TEMPORARY NORTHSIDE GROUND TRANSPORTATION (GT) FACILITIES
Addendum to the Final Environmental Impact Report for the San Diego International Airport Development Plan (State Clearinghouse No. 2017011053)
April 2022

1. INTRODUCTION

The *San Diego International Airport – Airport Development Plan Final Environmental Impact Report* (FEIR), certified in January 2020, analyzes and discloses the potential environmental effects of implementing the Airport Development Plan (ADP) for the San Diego International Airport (SDIA). The ADP describes specific improvements on SDIA to meet passenger demand through 2050.

As currently proposed, the ADP would temporarily relocate existing ground transportation facilities, including the taxi "hold lot" and the Rental Car Center (RCC) shuttle storage lot, from the southern portion of SDIA to the northern portion of SDIA while construction of the new Terminal 1 is underway, after which these ground transportation facilities would be moved back to the south side of SDIA property to its new permanent location. The purposes of this Addendum are: (1) to document the review that the San Diego County Regional Airport Authority (SDCRAA) has undertaken to assess the proposed Project in relation to the FEIR and current conditions; and (2) to substantiate the conclusion, based on substantial evidence presented in this Addendum and attachments, that there are no substantial changes to the project evaluated in the FEIR, no substantial changes in circumstances, and no new information indicating that there would be new significant impacts or a substantial increase in the severity of any previously disclosed significant impacts which would require major revisions to the FEIR. Because no major changes to the FEIR are required pursuant to this framework, the preparation of a Supplemental or Subsequent EIR is not required pursuant to the California Environmental Quality Act (CEQA); codified as Public Resources Code, Section 21000 et seq.

California Environmental Quality Act Requirements

CEQA requires public agencies to analyze and consider the environmental consequences of their decisions to approve development projects over which they exercise discretion. CEQA achieves this objective by requiring agencies to prepare Environmental Impact Reports (EIRs) for projects with the potential to cause significant impacts on the physical environment. EIRs are public documents that assess environmental effects related to the planning, construction, and operation of a project, and indicate ways to reduce or avoid possible environmental damage. An EIR also discloses growth-inducing impacts, effects found not to be significant, significant cumulative impacts, and significant impacts that cannot be avoided, if any. The purpose of an EIR is to inform. EIRs are not policy documents that recommend project approval or denial.

As lead agency, the SDCRAA prepared a FEIR (State Clearinghouse # 2017011053) that was certified in January 2020 for the ADP in compliance with CEQA and CEQA Guidelines (California Code of Regulations, Section 15000 et seq., as amended). The FEIR evaluated the potential short-term and long-term, direct, indirect, and cumulative environmental impacts associated with the airport improvements in the ADP. The FEIR provides a Project-level

analysis for the ADP, which consists of specific physical improvements for near-term construction and operation to meet aviation demand through 2035 at SDIA.

Section 21166 of CEQA (the statute) sets forth the requirements for how a lead agency is to consider changes to a proposed Project or its circumstances or the availability of new information that occurs after an EIR for the project has been completed, and Section 15162 of the State CEQA Guidelines reiterates those requirements, along with additional guidance.

Section 21166 of CEQA states:

When an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:

(a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report.

(b) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions in the environmental impact report.

(c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

Section 15162 of the State CEQA Guidelines indicates that:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR … due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR … due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete … shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR should be prepared "if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." When an Addendum is prepared, the decision-making body must consider the Addendum with the EIR prior to making a decision on the Project. Although, pursuant to State CEQA Guidelines Section 15164(c), an addendum to an EIR need not be circulated for public review, this Addendum to the San Diego International Airport ADP FEIR, along with the FEIR itself, is available to the public:

- On the Airport Authority website at www.san.org/green.
- At the San Diego County Regional Airport Authority offices located in the Administration Building (former Commuter Terminal) at San Diego International Airport, 3225 North Harbor Drive, San Diego, CA 92101 during the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday. Please contact Ted Anasis at 619-400-2478 to arrange for review during coronavirus pandemic restrictions on Authority office visits and hours.

2. PROJECT BACKGROUND AND PROJECT DESCRIPTION

A. Project Background

The FEIR was certified and the ADP project was approved on January 9, 2020, by the SDCRAA Board. Since that time, SDCRAA has undertaken detailed construction planning necessary to prepare for the implementation of the ADP, including construction and operation of the improvements approved as part of the ADP to meet regional aviation demands.

B. Purpose and Need

Recent ongoing coordination between the ADP construction program and other SDIA construction projects has identified the potential for use conflicts at the existing taxi hold lot and the existing RCC shuttle storage lot, necessitating a temporary relocation of those ground transportation facilities to an area outside of construction activity areas, specifically, to the northern portion of SDIA.

C. Project Description

As noted above, coordination between the ADP construction program and other SDIA construction projects has identified the potential for previously unanticipated use conflicts at the existing taxi hold lot and the existing RCC shuttle storage lot.

Taxi Hold Lot

The taxi hold lot facility provides a location off regional roadways for drivers to wait before being dispatched to the terminals to pick-up passengers. The SDCRAA proposes temporarily relocating the taxi hold lot from its existing location in the southside of the Airport to the northside of the Airport, as depicted in **Figure 1**. Access to and from the relocated hold lot would be via the intersection of Pacific Highway and Sassafras Street, as shown in **Figure 2.** The temporary relocation is anticipated from approximately August 2022 through December 2024. The exact dates may change based on the then-current construction schedule.

The taxi hold lot at the site of the temporary relocation is smaller than that of the existing hold lot; however, the smaller lot provides sufficient space to hold existing and anticipated volumes

of taxis. The number of taxis operating/permitted in San Diego has substantially dropped over the past two years due to the pandemic, with approximately 650 taxis now operating, as compared to approximately 1,200 taxis pre-pandemic. The same holds true relative to taxis operating on-airport, with approximately 370 taxis now compared to approximately 670 pre-pandemic. Additionally, SDIA implemented Virtual Hold Lot (VHL) software in January 2022, which allows taxis to check-in on their cell phone and be dispatched directly to the terminals for a fare. This has greatly reduced the number of taxis dwelling on-airport - by as much as 40 percent at peak times, and 60-65 percent at non-peak times, which, in turn, reduces the amount of space needed for the taxi hold lot.

The temporary taxi hold lot operation will encompass approximately 1.2 acres of SDIA property, as depicted in the conceptual site plan concept shown in **Figure 3**. The subject site is accessed from the regional roadway system via the intersection of Pacific Highway and Sassafras Street. The site is visually screened by the Rental Car Center to the north and the Facilities Management Department building to the east. The temporary taxi hold lot site improvements will include the following removable temporary features:

- Site fence
- Security camera
- Site lighting
- Approximately 70 taxi positions
- Portable restrooms
- Breakroom tent
- Airport operations modular booth

The above features would be removed when the taxi hold lot relocates back to its current facility, as depicted in **Figure 1**.

The SDCRAA anticipates limited pavement improvements to the proposed temporary taxi hold lot site access driveway. The anticipated scope of work is an asphalt concrete pavement overlay atop existing Portland cement concrete pavement. Approximately 0.3 acre of pavement overlay in the temporary taxi hold lot and 0.1 acre of pavement improvement to the access driveway are estimated at this time.

RCC Shuttle Employee and Storage Lot

The existing RCC shuttle storage lot is located adjacent to, and immediately north of, the existing taxi hold lot, as shown in **Figure 1**. The temporary RCC shuttle storage lot will encompass approximately 1.7 acres of SDIA property, as depicted in the conceptual site plan concept shown in **Figure 3**. In conjunction with relocating the existing RCC shuttle storage lot to the northern portion of SDIA, parking for RCC shuttle employees and two temporary trailers for dispatch office and employee breaks will be provided nearby as part of the relocated taxi hold lot.

The relocated RCC shuttle storage lot will operate in a similar fashion to the existing storage lot, whereby RCC shuttle employees park near the lot at the beginning of their shift and then begin their route after they pick up a bus from the storage lot.

The site for the temporary RCC shuttle storage lot is currently vacant and was previously used as a parking lot. The subject site is accessed from an on-airport service road that connects with the access road to/from the RCC, and does not require any regional access. Similar to the

temporary taxi hold lot, most of the temporary RCC shuttle storage lot is visually screened by the Rental Car Center to the north and the Facilities Management Department building to the northeast. The temporary RCC shuttle storage lot site improvements will include the following removable temporary features:

- Site fence
- Security camera
- Site lighting
- Approximately 25 RCC employee parking positions
- Two temporary trailers for dispatch office and employee breaks
- Approximately 30 RCC shuttle parking positions

The above features would be removed when the RCC shuttle storage lot relocates back to the southern portion of SDIA.

The SDCRAA anticipates limited pavement improvements to the proposed temporary RCC shuttle storage lot site, consisting of application of a thin layer of asphalt atop the existing paved area.

The temporary RCC shuttle storage lot is anticipated to operate from August 1, 2022 through March 31, 2023. The exact dates may change based on construction schedule changes.

3. ENVIRONMENTAL REVIEW OF THE PROJECT

The following analysis addresses the currently proposed Project (temporary relocation of the taxi hold lot and the existing RCC shuttle storage lot) in light of the CEQA evaluation criteria described above in Section 1, relative to whether there is any basis under those CEQA criteria to require a supplemental or subsequent EIR for the project.

For purposes of this Addendum, all environmental topic areas evaluated in the FEIR were reviewed through use of an Environmental Review Checklist. The Environmental Review Checklist provided as Appendix A to this Addendum follows the basic format of a typical CEQA Initial Study environmental analysis checklist, but has been tailored to address each such environmental topic relative to the CEQA criteria presented above in Section 1.

The analysis of the Checklist presented in Appendix A provides a brief summary of the analysis of the approved ADP (i.e., Alternative 4) for each environmental topic contained in the SDIA ADP Recirculated Draft EIR (RDEIR), as revised by the Corrections and Additions contained in Chapter 3 of the FEIR.

As demonstrated in the evaluation, none of the CEQA criteria presented above in Section 1 calling for preparation of a subsequent EIR or negative declaration would occur as a result of the proposed Project.

4. CONCLUSION

The information and analysis in this Addendum has been undertaken, pursuant to the provisions of CEQA and the CEQA Guidelines, to provide decision makers with a factual basis for determining whether any substantial modifications to the Project, substantial changes in circumstances, or receipt of new information not available during preparation of the FEIR would

require additional review or preparation of a subsequent or supplemental EIR.

Based on substantial evidence provided herein, as supported by the attached Appendix A, the environmental impacts associated with the proposed temporary relocation of the taxi hold lot and the RCC shuttle storage lot are sufficiently addressed by the FEIR, and none of the conditions warranting preparation of a supplemental or subsequent EIR, as set forth in CEQA Section 21166 and State CEQA Guidelines Section 15162 exist. Pursuant to Section 15164 of the State CEQA Guidelines, preparation of an Addendum to the ADP FEIR fully satisfies the CEQA review requirements for the project.

Figures:

Appendices:

Appendix A: Environmental Review Checklist

Appendix B: Technical Memorandum for Traffic Analysis

Figure 1 – Temporary Northside Ground Transportation Facilities Location

Figure 2 – Temporary Northside Ground Transportation Facilities Access

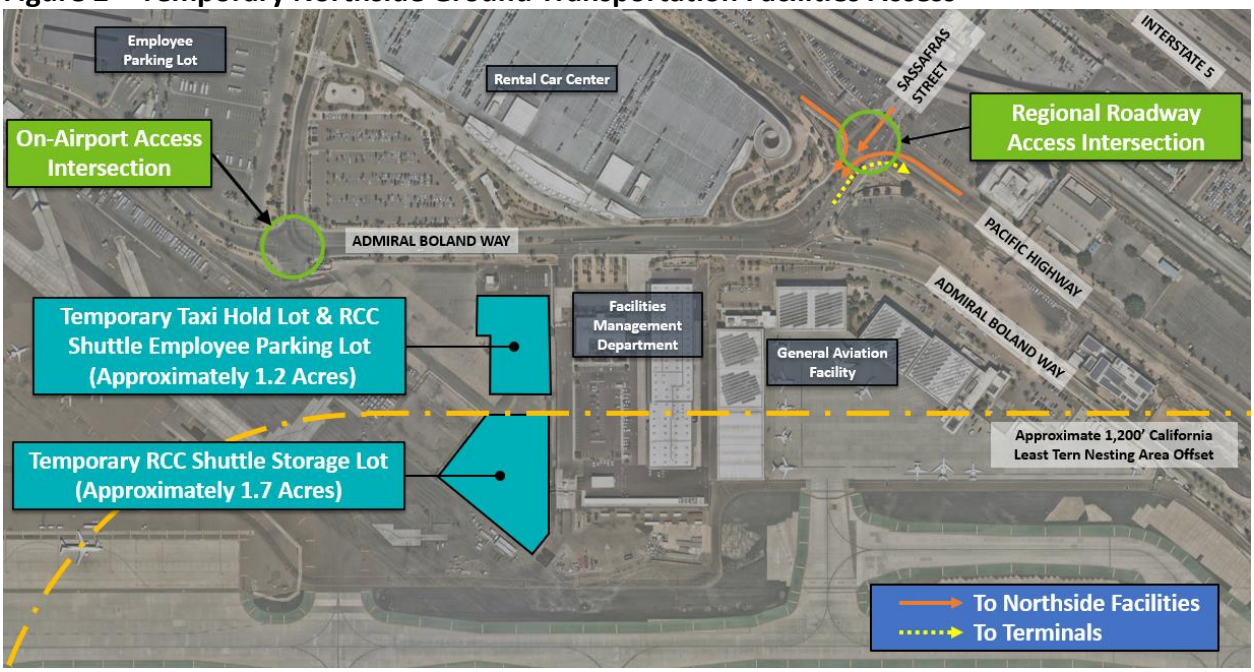


Figure 3 – Temporary Northside Ground Transportation Facilities Site Plan Concept

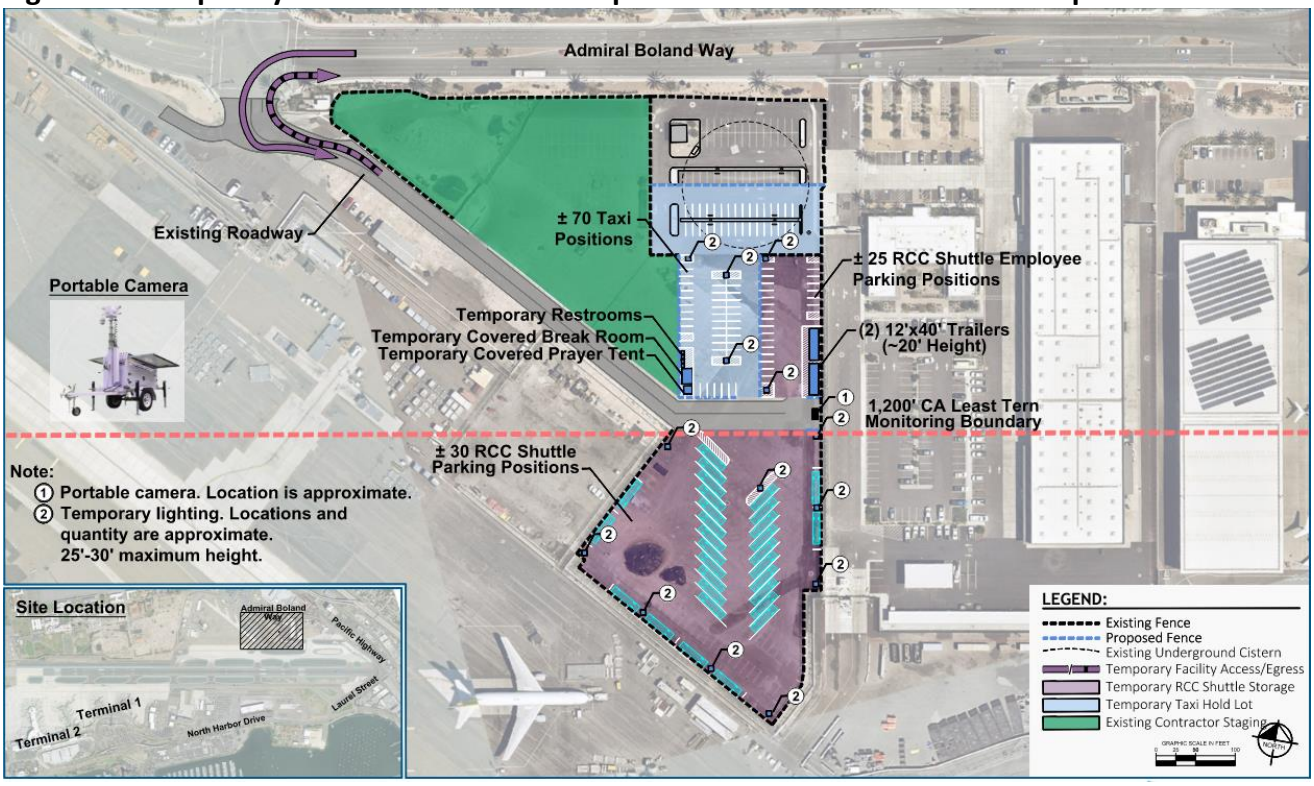


Figure 4 – East Bay Fault Lines

APPENDIX A: ENVIRONMENTAL REVIEW CHECKLIST

TEMPORARY RELOCATION OF EXISTING TAXI HOLD LOT AND EXISTING RENTAL CAR CENTER SHUTTLE STORAGE LOT

ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SAN DIEGO INTERNATIONAL AIRPORT DEVELOPMENT PLAN

	YES	NO
I. AESTHETICS		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		X
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		X
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		X

DISCUSSION:

Section 3.1, Aesthetics and Visual Resources, and Section 5.6.4.1 of the FEIR address potential impacts to aesthetics and visual resources from implementation of the ADP. The following evaluates the extent to which those analyses apply to the proposed Project.

a. Would the project have a substantial adverse effect on a scenic vista?

As described in Section 3.1.4 of the FEIR, SDIA is relatively flat and is in an urbanized area, surrounded by existing commercial, industrial, military, residential, and recreational uses, and San Diego Bay. Existing visual resources in the area consist of natural and human-made features. Natural visual features include the San Diego Bay, the Pacific Ocean, the Navy Boat Channel, and distant views of the Point Loma peninsula. The human-made features include the downtown skyline.

Scenic vistas in the area are focused toward the south of the SDIA toward the bay, the downtown skyline, and the Point Loma peninsula. By contrast, the taxi hold lot and the RCC shuttle storage lot are proposed to be temporarily relocated to the northern portion of the SDIA, where there are no scenic vistas. Views of the northern portion of the SDIA are available from the southbound lanes of I-5 and from developed areas adjacent to I-5; however, most views of the proposed relocation site are blocked by the nearby Consolidated Rental Car facility. Additionally, it should be noted that neither the proposed relocated taxi hold lot nor the proposed relocated RCC shuttle storage lot would not include any notable structures that would block or substantially change any existing views in the nearby area. Finally, the relocation of the subject ground transportation facilities is temporary, rendering any impact short-lived.

