments and conditions:

Comments:

1) City of Pico Rivera referenced herein shall pertain to its employees, agents, consultants, contractors, officers, patrons or invitees of City of Pico Rivera's, or by any other of City of Pico Rivera's affiliated entities.

2) The information provided, to date, is inadequate for properly reviewing the proposed improvements within sections of LADWP's TLRW. We therefore reserve the right to comment until more detailed information is provided regarding the proposed project. Provide plans illustrating the LADWP TLRW boundaries within the proposed project. Include towers and clearances from the proposed transmission line. Also, provide grading plans and utility plans, including any other plans illustrating the impacts to LADWP's TLRW. If access roads are proposed, provide plans illustrating impacts to LADWP's access roads. The plans should include APNs, state plane coordinates, or use the Public Land Survey System to locate the developments impacting LADWP's TLRW.

3) Plans may be submitted for review to the LADWP Real Estate Services Office via the following email: RE.Office@ladwp.com and copy LADWP's Environmental Affairs at environmental@ladwp.com.

4) Any temporary work within or immediately adjacent to LADWP's TLRW requires approval from LADWP.

Conditions:

1) City of Pico Rivera shall acknowledge the LADWP TLRW are integral components of the transmission line system, which provides electric power to the City of Los Angeles and other local communities. Their use is under the jurisdiction of the North American Electric Reliability Corporation, an organization of the Federal Energy Regulatory Commission. Safety and protection of critical facilities are the primary factors used to evaluate secondary land use proposals. The rights-of-way serve as platforms for access, construction, maintenance, facility expansion and emergency operations. Therefore, the proposed use may, from time to time, be subject to temporary disruption caused by such operations.

2) City of Pico Rivera shall be responsible for the maintenance of the Project area and shall keep the area in a neat and clean condition within LADWP's TLRW. It is our understanding that City of Pico Rivera will assume responsibility for the maintenance of the project improvements, and for all the risks and liabilities associated with the proposed improvements. LADWP will not be liable for any damage to the proposed project during LADWP's operation and maintenance activities.

3) No improvements or construction activities of any kind whatsoever will be allowed within the LADWP TLRW without the prior written approval of the LADWP.

4) No equipment with the height over 14-feet shall be allowed to travel within the LADWP TLRW without the written approval of LADWP.

5) No grading or structures shall be constructed within the LADWP TLRW without prior written approval of the LADWP.

6) Vehicle and/or truck repair, refueling, washing, and change of oil, are prohibited within the TLRW.

7) Additional conditions may be required following review of detailed site plans, grading/drainage plans, etc.

This response shall not be construed as an approval to begin construction activities, project improvements, nor approval of this project

For any questions regarding the above comments, please contact Ms. Jazmin Martin of my staff at (213) 367-1768 or Jazmin.Martin@ladwp.com.

Sincerely,

Katherine Rubin
Director of Corporate Environmental Affairs

JM:mr
c: Ms. Jazmin Martin
Ms. Jane Hauptman
Ms. Maria Depaz
Mr. Michael Hanson

Stakeholder List

Adriana Raza,
Customer Service Specialist
La County Sanitation District
Facilities Management Department
1955 Workman Mill Road
Whittier, CA 90601

Southern California Edison
Attn: Design Support/UND
9901 Geary Avenue
Santa Fe Springs, CA 90670

Dr. Marcos Villegas
Superintendent
El Rancho Unified School District
9333 Loch Lomond Drive
Pico Rivera, CA 90660

Joe Basulto
General Manager
Pico Water District
4843 S. Church Street
Pico Rivera, CA 90660

Los Angeles County Fire Department
Public Information Office
1320 N. Eastern Ave
Los Angeles, CA 90063

LA County Library Administrative Office
7400 E. Imperial Highway
Downey, CA 90242

Los Angeles County Sheriff's Department
Pico Rivera Station
6631 Passons Boulevard
Pico Rivera, 90660

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Pamela Yugar
Parks and Recreation Department
City of Pico Rivera
6767 Passons Boulevard

Pico Rivera, CA 90660

Noe Negrete
Public Works Department
City of Pico Rivera
6615 Passons Boulevard
Pico Rivera, CA 90660

Montebello Bus Lines
400 S. Taylor Avenue
Montebello, CA 90640

BNSF Railway
Pico Rivera Yard
7599 Rosemead Blvd #7425
Pico Rivera, CA 90660

Union Pacific – Los Nietos Yard
Los Nietos Rd,
Santa Fe Springs, CA 90670

Union Pacific – Montebello Yard
329 Van Norman Rd,
Montebello, CA 90640

Los Angeles County Flood Control District
900 S. Fremont Avenue,
Alhambra, CA 91803

South Coast AQMD
Stephano Padilla
21865 Copley Dr,
Diamond Bar, CA 91765

Planning Division
Montebello City Hall
1600 W. Beverly Boulevard
Montebello, CA 90640

Planning Division
Downey City Hall
1111 Brookshire Avenue
Downey, CA 90241

Planning Division
Whittier City Hall
13230 Penn Street
Whittier, CA 90602

Planning Division
Santa Fe Springs City Hall
11710 Telegraph Road
Santa Fe Springs, CA 90670