As discussed and illustrated in Section 5.6.4.1 of the FEIR, the ADP would not have a substantial adverse effect on a scenic vista, which would still be the case with implementation of the currently proposed Project.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As discussed in Sections 3.1.6.2.1 and 5.6.4.1 of the FEIR, the ADP site consists of highly-developed areas within and adjacent to a busy international airport. The ADP site is not located adjacent to or within the viewshed of a designated state scenic highway. The nearest designated state scenic highway is approximately two miles east of the project site (a one-mile segment of State Route 163 along the western portion of Balboa Park). The ADP site is not visible from the scenic highway-eligible portion of State Route 163. As discussed in Section 5.6.4.1 of the FEIR, the ADP would not impact scenic resources within a state scenic highway.

The proposed Project site does not contain trees, rock outcroppings, or historic buildings. In addition, the site is not visible from the scenic highway-eligible portion of State Route 163, nor is it notably visible from State Route 75 (Silver Strand Highway and San Diego - Coronado Bridge). As such, the proposed Project would not impact scenic resources within a state scenic highway. Therefore, the proposed Project would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetics. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?

The visual character of SDIA is described in Section 3.1 of the FEIR as being represented by a runway, taxiways, aircraft parking aprons, an airport traffic control tower, passenger terminals, and public parking. As discussed in Section 5.6.4.1 of the FEIR, the ADP would not conflict with applicable aesthetics-related California Coastal Act (CCA) and local plan policies, goals, objectives, and/or guidelines, nor would the ADP severely contrast with the character of the surrounding neighborhood.

The proposed Project includes temporary relocation of the existing taxi hold lot and the existing RCC shuttle storage lot to an area in the northern portion of the SDIA that consists primarily of paved/developed surfaces, which include, but are not limited to, surface parking uses and the nearby Consolidated Rental Car facility. The overall appearance and visual impact of the proposed ground transportation facilities relocation would be similar to existing uses in the general area. Therefore, the proposed Project would not conflict with applicable aesthetics-related CCA or local plan policies, goals, objectives, and/or guidelines, nor would the proposed Project severely contrast with the character of the surrounding uses. Therefore, the proposed Project would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetics. It would not require substantial revisions of the environmental impact report and no changes occur with respect

to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As discussed in Section 5.6.4.1 of the FEIR, the ADP would not alter lighting so as to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and the impact would be less than significant. The proposed Project would not include new substantial sources of exterior lighting and would be consistent with the existing lighting characteristics of the northern portion of SDIA and surrounding urbanized areas. The proposed Project would not introduce new permanent light fixtures. Therefore, no effect relative to lighting and glare beyond that identified in the FEIR would occur and the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetics. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
II. AGRICULTURE AND FOREST RESOURCES		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 1.4.4, Scope of Analysis, of the FEIR, specifically page 1-11, states that the ADP would have no impact on agriculture or forestry resources. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

As described on page 1-11 of the FEIR, SDIA is highly developed and there are no existing or proposed agricultural uses or operations within or near SDIA. The proposed Project site is an existing paved/developed area. The proposed Project would be located on the existing asphalt and no effect on agricultural resources would occur. Thus, the proposed Project

would not result in any material difference in the agricultural impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to agricultural resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

As described on page 1-11 of the FEIR, SDIA is highly developed and there are no existing or proposed agricultural uses or operations within or near SDIA. Likewise, the proposed Project site is developed and not zoned for agricultural use, nor do any Williamson Act contracts apply to the proposed Project site. Thus, no impacts would occur and the proposed Project would not result in any material difference in the agricultural impacts described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to agricultural resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

As described on page 1-11 of the FEIR, SDIA is highly developed and there is no forest land within or near SDIA. Similarly, the proposed Project site is developed with existing asphalt pavement for vehicle parking and is not zoned for forest land or timberland. The proposed Project would not alter any forest land or timberland. Therefore, no impact on land zoned as forest land or timberland would occur.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to forestland or timberland. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

As described on page 1-11 of the FEIR, SDIA is highly developed and there is no forest land within or near SDIA. Likewise, no forest land exists within the proposed Project limits or adjacent areas. Therefore, the proposed Project would not result in the loss or conversion of forest land.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to forest land. It would not require substantial revisions of the environmental impact report and no changes occur with respect

to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

e. Would the project involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

As described on page 1-11 of the FEIR, SDIA is highly developed and there are no agricultural or forest lands within or near SDIA and thus no impacts on such resources would occur. Likewise, there are no agricultural or forest lands at the proposed Project site. Therefore, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to farmland or forest land. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES		NO
III. AIR QUALITY			
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?			**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?			**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?			**X**

DISCUSSION:

Section 2.7 of the FEIR describes the Construction Assumptions for the ADP, and Section 3.2, Air Quality, and Section 5.6.4.2 address potential impacts to air quality from construction and operation of the ADP. Section 3.4, Human Health Risk, and Section 5.6.4.3 address potential human health risk impacts from construction and operation of the ADP, including as related to emissions of hazardous air pollutants. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The analysis and conclusions of the FEIR relative to air quality impacts related to construction and operational emissions are considered to be applicable to, and adequate for, the improvements included in the proposed Project. The construction emissions are identified in Section 5.6.4.2 and summary of impact determinations are identified in Table 5-38. Implementation of the proposed Project, with the very limited amount of site improvements required (i.e., less than half-acre of pavement improvements, as described above in Section

2.C), would not materially increase the amounts of construction-related emissions identified in the FEIR.

The conclusion of the FEIR analysis indicates that implementation of the ADP would not conflict with or obstruct implementation of an applicable air quality plan. Based on the above, that conclusion would not change with the implementation of the proposed Project. Therefore, the Project does not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact on air quality or a substantial increase in the severity of previously identified significant air quality impacts requiring major revisions of the certified FEIR.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality?

The proposed Project would not materially change the cumulative air quality impacts conclusions of the FEIR analysis, because the impacts associated with the ADP are not materially affected by the proposed Project. Therefore, the Project does not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact on air quality requiring major revisions of the certified FEIR.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

There are no sensitive receptors, (i.e., homes, schools, hospitals, resident care facilities, or day-care centers) in proximity to the proposed Project site. Therefore, the Project does not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. There is no substantial new information that there would be a new significant impact on air quality or a substantial increase in the severity of previously identified significant air quality impacts requiring major revisions of the certified FEIR.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The proposed Project would not create objectionable odors affecting a substantial number of people because it does not propose activities that are customarily associated with objectionable odors. Therefore, the Project does not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact on air quality requiring major revisions of the certified FEIR.

	YES	NO
IV. BIOLOGICAL RESOURCES		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.5, Biological Resources, and Section 5.6.4.4 of the FEIR address potential impacts to biological resources including listed species, and potential impacts to wetland resources from implementation of the ADP. The following evaluates the extent to which those analyses apply to the proposed Project.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

As indicated in Section 3.5 of the FEIR, the vast majority of SDIA is developed or highly disturbed and devoid of any sensitive biological resources. One exception is the California least tern nesting area in the southeast portion of SDIA. The FEIR determined that no direct physical disturbance of least tern nesting habitat would occur as no improvements are located at the least tern nesting sites or other areas of sensitive habitat for threatened, endangered, or other species. Mitigation measures were identified to reduce impacts adjacent to the least tern nesting sites. With mitigation measures, impacts to sensitive species and habitats were determined to be less than significant.

As shown on the site plan in Figure 3 in Section 2.C, the proposed relocated taxi hold lot is not near any nesting area for the California least tern on SDIA, with the closest nesting area being over 1,200 feet to the south. As also shown in Figure 3, the proposed relocated RCC shuttle storage lot lies within the northern portion of the 1,200 California least tern Monitoring Boundary; however, there would be no structural improvements or other notable construction activities occurring within that area. Project-related improvements within that area would be limited to application of a thin layer of asphalt atop the existing paved area, striping of parking positions for RCC shuttle storage, and installation of temporary lighting and fencing. Implementation of the proposed Project, including construction and operation, would not have direct or indirect impacts California least tern.

It should be noted that pursuant to the existing conservation/mitigation measure related to California least tern at SDIA (see Mitigation Measure MM-BIO-1, California Least Tern: Construction Measures in the FEIR), a tern biologist monitor would be present for any construction activities occurring within 1,200 feet of any nesting least tern area during the tern nesting season (April 1- September 15) and will immediately notify the Resident

Engineer (RE; or acting RE) if the least tern appear agitated or annoyed by project construction activities.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to sensitive species. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

As described Section 3.5 Biological Resources, the FEIR determined that no significant impacts on wetlands or other sensitive natural community would occur with implementation of the ADP.

The proposed Project site is located in a fully developed/improved portion of SDIA where there is no riparian habitat or other sensitive natural. Thus, the proposed Project would not result in any material difference in impacts on wetlands or other sensitive natural community compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to wetlands or other sensitive natural community. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

As described in Section 3.5 Biological Resources, the FEIR determined that no significant impacts on wetlands would occur. The proposed Project site is located in a fully developed/improved portion of SDIA where there are no wetlands. Therefore, the proposed Project would not result in any material difference in the wetlands impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to wetlands. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

The proposed Project site is located in a fully developed/improved portion of SDIA, where there are no native resident or migratory fish or wildlife species, and, as noted above, is well removed from the nearest California least tern nesting area. As such, the proposed Project would not impact least tern nesting areas and no effect on biological resources beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any

material difference in the impacts relative to biological resources compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to wildlife corridors and nursery sites. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

As described in Sections IV (a. – d.) above, the proposed Project site does not support any resources that are subject to local policies or ordinances such as a tree preservation policy or ordinance.

The proposed Project is located in a developed area and no effect on biological resources beyond that identified in the FEIR would occur. Thus, the proposed Project would not result in any material difference in the impacts relative to conflicting with policies or ordinances protecting biological resources compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts relative to policies or ordinances protecting biological resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

f. Would the project conflict with the provisions of an adopted habitat conservation plan; natural communities conservation plan; or any other approved local, regional, or state habitat conservation plan?

As indicated in Section 3.5 Biological Resources of the FEIR, SDIA is not within an adopted habitat management plan or natural communities conservation plan. Although the airport is within the municipal limits of the City of San Diego, and the City is a participating jurisdiction in the San Diego Multiple Species Conservation Program (MSCP), State Tidelands along San Diego Bay are specifically excluded from the MSCP. These State Tidelands are addressed in the San Diego Bay Integrated Natural Resources Management Plan, which was prepared by the U.S. Navy and the Port of San Diego; however, that plan does not focus on "developed fill areas" such as SDIA, nor does it provide applicable guidance for the development of SDIA. As such, the FEIR determined that no impact would occur.

The proposed Project site is located in a fully developed/improved portion of SDIA and, as such, no conflict with a habitat conservation plan would occur beyond that identified in the FEIR. The proposed Project would not result in any material difference in the impacts relative to conflict with an adopted habitat conservation plan compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to relative to conflict with an adopted habitat conservation plan. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that

project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES		NO
V. CULTURAL RESOURCES			
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?			**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?			**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?			**X**

DISCUSSION:

Section 3.6, Cultural Resources, and Section 5.6.4.5 of the FEIR address potential impacts to cultural resources from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA §15064.5?

The FEIR identifies historic properties, which are all located within the boundaries of SDIA, that would be impacted by the ADP. Although the northern portion of the proposed Project site lies within the boundary of the former Consolidated Aircraft Plant No. 1 Historic District, all of the historic structures were demolished and removed many years ago. The nearest existing historic structure is the Convair Wind Tunnel, located over 1,600 feet east of the proposed Project site. As such, implementation of the proposed Project would have no effect on historical resources beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in the historical resources impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to historical resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA §15064.5?

No archaeological sites have been identified within the SDIA boundaries. The current topography of the project area has been achieved through decades of dredging and placement of fill soils in an area of bay and mudflats. Based on this, archaeological resources would not be anticipated in the project area; no impact is expected to occur. Additionally, it should be noted that construction of the proposed Project would not require any notable grading/excavation below the existing surface.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to archaeological resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

As described in Section V (b.) above, the current topography of the ADP project vicinity, including the proposed Project site, has been achieved through decades of dredging and placement of fill soils in an area of bay and mudflats. Based on this, human remains would not be anticipated in the proposed Project area. Further, no ground disturbances would occur and the existing asphalt would remain. No impact would therefore occur. Thus, the proposed Project would have no effect on cultural resources beyond that identified in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to cultural resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
VI. ENERGY		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.15, Utilities, and Section 5.6.4.14 of the FEIR address potential impacts related to energy (fuel, electricity, and natural gas) from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The FEIR determined that while construction and operation of the ADP would result in increased energy demand, it would comply with federal, state, and local regulations and policies reducing energy demand associated with building energy use, water demand, wastewater generation, vehicle fuels, and construction equipment, including California's

green building code requirements and SDCRAA's policies and requirements pertaining to energy conservation and sustainable design. In addition, electricity supplied to the ADP would be required to comply with California's aggressive renewable portfolio standard. Therefore, construction and operation of the ADP would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy.

The proposed relocation of the taxi hold lot and the RCC shuttle storage lot would not result in any notable increase in energy demand associated with building energy use, water demand, and wastewater generation, given that provision of temporary lighting, temporary restrooms, temporary breakroom tent, and temporary operations booth would simply replace those same type facilities to be taken out of use at or near the existing hold lot. Additionally, given the very limited nature of improvements required at the proposed Project site, energy consumption associated with construction activities would be negligible.

The proposed Project would not result in a substantial increase in energy use from that assumed in the FEIR. No effect on energy use beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in energy use impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to energy use. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The objectives, goals, and requirements of the ADP support SDCRAA's commitments to energy efficiency. The FEIR determined that the ADP would be supportive of state, regional, and local efforts to increase use of renewable energy and improve energy efficiency and, thus, would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

As described above, no notable change in existing energy use would occur from implementation of the proposed Project. The proposed Project would not conflict with or obstruct a state or local plan for renewable energy use or energy efficiency and no effect beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference related to conflict with a state or local plan for renewable energy use would occur compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to plans for renewable energy or energy efficiency. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
VII. GEOLOGY AND SOILS		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.8, Geology and Soils, and Section 5.6.4.7; Section 3.10, Hydrology and Water Quality, and Section 5.6.4.9; and Section 3.6, Cultural Resources, and Section 5.6.4.5, of the FEIR address potential impacts related to these environmental factors from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

As identified in Section 3.8 of the FEIR, two zones of active faulting were identified at SDIA, including the Spanish Bight Fault Zone through the south central portion of SDIA, and the East Bay Fault, in the eastern and northern portions of SDIA. The FEIR determined that with compliance with the "No Build Zone" that precludes development of occupied structures on a fault zone, and implementation of recommendations in project-specific geotechnical investigation, including the use of engineered fill, the potential for the ADP to expose people or structures to substantial risk related to surface rupture at the ADP project site would be less than significant.

Portions of the East Bay Fault cross the proposed Project site; however, those areas of the site are proposed for vehicle parking and no buildings that would be occupied, including the temporary portable restrooms and the temporary operations building are located on the fault lines. **Figure 4** delineates the locations of the East Bay Fault lines that cross the proposed Project site.

The installation of temporary buildings would need to comply with any project-specific design and construction measures, including any seismic standards as required by the City of San Diego to obtain an occupancy permit. Thus, any project-specific design and construction measures to address potential ground rupture effects would be identified and implemented as part of the proposed Project, and potential impacts related to seismically induced ground rupture would be avoided or reduced below a level of significance. Therefore, no effect relative to rupture of a known earthquake fault beyond that identified in the FEIR would occur and the proposed Project would not result in any

material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

ii. Strong seismic ground shaking?

As indicated in Section 3.8 Geology and Soils of the FEIR, the ADP is required to adhere to design standards, grading, and construction practices to avoid or reduce seismic hazards. New structures would be designed, located, and built in compliance with the most up-to-date building code requirements and recommendations in the project-specific geotechnical evaluation and engineering analysis to address construction criteria and specified seismic parameters, including recommendations for proper composition and placement of engineered fill and foundation design. Compliance with up-to-date building code requirements and recommendations identified in the geotechnical evaluation and engineering analysis would reduce potential impacts associated with seismic ground shaking and would ensure the potential impacts associated with exposing people or structures to substantial risk related to ground shaking would be less than significant.

The proposed Project would need to comply with any project-specific design and construction measures to address underlying soil/geologic conditions that would be identified and implemented as part of the proposed Project, and potential impacts related to seismically induced ground acceleration as required by the City of San Diego to occupy temporary structures and obtain an occupancy permit. The other uses at the proposed Project site consist of using existing surface areas for vehicle parking, which would not result in increased risk associated with seismic ground shaking. Thus, no effect relative to strong seismic ground shaking beyond that identified in the FEIR would occur and the proposed Project would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

iii. Seismic-related ground failure, including liquefaction?

As indicated in Section 3.8 Geology and Soils of the FEIR, SDIA and vicinity are within an area considered to have a generally high potential for liquefaction. The project design for the ADP would incorporate measures to address potential liquefaction and related effects, pursuant to recommendations in the required site-specific geotechnical investigation and regulatory/industry standards identified in the FEIR. These measures may include standard measures to remediate liquefaction effects such as ground modification (e.g., dynamic compaction to improve on-site soil conditions) or the use of deep foundations. Use of deep foundations and adherence to geotechnical investigation recommendations and regulatory requirements would ensure that potential impacts

related to seismically-induced liquefaction and related effects would be less than significant.

Any project-specific design and construction measures to address potential liquefaction and related effects would be implemented as part of the proposed Project during the installation of the temporary buildings and prior to obtaining a certificate of occupancy from the City of San Diego. Potential impacts related to seismically induced liquefaction and related effects would be avoided or reduced below a level of significance. Thus, no effect relative to liquefaction beyond that identified in the FEIR would occur and the proposed Project would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

iv. Landslides?

As indicated in Section 3.8 Geology and Soils of the FEIR, SDIA and adjacent areas exhibit generally level and low-lying topography, which is not subject to a significant risk from landslides and, therefore, no significant impact would occur.

As with SDIA, the proposed Project site and surrounding area is flat and not subject to a risk from landslides. No effect relative to landslides beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Soil erosion is addressed in Section 3.10, Hydrology and Water Quality, and Section 5.6.4.9 of the FEIR. As discussed therein, construction activities associated with all new development at SDIA would increase the potential for soil erosion and sedimentation; however, such activities would be subject to National Pollution Discharge Elimination System (NPDES) control requirements, as administered through SDIA Stormwater Management Plans (SWMP). Those measures would serve to reduce erosion and sedimentation impacts to a level that is less than significant.

The proposed Project site consists of existing paved/developed surfaces that would be used as a taxi hold lot and an RCC shuttle storage lot. No notable ground disturbance would occur associated with preparation of the site for the proposed uses, with site surface improvements consisting primarily of placement of an asphalt concrete pavement overlay atop existing Portland cement concrete and asphalt pavement. Because no notable ground disturbance would occur, no impacts are anticipated with respect to soil erosion. As such, there would be no effect relative to substantial soil erosion or loss of topsoil beyond that identified in the

FEIR, and the proposed Project would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Is the project located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

See Section VII (a.) above regarding liquefaction and landslide hazards. Section 3.8 Geology and Soils, and Section 5.6.4.7 of the FEIR address other geotechnical issues such as expansive soils, corrosive soils, and compressible materials. The subject analysis concludes that with implementation of measures recommended in the required project-specific geotechnical investigations and compliance with regulatory requirements identified in the FEIR, potential impacts would be less than significant.

The proposed Project site consists of existing paved/developed surfaces and, with preparation of the site being primarily placement of an asphalt concrete pavement overlay atop existing Portland cement concrete pavement, no notable changes to the existing surface or underlying soils would occur. Further, installation of the temporary buildings would need to comply with any project-specific design and construction measures that would be identified and implemented as part of the proposed Project and as required by the City of San Diego to obtain an occupancy permit. No effect relative to unstable geologic units or soil beyond that identified in the FEIR would occur and the proposed Project would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the FEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Is the project located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

See Section VII (c.) above.

e. Would the project have soils that are incapable of supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

SDIA and adjacent areas use the City's sanitary sewer system, not septic tanks or other alternative wastewater disposal system. As such, the FEIR identified that no impact related to use of septic tanks or alternative wastewater disposal system would occur. The proposed temporary restrooms would be the portable chemical toilet system type that is periodically serviced by the licensed/permitted system vendor, which would have no effect relative to septic tanks or alternative wastewater disposal systems. Therefore, the proposed Project would not result in any material difference in impacts relative to septic tanks or alternative wastewater disposal systems compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geology and soils. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As indicated in the FEIR in Section 3.6, Cultural Resources, and Section 5.6.4.5, SDIA and the surrounding area is built on what was originally mudflats and bay. Decades of dredging and placement of fill soils have built up the area to its current topography. Based on this, the FEIR determined there is no potential for paleontological resources within the SDIA project area and no impact would occur.

The proposed Project site is also located on fill materials in an area that was formerly mudflats and bay. Additionally, the proposed Project site consists of paved/developed surfaces and no notable ground disturbance would occur and there would be no effect on paleontological resources beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in the paleontological resources impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to paleontological resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
VIII. GREENHOUSE GAS EMISSIONS		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.3, Greenhouse Gases and Climate Change, and Section 5.6.4.3 of the FEIR address potential impacts related to emissions of greenhouse gases from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As described in Section 3.3, Greenhouse Gases and Climate Change, of the FEIR, construction-related greenhouse gas (GHG) emissions were estimated over the ADP's construction period and included emissions from on-road and off/non-road vehicles and equipment. Construction emissions were estimated based on the ADP's development phasing and modeled with the *Airport Construction Emissions Inventory Tool* (ACEIT), which specifies the characteristics for on- and off/non-road construction vehicles, equipment, and supporting activities associated with airport construction projects.

As such, the land use and development assumptions used in the air quality analysis also are reflected in the GHG analysis, which includes construction emissions for the overall construction program for the ADP. As described above in Section 2.C, only minimal improvements are needed to prepare the proposed Project site for the proposed use, and, therefore, construction-related emissions associated with the proposed Project would be negligible and would fall well within the overall ADP construction emissions that are accounted for in the FEIR.

With respect to GHG emissions associated with operation of the proposed Project, the temporary relocation of the taxi hold lot and the RCC shuttle storage lot from the southern portion of the airport to the northern portion of the airport is anticipated to have a negligible effect relative to the overall distances between points of trip origin and points of trip destination. Also, relocation of the taxi hold lot to its new temporary location would not increase or decrease the number of taxi trips that would otherwise occur based on its existing location. The same holds true relative to the relocation of the RCC shuttle storage lot, as such relocation would not increase or decrease the number of shuttle operations that would otherwise occur on a daily basis. As such, GHG emissions associated with operation of the temporarily relocated ground transportation facilities are accounted for as part of the overall ADP operations-related GHG emissions.

Impacts associated with GHG emissions from the construction and operation of the ADP were previously disclosed in the FEIR as being significant and unavoidable; hence, the emissions specific to the proposed Project are, albeit negligible, already accounted for as part of the FEIR conclusion regarding significant and unavoidable GHG impacts. Therefore, the proposed Project does not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As indicated in Section VIII (a.) above, GHG emissions associated with construction of the proposed Project would be negligible and no notable change in operations-related GHG emissions are expected to occur. Notwithstanding, the FEIR concluded that implementation of the ADP, which includes construction and operational GHG emissions, would conflict with an applicable plan, policy, or regulation adopted to reduce the emissions of GHG, which would be a significant and unavoidable impact. That impact conclusion would also extend to the proposed Project, which would be part of the overall construction program for the ADP. As such, the proposed Project does not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
IX. HAZARDS AND HAZARDOUS MATERIALS		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.9, Hazards and Hazardous Materials, and Section 5.6.4.8 of the FEIR address potential impacts related to hazardous materials from implementation of the ADP. The following evaluates the extent to which that analysis applies to the Project.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The ADP FEIR determined that while existing federal, state, and local regulatory programs generally serve to address impacts associated with the routine transport, use, and disposal of hazardous materials, there are certain known or potential areas of contamination at the ADP project site that pose a potential for a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, which would be a significant impact. The impact would be reduced to less than significant with implementation of mitigation.

The proposed Project would not involve the routine transport, use, or disposal of hazardous materials. The proposed Project would have no effect related to the transport, use, and disposal of hazardous materials beyond that identified in the FEIR, and would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

A variety of hazardous materials are used at SDIA, and such use is strictly regulated by numerous federal, state, and local safety regulations. The ADP would not involve the generation, use, or storage of hazardous materials in quantities or types that are substantially different from those that are currently associated with the Airport. However, the ADP FEIR further determined that while existing federal, state, and local regulatory programs would generally serve to minimize reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, there are certain known or potential

areas of soil and groundwater contamination at the project site warranting specific measures to address such contamination during construction.

The proposed Project would not involve the use of hazardous materials. Further, the proposed Project would not involve any ground disturbance and there would be no potential for encountering contaminated groundwater or soils at the proposed Project site. The proposed Project would have no effect related to foreseeable upset and accident conditions that involve the release of hazardous materials beyond that identified in the FEIR, and would not result in any material difference in the impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Would the project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Implementation of the proposed Project would not result in any hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste.

Therefore, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Is the project located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The FEIR determined that SDIA is identified on numerous hazardous material sites databases, and remediation activities associated with past occurrences of soil and groundwater contamination have taken place. Although the clean-up cases have been closed, there is the potential that some soil and groundwater contamination associated with past activities could remain at concentrations above regulatory screening levels. Additionally, there is the potential for soil vapor gas intrusion into the new ADP Terminal 1. With mitigation, the impacts were determined to be less than significant.

There is one open Cleanup Program Site case (Geotracker Number T10000002563) for redevelopment in the northern portion of SDIA. The site is the former General Dynamics Convair Division facility. This case includes activities associated with the SDIA North Side Redevelopment and the Terminal 1 Replacement Project, as well as the per- and polyfluoroalkyl substances (PFAS) orders near the SDIA Fire Fighter Test Area. The proposed temporary taxi hold lot and RCC shuttle storage lot are located in the vicinity of the new Facilities Maintenance Administration Building and Shop/Warehouse Building, which were constructed with vapor intrusion mitigation systems to address risks associated with residual volatile organic compound, with monitoring of the mitigation systems conducted on a periodic basis. It should be noted that parts of the proposed temporary taxi hold lot are located above a new stormwater cistern, in which case any soil impacts directly beneath the proposed project would have likely been addressed during the cistern

construction. Further, the proposed Project site is covered with asphalt and no notable ground disturbance would occur, so if any soil or groundwater contamination is located at the proposed Project site, it would not be encountered.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

e. For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

As identified in the FEIR, the ADP is located at a public use airport, and it would not result in a safety hazard for people residing or working in the project area; however, an increase in aircraft noise associated with an increase in future aircraft levels would result in an excessive noise hazard.

The proposed Project is a temporary land use that involves relocation of the existing taxi hold lot and the existing RCC shuttle storage lot. The temporary buildings (i.e., portable restrooms and operations office) would be one story and the use and building height would be consistent with the Airport Land Use Compatibility Plan for SDIA. The proposed Project would not result in a safety hazard for people residing or working in the project area. As discussed in Section XIII herein, the proposed Project would not cause a noise hazard. As such, potential airport-related safety impacts would be less than significant. Therefore, the proposed Project would not result in any material difference in safety impacts associated with be being within an airport land use plan area compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As indicated in Section 3.9, Hazards and Hazardous Materials, of the FEIR, coordination with emergency service providers and planning of detours and emergency access routes during construction and compliance with emergency access requirements during construction and operations would ensure that the ADP would not interfere with an existing emergency response or emergency evacuation plan and impacts would be less than significant.

Similarly, compliance with emergency access requirements would ensure that the proposed Project would not interfere with an existing emergency response or emergency evacuation plan. The temporary relocation of the taxi hold lot and the RCC shuttle storage lot would have no effect relative to an adopted emergency response plan or emergency evacuation plan beyond that identified in the FEIR. Thus, the proposed Project would not result in any material difference compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

g. Would the project expose people or structures, either directly or indirectly, to the risk of loss, injury, or death involving wildland fires?

As indicated in Section XX. below, SDIA is an existing urban industrial environment dominated by concrete and asphalt, well removed from wildlands and, thus, there is no fire hazard relative to wildlands. The proposed Project site is also located in a developed area not near wildlands. No impact would occur.

The proposed Project would occur within a developed area and would have no impact relative to wildland fires. Therefore, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
X. HYDROLOGY AND WATER QUALITY		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.10, Hydrology and Water Quality, and Section 5.6.4.9 of the FEIR address potential impacts related to surface hydrology and water quality from implementation of the ADP. The following evaluates the extent to which those analyses apply to the proposed Project.

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

As described in Section 3.10, Hydrology and Water Quality, of the FEIR, all future development under the ADP is subject to the Airport Stormwater Management Plan (SWMP). The SWMP incorporates the terms of the General Industrial Storm Water Permit, as well as satisfies construction general permit requirements. The SWMP requires that all municipal activities, inclusive of new development, provide for Best Management Practices

(BMPs); therefore, the FEIR determined that water quality impacts relative to construction, grading, and erosion and sedimentation would be less than significant.

The proposed Project involves the use of existing paved/developed area that would not be substantially altered other than the installation of temporary improvements, such as placement of an asphalt concrete layer atop the existing paved surface and installation of temporary restrooms, operations office, lighting, fencing, and a tented break area. These improvements would be required to comply with the Airport Stormwater Management Plan, and are not expected to change the amount or water quality of stormwater runoff from the proposed Project site. The proposed temporary facilities would have no effect on water quality standards or waste discharge requirements beyond that identified in the FEIR and the proposed Project would not result in any material difference compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The FEIR determined that implementation of the ADP would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the ADP may impede sustainable groundwater management of the basin.

The proposed Project would not result in changes to the existing paved/developed surfaces and would not result in the withdrawal of groundwater. The temporary facilities would occur on areas that are already considered impervious and impacts on groundwater recharge would be less than significant. Therefore, the proposed Project would not result in any material difference compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on-site or off-site?

The FEIR determined that SDIA is primarily impervious and there would be no substantial alteration in the existing drainage patterns of the ADP project site or area in a manner that would result in substantial erosion or siltation on- or off-site.

The proposed Project activities would occur on an existing paved/developed area that is impervious. Implementation of the proposed Project may involve some minor rerouting of surface flows based on the location and orientation of the temporary structures, but it is not expected to result in any appreciable change in surface drainage patterns. Regarding the

potential for the proposed Project to result in substantial erosion or siltation, please see the discussion above in Section VII (b.). No effect on the drainage pattern resulting in substantial erosion or siltation on-site or off-site beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The ADP includes completion of a stormwater capture and reuse system, and the FEIR determined that the ADP would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

The proposed Project would occur on a developed area that is impervious. Implementation of the proposed Project may involve some minor rerouting of surface flows, based on the location and orientation of the temporary facilities, but it is not expected to result in any appreciable change in surface drainage patterns or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. No effect on the drainage pattern beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

See discussions in Sections X (a.), (c.), and (d.). The FEIR determined that potential impacts to surface drainage volumes would be less than significant.

The proposed Project would occur on an existing paved/developed surface area that is impervious and no change in the amount of runoff water would occur. No effect on stormwater runoff beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

iv. Impede or redirect flood flows?

The FEIR identifies that virtually all of SDIA is mapped as Zone X, "areas determined to be outside the 500-year floodplain." Subsequent to certification of the FEIR, the flood map was updated and all of SDIA, which includes the proposed Project site, is now Zone X. The FEIR determined that no significant impacts relative to impeding or redirecting flood flows would occur.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The FEIR determined that the ADP is not located in a flood hazard, tsunami, or seiche zone; therefore, there would be no impact.

Similar to ADP area, the northern portion of SDIA, which includes the proposed Project site, is not located in a flood hazard, tsunami, or seiche zone; therefore, there would be no impact.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The groundwater basin underlying SDIA, including the proposed Project site, is not subject to a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
XI. LAND USE AND PLANNING		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.11, Land Use and Planning, and 5.4.6.10 of the FEIR address potential impacts related to land use plans and land use compatibility from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project physically divide an established community?

As identified in the FEIR, the ADP improvements would occur within the existing SDIA boundaries and public rights-of-ways, would not extend into or cross through surrounding communities, and would not create a physical barrier that could divide existing communities. The impact was determined to be less than significant.

The proposed Project site is an existing paved/developed area that is used for vehicle parking and other airport-related uses. The temporary relocation of existing airport-related uses, the taxi hold lot and the existing RCC shuttle storage lot, to another area of SDIA, would not create a physical barrier or extend into or cross through local communities. Thus, no effect on dividing an established community would occur. Therefore, the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and planning. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The FEIR analyzed the compatibility of the ADP with numerous land use plans, policies, and regulations, such as the California Tidelands Trust; the California Coastal Act; the San Diego Regional Plan; Airport Master Plan, Airport Layout Plan; the SDIA Airport Land Use Compatibility Plan (ALUCP); the San Diego Port Master Plan; and the City of San Diego General Plan, including community plans for the surrounding communities. The FEIR identified that the ADP would not conflict with most aspects of the land use plans, policies, or regulations related to land use and planning adopted for the purpose of avoiding or mitigating an environmental effect; however, the significant impacts related to aircraft noise

and to traffic around SDIA could be considered to pose a conflict. Additionally, the future aircraft noise contours projected to occur at buildout of the proposed project in 2035 are inconsistent with the noise compatibility (65 dB CNEL) contour delineated in the current ALUCP, which would also be a plan conflict. Therefore, it was determined that implementation of the ADP would have a significant impact associated with applicable land use plans, policies, or regulations.

The proposed Project site is presently paved/developed and used for airport-related activities. The Port of San Diego Master Plan identifies all of SDIA as Airport Related Commercial. Similarly, most other land use plans, policies, and regulations recognize SDIA, in its entirety, as an airport land use. The only land use plan with notable distinction of specific land uses within SDIA is SDCRAA's Airport Land Use Plan for SDIA. As shown in Figure 3.11-1 of the EIR, much of the southern portion of the Airport, as well as the northern portion of the Airport, is designated for Ground Transportation. The proposed Project site would be situated within an area designated for Airport Support uses. As a temporary use in support of airport-related operations, the temporary placement of the taxi hold lot and the RCC shuttle storage lot in that area would not pose a land use conflict.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and planning. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
XII. MINERAL RESOURCES		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

a. Section 1.4.4, Scope of Analysis, of the FEIR, specifically page 1-11, states that the ADP would have no impact relative to mineral resources. The following evaluates the extent to which that analysis applies to the proposed Project. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

As described on page 1-11 of the FEIR, the ADP is located at an existing international airport within the City of San Diego. SDIA is underlain by artificial fill and bay deposits and does not contain a known mineral resource of value to the region. Further, SDIA and the vicinity

is highly developed and is not currently used, nor available, for mineral resource extraction. Therefore, no impact on mineral resources would occur.

The proposed Project site is located within SDIA, therefore, based on the above, the proposed Project site does not involve new significant impacts or a substantial increase in previously identified impacts to mineral resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

See Section XII (a.) above.

	YES	NO
XIII.NOISE		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.12, Noise, and Section 5.6.4.11 of the FEIR address potential impacts related to noise, including from aircraft, surface traffic (i.e., motor vehicles on nearby roadways), and construction from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project result in generation of a substantial or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

As described in Section 3.12 and Section 5.6.4.11 of the FEIR, significant and avoidable noise increases would occur associated with future aircraft operations at SDIA and traffic noise levels along several roadway segments. Implementation of the ADP would not result in any significant construction noise impacts.

The proposed Project site is not located near residential or other noise-sensitive uses. Further, it would be used for the holding (i.e., short-term parking) of taxis awaiting to be called into service, which is not expected to be significant generators of operational noise. Installation of the temporary facilities at the proposed Project site would not involve intensive use of heavy construction equipment that could generate high noise volumes. As such, no effect on noise beyond that identified in the FEIR would occur during operation and construction, and thus, the proposed Project would not result in any material difference in compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The FEIR determined that construction activities associated with the ADP, including the potential for generation of excessive groundborne vibration or groundborne noise levels, would be less than significant.

As described above in Section 2.C, preparation of the proposed Project site would involve minimal construction activities, with the most notable improvement being the placement of an asphalt concrete overlay on portions of the site. Such construction activity would result in negligible, if any, short-term localized groundborne vibration. No groundborne vibration would occur from operation of the proposed Project. As such, no effect on vibration beyond that identified in the FEIR would occur and proposed Project would not result in any material difference in the noise impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. For a project located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As described under Section XIII (a.) above, significant and unavoidable noise increases would occur associated with future aircraft operations at SDIA and with traffic noise levels along several roadway segments. These impacts would occur within an airport land use plan area. Implementation of the ADP would not result in any significant construction noise impacts.

The proposed Project site is located within SDIA. There are no residential land uses or other noise-sensitive receptors at the Project site. People parking and working at the proposed Project site would be exposed to noise levels typical of an airport. Such noise exposure is regulated by state and federal Occupational Safety and Health Administration (OSHA) standards. Given the very limited nature of construction activities associated with preparation of the proposed Project site, no notable construction noise is anticipated to occur. Such would also be the case for noise associated with operation of the proposed Project. As such, no noise impacts beyond that identified in the FEIR would occur and implementation of the proposed Project would not result in any material difference in the noise impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new

information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
XIV. POPULATION AND HOUSING		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 1.4.4, Scope of Analysis, of the FEIR, specifically page 1-11, states that the ADP would have no impact relative to population and housing. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?