Native American Heritage Commission
Tribal Consultation List

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St.,
#231
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820
Anza, CA, 92539

Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487
San Jacinto, CA, 92581
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Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Stakeholder List 2022

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Santa Fe Springs, CA 90670

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Pico Rivera, CA 90660

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General Manager
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4843 S. Church Street
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Los Angeles, CA 90063

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Downey, CA 90242

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c/o Kaili Torres
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Downey, CA 90241

Planning Division
Whittier City Hall
13230 Penn Street
Whittier, CA 90602

Planning Division
Santa Fe Springs City Hall
11710 Telegraph Road
Santa Fe Springs, CA 90670

UTILITIES CONTACT SHEET

ATTDSOUTH
AT&T – DISTRIBUTION
Substructure Records Request
Construction & Engineering
Call for Mailing Address, CA

(510) 645-2929
Ma2797@att.com
600 East Green Street Room 300
Pasadena, CA 91101

LACOTS
LA COUNTY PUBLIC WORKS
Gus Nakhoul
900 South Fremont Avenue Construction
Division 8th Floor Alhambra, CA 91803
(626) 458-3124
Gnakhoul@dpw.lacounty.gov

LCDPWSSO
LA COUNTY DEPARTMENT OF PUBLIC WORKS SEWER PUMP STATIONS
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Jbouse@dpw.lacounty.gov

LA COUNTY DEPARTMENT OF PUBLIC WORKS – SOUTH STORM WATER MAINTENANCE DIVISION
Ron Lacayo

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Rlacayo@dpw.lacounty.gov

LA COUNTY DEPARTMENT OF PUBLIC WORKS – PUBLIC UTILITIES/STORM DRAINS
Daryl Chenoweth

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Dchenoweth@dpw.lacounty.gov

LA COUNTY DEPARTMENT OF PUBLIC WORKS – ELECTRO MECHANIC WORKING SUPERVISOR
Edward E. Carmona Leon
(626) 458-1709 ext. 1633
Eleon@dpw.lacounty.gov

LAF54
LA COUNTY PUBLIC WORKS – STORM WATER MAINTENANCE DIVISION
Area Engineer Imperial Yard
Ask for Eduardo Ibasan or Ahmet Tatlilioglu
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(562) 861-0316
Eibasan@dpw.lacounty.gov
Atatlilioglu@dpw.lacounty.gov

Charter Communications (Pico Rivera Rep.)
Jimmie Biggs |Construction Manager-Zone C2 |
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Harbor Corridor Districts
Planning and Engineering North West
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Southeast Region – Anaheim HQ
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Coordinate with USPS for alternate delivery location in construction areas
Uco Johnson
Officer in Charge/Postmaster
El Segundo/Manhattan Beach Post Office
90245/90266
(310) 647-1723
Uco.Johnson@usps.gov

San Gabriel River Water Company
Engineer | Engineering Department
San Gabriel Valley Water Company
11142 Garvey Avenue | El Monte, CA 91733
Direct: 626.774.2784 | Main: 909.201.7375
Email: kphu@sgvwater.com

Charter Communications
Email: dl-socal-charter-engineering@charter.com
DiannaNetherlain SoCal Central Specialists, Business Development
3430 E Miraloma Ave.
Anaheim, CA 92806
dianna.netherlain@charter.com

COMMENT SHEET

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

(PLEASE PRINT)
NAME _____ **EMAIL**_____

ADDRESS

_____

REPRESENTING

_____

(This identification will be placed on the City's mailing list for this project, unless otherwise noted.)

*Provide your comment on the back of this card.

I have the following comment(s) regarding the scope of the environmental analysis, alternatives evaluation, or mitigation measures that should be addressed in the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Draft Environmental Impact Report (EIR).

_____

_____

_____

_____

_____

_____

_____

If you have comments and do not wish to speak during the Scoping Meeting, please take the opportunity to fill out this Comment Sheet. Comment Sheets will be collected at the end of this Scoping Meeting.

Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan

Environmental Impact Report Scoping Meeting

Public Scoping Meeting
October 25, 2023 / 5:00 – 6:00 PM
Pico Rivera City Council Chambers
6615 Passons Blvd., Pico Rivera, CA 90660

1

Project Team

City of Pico Rivera (Planning Department)
- Alvaro Betancourt – Community Development Director
- Jazmin Faccuseh – Senior Analyst

Kimley-Horn and Associates (CEQA Consultants)
- Kevin Thomas – Environmental Project Manager
- Ruben Salas – Environmental Assistant Project Manager
- Dave Barquist – Land Use Planning

2

Overview

- Purpose of Scoping Meeting
- Project Overview
- Purpose of CEQA
- EIR Process
- Notice of Preparation (NOP)
- Issues to be Analyzed in the EIR
- Public Comments

3

Purpose of Scoping Meeting

Purpose is to:
- Provide a general project description
- Solicit comments to refine and/or expand the "scope" of the Environmental Impact Report (EIR)

The scope is determined by:
- Responses to Notice of Preparation (NOP) from responsible agencies
- Input from the community (including comments at today's scoping meeting)
- Experience with similar projects

4

Project Location and Overview

- The 327-acre Project area is a developed portion of the City of Pico Rivera
- Generally bounded south of Washington Boulevard, west of Rosemead Boulevard, east of Crider Avenue, and north of railway.

5

Project Overview

- The Specific Plan (Project) promotes the future revitalization and reuse of the Specific Plan area into a vibrant transit oriented development (TOD), multi-modal, mixed use, commercial residential, and open space area in Pico Rivera.
- The Specific Plan assumes a maximum additional development potential of approximately **31,589 square-feet (SF)** of new mixed use residential development and approximately **1,743,685 SF** of new non-residential (mixed-use commercial, industrial and other uses). The proposed additional allowed SF of development (residential/non-residential) would be on top of what the existing zoning currently allows within the Project area.
- The Project is a long-term plan that will help guide future development.
- No specific development is proposed at this time as part of this effort.

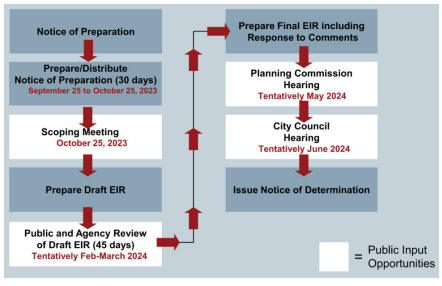
6

Purpose of CEQA

- California Environmental Quality Act (CEQA)
- Disclose project impacts to public and decision makers
- Identify ways to avoid or reduce environmental impacts
- Analyze alternatives
- Foster inter-agency coordination and review

7

EIR PROCESS



8

Topics to be Analyzed in the EIR

- ✓Aesthetics
- ✓Agriculture and Forestry Resources
- ✓Air Quality*
- ✓Biological Resources
- ✓Cultural Resources
- ✓Energy
- ✓Geology and Soils
- ✓Greenhouse Gas Emissions*
- ✓Hazards and Hazardous Materials
- ✓Hydrology and Water Quality
- ✓Land Use and Planning
- ✓Noise
- ✓Population and Housing
- ✓Public Services
- ✓Transportation*
- ✓Tribal Cultural Resources
- ✓Utilities and Service Systems

*Indicates a technical study will be prepared

9

Project-Related Technical Studies

- AQ/GHG Analysis
- Traffic Analysis
- Biological Assessment
- Cultural Assessment
- Tribal Consultation

10

Public Comments

Opportunities to Provide Input

- **Notice of Preparation**
  - 30-day public comment period began on September 25, 2023 and will end on October 25, 2023
- **Scoping Meeting**
  - Submit comments today to Jazmin Faccuseh (comment cards provided)
  - Please include your name and address

SCAN ME

11

Public Comments

Future Opportunities for Public Participation

- **Draft Environmental Impact Report**
  - Circulate Draft EIR for 45 days (tentatively Feb-March 2024)
- **Final EIR**
  - Includes responses to public comments
  - Final EIR is published and available for review prior to approval decision
- **Planning Commission and City Council Hearings**
  - Tentatively May-June 2024

12

Public Comments

- Any environmental issues you would like to see addressed in the EIR
- Comments may be submitted to Jazmin Faccuseh, Senior Analyst, City of Pico Rivera via:
  - Email: jfaccuseh@pico-rivera.org
  - In person: Using a comment card in today's scoping meeting
  - Mail: Community and Economic Development Department
    6615 Passons Blvd.
    Pico Rivera, CA 90660

13

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

Please **print** your name, address, and email address below to receive future notices regarding the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Environmental Impact Report (EIR).

	NAME	ORGANIZATION (If applicable)	EMAIL	ADDRESS
1.	Jose Molina	6		7775 Birchleaf Ave.
2.	Ralph Sedillo		RSedillo65@Icloud.com	6513 Beguette ave
3.	Jesus M Falmz			6312 Beguette Ave
4.	Jeff Stephens	CBRE	Jeffrey.Stephens@cbre.com	400 S. Hope St, LA CA 90071
5.	JULIAN BALDERAS	PRothAMBER	julianbalderas@picoriverachamber.com	5014 PASEO PR CA 90660
6.	Enerina Cliff		6704 Beguette Pico R	
7.	Jesus Ibarra		6739 Kelton Crest Dr	
8.	Daniel Rueda	L&M Fashion	ruedas1994@verizon.net	8605 Washington Blvd
9.	Jorge Martinez		grg.mrtnz23@gmail.com	6710 Lindsey Ave
10.	Joseph Nahas		johnjjjnn@gmail.com	171 Rivera Rd

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

Please **print** your name, address, and email address below to receive future notices regarding the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Environmental Impact Report (EIR).