As discussed on page 1-11 of the FEIR, the ADP is located at an existing international airport within the City of San Diego and would not displace any housing nor result in construction of new housing. Further, as discussed in Section 6.4 of the FEIR, the ADP would not have growth inducing impacts that could affect the region's job/housing balance or otherwise result in the need for new housing. Therefore, no population and housing impact would occur.

The proposed Project's temporary relocation of the existing taxi hold lot and the existing RCC shuttle storage lot would not affect housing or induce population growth. No effect on population or housing beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to population and housing. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

There is no existing or proposed housing at SDIA. As described on page 1-11 of the FEIR, implementation of the land use and development plans contemplated under the ADP would not significantly affect housing.

The proposed Project is located within SDIA and, as noted above, there is no housing at SDIA. As such, no housing would be displaced by the proposed Project and no effect on housing beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to population and housing. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
XV. PUBLIC SERVICES		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.13, Public Services, and Section 5.6.4.12 of the FEIR address potential impacts related to fire protection, law enforcement, parks, schools, and other public facilities. The following evaluates the extent to which those analyses apply to the Project.

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection?

Section 3.13, Public Services, of the FEIR determined that the existing fire stations, operated by the San Diego Fire Department (SDFD), would continue to provide paramedic and fire protection services on the airfield and at the Airport during construction and operation of the ADP and maintain adequate response times and service levels. Further, enforcement of code requirements pertaining to emergency vehicle access, as well as building standards, would also ensure maintenance of adequate response times and emergency access. Therefore, no new firefighting facilities would be required and there would be no need for existing fire stations to be relocated or expanded, and impacts would be less than significant.

The proposed Project site would be served by the existing fire stations and the temporary

facilities associated with the proposed Project would meet applicable fire code requirements. Access to the proposed Project site would be provided from an existing roadway nearby (see site plan in Figure 2). No effect on fire protection services beyond that identified in the FEIR would occur, and the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Therefore, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

ii. Police protection?

Section 3.13 Public Services, of the FEIR identifies that San Diego Harbor Police Department (SDHPD) and San Diego Police Department (SDPD) would continue to provide law enforcement services at SDIA, and due to the level of security provided at SDIA for civil aviation protection reasons, incidents of theft, destruction, or damage at SDIA facilities, and to employee vehicles and property are not expected to increase as a result of the ADP. Existing on-site SDHPD activities at SDIA, including foot patrols and vehicle patrols, would be maintained and no reduction in service levels or response times would occur. Construction activities would result in temporary access restrictions within the areas under construction; however, access routes through the construction area and in/out of SDIA would be kept clear and unobstructed at all times in accordance with FAA, Fire Marshal, and Fire Code regulations, thereby ensuring that adequate ingress and egress for law enforcement vehicles would be maintained.

The proposed Project would be located within the boundaries of SDIA, as is the case for the current taxi hold lot and the current RCC shuttle storage lot, and, therefore, would continue to covered by law enforcement services provided by SDHPD and SDPD. Implementation of the proposed Project would not affect law enforcement access routes or response times. As such, no effect on law enforcement beyond that identified in the FEIR would occur, and the proposed Project would not result in any material difference in impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

iii. Schools?

As identified in Section 3.13, Public Services, of the FEIR, the ADP is located at an existing international airport within the City of San Diego and would not affect the region's population through displacement or construction of housing or have other growth inducing impacts that could affect service ratios or other performance objectives for schools. The FEIR determined that no impacts to schools would occur.

The proposed Project site is located at SDIA, which is not near any schools. The proposed Project is a temporary relocation of an existing use, which would not displace population or induce growth. The proposed Project would not result in any material

difference in impacts on schools compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

iv. Parks?

See Section XVI (a.) below.

v. Other public facilities?

As indicated in Section 3.13, Public Services, of the FEIR, the ADP is located at an existing international airport within the City of San Diego and would not affect the region's population through displacement or construction of housing or have other growth inducing impacts that could affect service ratios, response times, or other performance objectives for other public services such as libraries or hospitals. Therefore, the FEIR determined that no impact on other public facilities would occur.

The proposed Project site is located within SDIA, in an area currently used for airport-related activities. Implementation of the proposed Project would not displace population or induce growth, and would not result in any material difference in impacts on other public facilities compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

	YES	NO
XVI. RECREATION		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.13, Public Services, of the FEIR addresses potential impacts related to parks and recreation from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

As discussed in Section 3.13 of the FEIR, the ADP would occur within SDIA boundaries and would not have any direct impact on parks or park access. Further, the ADP would not induce new growth within the region that would create an increased demand for acquisition and development of new public parks or adversely impact the recreational value, use, or aesthetic quality of parks in area.

Similarly, the proposed Project site is located within SDIA, in an area currently used for airport-related activities, and it represents a temporary relocation of an existing airport use. It would not induce new population that could increase demand for parks, nor would it adversely impact the recreational value, use, or aesthetic quality of parks in the area. As such, the proposed Project would have no effect on recreation beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in the recreation impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to recreation. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

See Section XVI (a.) above.

	YES	NO
XVII. TRANSPORTATION		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.14, Traffic and Circulation, and Appendix R-H of the FEIR address potential traffic impacts from implementation of the ADP. Further evaluation of potential traffic impacts associated with implementation of the ADP was completed in December 2020 in conjunction with the ADP EIR Addendum that addressed the use of temporary construction offices on Liberator Way and parking of up to 1,500 vehicles for construction staff on Harbor Island Drive

and shuttling construction employees to and from the ADP construction site. For the currently proposed Project, a traffic analysis was completed to address potential impacts associated with proposed temporary relocation of the existing taxi hold lot and the existing RCC shuttle storage lot. A technical memorandum for that traffic analysis is provided herewith as Appendix B. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

As identified in the FEIR, the measures of effectiveness used in the impacts analysis for the ADP are relative to the City of San Diego's thresholds of significance. Additionally, regarding transportation planning documents related to SDIA, the SDIA Airport Multimodal Accessibility Plan (AMAP), which is included as part of the SANDAG San Diego Regional Plan and the Regional Transportation Plan/Sustainable Communities Strategies, addresses long-term access at SDIA, including transit. The ADP is consistent with the AMAP.

The currently proposed Project includes relocating the existing taxi hold lot from the southern portion of SDIA to the northern portion of SDIA. The relocated taxi hold lot will operate in a similar fashion to the existing taxi hold lot, whereby taxis must first enter the taxi hold lot prior to being dispatched to the terminal buildings to pick up passengers. As illustrated in Figure 2 in Section 2.C, vehicles will access and egress the temporary taxi hold lot via the Sassafras Street and Pacific Highway intersection.

The technical analysis completed for the proposed Project assumes the temporary construction traffic described in the *ADP EIR Addendum – Construction Traffic Study* remains unchanged. Changes to traffic assumptions made as a result of the proposed Project include altering the traffic volumes to account for the altered route the taxis will take to enter the taxi hold lot and subsequently leave for the terminal buildings.

Taxi trip generation estimated to occur during operation of the temporary hold lot includes 67 inbound trips and 32 outbound trips during the AM Peak Hour and 112 inbound trips and 96 outbound trips during the PM Peak Hour. With regard to the temporary relocation of the RCC shuttle storage lot, the RCC shuttle employee shifts were provided by the shuttle operator, SP+. These schedules indicate 2-3 employee shifts beginning/ending during the regional roadway network's peak hours. Therefore, the traffic impact these employees will have on the roadway network is negligible and was not included in traffic analysis.

Regarding trip distribution, inbound taxi trips destined for the temporary taxi hold lot are assumed to originate in a manner consistent with the original trip distribution, though the route was altered such that the destination is the intersection of Pacific Highway and Sassafras Street. All outbound taxi trips exiting the temporary taxi hold lot for the terminal buildings are assumed to take Pacific Highway to Laurel Street and ultimately North Harbor Drive. The taxi trip distribution for the taxis exiting the terminal building remained unaltered.

Based on the assumed taxi trip distribution characteristics, potential impacts to the following intersections were evaluated:

- Intersection 9 – Pacific Highway and Sassafras Street
- Intersection 10 – Kettner Boulevard and Sassafras Street
- Intersection 12 – Pacific Highway and Palm Street
- Intersection 14 – West Laurel Street and North Harbor Drive
- Intersection 15 – Pacific Highway and West Laurel Street

- Intersection 19 – Pacific Highway and West Hawthorne Street

2021 Baseline and 2021 With Project Construction and Taxi traffic volumes were evaluated at the study intersections. Results of the analysis are shown in **Table 1** below.

Table 1

Peak-Hour Intersection Level of Service Summary

Intersection		Peak Hour	2021 Baseline		2021 Baseline + Construction + Taxi		
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Change
9	Pacific Highway and Sassafras Street	AM	22.4	C	23.7	C	1.3
		PM	30.9	C	35.7	D	4.8
10	Kettner Boulevard and Sassafras Street	AM	14.8	B	15.0	B	0.2
		PM	16.9	B	16.9	B	0.0
12	Pacific Highway and Palm Street	AM	9.4	A	9.6	A	0.2
		PM	11.3	B	11.3	B	0.0
14	West Laurel Street and North Harbor Drive	AM	25.9	C	27.0	C	1.1
		PM	28.2	C	34.9	C	6.7
15	Pacific Highway and West Laurel Street	AM	43.3	D	47.4	D	4.1
		PM	68.6	E	64.6	E	-4.0[3]
19	Pacific Highway and West Hawthorne Street	AM	37.5	D	38.0	D	0.5
		PM	44.9	D	45.8	D	0.9

[1]Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
[2]LOS Calculations are based on the methodology outlined in the 6th Edition Highway Capacity Manual and performed using Synchro 10.0
[3]The delay in the Project scenario is lower than in the baseline scenario due to a decrease in WBT and NBL traffic

As shown in Table 1, it is anticipated that under the With Project Construction and Taxi traffic volume conditions all study area intersections operate at acceptable levels of service during the weekday AM and PM peak hours with the exception of the Intersection 15 - Pacific Highway and West Laurel Street during the PM peak hour. This intersection operates at LOS E in the baseline traffic condition, as well as in the baseline with Project traffic condition. The delay with the Project scenario is below the applicable threshold of significance and, therefore, this impact is less than significant.

The traffic analysis does not identify significant changes to operations at the analyzed intersections. As such, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to traffic and circulation. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

CEQA Guidelines section 15064.3, which became effective on July 1, 2020, requires that lead agencies assess project-related traffic impacts using vehicle miles traveled (VMT) as the analytical metric for determining significance. The ADP FEIR, however, was adopted on January 9, 2020, approximately 6 months before the effective date of Guidelines section 15064.3. For this reason, the VMT metric was not required by the State or any San Diego-based agencies. Instead, level of service (LOS) was the official metric for identifying traffic impacts and mitigation. Nonetheless, project-related VMT was generally discussed in the

operational traffic impacts analysis for the ADP in Section 3.14, Traffic and Circulation, and Appendix R-H of the FEIR. Because the Proposed Project (i.e., relocation of the taxi hold lot) is meant to temporarily replace the existing taxi hold lot, and because both hold lot locations are less than a mile from SDIA's passenger terminals, the Proposed Project's VMT levels will be substantially similar to that of the current taxi hold lot. In other words, the Proposed Project would result in little to no change in VMT.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to traffic and circulation. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The FEIR identifies that the ADP does not include any non-standard design features that would increase traffic hazards to motor vehicles, bicyclists, or pedestrians, but rather the project provides for improvements to vehicle circulation in and near the Airport, and includes improvements for pedestrian and bicycle travel nearby. Therefore, no impact would occur.

The proposed Project involves improvement of an existing paved/developed area to accommodate the relocated taxi hold lot and the relocated RCC shuttle storage lot. Access into and out of the relocated taxi hold lot and the relocated RCC shuttle storage lot would be via an adjacent existing roadway. There would be no geometric design features, such as sharp curves or dangerous intersections, or incompatible uses. As such, there would be no increased hazards or incompatible uses and no significant impact would occur.

The proposed Project would not result in any material difference in impacts compared to those described in the FEIR. The proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to traffic and circulation. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Would the project result in inadequate emergency access?

The FEIR addressed emergency access in Section 3.13, Public Services, and Section 5.6.4.12.

See Section XV above.

	YES	NO
XVIII. TRIBAL RESOURCES		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.7, Tribal Cultural Resources, and Section 5.6.4.6 of the FEIR address potential impacts to such resources from implementation of the ADP. The following evaluates the extent to which that analysis applies to the proposed Project.

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

As described in Section 3.7, Tribal Cultural Resources, and Section 5.6.4.6 of the FEIR, SDIA was formerly mudflats and bay, and is built on fill materials. There are no known tribal cultural resources present at SDIA and the FEIR determined that impacts would be less than significant. Based on formal consultation with the Viejas Band of Kumeyaay Indians, ground disturbance associated with construction of the ADP could disturb previously unidentified tribal cultural resources on the ADP site at SDIA. SDCRAA agreed to implement monitoring during ground disturbing activities that involve soils that are not previously dredged/filled materials. Such monitoring would serve to address the potential, if any, for tribal cultural resources to be unexpectedly encountered during project-related excavation activities.

The proposed Project site is also located on former mudflats and bay built up by fill material that has been previously graded and developed. The proposed Project site is currently paved/developed and no notable ground disturbance would occur during site development. No tribal cultural resources would be impacted. No effect on tribal cultural resources beyond that identified in the FEIR would occur. Therefore, the proposed Project would not result in any material difference in tribal cultural resources impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to tribal cultural resources. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

See Section XVIII (a.) above.

	YES	NO
XIX. UTILITIES AND SERVICE SYSTEMS		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 3.15, Utilities, and Section 5.6.4.14 of the FEIR address potential impacts related to energy (electricity and natural gas), telecommunication systems, water demand/supply and systems, sewer, and solid waste from implementation of the ADP. The following evaluates the extent to which the analyses applies to the Project.

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

As identified in the FEIR, there would be some relocation and upgrading of utilities (i.e., water lines, sewer lines, stormwater drainage facilities, and electrical power lines, natural gas piping, and telecommunication infrastructure) required with development of the ADP. The implementation of these improvements would not cause significant environmental effects beyond those addressed in the FEIR and impacts were determined to be less than significant.

The proposed Project would connect to existing utilities at the site, primarily for electrical systems associated with the temporary taxi hold lot (i.e., site lighting and power for modular booth) and the temporary RCC shuttle storage lot (i.e., site lighting), and would not require relocation, construction, or expansion of utility facilities. The proposed Project would not result in any material difference relative to relocation, construction, or expansion of wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities compared to those described in the FEIR.

b. Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts relative to utility facilities. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

As described in Section 3.15, Utilities, and Section 5.6.4.14 of the FEIR, the ADP would have sufficient water supplies available to serve it and reasonably foreseeable future development during normal, dry, and multiple dry years as identified in a Water Supply Assessment by the City of San Diego Water Department. Further, water conservation strategies would be implemented to reduce reliance on potable water supplies. Impacts on water supply was determined to be less than significant.

The proposed Project represents a temporary relocation of the existing taxi hold lot and the existing RCC shuttle storage lot, which would not result in a net increase in water demand Water demand associated with construction activities would be temporary and negligible, and would not exceed available water supplies. As such, the proposed Project would not result in any material difference in water supply impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts relative to water supply. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

c. Has the wastewater treatment provider, which serves or may serve the project, determined that it has adequate capacity to serve the projected demand of the project in addition to the provider's existing commitments?

Development of the ADP would result in additional wastewater-generating facilities (e.g., sinks, toilets). This would include replacement of older outdated plumbing fixtures and fittings in the buildings to be demolished with new efficient plumbing. As discussed in Section 3.15, Utilities, and Section 5.6.4.14 of the FEIR, this increase in wastewater generation would not be significant, because there is adequate wastewater treatment capacity available to SDIA at the Point Loma Wastewater Treatment Plant to accommodate the projected increase. Thus, implementation of the ADP would not exceed wastewater treatment requirements of the San Diego Regional Water Quality Control Board or result in the construction of new treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Similar to the above evaluation of water demand, relocation of the existing taxi hold lot and the existing RCC shuttle storage lot would not result in a net increase in wastewater generation. As such, the proposed Project would not increase wastewater generation beyond that analyzed in the FEIR and would not result in any material difference in wastewater impacts compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts relative to wastewater. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no

substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

As indicated in Section 3.15, Utilities, and Section 5.6.4.14 of the FEIR, development of SDIA in accordance with the ADP would result in an increase of solid waste generated at SDIA during construction and operations. This increase would be accommodated by existing landfills in San Diego County, which have sufficient capacity available as described in the FEIR. Solid waste management for the ADP during construction and operation would comply with recycling and solid waste reduction programs mandated by the state and as identified in SDIA's solid waste reduction programs and diversion targets, such as a food waste diversion program, green waste recycling program, and environmental sustainability objectives for the ADP. This includes a minimum diversion rate of 75 percent for general construction waste and a minimum 90 percent diversion rate for elements such as asphalt and concrete. Development of the ADP at SDIA would have a less than significant impact on the solid waste disposal system.

Similar to above, the proposed Project represents a temporary relocation of an existing use, which would not result in a net increase in solid waste generation. Therefore, the proposed Project would not result in any material difference in solid waste impacts during construction compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts relative to solid waste. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

See Section XIX (d.) above.

	YES	NO
XX. WILDFIRE		
a) Are substantial changes proposed in the project that will require major revisions of the environmental impact report?		**X**
b) Will substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions in the environmental impact report?		**X**
c) Has new information of substantial importance become available indicating new or substantially greater significant impacts or new/different mitigation measures or alternatives for significant impacts?		**X**

DISCUSSION:

Section 1.4.4, Scope of Analysis, of the FEIR, specifically page 1-11, states that the ADP would have no impact relative to wildfire. The following evaluates the extent to which that analysis applies to the proposed Project.

If located in or near state responsibility area or lands classified as very high fire hazard severity zones, would the project:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As described on page 1-11 of the FEIR, the ADP is located at an existing international airport within the City of San Diego and is not located near state responsibility areas or lands classified as very high fire hazard severity zones. The proposed Project site is similarly not located in a designated high fire severity zone. Thus, the proposed Project would not result in any material difference in the impacts related to wildfire compared to those described in the FEIR.

Based on the above, the proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts related to wildfire. It would not require substantial revisions of the environmental impact report and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

Appendix B – Technical Memorandum for Traffic Analysis

Kimley»Horn

Technical Memorandum

DATE: March 28, 2022

TO: *Ted Anasis*
San Diego County Regional Airport Authority (SDCRAA)

FROM: Leonardo Espelet and William Schmitz
Kimley-Horn and Associates, Inc.
401 B Street, Suite 600, San Diego, CA 92101

SUBJECT: San Diego International Airport Development Plan (ADP) – Temporary Northside Ground Transportation (GT) Facilities Traffic Memo

1. INTRODUCTION

Kimley-Horn has prepared this technical memorandum to document a temporary operational change during the San Diego International Airport (SAN) Airport Development Plan (ADP) construction. The technical memorandum, *San Diego International Airport ADP EIR Addendum – Construction Traffic Study* dated March 22, 2021, assumed the location of the taxi hold lot and Rental Car Center (RCC) shuttle storage lot would remain at their existing locations throughout the duration of construction. This supplemental analysis evaluates the change in traffic during construction under a temporary operational change where these facilities are relocated to a temporary location.