	NAME	ORGANIZATION (If applicable)	EMAIL	ADDRESS
11.	VERONIQUE OLIVAREZ		VOLIVAREZ VARIZON	[illegible] PR. CA 9660
12.	VERONIKA LEGIAN		" "	[illegible] PR. CA 9660
13.	Jayro Queme		queme jayro@gmail.com	9111 West Blvd
14.	Luis Rueda		rueda56187@msn.com	8605 Washington Blvd Pico Rivera
15.	Belen Lopez		pecoso926@yahoo.com	9041 Danbridge Pico
16.	Favian Lopez		Powerloadfan1@yahoo	9041 Danbridge Pico
17.	Lisa Fisher		ppprincessLissA@yahoo.com	7208 Lindell Ave
18.	JOHN KWOK		john@mdbmail.com	8700 Rex RD. Pico Rivera
19.	John N		Johnjjjn@gmail.com	
20.				

PUBLIC SCOPING PUBLIC COMMENT NOTES

Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan

Wednesday, October 25, 2023, at 5:00 PM

Traffic/Roadway Concerns • Parking and traffic concerns on Washington Blvd. •	**Air Quality Concerns** •
Cultural Resources Concerns •	**General Safety Concerns** • Metro hazard for pedestrians and homelessness
All Other Topics • Crime concerns • Crime concerns due on existing BNSF grounds and adjacent residential communities. • Provide Metro information and meetings on the rail line. • Underground rail preferred as above rail is considered to be	**Noise Concerns** • Noise concerns due to new Metro Line. •

TOPIC	COMMENT
• CRIME/POLICING	HOW AFFECT CRIME RATES AND AFFECTS.
• CRIME/POLICING (HIGHLIGHTING)	SIGNED CONTRACT → IMPACTS • DURING CRIME RAILROAD / CRIME. WERE CALLED RAILROAD. • DRONES / CALLING COPS • A LOT MORE DOING CRIMES • NOBODY IS POLICING. • RELATED TO METRO. METRO • IS THAT ON.
• WHAT IS SPECIFIC PLAN AREA & WHAT DOES IT MEAN?	• WHAT WILL SPECIFIC PLAN DO? • WHAT DOES IT. • •

TOPIC	COMMENTS. ~~COMMENTS~~
HOMELESS	• BRINGING THEM HERE? • YOU ARE BRINGING HOMELESSNESS TO CITY. • GONNA LOOK LIKE CRAP • BLOCK LAND. • CONSIDER HAZARDS FROM CHILDREN? • NO FENCING? LOOK WORSE! • WHY COMES THROUGH PICO RIVERA • R/R TRACK CROSSING
RAIL LINE	•
	•
	•
	•

TOPIC	COMMENT.
• TRAFFIC • (ALL USERS).	• STUDIES BEING DONE? • WHAT ARE METRICS FOR SAFETY BEING USED. • SAFETY ISSUES? • COLLISIONS/ISSUES. • ALL •
TRAFFIC	• ADDITION OF ~~TRAFFIC~~ TO 700 DU PROJECT. WILL

COMMENT CARD

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

(PLEASE PRINT)
NAME Javier Lopez **EMAIL** powerloadfool@yahoo

ADDRESS

REPRESENTING

(This identification will be placed on the City's mailing list for this project, unless otherwise noted.)

*Provide your comment on the back of this card.

I have the following comment(s) regarding the scope of the environmental analysis, alternatives evaluation, or mitigation measures that should be addressed in the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Draft Environmental Impact Report (EIR).

~~Not~~ Have meetings @ 6pm so more people could attend.

If you have comments and do not wish to speak during the Scoping Meeting, please take the opportunity to fill out this Comment Sheet. Comment Sheets will be collected at the end of this Scoping Meeting.

COMMENT CARD

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

(PLEASE PRINT)
NAME Luis Ruedas **EMAIL** ruedas61897@msn.com

ADDRESS
8605 Washington Blvd Pico Rivera, CA 90660

REPRESENTING
L4M Footwear

(This identification will be placed on the City's mailing list for this project, unless otherwise noted.)

*Provide your comment on the back of this card.

I have the following comment(s) regarding the scope of the environmental analysis, alternatives evaluation, or mitigation measures that should be addressed in the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Draft Environmental Impact Report (EIR).

I am worried about keeping my Business and land will own, also this will Bring crime and Homeless to our city. I don't want Rail in our city

If you have comments and do not wish to speak during the Scoping Meeting, please take the opportunity to fill out this Comment Sheet. Comment Sheets will be collected at the end of this Scoping Meeting.

October 11, 2023

Ms. Jazmin Faccuseh, Senior Analyst
City of Pico Rivera
6615 Passons Boulevard
Pico Rivera, CA 90660
Email: communitydevelopment@pico-rivera.org

Dear Ms. Faccuseh:

Subject: City of Pico Rivera – Notice of Preparation of a Draft Environmental Impact Report and Scoping Meeting for the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan

The Los Angeles Department of Water and Power (LADWP) is in receipt of City of Pico Rivera's Notice of Preparation of a Draft Environmental Impact Report and Scoping Meeting dated September 21, 2023, and appreciates the opportunity to provide comments on the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan (Project). The mission of LADWP is to provide clean, reliable water and power to the City of Los Angeles. Based on our review of the Project we respectfully submit the below comments.

City of Pico Rivera shall provide additional information before any developments are authorized adjacent and/or within LADWP's Transmission Line Rights-of-Way (TLRW) and are subject to the following comments and conditions:

Comments:

1) City of Pico Rivera referenced herein shall pertain to its employees, agents, consultants, contractors, officers, patrons or invitees of City of Pico Rivera's, or by any other of City of Pico Rivera's affiliated entities.

2) The information provided, to date, is inadequate for properly reviewing the proposed improvements within sections of LADWP's TLRW. We therefore reserve the right to comment until more detailed information is provided regarding the proposed project. Provide plans illustrating the LADWP TLRW boundaries within the proposed project. Include towers and clearances from the proposed transmission line. Also, provide grading plans and utility plans, including any other plans illustrating the impacts to LADWP's TLRW. If access roads are proposed, provide plans illustrating impacts to LADWP's access roads. The plans should include APNs, state plane coordinates, or use the Public Land Survey System to locate the developments impacting LADWP's TLRW.

3) Plans may be submitted for review to the LADWP Real Estate Services Office via the following email: RE.Office@ladwp.com and copy LADWP's Environmental Affairs at environmental@ladwp.com.

4) Any temporary work within or immediately adjacent to LADWP's TLRW requires approval from LADWP.

Conditions:

1) City of Pico Rivera shall acknowledge the LADWP TLRW are integral components of the transmission line system, which provides electric power to the City of Los Angeles and other local communities. Their use is under the jurisdiction of the North American Electric Reliability Corporation, an organization of the Federal Energy Regulatory Commission. Safety and protection of critical facilities are the primary factors used to evaluate secondary land use proposals. The rights-of-way serve as platforms for access, construction, maintenance, facility expansion and emergency operations. Therefore, the proposed use may, from time to time, be subject to temporary disruption caused by such operations.

2) City of Pico Rivera shall be responsible for the maintenance of the Project area and shall keep the area in a neat and clean condition within LADWP's TLRW. It is our understanding that City of Pico Rivera will assume responsibility for the maintenance of the project improvements, and for all the risks and liabilities associated with the proposed improvements. LADWP will not be liable for any damage to the proposed project during LADWP's operation and maintenance activities.

3) No improvements or construction activities of any kind whatsoever will be allowed within the LADWP TLRW without the prior written approval of the LADWP.

4) No equipment with the height over 14-feet shall be allowed to travel within the LADWP TLRW without the written approval of LADWP.

5) No grading or structures shall be constructed within the LADWP TLRW without prior written approval of the LADWP.

6) Vehicle and/or truck repair, refueling, washing, and change of oil, are prohibited within the TLRW.

7) Additional conditions may be required following review of detailed site plans, grading/drainage plans, etc.

This response shall not be construed as an approval to begin construction activities, project improvements, nor approval of this project

For any questions regarding the above comments, please contact Ms. Jazmin Martin of my staff at (213) 367-1768 or Jazmin.Martin@ladwp.com.

Sincerely,

Katherine Rubin
Director of Corporate Environmental Affairs

JM:mr
c: Ms. Jazmin Martin
Ms. Jane Hauptman
Ms. Maria Depaz
Mr. Michael Hanson

Stakeholder List

Adriana Raza,
Customer Service Specialist
La County Sanitation District
Facilities Management Department
1955 Workman Mill Road
Whittier, CA 90601

Southern California Edison
Attn: Design Support/UND
9901 Geary Avenue
Santa Fe Springs, CA 90670

Dr. Marcos Villegas
Superintendent
El Rancho Unified School District
9333 Loch Lomond Drive
Pico Rivera, CA 90660

Joe Basulto
General Manager
Pico Water District
4843 S. Church Street
Pico Rivera, CA 90660

Los Angeles County Fire Department
Public Information Office
1320 N. Eastern Ave
Los Angeles, CA 90063

LA County Library Administrative Office
7400 E. Imperial Highway
Downey, CA 90242

Los Angeles County Sheriff's Department
Pico Rivera Station
6631 Passons Boulevard
Pico Rivera, 90660

Julia Emerson
Public Affairs Manager
9420 E. Firestone Blvd, ERC-1
Downey, CA 90241
jemerson@socalgas.com
Pamela Yugar
Parks and Recreation Department
City of Pico Rivera
6767 Passons Boulevard

Pico Rivera, CA 90660

Noe Negrete
Public Works Department
City of Pico Rivera
6615 Passons Boulevard
Pico Rivera, CA 90660

Montebello Bus Lines
400 S. Taylor Avenue
Montebello, CA 90640

BNSF Railway
Pico Rivera Yard
7599 Rosemead Blvd #7425
Pico Rivera, CA 90660

Union Pacific – Los Nietos Yard
Los Nietos Rd,
Santa Fe Springs, CA 90670

Union Pacific – Montebello Yard
329 Van Norman Rd,
Montebello, CA 90640

Los Angeles County Flood Control District
900 S. Fremont Avenue,
Alhambra, CA 91803

South Coast AQMD
Stephano Padilla
21865 Copley Dr,
Diamond Bar, CA 91765

Planning Division
Montebello City Hall
1600 W. Beverly Boulevard
Montebello, CA 90640