The following sections summarize the methodologies used to determine the changes in traffic volumes as a result of the GT facilities relocations, compared to what was analyzed in the *San Diego International Airport ADP EIR – Construction Traffic Study*.

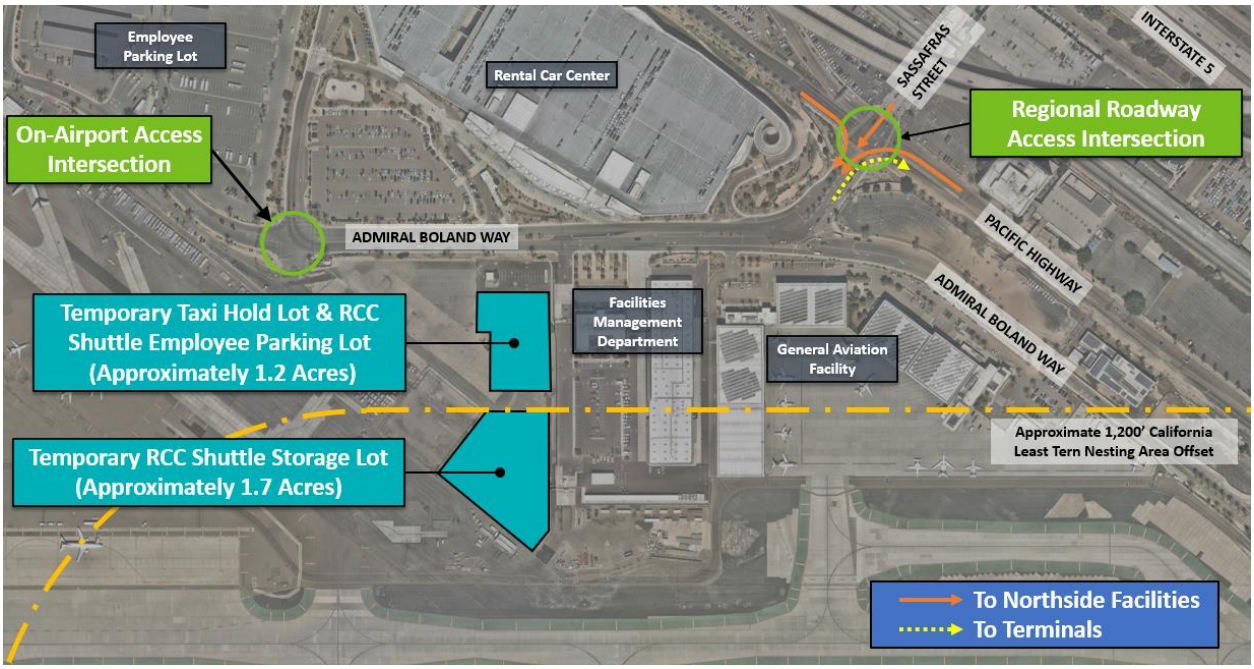
2. PROJECT DESCRIPTION

The Project proposes relocating the existing taxi hold lot and the RCC shuttle storage lot – both on the south side of Airport property – to the northside of Airport property, as shown in **Figure 1.** The relocated taxi hold lot will operate in a similar fashion to the existing taxi hold lot, whereby taxis must first enter the taxi hold lot prior to being dispatched to the terminal buildings to pick up passengers. The relocated RCC shuttle storage lot will also operate in a similar fashion to the existing storage lot, whereby RCC shuttle employees park near the lot at the beginning of their shift and then begin their route after they pick up a bus from the storage lot. As illustrated in **Figure 2**, vehicles will access and egress the northside GT facilities lot via the Sassafras Street and Pacific Highway intersection.

This technical memorandum assumes the temporary construction traffic described in the *ADP EIR Addendum – Construction Traffic Study* remains unchanged. Changes to traffic assumptions made as a result of the Project include altering the traffic volumes to account for the altered route the taxis will take to enter the taxi hold lot and subsequently leave for the terminal buildings. The temporary taxi hold lot is anticipated to operate from August 1, 2022 through December 31, 2024. The temporary RCC shuttle storage lot is anticipated to operate from August 1, 2022 through March 31, 2023. The exact dates may change based on construction schedule changes.

Figure 1 – Temporary Northside GT Facilities Location

Figure 2 – Temporary Northside GT Facilities Access/Egress Intersections



3. TRIP GENERATION

Construction trip generation associated with the proposed project is identified in the *ADP EIR Addendum – Construction Traffic Study*. The construction trip generation consists of employee commuter trips and material related truck trips. The anticipated number and of construction employee parking, shuttles and truck trips have not changed.

RCC shuttle employee shifts were provided by the shuttle operator, SP+. These schedules indicate 2-3 employee shifts beginning/ending during the regional roadway network's peak hours. Therefore, the traffic impact these employees will have on the roadway network is negligible and was not included in this analysis.

Taxi trip activity was not specifically identified in the *ADP EIR Addendum – Construction Traffic Study*. This analysis used historical data from October 2019. **Table 1** presents the total Airport taxi trip generation during the roadway peak hours based on the 85th percentile of the inbound and outbound taxi traffic activity.

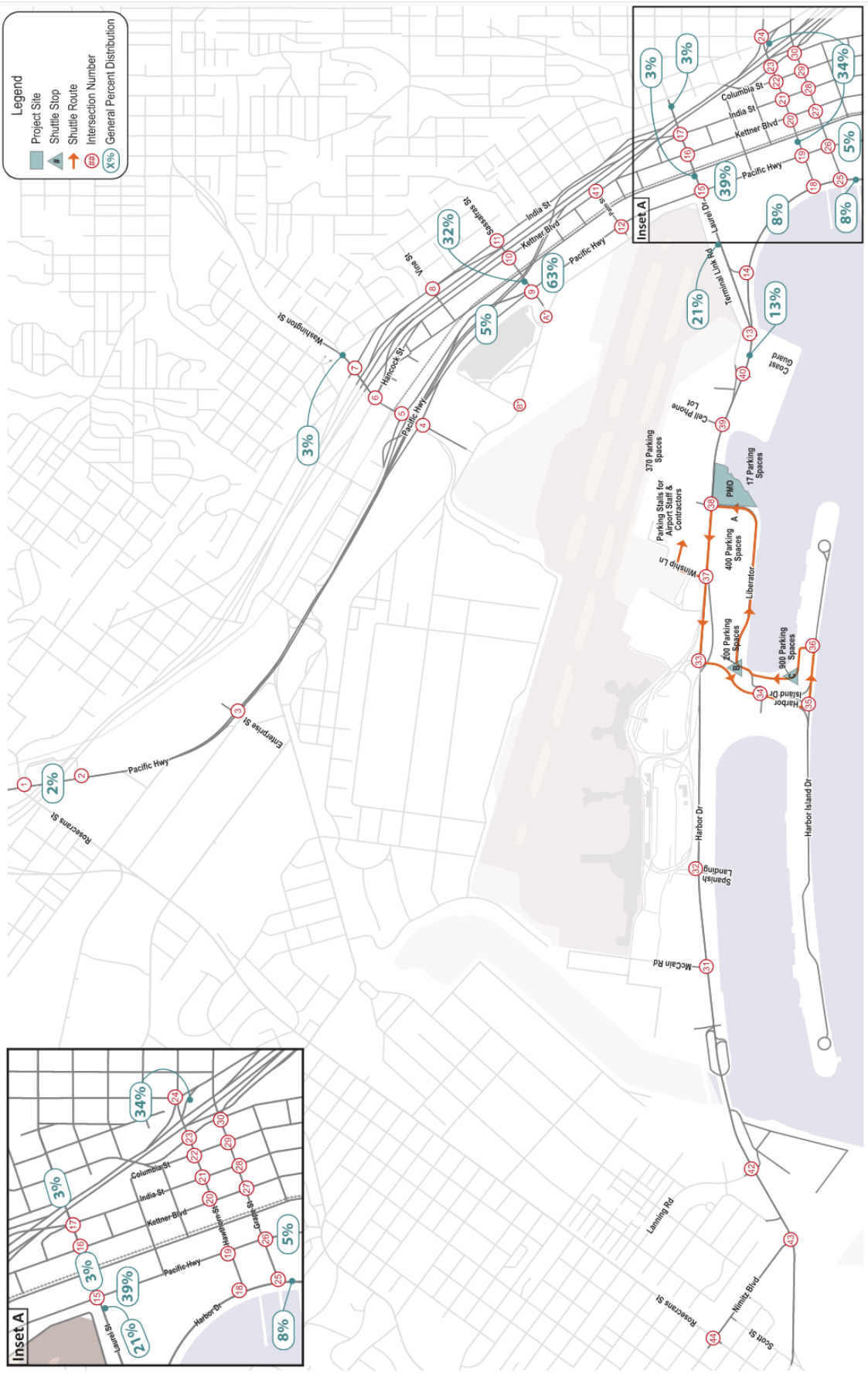
Table 1
Total Airport Taxi Trip Generation

Construction Phase	Type of Trip	Taxi Trips	
		AM Peak Hour	PM Peak Hour
Phase 1a	Inbound	67	112
	Outbound	32	96

4. Airport Trip Distributions

The Airport traffic distribution was assumed to remain unaltered from the original distribution identified in the *San Diego International Airport ADP EIR– Construction Traffic Study*. Inbound taxi trips destined for the temporary taxi hold lot are assumed to originate in a manner consistent with the original trip distribution, though the route was altered such that the destination is the intersection of Pacific Highway and Sassafras Street. The taxi traffic distribution for the vehicles destined for the hold lot is shown in **Figure 3**. All outbound taxi trips exiting the temporary taxi hold lot for the terminal buildings are assumed to take Pacific Highway to Laurel Street and ultimately North Harbor Drive. The taxi trip distribution for the taxis exiting the terminal building remained unaltered.

Figure 3 – Taxi Traffic Distribution



5. Intersection Traffic Volumes

The trip distributions from F**igure 3** were applied to the AM Peak Hour and PM Peak Hour volumes shown in **Table 1** for analysis year 2020/2021 to determine the taxi specific volumes at each intersection. With the proposed taxi traffic changes, 2020/2021 With Project Construction (Phase 1a) traffic volumes will be changed from what was previously analyzed at the following intersections:

- Intersection 9 – Pacific Highway and Sassafras Street
- Intersection 10 – Kettner Boulevard and Sassafras Street
- Intersection 12 – Pacific Highway and Palm Street
- Intersection 14 – West Laurel Street and North Harbor Drive
- Intersection 15 – Pacific Highway and West Laurel Street
- Intersection 19 – Pacific Highway and West Hawthorne Street

Figure 3 identifies the intersections analyzed in the *San Diego International Airport ADP EIR – Construction Traffic Study*. Construction traffic volumes remain unchanged. Taxi traffic volumes reflect the new routes that will be taken by each vehicle. Another set of volumes were calculated to remove a portion of the taxi volume to avoid double-counting vehicles. The final total traffic volumes at the intersections of interest were determined as a function of the existing volumes and the rerouted taxi traffic volumes.

Attachment A provides figures for the baseline airport traffic volumes, construction Phase 1A traffic volumes, proposed taxi traffic volumes, and the resulting traffic volumes at the intersections of interest.

6. Thresholds of Significance

The SDCRAA's development of thresholds of significant to use in evaluation the proposed project's potential traffic and circulation impacts took into consideration the thresholds utilized by the City of San Diego. The following summarizes the SDCRAA's review of the aforementioned thresholds of significance and the basis for selection of specific thresholds for evaluation of the proposed project's impacts.

The City of San Diego has developed acceptable threshold standards to determine the significance of project impacts to intersections. Regarding the evaluation of the proposed project's construction-related impacts under the City's thresholds, the measurement of effectiveness (MOE) applied to intersections is based on allowable increases in delay. At intersections that are expected to operate at LOS E or F without the project, the allowable increase in delay is two seconds at LOS E and one second at LOS F with the addition of the project. If vehicle trips from a project cause the delay at an intersection to increase by more than the allowable threshold, this would be considered a significant project impact that requires mitigation. Also, if the project causes an intersection that was operating at an acceptable LOS (i.e., LOS A, B, C, or D) to operate at LOS E or F, this would be considered significant project impact that requires mitigation.

7. Intersection Level of Service

2021 Baseline and 2021 With Project Construction and Taxi Traffic volumes were evaluated at the study intersections. Results of the analysis are shown in **Table 2**. The associated Level of Service Worksheets are included in **Attachment B**. The *San Diego International Airport ADP EIR – Construction Traffic Study* analysis was performed prior to intersection geometry changes made by the City at the intersection at Pacific Highway and West Laurel Street. Before the changes were made, the intersection had 3 northbound and 3 southbound lanes. In its current state, the intersection has 2 northbound and 2 southbound lanes. This analysis incorporated this alteration when modeling the intersection's performance.

As shown in the table, it is anticipated that under the With Project Construction and Taxi Traffic volume conditions all study area intersections operate at acceptable levels of service during the weekday AM and PM peak hours with the exception of the intersection at West Laurel Street and Pacific Highway during the PM peak hour.

Table 2
Peak-Hour Intersection Level of Service Summary

Intersection		Peak Hour	2021 Baseline		2021 + Construction + Taxi Traffic		
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Change
9	Pacific Highway and Sassafras Street	AM	22.4	C	23.7	C	1.3
		PM	30.9	C	35.7	D	4.8
10	Kettner Boulevard and Sassafras Street	AM	14.8	B	15.0	B	0.2
		PM	16.9	B	16.9	B	0.0
12	Pacific Highway and Palm Street	AM	9.4	A	9.6	A	0.2
		PM	11.3	B	11.3	B	0.0
14	West Laurel Street and North Harbor Drive	AM	25.9	C	27.0	C	1.1
		PM	28.2	C	34.9	C	6.7
15	Pacific Highway and West Laurel Street	AM	43.3	D	47.4	D	4.1
		PM	68.6	E	64.6	E	-4.0[3]
19	Pacific Highway and West Hawthorne Street	AM	37.5	D	38.0	D	0.5
		PM	44.9	D	45.8	D	0.9

[1]Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
[2]LOS Calculations are based on the methodology outlined in the 6th Edition Highway Capacity Manual and performed using Synchro 10.0.
[3]The delay in the Project scenario is lower than in the baseline scenario due to a decrease in WBT and NBL traffic.

8. Vehicle Miles Traveled (VMT)

The rerouted taxi traffic are temporary trips on the network that occur during the specified timeframe only. Potential project effects related to VMT are evaluated only for permanent conditions and are not applicable to temporary traffic conditions. Therefore, the change in taxi traffic would have no effect on the VMT analysis in the *San Diego International Airport ADP EIR – Construction Traffic Study*.

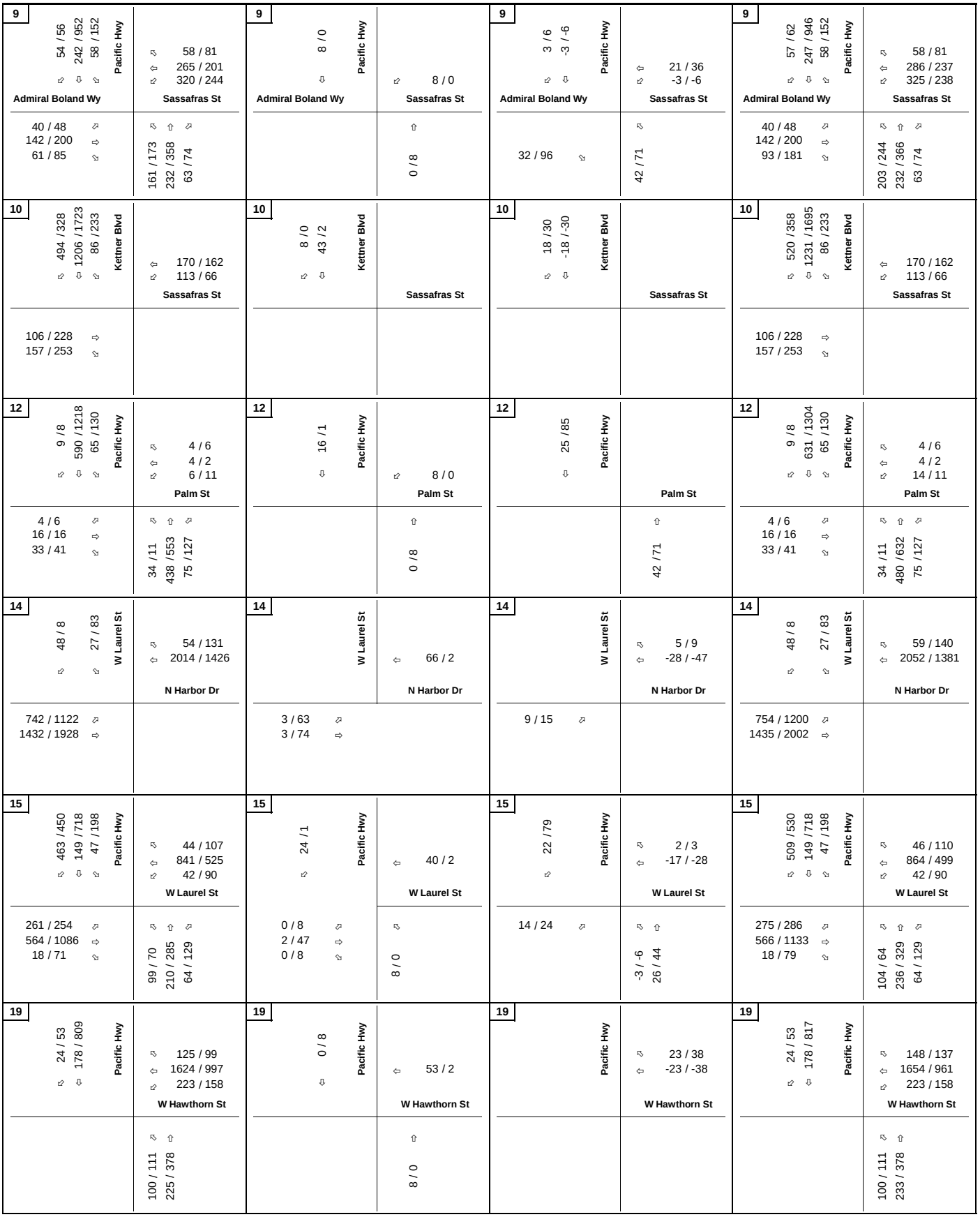
9. Findings and Conclusion

Table 2 summarizes the intersection impacts related to the additional construction and taxi traffic. All study intersections operate at acceptable levels of service during the weekday AM and PM peak hours with the exception of the intersection of West Laurel Street and Pacific Highway in the PM peak hour. This intersection operates at LOS E in the baseline traffic condition as well as in the baseline with Project traffic condition. The delay with the Project scenario is below the threshold of significance and does not require mitigation.

The traffic analysis does not identify significant changes to operations at the analyzed intersections. As such, the proposed project does not involve new significant impacts or a substantial increase in previously identified impacts to traffic and circulation.

Attachment A

Updated Roadway Intersection Volumes



X / Y = AM / PM PEAK HOUR
TURNING VOLUMES

NOT TO SCALE

Kimley»Horn

Baseline + Construction + Taxi Traffic Peak-Hour Traffic Volumes

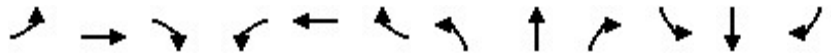
Attachment B

Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	142	61	320	265	58	161	232	63	58	242	54
Future Volume (veh/h)	40	142	61	320	265	58	161	232	63	58	242	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	153	66	344	285	62	173	249	68	62	260	58
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	290	243	402	515	112	220	1050	269	79	762	161
Arrive On Green	0.03	0.15	0.15	0.23	0.35	0.35	0.12	0.26	0.26	0.04	0.18	0.18
Sat Flow, veh/h	1781	1870	1570	1781	1487	323	1781	4023	1032	1781	4194	888
Grp Volume(v), veh/h	43	153	66	344	0	347	173	208	109	62	208	110
Grp Sat Flow(s),veh/h/ln	1781	1870	1570	1781	0	1810	1781	1702	1651	1781	1702	1678
Q Serve(g_s), s	1.4	4.6	2.2	11.2	0.0	9.4	5.7	2.9	3.2	2.1	3.2	3.5
Cycle Q Clear(g_c), s	1.4	4.6	2.2	11.2	0.0	9.4	5.7	2.9	3.2	2.1	3.2	3.5
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.63	1.00		0.53
Lane Grp Cap(c), veh/h	61	290	243	402	0	628	220	889	431	79	619	305
V/C Ratio(X)	0.71	0.53	0.27	0.86	0.00	0.55	0.79	0.23	0.25	0.78	0.34	0.36
Avail Cap(c_a), veh/h	883	1236	1037	883	0	1196	883	3374	1636	883	3374	1663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	23.5	22.6	22.5	0.0	16.0	25.7	17.6	17.7	28.6	21.6	21.7
Incr Delay (d2), s/veh	5.6	0.6	0.2	2.1	0.0	0.8	2.3	0.2	0.6	6.2	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.0	0.8	4.6	0.0	3.7	2.4	1.1	1.2	1.0	1.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	24.1	22.8	24.6	0.0	16.7	28.1	17.9	18.3	34.9	22.2	23.0
LnGrp LOS	C	C	C	C	A	B	C	B	B	C	C	C
Approach Vol, veh/h		262			691			490			380	
Approach Delay, s/veh		25.5			20.6			21.6			24.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	21.1	18.1	14.3	11.9	16.3	6.5	25.9
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	30.0	60.0	30.0	40.0	30.0	60.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	4.1	5.2	13.2	6.6	7.7	5.5	3.4	11.4
Green Ext Time (p_c), s	0.1	3.9	0.5	0.7	0.2	3.8	0.0	2.4

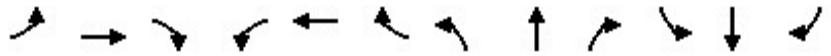
Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	106	157	113	170	0	0	0	0	86	1206	494
Future Volume (veh/h)	0	106	157	113	170	0	0	0	0	86	1206	494
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	120	178	128	193	0				98	1370	561
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	402	341	231	394	0				1123	2243	905
Arrive On Green	0.00	0.21	0.21	0.21	0.21	0.00				0.63	0.63	0.63
Sat Flow, veh/h	0	1870	1585	713	1920	0				1781	3557	1435
Grp Volume(v), veh/h	0	120	178	158	163	0				98	1310	621
Grp Sat Flow(s),veh/h/ln	0	1870	1585	930	1617	0				1781	1702	1588
Q Serve(g_s), s	0.0	4.5	8.4	10.1	7.4	0.0				1.8	19.4	20.0
Cycle Q Clear(g_c), s	0.0	4.5	8.4	14.6	7.4	0.0				1.8	19.4	20.0
Prop In Lane	0.00		1.00	0.81		0.00				1.00		0.90
Lane Grp Cap(c), veh/h	0	402	341	277	347	0				1123	2147	1001
V/C Ratio(X)	0.00	0.30	0.52	0.57	0.47	0.00				0.09	0.61	0.62
Avail Cap(c_a), veh/h	0	667	565	444	577	0				1271	2428	1132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	27.7	29.2	33.2	28.8	0.0				6.1	9.3	9.4
Incr Delay (d2), s/veh	0.0	0.2	0.5	1.4	0.7	0.0				0.1	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	3.2	3.2	2.9	0.0				0.6	6.3	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	27.9	29.7	34.6	29.6	0.0				6.1	9.9	10.7
LnGrp LOS	A	C	C	C	C	A				A	A	B
Approach Vol, veh/h		298			321						2029	
Approach Delay, s/veh		28.9			32.0						10.0	
Approach LOS		C			C						A	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		24.8		59.3		24.8
Change Period (Y+Rc), s		6.7		6.3		6.7
Max Green Setting (Gmax), s		30.0		60.0		30.0
Max Q Clear Time (g_c+I1), s		10.4		22.0		16.6
Green Ext Time (p_c), s		0.7		31.1		1.4

Intersection Summary	
HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B



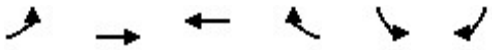
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	16	33	6	4	4	34	438	75	65	590	9
Future Volume (veh/h)	4	16	33	6	4	4	34	438	75	65	590	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	18	36	7	4	4	37	481	82	71	648	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	404	99	199	362	153	153	59	2250	686	180	2381	37
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.03	0.44	0.44	0.05	0.46	0.46
Sat Flow, veh/h	1400	555	1110	1344	856	856	1781	5106	1558	3456	5178	80
Grp Volume(v), veh/h	4	0	54	7	0	8	37	481	82	71	426	232
Grp Sat Flow(s),veh/h/ln	1400	0	1665	1344	0	1713	1781	1702	1558	1728	1702	1853
Q Serve(g_s), s	0.1	0.0	1.2	0.2	0.0	0.2	0.9	2.6	1.4	0.9	3.5	3.5
Cycle Q Clear(g_c), s	0.3	0.0	1.2	1.5	0.0	0.2	0.9	2.6	1.4	0.9	3.5	3.5
Prop In Lane	1.00		0.67	1.00		0.50	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	404	0	298	362	0	306	59	2250	686	180	1566	852
V/C Ratio(X)	0.01	0.00	0.18	0.02	0.00	0.03	0.63	0.21	0.12	0.39	0.27	0.27
Avail Cap(c_a), veh/h	1387	0	1468	1306	0	1510	1177	6750	2059	2284	4500	2450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	15.8	16.4	0.0	15.4	21.7	7.8	7.5	20.8	7.6	7.6
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.0	4.1	0.1	0.1	0.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.1	0.0	0.1	0.4	0.7	0.4	0.3	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	15.9	16.4	0.0	15.4	25.8	7.9	7.6	21.3	7.7	7.7
LnGrp LOS	B	A	B	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		58			15			600			729	
Approach Delay, s/veh		15.9			15.9			9.0			9.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	25.7		12.9	5.9	26.6		12.9
Change Period (Y+Rc), s	4.4	* 5.7		* 4.8	4.4	5.7		* 4.8
Max Green Setting (Gmax), s	30.0	* 60		* 40	30.0	60.0		* 40
Max Q Clear Time (g_c+I1), s	2.9	4.6		3.2	2.9	5.5		3.5
Green Ext Time (p_c), s	0.1	7.0		0.2	0.0	4.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	742	1432	2014	54	27	48
Future Volume (veh/h)	742	1432	2014	54	27	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	843	1627	2289	0	31	55
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	5	5	2	2	2
Cap, veh/h	814	4297	2937		87	78
Arrive On Green	0.24	0.86	0.59	0.00	0.05	0.05
Sat Flow, veh/h	3456	5149	5149	1585	1781	1585
Grp Volume(v), veh/h	843	1627	2289	0	31	55
Grp Sat Flow(s),veh/h/ln	1728	1662	1662	1585	1781	1585
Q Serve(g_s), s	27.8	7.9	41.2	0.0	2.0	4.0
Cycle Q Clear(g_c), s	27.8	7.9	41.2	0.0	2.0	4.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	814	4297	2937		87	78
V/C Ratio(X)	1.04	0.38	0.78		0.36	0.71
Avail Cap(c_a), veh/h	814	4297	2937		479	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.51	0.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	1.7	18.4	0.0	54.3	55.3
Incr Delay (d2), s/veh	41.0	0.3	1.1	0.0	0.9	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	0.9	14.3	0.0	0.9	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	86.1	1.9	19.5	0.0	55.2	59.7
LnGrp LOS	F	A	B		E	E
Approach Vol, veh/h		2470	2289	A	86	
Approach Delay, s/veh		30.7	19.5		58.1	
Approach LOS		C	B		E	

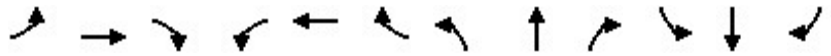
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		107.0		11.0	32.2	74.8
Change Period (Y+Rc), s		5.3		5.2	4.4	* 5.3
Max Green Setting (Gmax), s		75.8		31.7	27.8	* 44
Max Q Clear Time (g_c+I1), s		9.9		6.0	29.8	43.2
Green Ext Time (p_c), s		49.8		0.1	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	261	564	18	42	841	44	99	210	64	47	149	463
Future Volume (veh/h)	261	564	18	42	841	44	99	210	64	47	149	463
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.94	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	281	606	19	45	904	47	106	226	69	51	160	498
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	1647	52	233	1486	77	129	775	325	66	650	529
Arrive On Green	0.17	0.47	0.47	0.17	0.58	0.58	0.07	0.22	0.22	0.04	0.18	0.18
Sat Flow, veh/h	1781	3515	110	1781	3436	179	1781	3554	1488	1781	3554	1398
Grp Volume(v), veh/h	281	306	319	45	468	483	106	226	69	51	160	498
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1838	1781	1777	1488	1781	1777	1398
Q Serve(g_s), s	21.7	15.5	15.5	3.0	24.1	24.1	8.2	7.4	3.9	4.0	5.4	25.6
Cycle Q Clear(g_c), s	21.7	15.5	15.5	3.0	24.1	24.1	8.2	7.4	3.9	4.0	5.4	25.6
Prop In Lane	1.00		0.06	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	833	866	233	768	795	129	775	325	66	650	529
V/C Ratio(X)	0.92	0.37	0.37	0.19	0.61	0.61	0.82	0.29	0.21	0.77	0.25	0.94
Avail Cap(c_a), veh/h	382	833	866	233	768	795	244	775	325	244	650	529
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	23.9	23.9	51.5	22.0	22.0	64.1	45.7	24.2	66.8	48.9	44.5
Incr Delay (d2), s/veh	23.1	1.3	1.2	1.7	3.2	3.1	4.8	0.2	0.4	7.0	0.3	25.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	6.7	7.0	1.4	9.4	9.7	3.9	3.3	2.0	1.9	2.4	20.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.0	25.1	25.1	53.2	25.2	25.1	68.9	45.9	24.6	73.8	49.2	70.2
LnGrp LOS	F	C	C	D	C	C	E	D	C	E	D	E
Approach Vol, veh/h		906			996			401			709	
Approach Delay, s/veh		42.1			26.4			48.3			65.7	
Approach LOS		D			C			D			E	

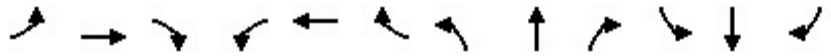
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	35.5	24.1	70.8	14.5	30.6	28.5	66.3
Change Period (Y+Rc), s	4.4	* 5	5.8	* 5.2	4.4	5.0	4.4	5.8
Max Green Setting (Gmax), s	19.2	* 26	9.8	* 66	19.2	25.6	30.0	45.6
Max Q Clear Time (g_c+I1), s	16.0	9.4	5.0	17.5	10.2	27.6	23.7	26.1
Green Ext Time (p_c), s	0.0	1.6	0.0	5.8	0.1	0.0	0.4	5.0

Intersection Summary	
HCM 6th Ctrl Delay	43.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	223	1624	125	100	225	0	0	178	24
Future Volume (veh/h)	0	0	0	223	1624	125	100	225	0	0	178	24
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				237	1728	133	106	239	0	0	189	26
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				326	2539	200	135	979	0	0	438	59
Arrive On Green				0.19	0.19	0.19	0.15	0.55	0.00	0.00	0.14	0.14
Sat Flow, veh/h				568	4426	349	1781	3647	0	0	3185	414
Grp Volume(v), veh/h				768	644	686	106	239	0	0	106	109
Grp Sat Flow(s),veh/h/ln				1842	1702	1800	1781	1777	0	0	1777	1729
Q Serve(g_s), s				43.1	38.6	38.9	6.3	3.8	0.0	0.0	6.0	6.3
Cycle Q Clear(g_c), s				43.1	38.6	38.9	6.3	3.8	0.0	0.0	6.0	6.3
Prop In Lane				0.31		0.19	1.00		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				1057	976	1032	135	979	0	0	252	245
V/C Ratio(X)				0.73	0.66	0.66	0.79	0.24	0.00	0.00	0.42	0.44
Avail Cap(c_a), veh/h				1057	976	1032	155	1134	0	0	309	300
HCM Platoon Ratio				0.33	0.33	0.33	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.69	0.69	0.69	0.59	0.59	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				36.5	34.6	34.8	45.8	18.8	0.0	0.0	43.1	43.2
Incr Delay (d2), s/veh				3.1	2.4	2.3	10.8	0.1	0.0	0.0	0.7	0.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				22.1	18.2	19.4	3.0	1.5	0.0	0.0	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.5	37.1	37.1	56.7	18.9	0.0	0.0	43.8	44.0
LnGrp LOS				D	D	D	E	B	A	A	D	D
Approach Vol, veh/h					2098			345			215	
Approach Delay, s/veh					38.0			30.5			43.9	
Approach LOS					D			C			D	

Timer - Assigned Phs	3	4	6	8
Phs Duration (G+Y+Rc), s	14.2	22.0	69.0	36.2
Change Period (Y+Rc), s	5.9	* 6.4	5.9	5.9
Max Green Setting (Gmax), s	9.6	* 19	63.1	35.1
Max Q Clear Time (g_c+I1), s	8.3	8.3	45.1	5.8
Green Ext Time (p_c), s	0.0	0.6	11.6	1.7

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

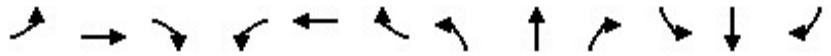
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	200	85	244	201	81	173	358	74	152	952	56
Future Volume (veh/h)	48	200	85	244	201	81	173	358	74	152	952	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	213	90	260	214	86	184	381	79	162	1013	60
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	284	240	298	357	144	220	1568	315	197	1751	104
Arrive On Green	0.04	0.15	0.15	0.17	0.28	0.28	0.12	0.37	0.37	0.11	0.36	0.36
Sat Flow, veh/h	1781	1870	1579	1781	1268	510	1781	4260	855	1781	4928	292
Grp Volume(v), veh/h	51	213	90	260	0	300	184	302	158	162	699	374
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	0	1777	1781	1702	1711	1781	1702	1816
Q Serve(g_s), s	2.7	10.2	4.8	13.4	0.0	13.7	9.5	5.8	6.0	8.4	15.7	15.7
Cycle Q Clear(g_c), s	2.7	10.2	4.8	13.4	0.0	13.7	9.5	5.8	6.0	8.4	15.7	15.7
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.50	1.00		0.16
Lane Grp Cap(c), veh/h	66	284	240	298	0	501	220	1253	630	197	1209	645
V/C Ratio(X)	0.77	0.75	0.38	0.87	0.00	0.60	0.84	0.24	0.25	0.82	0.58	0.58
Avail Cap(c_a), veh/h	569	797	673	569	0	757	569	2175	1093	569	2175	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	38.1	35.8	38.1	0.0	29.1	40.2	20.6	20.7	40.8	24.6	24.6
Incr Delay (d2), s/veh	7.1	1.5	0.4	3.2	0.0	1.2	3.2	0.2	0.4	3.2	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.8	1.9	6.1	0.0	6.0	4.2	2.2	2.4	3.8	6.2	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	39.6	36.2	41.3	0.0	30.3	43.4	20.8	21.0	44.1	25.3	26.1
LnGrp LOS	D	D	D	D	A	C	D	C	C	D	C	C
Approach Vol, veh/h		354			560			644			1235	
Approach Delay, s/veh		40.5			35.4			27.3			28.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	39.9	20.1	19.2	16.0	38.7	7.9	31.4
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	10.4	60.0	30.0	40.0	30.0	60.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	10.4	8.0	15.4	12.2	11.5	17.7	4.7	15.7
Green Ext Time (p_c), s	0.2	5.9	0.3	1.0	0.2	15.7	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	228	253	66	162	0	0	0	0	233	1723	328
Future Volume (veh/h)	0	228	253	66	162	0	0	0	0	233	1723	328
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	245	272	71	174	0				251	1853	353
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	423	357	144	426	0				1124	2724	511
Arrive On Green	0.00	0.23	0.23	0.23	0.23	0.00				0.63	0.63	0.63
Sat Flow, veh/h	0	1870	1581	344	1971	0				1781	4319	809
Grp Volume(v), veh/h	0	245	272	107	138	0				251	1454	752
Grp Sat Flow(s),veh/h/ln	0	1870	1581	613	1617	0				1781	1702	1724
Q Serve(g_s), s	0.0	10.6	14.6	7.0	6.5	0.0				5.5	25.0	25.9
Cycle Q Clear(g_c), s	0.0	10.6	14.6	17.6	6.5	0.0				5.5	25.0	25.9
Prop In Lane	0.00		1.00	0.66		0.00				1.00		0.47
Lane Grp Cap(c), veh/h	0	423	357	205	366	0				1124	2147	1087
V/C Ratio(X)	0.00	0.58	0.76	0.52	0.38	0.00				0.22	0.68	0.69
Avail Cap(c_a), veh/h	0	618	523	317	534	0				1178	2250	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	31.3	32.8	36.4	29.7	0.0				7.2	10.8	11.0
Incr Delay (d2), s/veh	0.0	0.5	1.9	1.5	0.5	0.0				0.2	1.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.8	5.7	2.4	2.6	0.0				1.9	8.5	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	31.8	34.7	38.0	30.2	0.0				7.4	11.8	13.1
LnGrp LOS	A	C	C	D	C	A				A	B	B
Approach Vol, veh/h		517			245						2457	
Approach Delay, s/veh		33.3			33.6						11.7	
Approach LOS		C			C						B	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		27.2		63.5		27.2
Change Period (Y+Rc), s		6.7		6.3		6.7
Max Green Setting (Gmax), s		30.0		60.0		30.0
Max Q Clear Time (g_c+I1), s		16.6		27.9		19.6
Green Ext Time (p_c), s		1.3		29.3		0.9