Planning Division
Downey City Hall
1111 Brookshire Avenue
Downey, CA 90241

Planning Division
Whittier City Hall
13230 Penn Street
Whittier, CA 90602

Planning Division
Santa Fe Springs City Hall
11710 Telegraph Road
Santa Fe Springs, CA 90670

Native American Heritage Commission
Tribal Consultation List

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St.,
#231
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820
Anza, CA, 92539

Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487
San Jacinto, CA, 92581
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Stakeholder List 2022

Adriana Raza,
Customer Service Specialist
La County Sanitation District
Facilities Management Department
1955 Workman Mill Road
Whittier , CA 90601

Southern California Edison
Attn: Design Support/UND
9901 Geary Avenue
Santa Fe Springs, CA 90670

Dr. Marcos Villegas
Superintendent
El Rancho Unified School District
9333 Loch Lomond Drive
Pico Rivera, CA 90660

Joe Basulto
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4843 S. Church Street
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9420 E. Firestone Blvd, ERC-1
Downey, CA 90241

jemerson@socalgas.com

Pam Yugar
c/o Kaili Torres
Parks and Recreation Department
City of Pico Rivera
6767 Passons Boulevard
Pico Rivera, CA 90660

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Montebello City Hall
1600 W. Beverly Boulevard
Montebello, CA 90640

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1111 Brookshire Avenue
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Whittier City Hall
13230 Penn Street
Whittier, CA 90602

Planning Division
Santa Fe Springs City Hall
11710 Telegraph Road
Santa Fe Springs, CA 90670

UTILITIES CONTACT SHEET

ATTDSOUTH
AT&T – DISTRIBUTION
Substructure Records Request
Construction & Engineering
Call for Mailing Address, CA

(510) 645-2929
Ma2797@att.com
600 East Green Street Room 300
Pasadena, CA 91101

LACOTS
LA COUNTY PUBLIC WORKS
Gus Nakhoul
900 South Fremont Avenue Construction
Division 8th Floor Alhambra, CA 91803
(626) 458-3124
Gnakhoul@dpw.lacounty.gov

LCDPWSSO
LA COUNTY DEPARTMENT OF PUBLIC WORKS SEWER PUMP STATIONS
Jeffrey Bouse
900 South Fremont Avenue
Alhambra, CA 91803
(626) 300-3373
Jbouse@dpw.lacounty.gov

LA COUNTY DEPARTMENT OF PUBLIC WORKS – SOUTH STORM WATER MAINTENANCE DIVISION
Ron Lacayo

(562) 861-0316
Rlacayo@dpw.lacounty.gov

LA COUNTY DEPARTMENT OF PUBLIC WORKS – PUBLIC UTILITIES/STORM DRAINS
Daryl Chenoweth

(626) 458-3109
Dchenoweth@dpw.lacounty.gov

LA COUNTY DEPARTMENT OF PUBLIC WORKS – ELECTRO MECHANIC WORKING SUPERVISOR
Edward E. Carmona Leon
(626) 458-1709 ext. 1633
Eleon@dpw.lacounty.gov

LAF54
LA COUNTY PUBLIC WORKS – STORM WATER MAINTENANCE DIVISION
Area Engineer Imperial Yard
Ask for Eduardo Ibasan or Ahmet Tatlilioglu
5525 East Imperial Highway
South Gate, CA 90280
(562) 861-0316
Eibasan@dpw.lacounty.gov
Atatlilioglu@dpw.lacounty.gov

Charter Communications (Pico Rivera Rep.)
Jimmie Biggs |Construction Manager-Zone C2 |
4781 Irwindale Ave, Irwindale, CA 91706
Office: (626) 430-3337
Cell: (951) 401-8638
james.biggs@charter.com

TMOBILE
T-MOBILE USA
Shawn Henderson
7543 Woodley Avenue
Van Nuys, CA 91406
(805) 279-3513
Shenderson@synergy.cc

Los Angeles County Sanitation District
Adriana Raza
Real Property Agent | Property Management Group
562-908-4288 ext. 2710 | Facilities Planning Department
araza@lacsd.org

SPECTRUM (TIME WARNER CABLE)
Anthony Xanthis, Construction Manager
1529 Valley Drive
Hermosa Beach, CA 90254
(310) 750-9185
Anthony.Xanthis@charter.com
Utility related request email: DL-socal-charter-engineering@charter.com

SPECTRUM (TIME WARNER CABLE)
Dwight Richardson, Construction Supervisor
(310) 750-9130
Dwight.Richardson@charter.com

SPECTRUM (TIME WARNER CABLE)
Dave Dolney
12051 Industry Street
Garden Grove, CA 92841
(951) 406-1635
Dave.Dolney@charter.com

SOUTHERN CALIFORNIA GAS COMPANY
Guillermo Tejeda
Lead Planning Associate
Harbor Corridor Districts
Planning and Engineering North West
701 North Bullis Road SC 9521
Compton, CA 90224-9099
(310) 687-2014
Gtejeda2@semprautilities.com

SOUTHERN CALIFORNIA GAS COMPANY
Gamaliel Vazquez
Franchise Department
701 North Bullis Road SC 9521
Compton, CA 90224-9099
(310) 605-2194
Gvazquez@semprautilities.com