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

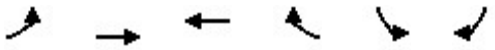
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	16	41	11	2	6	11	553	127	130	1218	8
Future Volume (veh/h)	6	16	41	11	2	6	11	553	127	130	1218	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	19	48	13	2	7	13	643	148	151	1416	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	102	258	382	79	277	23	2156	665	261	2537	16
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.01	0.42	0.42	0.08	0.48	0.48
Sat Flow, veh/h	1391	466	1177	1322	361	1265	1781	5106	1575	3456	5235	33
Grp Volume(v), veh/h	7	0	67	13	0	9	13	643	148	151	921	504
Grp Sat Flow(s),veh/h/ln	1391	0	1643	1322	0	1627	1781	1702	1575	1728	1702	1864
Q Serve(g_s), s	0.2	0.0	1.7	0.4	0.0	0.2	0.4	4.4	3.2	2.2	10.1	10.1
Cycle Q Clear(g_c), s	0.4	0.0	1.7	2.2	0.0	0.2	0.4	4.4	3.2	2.2	10.1	10.1
Prop In Lane	1.00		0.72	1.00		0.78	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	435	0	360	382	0	356	23	2156	665	261	1650	904
V/C Ratio(X)	0.02	0.00	0.19	0.03	0.00	0.03	0.55	0.30	0.22	0.58	0.56	0.56
Avail Cap(c_a), veh/h	1188	0	1249	1098	0	1237	1016	5823	1796	1971	3882	2126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	0.0	16.7	17.6	0.0	16.1	25.8	10.0	9.7	23.5	9.6	9.6
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.0	7.4	0.1	0.3	0.8	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.6	0.1	0.0	0.1	0.2	1.3	0.9	0.8	2.9	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	0.0	16.8	17.6	0.0	16.1	33.2	10.2	10.0	24.3	9.9	10.1
LnGrp LOS	B	A	B	B	A	B	C	B	A	C	A	B
Approach Vol, veh/h		74			22			804			1576	
Approach Delay, s/veh		16.8			17.0			10.5			11.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	27.9		16.3	5.1	31.2		16.3
Change Period (Y+Rc), s	4.4	* 5.7		* 4.8	4.4	5.7		* 4.8
Max Green Setting (Gmax), s	30.0	* 60		* 40	30.0	60.0		* 40
Max Q Clear Time (g_c+I1), s	4.2	6.4		3.7	2.4	12.1		4.2
Green Ext Time (p_c), s	0.2	10.4		0.3	0.0	13.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1122	1928	1426	131	83	8
Future Volume (veh/h)	1122	1928	1426	131	83	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	1169	2008	1485	0	86	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	5	5	2	2	2
Cap, veh/h	1130	4230	2414		111	99
Arrive On Green	0.33	0.85	0.48	0.00	0.06	0.06
Sat Flow, veh/h	3456	5149	5149	1585	1781	1585
Grp Volume(v), veh/h	1169	2008	1485	0	86	8
Grp Sat Flow(s),veh/h/ln	1728	1662	1662	1585	1781	1585
Q Serve(g_s), s	38.6	12.0	25.8	0.0	5.6	0.6
Cycle Q Clear(g_c), s	38.6	12.0	25.8	0.0	5.6	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1130	4230	2414		111	99
V/C Ratio(X)	1.03	0.47	0.62		0.77	0.08
Avail Cap(c_a), veh/h	1130	4230	2414		453	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.84	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	2.3	22.4	0.0	54.5	52.1
Incr Delay (d2), s/veh	36.0	0.4	1.0	0.0	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.2	1.7	9.6	0.0	2.6	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	75.7	2.6	23.3	0.0	58.8	52.3
LnGrp LOS	F	A	C		E	D
Approach Vol, veh/h		3177	1485	A	94	
Approach Delay, s/veh		29.5	23.3		58.2	
Approach LOS		C	C		E	

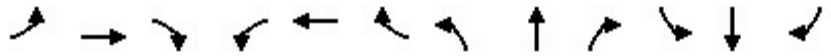
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		105.4		12.6	43.0	62.4
Change Period (Y+Rc), s		5.3		5.2	4.4	* 5.3
Max Green Setting (Gmax), s		77.5		30.0	38.6	* 35
Max Q Clear Time (g_c+I1), s		14.0		7.6	40.6	27.8
Green Ext Time (p_c), s		56.7		0.1	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	1086	71	90	525	107	70	285	129	198	718	450
Future Volume (veh/h)	254	1086	71	90	525	107	70	285	129	198	718	450
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	295	1263	83	105	610	124	81	331	150	230	835	523
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	1585	104	220	1229	249	102	444	196	244	729	606
Arrive On Green	0.18	0.47	0.47	0.04	0.14	0.14	0.06	0.13	0.13	0.14	0.21	0.21
Sat Flow, veh/h	1781	3382	222	1781	2942	597	1781	3554	1566	1781	3554	1566
Grp Volume(v), veh/h	295	663	683	105	368	366	81	331	150	230	835	523
Grp Sat Flow(s),veh/h/ln	1781	1777	1827	1781	1777	1762	1781	1777	1566	1781	1777	1566
Q Serve(g_s), s	22.8	44.2	44.5	8.1	26.8	26.9	6.3	12.6	10.0	17.9	28.7	28.7
Cycle Q Clear(g_c), s	22.8	44.2	44.5	8.1	26.8	26.9	6.3	12.6	10.0	17.9	28.7	28.7
Prop In Lane	1.00		0.12	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	833	856	220	743	736	102	444	196	244	729	606
V/C Ratio(X)	0.92	0.80	0.80	0.48	0.50	0.50	0.80	0.74	0.77	0.94	1.15	0.86
Avail Cap(c_a), veh/h	382	833	856	220	743	736	244	652	287	244	729	606
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	31.5	31.6	62.7	46.7	46.7	65.2	59.1	35.2	59.8	55.6	39.7
Incr Delay (d2), s/veh	24.7	7.8	7.7	6.8	2.2	2.3	5.2	2.9	7.6	41.2	81.2	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	20.1	20.8	4.2	13.3	13.2	3.0	5.8	4.2	10.8	21.0	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.1	39.3	39.3	69.5	48.9	49.0	70.4	62.0	42.8	101.1	136.8	52.3
LnGrp LOS	F	D	D	E	D	D	E	E	D	F	F	D
Approach Vol, veh/h		1641			839			562			1588	
Approach Delay, s/veh		46.8			51.5			58.1			103.8	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.6	22.5	23.1	70.8	12.4	33.7	29.6	64.3
Change Period (Y+Rc), s	4.4	* 5	5.8	* 5.2	4.4	5.0	4.4	5.8
Max Green Setting (Gmax), s	19.2	* 26	9.8	* 66	19.2	25.6	30.0	45.6
Max Q Clear Time (g_c+I1), s	19.9	14.6	10.1	46.5	8.3	30.7	24.8	28.9
Green Ext Time (p_c), s	0.0	2.2	0.0	11.3	0.1	0.0	0.4	3.5

Intersection Summary	
HCM 6th Ctrl Delay	68.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

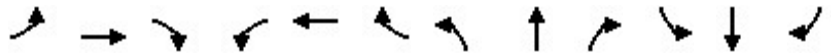
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	158	997	99	111	378	0	0	809	53
Future Volume (veh/h)	0	0	0	158	997	99	111	378	0	0	809	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				166	1049	104	117	398	0	0	852	56
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				195	1320	134	147	1474	0	0	926	61
Arrive On Green				0.10	0.10	0.10	0.16	0.83	0.00	0.00	0.27	0.27
Sat Flow, veh/h				630	4257	434	1781	3647	0	0	3472	222
Grp Volume(v), veh/h				484	408	427	117	398	0	0	448	460
Grp Sat Flow(s),veh/h/ln				1839	1702	1780	1781	1777	0	0	1777	1824
Q Serve(g_s), s				28.5	25.7	25.7	6.9	2.7	0.0	0.0	26.9	26.9
Cycle Q Clear(g_c), s				28.5	25.7	25.7	6.9	2.7	0.0	0.0	26.9	26.9
Prop In Lane				0.34		0.24	1.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h				570	528	552	147	1474	0	0	487	500
V/C Ratio(X)				0.85	0.77	0.77	0.80	0.27	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h				570	528	552	431	2071	0	0	510	524
HCM Platoon Ratio				0.33	0.33	0.33	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.90	0.90	0.90	0.51	0.51	0.00	0.00	0.20	0.20
Uniform Delay (d), s/veh				46.9	45.6	45.6	45.0	5.7	0.0	0.0	38.7	38.7
Incr Delay (d2), s/veh				13.4	9.6	9.2	1.9	0.1	0.0	0.0	5.8	5.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.2	13.1	13.7	2.9	0.9	0.0	0.0	12.2	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				60.3	55.2	54.8	47.0	5.8	0.0	0.0	44.5	44.4
LnGrp LOS				E	E	D	D	A	A	A	D	D
Approach Vol, veh/h					1319			515			908	
Approach Delay, s/veh					56.9			15.1			44.5	
Approach LOS					E			B			D	

Timer - Assigned Phs	3	4	6	8
Phs Duration (G+Y+Rc), s	15.0	36.6	40.0	51.5
Change Period (Y+Rc), s	5.9	* 6.4	5.9	5.9
Max Green Setting (Gmax), s	26.6	* 32	34.1	64.1
Max Q Clear Time (g_c+I1), s	8.9	28.9	30.5	4.7
Green Ext Time (p_c), s	0.1	1.2	2.2	3.2

Intersection Summary	
HCM 6th Ctrl Delay	44.9
HCM 6th LOS	D

Notes

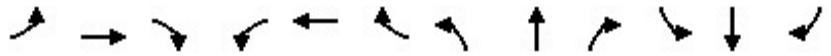
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	142	93	325	286	58	203	232	63	58	247	57
Future Volume (veh/h)	40	142	93	325	286	58	203	232	63	58	247	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	153	100	349	308	62	218	249	68	62	266	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	286	240	404	523	105	269	1122	288	79	720	157
Arrive On Green	0.03	0.15	0.15	0.23	0.35	0.35	0.15	0.28	0.28	0.04	0.17	0.17
Sat Flow, veh/h	1781	1870	1570	1781	1510	304	1781	4023	1032	1781	4170	907
Grp Volume(v), veh/h	43	153	100	349	0	370	218	208	109	62	214	113
Grp Sat Flow(s),veh/h/ln	1781	1870	1570	1781	0	1814	1781	1702	1651	1781	1702	1673
Q Serve(g_s), s	1.5	4.8	3.7	12.1	0.0	10.7	7.6	3.0	3.3	2.2	3.6	3.8
Cycle Q Clear(g_c), s	1.5	4.8	3.7	12.1	0.0	10.7	7.6	3.0	3.3	2.2	3.6	3.8
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.62	1.00		0.54
Lane Grp Cap(c), veh/h	59	286	240	404	0	629	269	949	461	79	588	289
V/C Ratio(X)	0.72	0.53	0.42	0.86	0.00	0.59	0.81	0.22	0.24	0.78	0.36	0.39
Avail Cap(c_a), veh/h	834	1168	980	834	0	1133	834	3189	1547	834	3189	1567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	25.0	24.5	23.8	0.0	17.2	26.3	17.7	17.8	30.3	23.4	23.5
Incr Delay (d2), s/veh	6.0	0.6	0.4	2.2	0.0	0.9	2.3	0.2	0.5	6.1	0.7	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.1	1.4	5.1	0.0	4.3	3.1	1.1	1.2	1.0	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	25.6	25.0	26.0	0.0	18.1	28.6	18.0	18.3	36.4	24.1	25.0
LnGrp LOS	D	C	C	C	A	B	C	B	B	D	C	C
Approach Vol, veh/h		296			719			535			389	
Approach Delay, s/veh		27.0			21.9			22.4			26.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	23.2	18.9	14.7	14.1	16.4	6.5	27.1
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	30.0	60.0	30.0	40.0	30.0	60.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	14.2	5.3	14.1	6.8	9.6	5.8	3.5	12.7
Green Ext Time (p_c), s	0.1	3.9	0.5	0.8	0.3	3.9	0.0	2.6

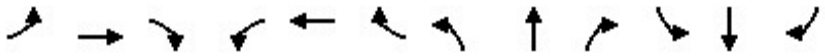
Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	106	157	113	170	0	0	0	0	86	1231	520
Future Volume (veh/h)	0	106	157	113	170	0	0	0	0	86	1231	520
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	120	178	128	193	0				98	1399	591
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	401	340	229	393	0				1128	2234	925
Arrive On Green	0.00	0.21	0.21	0.21	0.21	0.00				0.63	0.63	0.63
Sat Flow, veh/h	0	1870	1585	713	1917	0				1781	3526	1460
Grp Volume(v), veh/h	0	120	178	158	163	0				98	1350	640
Grp Sat Flow(s),veh/h/ln	0	1870	1585	928	1617	0				1781	1702	1583
Q Serve(g_s), s	0.0	4.6	8.5	10.3	7.5	0.0				1.8	20.6	21.3
Cycle Q Clear(g_c), s	0.0	4.6	8.5	14.9	7.5	0.0				1.8	20.6	21.3
Prop In Lane	0.00		1.00	0.81		0.00				1.00		0.92
Lane Grp Cap(c), veh/h	0	401	340	275	347	0				1128	2156	1003
V/C Ratio(X)	0.00	0.30	0.52	0.57	0.47	0.00				0.09	0.63	0.64
Avail Cap(c_a), veh/h	0	657	557	436	568	0				1251	2391	1112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	28.2	29.7	33.8	29.3	0.0				6.1	9.5	9.6
Incr Delay (d2), s/veh	0.0	0.2	0.5	1.4	0.7	0.0				0.1	0.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	3.2	3.2	3.0	0.0				0.6	6.7	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	28.3	30.2	35.2	30.1	0.0				6.1	10.2	11.1
LnGrp LOS	A	C	C	D	C	A				A	B	B
Approach Vol, veh/h		298			321						2088	
Approach Delay, s/veh		29.4			32.6						10.3	
Approach LOS		C			C						B	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		25.0		60.4		25.0
Change Period (Y+Rc), s		6.7		6.3		6.7
Max Green Setting (Gmax), s		30.0		60.0		30.0
Max Q Clear Time (g_c+I1), s		10.5		23.3		16.9
Green Ext Time (p_c), s		0.7		30.8		1.4

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B



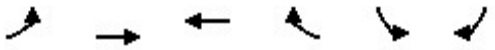
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	16	33	14	4	4	34	480	75	65	631	9
Future Volume (veh/h)	4	16	33	14	4	4	34	480	75	65	631	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	18	36	15	4	4	37	527	82	71	693	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	104	208	373	161	161	58	2225	679	179	2358	34
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.44	0.44	0.05	0.45	0.45
Sat Flow, veh/h	1401	555	1110	1344	856	856	1781	5106	1558	3456	5184	75
Grp Volume(v), veh/h	4	0	54	15	0	8	37	527	82	71	455	248
Grp Sat Flow(s),veh/h/ln	1401	0	1665	1344	0	1713	1781	1702	1558	1728	1702	1854
Q Serve(g_s), s	0.1	0.0	1.2	0.4	0.0	0.2	0.9	3.0	1.4	0.9	3.9	3.9
Cycle Q Clear(g_c), s	0.3	0.0	1.2	1.7	0.0	0.2	0.9	3.0	1.4	0.9	3.9	3.9
Prop In Lane	1.00		0.67	1.00		0.50	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	415	0	313	373	0	322	58	2225	679	179	1548	843
V/C Ratio(X)	0.01	0.00	0.17	0.04	0.00	0.02	0.63	0.24	0.12	0.40	0.29	0.29
Avail Cap(c_a), veh/h	1372	0	1451	1292	0	1493	1164	6675	2036	2259	4450	2424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	15.6	16.4	0.0	15.2	21.9	8.1	7.7	21.1	7.9	7.9
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.0	4.2	0.1	0.1	0.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.1	0.0	0.1	0.4	0.8	0.4	0.3	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.0	15.7	16.4	0.0	15.2	26.1	8.2	7.9	21.6	8.0	8.1
LnGrp LOS	B	A	B	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		58			23			646			774	
Approach Delay, s/veh		15.7			16.0			9.2			9.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	25.7		13.4	5.9	26.6		13.4
Change Period (Y+Rc), s	4.4	* 5.7		* 4.8	4.4	5.7		* 4.8
Max Green Setting (Gmax), s	30.0	* 60		* 40	30.0	60.0		* 40
Max Q Clear Time (g_c+I1), s	2.9	5.0		3.2	2.9	5.9		3.7
Green Ext Time (p_c), s	0.1	7.7		0.2	0.0	5.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	754	1435	2052	59	27	48
Future Volume (veh/h)	754	1435	2052	59	27	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	857	1631	2332	0	31	55
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	5	5	2	2	2
Cap, veh/h	814	4297	2937		87	78
Arrive On Green	0.24	0.86	0.59	0.00	0.05	0.05
Sat Flow, veh/h	3456	5149	5149	1585	1781	1585
Grp Volume(v), veh/h	857	1631	2332	0	31	55
Grp Sat Flow(s),veh/h/ln	1728	1662	1662	1585	1781	1585
Q Serve(g_s), s	27.8	7.9	42.6	0.0	2.0	4.0
Cycle Q Clear(g_c), s	27.8	7.9	42.6	0.0	2.0	4.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	814	4297	2937		87	78
V/C Ratio(X)	1.05	0.38	0.79		0.36	0.71
Avail Cap(c_a), veh/h	814	4297	2937		479	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.47	0.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	1.7	18.7	0.0	54.3	55.3
Incr Delay (d2), s/veh	46.3	0.3	1.1	0.0	0.9	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	0.9	14.8	0.0	0.9	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	91.4	1.9	19.8	0.0	55.2	59.7
LnGrp LOS	F	A	B		E	E
Approach Vol, veh/h		2488	2332	A	86	
Approach Delay, s/veh		32.7	19.8		58.1	
Approach LOS		C	B		E	