Ryan Sawasaki
SoCalGas
Planning Associate – Right of Way
Technical Services – Planning & Engineering
Southeast Region – Anaheim HQ
1919 S. State College Blvd
Anaheim, CA 92806
RSawasaki@socalgas.com

Coordinate with USPS for alternate delivery location in construction areas
Uco Johnson
Officer in Charge/Postmaster
El Segundo/Manhattan Beach Post Office
90245/90266
(310) 647-1723
Uco.Johnson@usps.gov

San Gabriel River Water Company
Engineer | Engineering Department
San Gabriel Valley Water Company
11142 Garvey Avenue | El Monte, CA 91733
Direct: 626.774.2784 | Main: 909.201.7375
Email: kphu@sgvwater.com

Charter Communications
Email: dl-socal-charter-engineering@charter.com
DiannaNetherlain SoCal Central Specialists, Business Development
3430 E Miraloma Ave.
Anaheim, CA 92806
dianna.netherlain@charter.com

COMMENT SHEET

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

(PLEASE PRINT)
NAME _____ **EMAIL**_____

ADDRESS

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REPRESENTING

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_____

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Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan

Environmental Impact Report Scoping Meeting

Public Scoping Meeting
October 25, 2023 / 5:00 – 6:00 PM
Pico Rivera City Council Chambers
6615 Passons Blvd., Pico Rivera, CA 90660

1

Project Team

City of Pico Rivera (Planning Department)
- Alvaro Betancourt – Community Development Director
- Jazmin Faccuseh – Senior Analyst

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- Kevin Thomas – Environmental Project Manager
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- The Project is a long-term plan that will help guide future development.
- No specific development is proposed at this time as part of this effort.

6

Purpose of CEQA

- California Environmental Quality Act (CEQA)
- Disclose project impacts to public and decision makers
- Identify ways to avoid or reduce environmental impacts
- Analyze alternatives
- Foster inter-agency coordination and review

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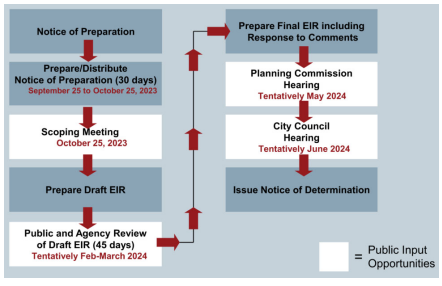
EIR PROCESS



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Topics to be Analyzed in the EIR

- ✓Aesthetics
- ✓Agriculture and Forestry Resources
- ✓Air Quality*
- ✓Biological Resources
- ✓Cultural Resources
- ✓Energy
- ✓Geology and Soils
- ✓Greenhouse Gas Emissions*
- ✓Hazards and Hazardous Materials
- ✓Hydrology and Water Quality
- ✓Land Use and Planning
- ✓Noise
- ✓Population and Housing
- ✓Public Services
- ✓Transportation*
- ✓Tribal Cultural Resources
- ✓Utilities and Service Systems

*Indicates a technical study will be prepared

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Project-Related Technical Studies

- AQ/GHG Analysis
- Traffic Analysis
- Biological Assessment
- Cultural Assessment
- Tribal Consultation

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Public Comments

Opportunities to Provide Input

- **Notice of Preparation**
  - 30-day public comment period began on September 25, 2023 and will end on October 25, 2023
- **Scoping Meeting**
  - Submit comments today to Jazmin Faccuseh (comment cards provided)
  - Please include your name and address

SCAN ME

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Public Comments

Future Opportunities for Public Participation

- **Draft Environmental Impact Report**
  - Circulate Draft EIR for 45 days (tentatively Feb-March 2024)
- **Final EIR**
  - Includes responses to public comments
  - Final EIR is published and available for review prior to approval decision
- **Planning Commission and City Council Hearings**
  - Tentatively May-June 2024

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Public Comments

- Any environmental issues you would like to see addressed in the EIR
- Comments may be submitted to Jazmin Faccuseh, Senior Analyst, City of Pico Rivera via:
  - Email: jfaccuseh@pico-rivera.org
  - In person: Using a comment card in today's scoping meeting
  - Mail: Community and Economic Development Department
    6615 Passons Blvd.
    Pico Rivera, CA 90660

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PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

Please **print** your name, address, and email address below to receive future notices regarding the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Environmental Impact Report (EIR).

	NAME	ORGANIZATION (If applicable)	EMAIL	ADDRESS
1.	Jose Molina	6		7775 Birchleaf Ave.
2.	Ralph Sedillo		RSedillo65@Icloud.com	6513 Beguette ave
3.	Jesus M Falmz			6312 Beguette Ave
4.	Jeff Stephens	CBRE	Jeffrey.Stephens@cbre.com	400 S. Hope St, LA CA 90071
5.	JULIAN BALDERAS	PRothAMBER	julianbalderas@picoriverachamber.com	5014 PASEO PR CA 90660
6.	Enerina Cliff		6704 Beguette Pico R	
7.	Jesus Ibarra		6739 Kelton Crest Dr	
8.	Daniel Rueda	L&M Fashion	ruedas1994@verizon.net	8605 Washington Blvd
9.	Jorge Martinez		grg.mrtnz23@gmail.com	6710 Lindsey Ave
10.	Joseph Nahas		johnjjjnn@gmail.com	171 Rivera Rd

PUBLIC SCOPING MEETING
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Wednesday, October 25, 2023, at 5:00 PM

Please **print** your name, address, and email address below to receive future notices regarding the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Environmental Impact Report (EIR).