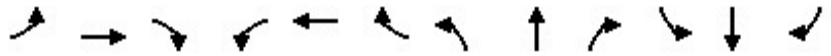
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		107.0		11.0	32.2	74.8
Change Period (Y+Rc), s		5.3		5.2	4.4	* 5.3
Max Green Setting (Gmax), s		75.8		31.7	27.8	* 44
Max Q Clear Time (g_c+I1), s		9.9		6.0	29.8	44.6
Green Ext Time (p_c), s		49.9		0.1	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		27.0
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	566	18	42	864	46	104	236	64	47	149	509
Future Volume (veh/h)	275	566	18	42	864	46	104	236	64	47	149	509
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.94	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	609	19	45	929	49	112	254	69	51	160	547
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	1647	51	226	1445	76	135	788	330	66	650	542
Arrive On Green	0.18	0.47	0.47	0.17	0.56	0.56	0.08	0.22	0.22	0.04	0.18	0.18
Sat Flow, veh/h	1781	3516	110	1781	3433	181	1781	3554	1489	1781	3554	1398
Grp Volume(v), veh/h	296	308	320	45	481	497	112	254	69	51	160	547
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1837	1781	1777	1489	1781	1777	1398
Q Serve(g_s), s	22.9	15.6	15.6	3.0	26.1	26.1	8.7	8.4	3.9	4.0	5.4	25.6
Cycle Q Clear(g_c), s	22.9	15.6	15.6	3.0	26.1	26.1	8.7	8.4	3.9	4.0	5.4	25.6
Prop In Lane	1.00		0.06	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	833	866	226	748	773	135	788	330	66	650	542
V/C Ratio(X)	0.92	0.37	0.37	0.20	0.64	0.64	0.83	0.32	0.21	0.77	0.25	1.01
Avail Cap(c_a), veh/h	382	833	866	226	748	773	244	788	330	244	650	542
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	23.9	23.9	52.1	23.6	23.6	63.8	45.7	24.2	66.8	48.9	45.4
Incr Delay (d2), s/veh	24.8	1.3	1.2	1.7	3.8	3.7	4.7	0.3	0.3	7.0	0.3	41.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	6.7	7.0	1.5	10.3	10.6	4.1	3.7	2.0	1.9	2.4	24.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	25.2	25.1	53.8	27.4	27.2	68.5	45.9	24.5	73.8	49.2	86.5
LnGrp LOS	F	C	C	D	C	C	E	D	C	E	D	F
Approach Vol, veh/h		924			1023			435			758	
Approach Delay, s/veh		43.1			28.5			48.3			77.8	
Approach LOS		D			C			D			E	

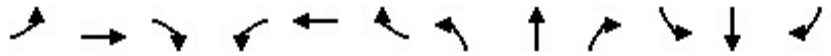
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	36.0	23.6	70.8	15.0	30.6	29.7	64.7
Change Period (Y+Rc), s	4.4	* 5	5.8	* 5.2	4.4	5.0	4.4	5.8
Max Green Setting (Gmax), s	19.2	* 26	9.8	* 66	19.2	25.6	30.0	45.6
Max Q Clear Time (g_c+I1), s	16.0	10.4	5.0	17.6	10.7	27.6	24.9	28.1
Green Ext Time (p_c), s	0.0	1.7	0.0	5.8	0.1	0.0	0.4	5.0

Intersection Summary	
HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	223	1654	148	100	233	0	0	178	24
Future Volume (veh/h)	0	0	0	223	1654	148	100	233	0	0	178	24
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.88
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				237	1760	157	106	248	0	0	189	26
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				317	2513	229	135	979	0	0	438	59
Arrive On Green				0.19	0.19	0.19	0.15	0.55	0.00	0.00	0.14	0.14
Sat Flow, veh/h				553	4381	400	1781	3647	0	0	3185	414
Grp Volume(v), veh/h				790	662	702	106	248	0	0	106	109
Grp Sat Flow(s),veh/h/ln				1843	1702	1789	1781	1777	0	0	1777	1729
Q Serve(g_s), s				44.5	39.8	40.2	6.3	4.0	0.0	0.0	6.0	6.3
Cycle Q Clear(g_c), s				44.5	39.8	40.2	6.3	4.0	0.0	0.0	6.0	6.3
Prop In Lane				0.30		0.22	1.00		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				1057	976	1026	135	979	0	0	252	245
V/C Ratio(X)				0.75	0.68	0.68	0.79	0.25	0.00	0.00	0.42	0.44
Avail Cap(c_a), veh/h				1057	976	1026	155	1134	0	0	309	300
HCM Platoon Ratio				0.33	0.33	0.33	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.67	0.67	0.67	0.58	0.58	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				37.1	35.1	35.3	45.8	18.8	0.0	0.0	43.1	43.2
Incr Delay (d2), s/veh				3.3	2.6	2.5	10.7	0.1	0.0	0.0	0.7	0.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				22.9	18.8	19.9	3.0	1.5	0.0	0.0	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.3	37.7	37.8	56.5	18.9	0.0	0.0	43.8	44.0
LnGrp LOS				D	D	D	E	B	A	A	D	D
Approach Vol, veh/h					2154			354			215	
Approach Delay, s/veh					38.7			30.2			43.9	
Approach LOS					D			C			D	

Timer - Assigned Phs	3	4	6	8
Phs Duration (G+Y+Rc), s	14.2	22.0	69.0	36.2
Change Period (Y+Rc), s	5.9	* 6.4	5.9	5.9
Max Green Setting (Gmax), s	9.6	* 19	63.1	35.1
Max Q Clear Time (g_c+I1), s	8.3	8.3	46.5	6.0
Green Ext Time (p_c), s	0.0	0.6	11.3	1.7

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

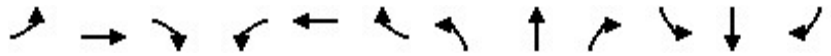
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	200	181	238	237	81	244	366	74	152	946	62
Future Volume (veh/h)	48	200	181	238	237	81	244	366	74	152	946	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	213	193	253	252	86	260	389	79	162	1006	66
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	294	248	287	374	128	293	1678	330	194	1648	108
Arrive On Green	0.04	0.16	0.16	0.16	0.28	0.28	0.16	0.39	0.39	0.11	0.34	0.34
Sat Flow, veh/h	1781	1870	1579	1781	1333	455	1781	4276	842	1781	4894	321
Grp Volume(v), veh/h	51	213	193	253	0	338	260	307	161	162	699	373
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	0	1787	1781	1702	1714	1781	1702	1810
Q Serve(g_s), s	3.0	11.4	12.3	14.6	0.0	17.6	15.0	6.3	6.6	9.4	18.0	18.1
Cycle Q Clear(g_c), s	3.0	11.4	12.3	14.6	0.0	17.6	15.0	6.3	6.6	9.4	18.0	18.1
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.49	1.00		0.18
Lane Grp Cap(c), veh/h	66	294	248	287	0	502	293	1335	672	194	1146	610
V/C Ratio(X)	0.77	0.72	0.78	0.88	0.00	0.67	0.89	0.23	0.24	0.83	0.61	0.61
Avail Cap(c_a), veh/h	508	711	601	508	0	680	508	1942	978	508	1942	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	42.2	42.6	43.2	0.0	33.5	43.0	21.3	21.4	45.9	29.1	29.1
Incr Delay (d2), s/veh	6.9	1.3	2.0	3.6	0.0	1.6	4.5	0.2	0.3	3.6	0.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.4	5.0	6.7	0.0	7.9	6.9	2.5	2.7	4.3	7.3	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	43.4	44.5	46.7	0.0	35.1	47.5	21.5	21.8	49.5	30.1	30.9
LnGrp LOS	E	D	D	D	A	D	D	C	C	D	C	C
Approach Vol, veh/h		457			591			728			1234	
Approach Delay, s/veh		45.4			40.1			30.8			32.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	46.6	21.3	21.4	21.7	40.7	8.3	34.4
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	30.0	60.0	30.0	40.0	30.0	60.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	11.4	8.6	16.6	14.3	17.0	20.1	5.0	19.6
Green Ext Time (p_c), s	0.2	6.0	0.3	1.2	0.3	15.3	0.1	2.1

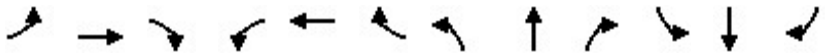
Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	228	253	66	162	0	0	0	0	233	1695	358
Future Volume (veh/h)	0	228	253	66	162	0	0	0	0	233	1695	358
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	245	272	71	174	0				251	1823	385
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	423	357	144	426	0				1124	2673	554
Arrive On Green	0.00	0.23	0.23	0.23	0.23	0.00				0.63	0.63	0.63
Sat Flow, veh/h	0	1870	1581	344	1971	0				1781	4237	879
Grp Volume(v), veh/h	0	245	272	107	138	0				251	1458	750
Grp Sat Flow(s),veh/h/ln	0	1870	1581	613	1617	0				1781	1702	1712
Q Serve(g_s), s	0.0	10.6	14.6	7.0	6.5	0.0				5.5	25.1	26.1
Cycle Q Clear(g_c), s	0.0	10.6	14.6	17.6	6.5	0.0				5.5	25.1	26.1
Prop In Lane	0.00		1.00	0.66		0.00				1.00		0.51
Lane Grp Cap(c), veh/h	0	423	357	204	365	0				1124	2147	1080
V/C Ratio(X)	0.00	0.58	0.76	0.52	0.38	0.00				0.22	0.68	0.69
Avail Cap(c_a), veh/h	0	618	522	317	534	0				1177	2249	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	31.3	32.9	36.5	29.7	0.0				7.2	10.8	11.0
Incr Delay (d2), s/veh	0.0	0.5	1.9	1.5	0.5	0.0				0.2	1.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.8	5.7	2.4	2.6	0.0				1.9	8.5	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	31.8	34.7	38.0	30.2	0.0				7.4	11.8	13.2
LnGrp LOS	A	C	C	D	C	A				A	B	B
Approach Vol, veh/h		517			245						2459	
Approach Delay, s/veh		33.3			33.6						11.8	
Approach LOS		C			C						B	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		27.2		63.6		27.2
Change Period (Y+Rc), s		6.7		6.3		6.7
Max Green Setting (Gmax), s		30.0		60.0		30.0
Max Q Clear Time (g_c+I1), s		16.6		28.1		19.6
Green Ext Time (p_c), s		1.3		29.2		0.9

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B



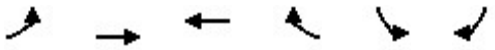
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	16	41	11	2	6	11	632	127	130	1304	8
Future Volume (veh/h)	6	16	41	11	2	6	11	632	127	130	1304	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	19	48	13	2	7	13	735	148	151	1516	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	99	251	367	77	269	23	2268	700	258	2649	16
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.01	0.44	0.44	0.07	0.51	0.51
Sat Flow, veh/h	1391	466	1177	1322	361	1265	1781	5106	1575	3456	5237	31
Grp Volume(v), veh/h	7	0	67	13	0	9	13	735	148	151	985	540
Grp Sat Flow(s),veh/h/ln	1391	0	1643	1322	0	1626	1781	1702	1575	1728	1702	1864
Q Serve(g_s), s	0.2	0.0	1.9	0.5	0.0	0.2	0.4	5.2	3.2	2.4	11.2	11.2
Cycle Q Clear(g_c), s	0.5	0.0	1.9	2.3	0.0	0.2	0.4	5.2	3.2	2.4	11.2	11.2
Prop In Lane	1.00		0.72	1.00		0.78	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	420	0	350	367	0	346	23	2268	700	258	1722	943
V/C Ratio(X)	0.02	0.00	0.19	0.04	0.00	0.03	0.56	0.32	0.21	0.59	0.57	0.57
Avail Cap(c_a), veh/h	1124	0	1182	1036	0	1170	961	5510	1700	1864	3673	2012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	17.9	18.9	0.0	17.3	27.3	10.0	9.5	24.9	9.6	9.6
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.0	7.5	0.1	0.3	0.8	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.7	0.1	0.0	0.1	0.2	1.6	0.9	0.9	3.2	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	0.0	18.0	18.9	0.0	17.3	34.8	10.2	9.7	25.7	9.9	10.1
LnGrp LOS	B	A	B	B	A	B	C	B	A	C	A	B
Approach Vol, veh/h		74			22			896			1676	
Approach Delay, s/veh		18.0			18.3			10.5			11.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	30.4		16.6	5.1	33.8		16.6
Change Period (Y+Rc), s	4.4	* 5.7		* 4.8	4.4	5.7		* 4.8
Max Green Setting (Gmax), s	30.0	* 60		* 40	30.0	60.0		* 40
Max Q Clear Time (g_c+I1), s	4.3	7.2		3.9	2.4	13.2		4.3
Green Ext Time (p_c), s	0.2	12.1		0.3	0.0	14.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1200	2002	1381	140	83	8
Future Volume (veh/h)	1200	2002	1381	140	83	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	1250	2085	1439	0	86	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	5	5	2	2	2
Cap, veh/h	1130	4230	2414		111	99
Arrive On Green	0.33	0.85	0.48	0.00	0.06	0.06
Sat Flow, veh/h	3456	5149	5149	1585	1781	1585
Grp Volume(v), veh/h	1250	2085	1439	0	86	8
Grp Sat Flow(s),veh/h/ln	1728	1662	1662	1585	1781	1585
Q Serve(g_s), s	38.6	12.8	24.7	0.0	5.6	0.6
Cycle Q Clear(g_c), s	38.6	12.8	24.7	0.0	5.6	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1130	4230	2414		111	99
V/C Ratio(X)	1.11	0.49	0.60		0.77	0.08
Avail Cap(c_a), veh/h	1130	4230	2414		453	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.84	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	2.3	22.1	0.0	54.5	52.1
Incr Delay (d2), s/veh	60.7	0.4	0.9	0.0	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.1	1.8	9.2	0.0	2.6	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	100.4	2.7	23.0	0.0	58.8	52.3
LnGrp LOS	F	A	C		E	D
Approach Vol, veh/h		3335	1439	A	94	
Approach Delay, s/veh		39.3	23.0		58.2	
Approach LOS		D	C		E	

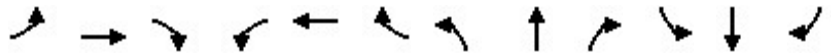
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		105.4		12.6	43.0	62.4
Change Period (Y+Rc), s		5.3		5.2	4.4	* 5.3
Max Green Setting (Gmax), s		77.5		30.0	38.6	* 35
Max Q Clear Time (g_c+I1), s		14.8		7.6	40.6	26.7
Green Ext Time (p_c), s		57.1		0.1	0.0	7.4

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	1133	79	90	499	110	64	329	129	198	718	530
Future Volume (veh/h)	286	1133	79	90	499	110	64	329	129	198	718	530
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	333	1317	92	105	580	128	74	383	150	230	835	616
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	1577	110	199	1117	246	94	487	215	244	787	664
Arrive On Green	0.20	0.47	0.47	0.04	0.13	0.13	0.05	0.14	0.14	0.14	0.22	0.22
Sat Flow, veh/h	1781	3366	235	1781	2894	637	1781	3554	1568	1781	3554	1567
Grp Volume(v), veh/h	333	693	716	105	355	353	74	383	150	230	835	616
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1755	1781	1777	1568	1781	1777	1567
Q Serve(g_s), s	25.8	47.6	48.0	8.1	26.2	26.3	5.7	14.6	10.0	17.9	31.0	31.0
Cycle Q Clear(g_c), s	25.8	47.6	48.0	8.1	26.2	26.3	5.7	14.6	10.0	17.9	31.0	31.0
Prop In Lane	1.00		0.13	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	833	855	199	686	677	94	487	215	244	787	664
V/C Ratio(X)	0.93	0.83	0.84	0.53	0.52	0.52	0.79	0.79	0.70	0.94	1.06	0.93
Avail Cap(c_a), veh/h	382	833	855	199	686	677	244	652	288	244	787	664
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	32.4	32.5	63.8	48.9	49.0	65.6	58.4	35.2	59.8	54.5	38.5
Incr Delay (d2), s/veh	29.1	9.6	9.6	9.0	2.6	2.7	5.4	4.8	5.1	41.2	49.4	19.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	21.9	22.6	4.3	13.0	12.9	2.7	6.9	4.1	10.8	19.1	23.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.2	42.0	42.1	72.8	51.5	51.6	70.9	63.2	40.2	101.1	103.9	58.1
LnGrp LOS	F	D	D	E	D	D	E	E	D	F	F	E
Approach Vol, veh/h		1742			813			607			1681	
Approach Delay, s/veh		50.1			54.3			58.5			86.7	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.6	24.2	21.4	70.8	11.8	36.0	32.4	59.8
Change Period (Y+Rc), s	4.4	* 5	5.8	* 5.2	4.4	5.0	4.4	5.8
Max Green Setting (Gmax), s	19.2	* 26	9.8	* 66	19.2	25.6	30.0	45.6
Max Q Clear Time (g_c+I1), s	19.3	16.6	10.1	50.0	7.7	33.0	27.8	28.3
Green Ext Time (p_c), s	0.0	2.2	0.0	10.3	0.1	0.0	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	64.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	158	961	137	111	378	0	0	817	53
Future Volume (veh/h)	0	0	0	158	961	137	111	378	0	0	817	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				166	1012	144	117	398	0	0	860	56
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				194	1261	185	147	1490	0	0	942	61
Arrive On Green				0.10	0.10	0.10	0.16	0.84	0.00	0.00	0.28	0.28
Sat Flow, veh/h				625	4067	596	1781	3647	0	0	3475	220
Grp Volume(v), veh/h				488	411	422	117	398	0	0	452	464
Grp Sat Flow(s),veh/h/ln				1839	1702	1746	1781	1777	0	0	1777	1824
Q Serve(g_s), s				28.7	25.9	25.9	6.9	2.6	0.0	0.0	27.1	27.1
Cycle Q Clear(g_c), s				28.7	25.9	25.9	6.9	2.6	0.0	0.0	27.1	27.1
Prop In Lane				0.34		0.34	1.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h				570	528	541	147	1490	0	0	495	508
V/C Ratio(X)				0.86	0.78	0.78	0.80	0.27	0.00	0.00	0.91	0.91
Avail Cap(c_a), veh/h				570	528	541	415	2071	0	0	527	541
HCM Platoon Ratio				0.33	0.33	0.33	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.90	0.90	0.90	0.51	0.51	0.00	0.00	0.34	0.34
Uniform Delay (d), s/veh				47.0	45.7	45.7	45.0	5.4	0.0	0.0	38.4	38.4
Incr Delay (d2), s/veh				14.0	9.9	9.7	1.9	0.1	0.0	0.0	8.1	8.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.4	13.3	13.6	2.9	0.8	0.0	0.0	12.6	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				60.9	55.6	55.4	47.0	5.4	0.0	0.0	46.5	46.4
LnGrp LOS				E	E	E	D	A	A	A	D	D
Approach Vol, veh/h					1322			515			916	
Approach Delay, s/veh					57.5			14.9			46.4	
Approach LOS					E			B			D	

Timer - Assigned Phs	3	4	6	8
Phs Duration (G+Y+Rc), s	15.0	37.0	40.0	52.0
Change Period (Y+Rc), s	5.9	* 6.4	5.9	5.9
Max Green Setting (Gmax), s	25.6	* 33	34.1	64.1
Max Q Clear Time (g_c+I1), s	8.9	29.1	30.7	4.6
Green Ext Time (p_c), s	0.1	1.6	2.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.