	NAME	ORGANIZATION (If applicable)	EMAIL	ADDRESS
11.	VERONIQUE OLIVAREZ		VOLIVAREZ VARIZON	[illegible] PR. CA 9660
12.	VERONIKA LEGIAN		" "	[illegible] PR. CA 9660
13.	Jayro Queme		queme jayro@gmail.com	9111 West Blvd
14.	Luis Rueda		rueda56187@msn.com	8605 Washington Blvd Pico Rivera
15.	Belen Lopez		pecoso926@yahoo.com	9041 Danbridge Pico
16.	Favian Lopez		Powerloadfan1@yahoo	9041 Danbridge Pico
17.	Lisa Fisher		ppprincessLissA@yahoo.com	7208 Lindell Ave
18.	JOHN KWOK		john@mdbmail.com	8700 Rex RD. Pico Rivera
19.	John N		Johnjjjn@gmail.com	
20.				

PUBLIC SCOPING PUBLIC COMMENT NOTES

Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan

Wednesday, October 25, 2023, at 5:00 PM

Traffic/Roadway Concerns • Parking and traffic concerns on Washington Blvd. •	**Air Quality Concerns** •
Cultural Resources Concerns •	**General Safety Concerns** • Metro hazard for pedestrians and homelessness
All Other Topics • Crime concerns • Crime concerns due on existing BNSF grounds and adjacent residential communities. • Provide Metro information and meetings on the rail line. • Underground rail preferred as above rail is considered to be	**Noise Concerns** • Noise concerns due to new Metro Line. •

TOPIC	COMMENT
• CRIME/POLICING	HOW AFFECT CRIME RATES AND AFFECTS.
• CRIME/POLICING (HIGHLIGHTING)	SIGNED CONTRACT → IMPACTS • DURING CRIME RAILROAD / CRIME. WERE CALLED RAILROAD. • DRONES / CALLING COPS • A LOT MORE DOING CRIMES • NOBODY IS POLICING. • RELATED TO METRO. METRO • IS THAT ON.
• WHAT IS SPECIFIC PLAN AREA & WHAT DOES IT MEAN?	• WHAT WILL SPECIFIC PLAN DO? • WHAT DOES IT. • •

TOPIC	COMMENTS. ~~COMMENTS~~
HOMELESS	• BRINGING THEM HERE? • YOU ARE BRINGING HOMELESSNESS TO CITY. • GONNA LOOK LIKE CRAP • BLOCK LAND. • CONSIDER HAZARDS FROM CHILDREN? • NO FENCING? LOOK WORSE! • WHY COMES THROUGH PICO RIVERA • R/R TRACK CROSSING
RAIL LINE	•
	•
	•
	•

TOPIC	COMMENT.
• TRAFFIC • (ALL USERS).	• STUDIES BEING DONE? • WHAT ARE METRICS FOR SAFETY BEING USED. • SAFETY ISSUES? • COLLISIONS/ISSUES. • ALL •
TRAFFIC	• ADDITION OF ~~TRAFFIC~~ TO 700 DU PROJECT. WILL

COMMENT CARD

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

(PLEASE PRINT)
NAME Javier Lopez **EMAIL** powerloadfool@yahoo

ADDRESS

REPRESENTING

(This identification will be placed on the City's mailing list for this project, unless otherwise noted.)

*Provide your comment on the back of this card.

I have the following comment(s) regarding the scope of the environmental analysis, alternatives evaluation, or mitigation measures that should be addressed in the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Draft Environmental Impact Report (EIR).

~~Not~~ Have meetings @ 6pm so more people could attend.

If you have comments and do not wish to speak during the Scoping Meeting, please take the opportunity to fill out this Comment Sheet. Comment Sheets will be collected at the end of this Scoping Meeting.

COMMENT CARD

PUBLIC SCOPING MEETING
Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan
Wednesday, October 25, 2023, at 5:00 PM

(PLEASE PRINT)
NAME Luis Ruedas **EMAIL** ruedas61897@msn.com

ADDRESS
8605 Washington Blvd Pico Rivera, CA 90660

REPRESENTING
L4M Footwear

(This identification will be placed on the City's mailing list for this project, unless otherwise noted.)

*Provide your comment on the back of this card.

I have the following comment(s) regarding the scope of the environmental analysis, alternatives evaluation, or mitigation measures that should be addressed in the Washington and Rosemead Boulevards Transit-Oriented Development Specific Plan Draft Environmental Impact Report (EIR).

I am worried about keeping my Business and land will own, also this will Bring crime and Homeless to our city. I don't want Rail in our city

If you have comments and do not wish to speak during the Scoping Meeting, please take the opportunity to fill out this Comment Sheet. Comment Sheets will be collected at the end of this Scoping Meeting.